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Planning for economic development around a second-tier airport: A case study of Gold Coast Airport.

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Planning for economic development around a second-tier airport: A case study of Gold Coast Airport

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Associate Professor Bhashna Bajracharya and

Associate Professor Daniel O'Hare

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Abstract

Traditionally, airports functioned solely for the air transport of passengers and freight with limited focus on other activities. However, airports have expanded significantly in terms of their size as well as operational scale and complexity due to the influence of several factors including the advancement in aircraft technologies, the deregulation and subsequent growth of the aviation industry, the privatisation of airport ownership and management rights and the increasing integration of non-aviation uses on airport land. Consequently, the role of airports in economic development has become more significant and sophisticated. Nevertheless, there has been limited investigation amongst planning scholars into the economic development role of airports, particularly those servicing non-capital cities. This research investigates planning constraints and opportunities for second-tier airports' contribution to local and regional economic development. Through a multi-method approach encompassing spatial analysis, field observation, semi-structured interviews, policy analysis and literature review, the research explores a case study of Gold Coast Airport. The airport, as one of the major Australian airports to have undergone a privatisation process, not only is one of the fastest growing airports in Australia, but also uniquely spans a border between the states of Queensland and New South Wales and between two Local Government Areas (LGAs). As such, Gold Coast Airport has a major potential to contribute to regional economic development across the border.

Although Gold Coast Airport has made substantial economic development contributions, particularly due to its rapid growth and development since privatisation, the Gold Coast LGA has received most of the airport's economic benefits, thus implying that the distribution of these benefits has been primarily limited to only one side of the border. The principal reason behind the uneven spatial distribution of Gold Coast Airport's economic benefits is the adverse impact of the border on collaborative stakeholder relationships between Gold Coast Airport and government agencies. Whilst Gold Coast Airport has extensively collaborated with state and local governments on the Queensland side of the border, the airport has demonstrated relatively limited collaboration with stakeholders on the New South Wales side. There is also inadequate cross-border cooperation between state and local government agencies for planning and funding arrangements related to Gold Coast Airport. Whilst the existing planning frameworks recognise the role of Gold Coast Airport as an economic development driver, they currently lack strategic and statutory directions and cross-border recognition for promoting or capitalising on the airport's economic benefits. Therefore, there is a need to adopt a more regional, rather than local, approach in promoting Gold Coast Airport's economic benefits. Such an approach will allow the airport's economic benefits to be distributed not only more evenly across

the border, but also at a more regional scale. The key lesson is that planners should promote and capitalise on economic benefits of airports at both local and regional scales. A more regional planning perspective will also enable a significant amount of financial and policy support to be solicited across a jurisdictional border, which can further promote economic benefits of airports.

Keywords

Local economic development; regional economic development; planning frameworks; cross-border; stakeholder relationships; Gold Coast Airport; Gold Coast; Tweed Shire; Queensland; New South Wales

Declaration by Author

This thesis is submitted to Bond University in fulfilment of the requirements of the degree of Doctor of Philosophy.

This thesis represents my own original work towards this research degree and contains no material that has previously been submitted for a degree or diploma at this University or any other institution, except where due acknowledgement is made.

Signed: _____

Isara Khanjanasthiti

Date: 04/08/21

Research Outputs

The following publications are research outputs that were published during the author's candidature:

Peer-Reviewed Papers

Bajracharya, B., Too, L., & **Khanjanasthiti, I.** (2014). Supporting Active and Healthy Living in Master-planned Communities: A Case Study. *Australian Planner*, 51(4), 349-361. doi:10.1080/07293682.2014.901980

Book Chapters

Bajracharya, B., & **Khanjanasthiti, I.** (2021). A Placemaking Framework for the Social Sustainability of Master-Planned Communities: A Case Study from Australia. In P. S. Low (Ed.), *Sustainable Development: Asia-Pacific Perspectives*. Cambridge: Cambridge University Press.

Khanjanasthiti, I., & Armitage, L. (2018). The Rise and Rise of Micro Apartments and High-Rise Apartments in Australian Capital Cities: A Critical Design Review. In K. Day & G. Cairns (Eds.), *Global Dimensions in Housing: Approaches in Design and Theory from Europe to the Pacific Rim*. Oxfordshire: Libri Publishing.

Bajracharya, B., Too, L., O'Hare, D., & **Khanjanasthiti, I.** (2015). Planning for the Gold Coast: Processes, Challenges and Opportunities. In T. Hundloe, B. McDougall, & C. Page (Eds.), *The Gold Coast Transformed: From Wilderness to Urban Ecosystem*. Clayton South, Australia: CSIRO Publishing.

Conference Papers

Armitage, L., **Khanjanasthiti, I.**, & Chand, S. (2017). *Micro Houses: Trends and Implications on the Gold Coast*. Paper presented at the Australian Regional Development Conference, Coffs Harbour.

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Ethics Declaration

The research associated with this thesis received ethics approval from the Bond University Human Research Ethics Committee. Ethics application number 0000015653, approved on 27/06/2016.

Copyright Declaration

No published manuscripts were included for publication within this thesis.

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Abbreviations

Australian Airports Association	AAA
Australian Bureau of Statistics	ABS
Australian Capital Territory	ACT
Airports Act 1996	Airports Act
Australian Standard Geographical Classification Remoteness Structure	ASGC
City of Gold Coast	CoGC
Council of Mayors (South East Queensland)	COMSEQ
The Federal Aviation Administration	FAA
Fly-in, fly-out	FIFO
Full Time Equivalent	FTE
Gold Coast Airport Pty Ltd	GCAPL
Gross Domestic Product	GDP
Gross National Income	GNI
Gross Regional Product	GRP
International Air Transport Association	IATA
International Civil Aviation Organisation	ICAO
Instrument Landing System	ILS
Just-in-time	JIT
Low-cost carrier	LCC
Local Environmental Plan	LEP
Local Government Area	LGA
Memorandum of Understanding	MoU
The National Aeronautics and Space Administration	NASA
New South Wales	NSW
Queensland Airports Limited	QAL
Queensland	QLD
Regular Passenger Transport	RPT
South East Queensland	SEQ
Southern Cross University	SCU
State Planning Policy	SPP
Victoria	VIC
World War II	WWII

Unless stated otherwise, all dollar (\$) figures in the thesis refer to Australian dollars.

CHAPTER 1: INTRODUCTION

1.1 INTRODUCTION

Chapter 1 serves as an introduction to the thesis by providing an overview of the research, particularly the what, the why and the how of the study. To this end, it comprises four main sections. Firstly, the chapter provides a problem statement by discussing the evolving role of airports in economic development driven by their privatisation process. Gold Coast Airport, the case study chosen for investigation in this research, is introduced in this section. Secondly, the chapter outlines the research objective and questions guiding this study. Thirdly, the chapter outlines three key reasons why Gold Coast Airport is chosen as a case study for this research. Lastly, the chapter outlines the structure of the thesis by introducing the different chapters it comprises.

1.2 PROBLEM STATEMENT

The following topics are broadly discussed in this section as the problem statement for this thesis:

- ✈ The historical significance of transport for economic development and urban development;
- ✈ The rapid growth and increasing importance of air transport;
- ✈ Links between airports and economic development;
- ✈ Privatisation of airports in Australia and around the world;
- ✈ Introduction to Gold Coast Airport; and
- ✈ The need to investigate Gold Coast Airport's role in economic development.

1.2.1 THE HISTORICAL SIGNIFICANCE OF TRANSPORT FOR ECONOMIC DEVELOPMENT AND URBAN DEVELOPMENT

Transport has long been recognised as a major driver of economic development (Button, 2010). Adequate transport network density and quality is essential for not only the daily function of a city and its economy, but also for international travel and trade (Banister, 2012). Prior to the Industrial Revolution, there were limited transport links as walking and the use of domesticated animals were the main modes of transport, thus hindering the economic growth of cities (Shaw-Taylor & You, 2018). The Industrial Revolution led to significant technological and infrastructural advancements for not only industrial activities but also the transport sector, particularly with the introduction of rail. In Britain, the substantial improvement in transport infrastructure throughout the Industrial Revolution contributed to the country's rapid economic growth and increased living standard during this period (Bogart, 2014).

In addition to stimulating economic development, transportation also has a broader impact by shaping urban development (Eberts, 2000). A clear example of how transport alters the structure of the urban

environment is the increasingly common urban sprawl created by dependency on cars, a global phenomenon that many cities around the world are currently experiencing. According to Grover (2013), four major waves of transport modes have historically altered the way that cities are planned and developed, including the following in a chronological order: seaports (e.g. Rome and Constantinople), rivers and waterways (e.g. London, Paris and Kolkata), rail (e.g. Chicago and Manchester) and cars (e.g. Los Angeles).

1.2.2 THE RAPID GROWTH AND INCREASING IMPORTANCE OF AIR TRANSPORT

Airports, which facilitate air transport by accommodating aircraft, are noted by Karsarda and Lindsay (2011) as the fifth and current wave of transport modes and infrastructure which drive urban development. Air transport is progressively becoming a more prevalent transport mode for the movement of both freight and people from one location to another both domestically and internationally. This phenomenon is attributable to four key factors, including increasing level of income and living standards, lower airfares, globalisation and deregulation of the global aviation industry (Air Transport Action Group, 2005). According to International Air Transport Association (IATA, 2019), the number of annual air passengers increased from 1.6 billion in 2000 to 4.4 billion in 2018. The average number of months between flights taken by a person dropped considerably from 45 to 21 in the same period. Meanwhile, the International Civil Aviation Organization (ICAO, 2016) forecasts a growth rate of 4.5 per cent per annum for the total yearly revenue passenger kilometres between 2012 and 2042.

The statistics above illustrate that air transport has become significantly more frequent amongst the global public, a trend expected to continue in the foreseeable future – until the impacts of the 2020 pandemic.¹ In Australia, aviation plays a significant role in facilitating the transport of both goods and people given the significant geographical distances between its major cities and between Australia and the rest of the world (Deloitte Access Economics, 2018). Australia's sea-locked location, together with its substantial distances to other countries, has made air transport an important means of international travel into and out of the country. In 2016-17, airports in Australia facilitated approximately 118 million domestic passenger movements and 39 million international passenger movements (Deloitte Access Economics, 2018).

¹ This research was completed in the early stages of the Covid-19 pandemic. Its implications for economic development planning around an airport are raised in the Conclusion (Chapter 8) as an important topic for future research.

1.2.3 LINKS BETWEEN AIRPORTS AND ECONOMIC DEVELOPMENT

Airports have been extensively linked with economic development in the literature (Bilotkach, 2015; Button et al., 2010; Green, 2007; Mosbah & Ryerson, 2016; Olipra & Augustyniak, 2015). Due to the rapid growth in air transport, the role of airports as economic development drivers has become more prominent than ever before, with a total of 65.5 million jobs, US\$2.7 billion (equivalent to 3.6 per cent of the global Gross Domestic Product (GDP)) created by the global aviation industry (ICAO, 2019). In 2016-17, the core operation of Australian airports contributed a total of \$4.9 billion to the Australian economy and supported employment of more than 8,700 full-time equivalent (FTE) jobs. Airports also support a variety of economic activities within their precincts such as retail, logistics and corporate spaces. As such, the broader economic contribution of Australian airports in 2016-17, attributable to both their core operation and other activities within airport precincts, was \$34.6 billion, equivalent to two per cent of Australia's GDP and supporting a total of 206,400 jobs in the financial year (Deloitte Access Economics, 2018).

1.2.4 PRIVATISATION OF AIRPORTS IN AUSTRALIA AND AROUND THE WORLD

Traditionally, airports were government-owned assets that primarily facilitated air travel for the public with limited focus on other activities. However, many airports around the world have undergone a 'privatisation' process where the ownership, planning, development and/or operation responsibility transitions from the public sector to the private sector. In Australia, under the Airports Act 1996 (the 'Airports Act' henceforth), 21 major airports, including Gold Coast Airport, have been privatised and are now operated, planned and developed by private organisations (Australian Government, 2018a). Since their privatisation, many airports around the world now have a key focus on maximising revenue from not only aviation uses but also non-aviation uses within their boundaries. As such, there has been a significant shift in management focus amongst privatised airports, thus implying that their role as an infrastructure and economic asset for their host region has changed significantly.

1.2.5 INTRODUCTION TO GOLD COAST AIRPORT

Since its privatisation in 1998, Gold Coast Airport (Figure 1.1) has been under the operation, planning and management responsibilities of Gold Coast Airport Pty Limited (GCAPL), a subsidiary of Queensland Airports Limited (QAL).



Figure 1.1: Gold Coast Airport (Source: QAL (2019a))²

Figure 1.2 on the following page displays the spatial context of Gold Coast Airport at the national, regional, local government area and local scales.

² The source image for Figure 1.1 is used with permission from QAL, which retains its full copyright.

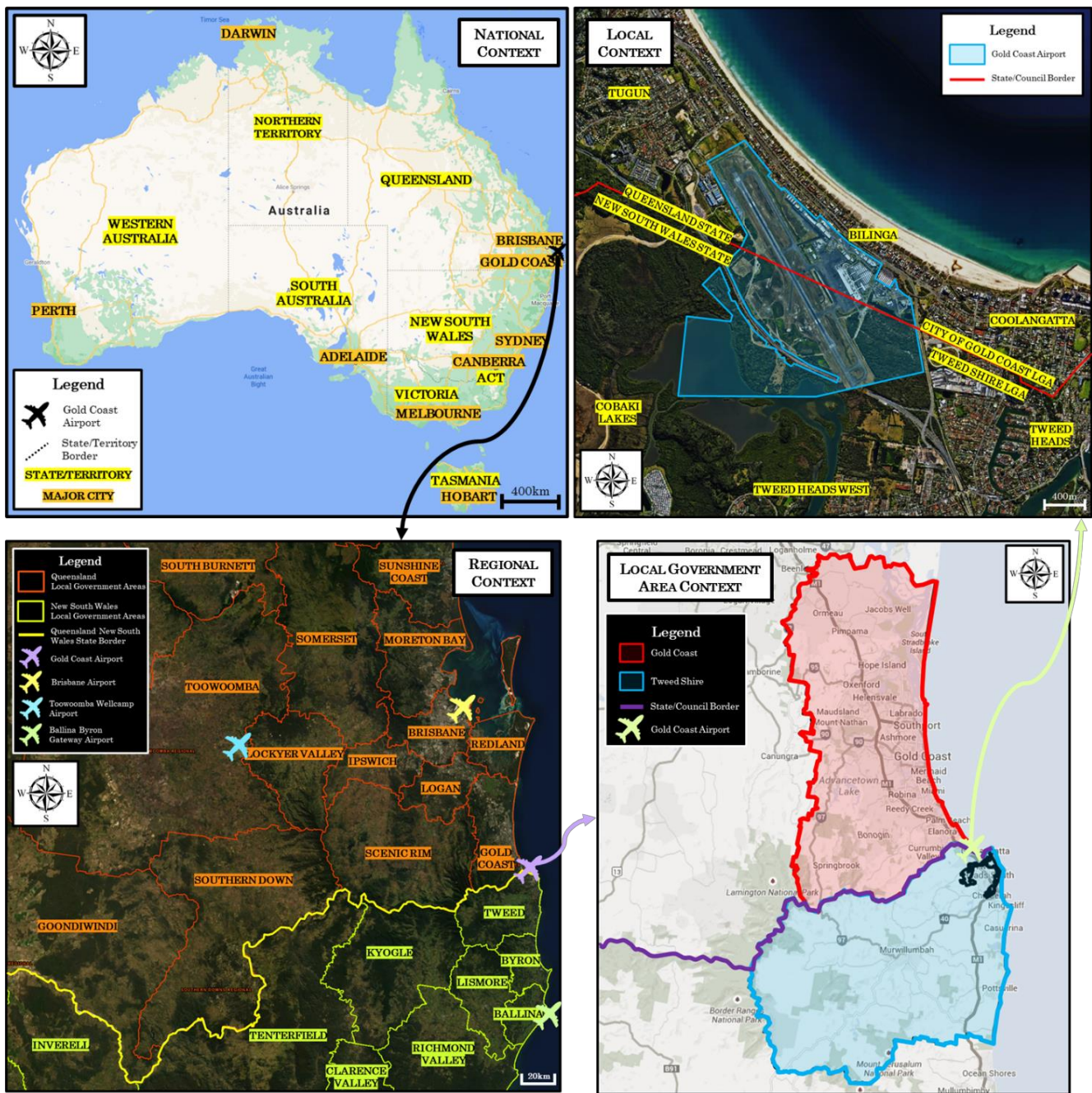


Figure 1.2: Context Map of Gold Coast Airport³

³ Figure 1.2 is created and labelled by the author with satellite imagery from Google Earth (Google, 2020a), Google Maps (Google, 2020b), Queensland Globe (QLD Government, 2020e) and .id (2019s, 2019t). The imagery from Queensland Globe is used under the CC BY 3.0 AU license (Creative Commons, undated-a; QLD Government, 2021a). The imagery from .id was compiled and presented by .id, the population experts. www.id.com.au. This material is a derivative of ABS Data that can be accessed from the website of the Australian Bureau of Statistics at www.abs.gov.au, and which data can be licensed on terms published on the ABS website. The replicated Map Data in the imagery from .id belongs to HERE (2016).

As illustrated in Figure 1.2, Gold Coast Airport's location spans two adjacent local government areas (LGAs) of the Gold Coast and Tweed Shire, as well as two neighbouring states, namely Queensland (QLD) and New South Wales (NSW). The location of Gold Coast Airport implies that the airport potentially plays a significant role as a cross-border economic development driver at both the local and regional scales.⁴ As the economies of Gold Coast and Tweed Shire are both highly dependent on tourism, the airport has potentially played a major role in driving the growth of this industry for the LGAs with its increasing passenger volume.

1.2.6 THE NEED TO INVESTIGATE GOLD COAST AIRPORT'S ROLE IN ECONOMIC DEVELOPMENT

Gold Coast Airport has experienced several major changes since its privatisation. Shortly after the transfer of management rights, the airport name was changed by GCAPL from Coolangatta Airport to Gold Coast Airport to leverage the Gold Coast's reputation as a tourism destination. Further, the airport, which previously only serviced domestic flights, eventually transitioned into an international airport. GCAPL also sought to develop Gold Coast Airport into a specialised low-cost carrier hub to capitalise on the rapid growth in the low-cost carrier industry. GCAPL's low-cost carrier focus led to a significant growth in the airport's passenger number, thus positioning the airport as "one of Australia's fastest growing airports" with more than 6.5 million passengers visiting the airport annually (GCAPL, 2019a). Throughout the two decades after the airport was privatised, GCAPL has also undertaken several infrastructure upgrades to accommodate the airport's rapid growth.

These outcomes illustrate that the privatisation of Gold Coast Airport has substantially influenced the airport's operational focus and passenger volume. In this regard, the significant growth in Gold Coast Airport's aircraft and passenger traffic indicates that the airport's contribution to economic development has increased. The airport's cross-border location implies that these amplified economic development contributions are distributed across the border, thus benefiting a range of stakeholders at both the local and regional scales. These major changes in Gold Coast Airport's operational focus

⁴ One of the central themes of this thesis is Gold Coast Airport's contribution to local and regional economic development. As discovered in Section 2.4.2, the primary distinction between local economic development and regional economic development is their geographical scale, with the former being smaller. The terms 'local' and 'regional' are used extensively throughout the thesis. Table 4.2 provides an outline of the local and regional scales the author has specifically applied to Gold Coast Airport. It is suggested that the terms 'local' and 'regional' are flexibly interpreted for the airport being considered given that contexts can significantly vary for different airports.

and economic contributions suggest a need to investigate the airport's evolving economic development role from an urban planning perspective.

A range of strategic, statutory and cross-border planning frameworks, which shape the planning and development processes and outcomes for both Gold Coast Airport and its surroundings, are currently in place. The intertwining of these planning instruments can create an environment which is either conducive or restrictive to the airport's economic development contribution. As such, there is a need to investigate how these frameworks affect Gold Coast Airport's economic development contribution.

Even though economic benefits of airports are multidimensional, past studies on the economic role of airports have primarily focused on quantitative measures of their economic development contributions such as employment generation and Gross Regional Product (GRP). Meanwhile, there has been limited planning investigation into how airports' economic benefits are shaped by attributes of their host region including land use, transport infrastructure and industry sectors. For Gold Coast Airport, the existence of vacant land parcels in proximity implies a major economic development opportunity to develop airport-compatible use.

Lastly, the privatisation of the major airports in Australia has effectively separated the planning processes for these airports and their surrounding land uses as planning frameworks imposed by local and state governments have no statutory influence on airport land (Baker & Freestone, 2008; Baker & Freestone, 2012). Consequently, tensions between the privatised airport operators and other stakeholders have become increasingly common, particularly when non-aviation uses are "approved [for the airports] with no determining input by local decision-makers" (Freestone & Baker, 2010, p. 264). Whilst these stakeholder conflicts have been investigated from an urban planning perspective, there been no studies on how the existing stakeholder relationships and community voice influence the economic development contributions of these privatised airports. Further, the cross-border location of Gold Coast Airport means that the airport is associated with several stakeholders from both sides of the LGA and state border. Therefore, stakeholder relationships potentially have a particularly significant impact on the airport's economic development contributions.

1.3 RESEARCH OBJECTIVE AND QUESTIONS

The research questions and sub-questions guiding this research are as follows:

- 1) **What is the existing nature and economic role of Gold Coast Airport?**
 - 1.1. What is the context of Gold Coast Airport at the local and regional scales?
 - 1.2. What are the key outcomes of Gold Coast Airport privatisation?
 - 1.3. What is the role of Gold Coast Airport in local and regional economic development?
- 2) **How do existing planning frameworks affect Gold Coast Airport's contribution to economic development?**
 - 2.1. How do strategic and statutory planning frameworks affect Gold Coast Airport's economic development contribution?
 - 2.2. How do cross-border planning frameworks affect Gold Coast Airport's economic development contribution?
- 3) **How do land use, transport and industry sectors shape Gold Coast Airport's contribution to economic development?**
 - 3.1. How do existing land use patterns in and around Gold Coast Airport shape its economic development contribution?
 - 3.2. How does existing and future transport infrastructure shape Gold Coast Airport's economic development contribution?
 - 3.3. What are the constraints and opportunities for Gold Coast Airport's contribution to the advancement of different industry sectors?
- 4) **How do stakeholder relationships influence Gold Coast Airport's contribution to economic development?**
 - 4.1. What is the current nature of the relationships between Gold Coast Airport Pty Ltd and state and local government agencies?
 - 4.2. How has community voice influenced development at Gold Coast Airport in recent years?

1.4 METHODOLOGICAL APPROACH

This thesis seeks to respond to the problems identified previously in Section 1.2 above. To this end, the principal research objective of this study is to “**investigate planning constraints and opportunities influencing Gold Coast Airport's contribution to local and regional economic development.**” To achieve this objective, the research is guided by four research questions, each of which focuses on a specific theme. Each research question is also associated with sub-questions, which concentrate on several sub-themes related to the overall theme of the research question.

The first research question, “**What is the existing nature and economic role of Gold Coast Airport?**” seeks to understand characteristics of Gold Coast Airport by investigating the existing context of Gold Coast Airport at the local and regional scales, the key outcomes of the airport's privatisation and its current role in local and regional economic development. Given the nature of the

topics explored, the first research question serves as a foundation for the three subsequent questions. For the second research question, **“How do existing planning frameworks affect Gold Coast Airport’s contribution to economic development?”** the research reviews the relevant strategic and statutory planning instruments and cross-border planning frameworks in terms of how they affect Gold Coast Airport’s economic development contribution. The planning frameworks investigated in this research question encompass planning instruments implemented by several stakeholders, including the private sector and government agencies at the Federal, state and local levels.

The third research question, **“How do land use, transport and industry sectors shape Gold Coast Airport’s contribution to economic development?”** focuses on how three different themes, namely land use, transport infrastructure and industry sectors, shape Gold Coast Airport’s economic development contribution. This research question specifically focuses on the local and regional contexts, which encompass both the Gold Coast and Tweed Shire LGAs. Lastly, the fourth research question, **“How do stakeholder relationships influence Gold Coast Airport’s contribution to economic development?”** explores the existing collaborative relationships between several relevant stakeholders, including GCAPL, local and state government agencies and local chambers of commerce, in the context of Gold Coast Airport’s economic development contribution. Community voice in response to development and other activities at the airport in recent years is also investigated in this research question. Similarly to the previous research question, the fourth research question focuses on the Gold Coast and Tweed Shire context.

The topic of this research, how various planning factors influence the economic development contribution of airports, broadly covers two social sciences: urban planning and economics. Case study research is employed as the methodology for this study given that it has played a major role in advancing the body of knowledge in several fields of social science (Ylikoski & Zahle, 2019). Additionally, the research explores how a complex, contemporary phenomenon that cannot be manipulated by the author, namely airports’ economic development contribution, occurs. As such, direct observation and interviewing with the stakeholders, who are relevant to the event, can be employed as data collection methods. These aspects of the study suggest that case study is the appropriate methodology for this research (Yin, 2014). Section 3.2 provides further justification for the methodology employed in this research.

To address all the research questions and sub-questions, which are further elaborated in Section 3.3, the research employs a mixed-method approach where the following five methods are implemented across the four research questions: spatial analysis, field observation, semi-structured interviews,

policy analysis and literature review. Section 3.4 of Chapter 3 discusses the research methodology, including the five methods above, in further detail.

1.5 WHY GOLD COAST AIRPORT?

Gold Coast Airport is chosen as the case study for this research due to three primary reasons. Firstly, the airport, as one of the 21 privatised airports in Australia under the Airports Act, has experienced not only a significant shift in its planning and development focus under the new management by GCAPL, but also a substantial growth in its passenger and aircraft volume since its privatisation in 1998. Given these changes, GCAPL (2018) notes that Gold Coast Airport has undergone ‘dramatic’ transformation since the organisation acquired planning and management rights for the airport. One of the major changes the airport has experienced is the significant increase in the number of destinations serviced by the airport, from three in 1998 (including Sydney, Melbourne and Hamilton) to 21 current destinations across not only Australia but also New Zealand and Asia.⁵ The airport’s significant transformation, particularly its rapid growth in passenger and aircraft volume, implies that its economic development contribution has been substantially magnified. Therefore, through analysing Gold Coast Airport as a case study for this research, a greater understanding of the impacts of airport privatisation on the economic development role of airports can be developed.

Secondly, Gold Coast Airport is situated in a highly unique location across not only the state border dividing QLD and NSW, but also the local council border separating the Gold Coast and Tweed Shire LGAs. The northern half of Gold Coast Airport is situated in QLD and the LGA of the Gold Coast whereas the airport’s southern half is located in NSW and the Tweed Shire LGA. The cross-border nature of the Gold Coast Airport’s location implies that the airport’s surroundings are subject to planning frameworks from not only the two state governments of QLD and NSW, but also two local councils, namely the City of Gold Coast (CoGC) and Tweed Shire Council. The intertwining of planning instruments at the state and local levels across the border effectively creates a complex layer of planning frameworks, which can significantly influence the economic contribution of Gold Coast Airport. As such, the case study will provide useful lessons for promoting economic development through airports in the cross-border context, which have practical relevance for stakeholders located in cross-border regions.

⁵ Section 4.5.3 further discusses the key outcomes of Gold Coast Airport privatisation.

Thirdly, Gold Coast Airport is the only airport in Australia to have a university campus located within its boundary (QAL, 2018). In 2010, Southern Cross University (SCU) leased a site in Gold Coast Airport for the development of its Gold Coast campus, which superseded the two campuses of the university previously located in the neighbouring Tweed Heads suburb (GCAPL, 2015). The distinctive co-location of Gold Coast Airport and the SCU campus not only establishes the airport as a unique case study but also is associated with both economic development and knowledge creation implications. Thus, exploring the relationship between both entities and the impacts of their co-location will yield useful lessons for other airports and universities.

1.6 SIGNIFICANCE OF THE RESEARCH

Promoting economic development has been one of the most important objectives amongst government agencies. This is particularly apparent in Australia where there have been a number of reforms, initiatives and inquiries to help improve the effectiveness of various branches of government in promoting economic development (Pugalis & Tan, 2017). In this regard, economic development is currently a key focus of government authorities in Australia as illustrated by the recent legislative amendments and infrastructure projects undertaken by state and local governments throughout the country.

Given the rapid growth of the aviation industry, the advancement in aviation technologies and the widespread airport privatisation phenomenon, airports now function as not only a transport facility, but also a major commercial centre with widespread economic impacts on communities. The lessons yielded from this research will inform government agencies and airport operators of how a variety of planning factors influence economic contributions of airports, a topic not sufficiently covered in the literature. These findings will have policy implications for government agencies and airport operators by assisting them in better planning of infrastructure projects and economic development planning frameworks.

Although there is rich literature linking airports with economic development, the majority of past studies are based on airports in the United States and focus primarily on quantitative economic measurements such as employment. Meanwhile, past urban planning investigations into Australian airports have concentrated on land use and stakeholder implications of their privatisation.⁶ This

⁶ Section 2.7.2 identifies and discusses the existing literature gaps in further detail.

research seeks to complement these studies by incorporating both urban planning and economic development considerations into an investigation on Gold Coast Airport's role in local and regional economic development, thus contributing new knowledge to the literature.

This research is also focused on a contemporary phenomenon of airport privatisation, which has led to several debates on impacts of privatised airports on their local communities. In Australia, given the regulatory environment and the Airports Act legislation, the privatisation process has led to a separation of planning processes between airport operators and government agencies. As a result, there is often opposition when one party implements a new plan or approves a new development for local communities or airports. By investigating the stakeholder relationships relevant to Gold Coast Airport and its economic development contribution, lessons arising from this research will have practical implications by potentially promoting more collaborative relationships between stakeholders, thus leading to more successful local and regional economic development planning processes.

Finally, the lessons drawn from the Gold Coast Airport case study can help inform several stakeholders in the public and private sectors in their respective planning processes. As such, they can potentially lead to the development and implementation of planning instruments and practices which positively influence the economic development contribution of airports not only in Australia but also around the world. Due to the study's investigation into the cross-border nature of Gold Coast Airport's context, the lessons provided by this thesis may also be applicable to other cross-border regions. In this regard, the lessons can assist stakeholders in sharing a more synergistic collaborative cross-border relationship, thus creating an environment which is more conducive for promoting economic development.

1.7 STRUCTURE OF THESIS

The thesis comprises eight chapters. This chapter, Chapter 1, has introduced the research by providing a problem statement and outlining research objective and questions. The chapter has provided justification for the selection of Gold Coast Airport as a case study for the research and outlined the significance of this study to the planning literature and practice. Lastly, in this section, the chapter presents an outline of this thesis structure by introducing the different sections and chapters the thesis comprises. Chapter 2 investigates the characteristics of airports and their role in local and regional economic development. As the literature review chapter for this thesis, Chapter 2 develops a theoretical framework which serves as a foundation for this research. Next, Chapter 3 outlines the

research methods and methodology used in this study and provides justifications for the approach used in this research. The chapter further describes the research framework, introduced previously in Section 1.4, and explains the methods employed for each of the four research questions.

Chapters 4 to 8 focus on the four research questions previously introduced in Section 1.3. Thus, these chapters encompass the original findings of this thesis. Figure 1.3 below illustrates how chapters 4 to 8 address the four research questions.

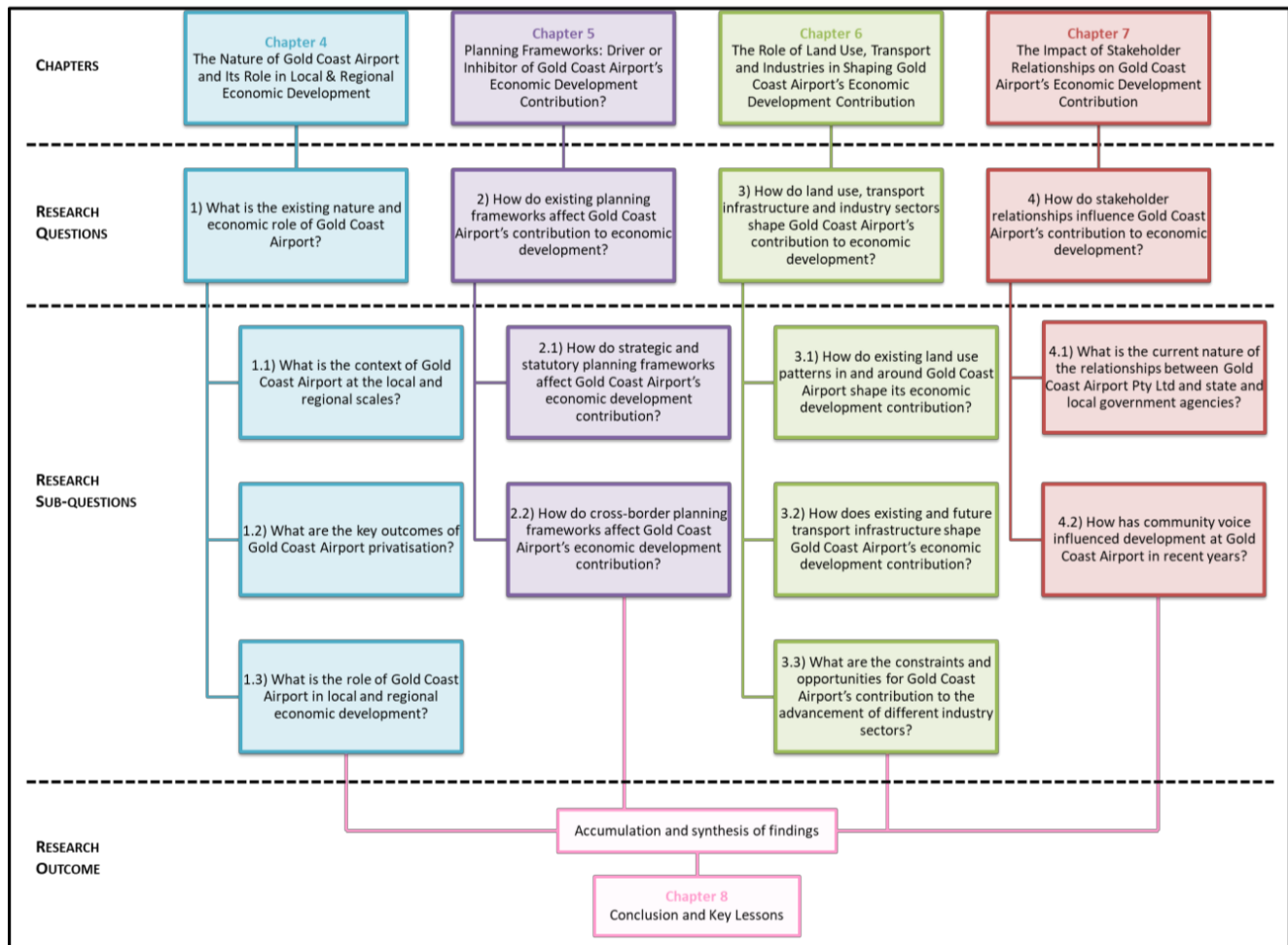


Figure 1.3: How Chapters 4 to 8 Address the Thesis Research Questions

As shown in Figure 1.3 above, Chapters 4 to 7 each responds to one of the four research questions sequentially. Chapter 4, addressing the first research question, investigates the nature of Gold Coast Airport and its current role in local and regional economic development. The chapter incorporates a context analysis of Gold Coast Airport's surroundings at different scales and a discussion on Gold Coast Airport's history, privatisation outcomes and current contribution to economic development at the local and regional levels. The chapter also develops a conceptual classification for Australian airports, which is then applied to Gold Coast Airport to classify it as a 'Second-Tier Airport'. The

following chapter, Chapter 5, in response to the second research question, explores the existing planning frameworks implemented by both the private sector and government agencies at the local, state and Federal levels. The chapter reviews several strategic, statutory and cross-border planning instruments in terms of how they affect Gold Coast Airport's economic development contribution.

Chapter 6 answers the third research question by investigating land uses in and around Gold Coast Airport and the current and future transport infrastructure servicing the airport in terms of how they shape the airport's economic development contribution. The chapter also discusses key issues and opportunities for Gold Coast Airport's contribution to the advancement of several industry sectors, including freight, medical tourism, tourism, business and education. Subsequently, Chapter 7 addresses the fourth and final research question by assessing how stakeholder relationships influence Gold Coast Airport's economic development contribution. To achieve this, the chapter explores the existing relationships between several stakeholders, including government agencies at the state and local levels, GCAPL, local destination marketing organisations and SCU. Moreover, financial support from state governments is examined in terms of how it influences Gold Coast Airport's economic development contribution.

Following Chapter 7, the thesis, having answered all four research questions in the four preceding chapters, accumulates and synthesises the findings from chapters 4, 5, 6 and 7 into conclusions and key lessons, which are the research outcome of this study and are outlined in Chapter 8. Given the nature of the contents in chapters 4 to 8, these chapters comprise the original findings of this thesis.

The next chapter of the thesis, Chapter 2, presents literature review findings on characteristics of airports and their role in local and regional economic development. It also identifies existing literature gaps and establishes links between the literature review findings and the thesis research questions.

CHAPTER 2: CHARACTERISTICS OF AIRPORTS AND THEIR ROLE IN LOCAL AND REGIONAL ECONOMIC DEVELOPMENT

2.1 INTRODUCTION

Chapter 2 conducts a literature review on characteristics of airports and their role in local and regional economic development to develop a theoretical framework for this research. Specifically, four key themes are covered in the literature review as displayed in Table 2.1 below, which also outlines the different sub-themes associated with each theme.

Table 2.1: Overview of Literature Review Themes and Sub-Themes

Theme	Sub-Themes
Airport Privatisation	<ul style="list-style-type: none"> ✈ The historical origin of airport privatisation ✈ Drivers of airport privatisation ✈ The extent of private sector involvement in airport governance ✈ Outcomes of airport privatisation in Australia
Local and Regional Economic Development	<ul style="list-style-type: none"> ✈ Definition of economic development ✈ Differences between local economic development and regional economic development
Airports and Economic Development	<ul style="list-style-type: none"> ✈ The role of airports in economic development ✈ Economic development contribution of airports ✈ The influence of planning factors on economic development contribution of airports
Cross-Border Planning	<ul style="list-style-type: none"> ✈ The increasing importance of cross-border planning ✈ Overview of cross-border planning in Australia ✈ Cross-border planning for Albury-Wodonga (NSW-VIC) ✈ Cross-border planning for Canberra and its surrounding shires (ACT-NSW)

Prior to discussing the literature review findings on the themes and sub-themes outlined in Table 2.1 above, the chapter firstly introduces the thesis topic by providing an overview of airports in terms of their definition, function and significance in urban planning and development.

2.2 OVERVIEW OF AIRPORTS

As an introduction to the thesis topic, this section of the literature review provides a brief overview of airports by defining what airports are in terms of their form, land uses and operation. The significance of airports in urban planning and development, including conceptual models of airport-driven urban development, is also established.

2.2.1 WHAT ARE AIRPORTS?

According to the International Civil Aviation Organization (ICAO, 2018, pp. 1-2), an aerodrome is “a defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.” An airport is a type of aerodrome which contains facilities to facilitate commercial air transport (Wragg, 2008). As such, it is a facility where passengers transition from ground transportation (e.g. rail or bus) to air transportation and vice versa. Further, an airport is an aerodrome with a license from a relevant government organisation (e.g. the United States’ Federal Aviation Administration (FAA)) (Sherry, 2009). Thus, while all airports are considered aerodromes, not all aerodromes necessarily function as airports.

An airport which provides “entry and departure for international air traffic, where the formalities incident to customs, immigration, public health, agricultural quarantine and similar procedures are carried out” is defined as an ‘international airport’ by the ICAO (2009, pp. B-3). Without the presence of international air traffic and the facilities and procedures to screen inbound and outbound international air passengers, an airport is considered domestic in terms of its operation.

According to the Civil Aviation Safety Authority (CASA, 2019), two types of commercial flights, namely Regular Passenger Transport (RPT) and Charter, service airports and are available to the general public. Flight operations conducted for remuneration with fixed scheduled and routes, and on which seats and/or cargo space is accessible to the public are referred to as RPT. Charter, on the other hand, refers to non-scheduled operations by an aircraft operator where passengers or cargo are carried for hire or reward.

2.2.2 SIGNIFICANCE OF AIRPORTS IN URBAN PLANNING AND DEVELOPMENT

The scale, role and meaning of major airports around the world have transformed in recent years due to various economic and corporate factors. Such a change has resulted in complex, multi-dimensional issues surrounding airport development (Stevens, 2006). Airports are proposed by Karsarda and Lindsay (2011) as the fifth wave of transport infrastructure which transforms the way cities are planned and developed. Figure 2.1 below displays the five historical waves of transport infrastructure, including airports as the fifth wave, which have significantly altered urban development patterns.

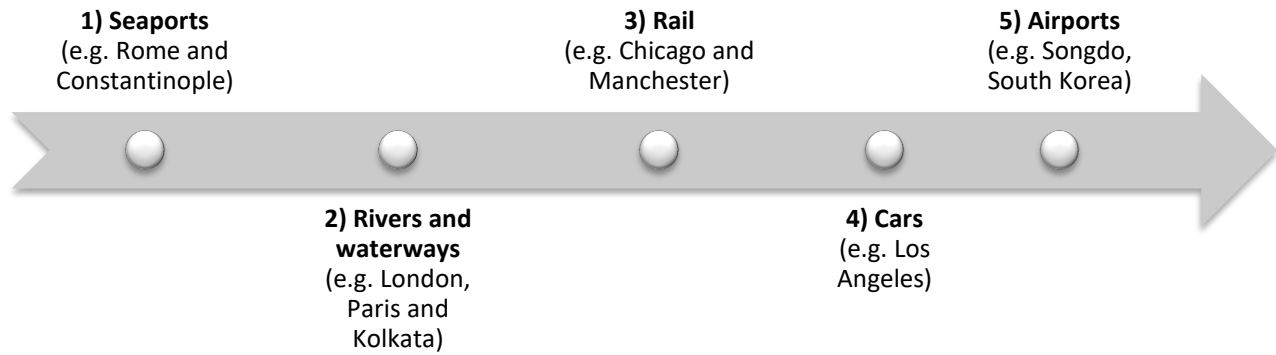


Figure 2.1: Five Historical Waves of Transport Infrastructure Altering Urban Development Patterns (Source: Grover (2013))

Given the economic significance of contemporary airports, the concept of ‘Airport Cities’, where urban development is centred around an airport to capitalise on the efficient access to air transport, has gained significant attention from academics, government officials and various other stakeholders globally (Grover, 2013). According to Karsarda (2013), there were more than 80 Airport Cities and airport-centred urban economic regions around the world as at 2013. Several city development models based on airports have been conceptualised and implemented, including the Aerotropolis.

The Aerotropolis, conceptualised by (Karsarda, 2010, p. 21), is “an airport-integrated urban economic region anchored by a multimodal airport city core and nearby commercial development” for businesses which benefit from access to air transport due to their time-sensitive nature such as Just-In-Time (JIT) manufacturers, medical centres, hotels and freight and logistic companies. The Aerotropolis model designates an airport and its immediate surroundings as an ‘Airport City’, which comprises the airport’s terminals, express couriers, perishables storage, hotels and offices and is surrounded by a ring road. The Airport City is efficiently linked with the rest of the Aerotropolis and other city centres outside the metropolis through highways called ‘Aeroplanes’ and high-speed rail corridors referred to as ‘Aerotrails’. The Aerotropolis concept has recently been implemented in the creation of several new metropolises around the world, including Western Sydney, a greenfield region centred around Western Sydney International (Nancy-Bird Walton) Airport. The Western Sydney Aerotropolis, currently under construction in conjunction with its associated airport, is expected to create approximately 200,000 new jobs for the Western Sydney region across several high-skill industries, including education and research, freight and logistics, agribusiness, healthcare, manufacturing and aerospace and defence (NSW Government, undated-c).

In addition to the Aerotropolis, several other models of airport-driven urban development, which are outlined in Table 2.2 below, have been conceptualised.

Table 2.2: Other Airport-driven Urban Development Models (Source: Freestone and Baker (2011))

Model	Description
Airea	Separate clusters of airport-related development commonly located in a metropolitan subregion and developed by the private market
Airfront	A commercial zone located in the fringe of an airport, which has close links to the airport's operation and is typically developed through public-private partnerships
Airport City	A planned, mixed use development on an airport's land, led by the airport's owner/lessee
Airport Corridor	A corridor located between an airport and a CBD where infrastructure and commercial development are provided in a coordinated fashion by government authorities and private developers
Decoplex	A greenfield airport community located in a regional area and primarily functioning as a fly-in setting, the development of which is led by a master developer

As shown in Table 2.2 and the prior discussion on the Aerotropolis, airports have played a significant role in terms of shaping urban development patterns. This trend can be attributed to the rapid growth in air transport as a means to transport freight and people, underpinned by several factors including improved aircraft technologies, lower airfares and higher disposable incomes amongst the public.

Having provided an overview of airports in terms of their form, function and significance in urban planning, the next section of the literature review focuses on airport privatisation, a phenomenon which the majority of airports around the world have undergone.

2.3 AIRPORT PRIVATISATION

Four aspects of airport privatisation are discussed in this section of the literature review, including:

- ✈ Historical origin of airport privatisation;
- ✈ Drivers of airport privatisation;
- ✈ The varying extent of private sector involvement in airport governance around the world; and
- ✈ Outcomes of airport privatisation in Australia.

2.3.1 THE HISTORICAL ORIGIN OF AIRPORT PRIVATISATION

2.3.1.1 Rapid Growth of Aviation Industry

Following the conclusion of World War II (WWII), the aviation industry has experienced significant growth due to deregulation of the airline industry, which stimulated global competition amongst airlines. The competition led to lower airfares, which made air travel significantly more accessible to the general public. The global number of air passengers increased from 1.02 billion in 1990 to more than 3.03 billion in 2012 (World Bank, undated). It has been predicted that both passenger and cargo traffic would grow by five per cent per annum between 2013 and 2032 (Boeing, 2014).

In Australia, aviation is the principal driver of the country's international tourism industry given that the country is a remote island continent with no land adjoining other countries. It has been estimated that over 99 per cent of international tourists travel to Australia by air (Australian Government, 2009). From 1977 to 2010, the total number of passenger movements through Australian airports per annum increased from 27.0 million to 135.1 million. During this period, the air passenger figure grew by an average of 5 per cent per annum (Australian Government, 2012). Meanwhile, according to the Bureau of Infrastructure, Transport and Regional Economics (BITRE, 2014), international air freight volume in Australia increased from 0.23 million tonnes in 1985 to 0.87 million tonnes in 2012 through an average increase of 5.2% per annum.

Traditionally, governments financed airport development through public debt, supplemented by tax revenues and airport user fees. The rapid growth of the aviation industry, however, strained resources of governments around the world "to the limit" (Hooper, 2002, p. 289). The International Civil Aviation Organization (ICAO), for example, estimated that an investment of \$250 billion would be required for airports around the world between 2000 and 2010 in order to meet the increasing aviation demands (Spillers, 2000). The significant resources needed to meet the growing aviation demands were a major factor influencing governments around the world to "corporatize, privatise and deregulate" their airport infrastructure (Hooper, 2002, p. 289). This was especially the case given the substantial revenue governments could receive from the privatisation process, which is further discussed in Section 2.3.2.1.

2.3.1.2 Neo-Liberalism

Neo-liberalism has become a major driver for public policies and provision of services around the world (Self, 1993). The concept has been noted by several academics to be "the dominant ideology shaping our world today" (Thorsen & Lie, undated, p. 1). According to neo-liberalism, market mechanisms are the best instruments for efficiently allocating resources. Any intervention in the economy from governments is seen as undesirable as it can undermine the logic of the free marketplace (Thorsen & Lie, undated).

Neo-liberalism has led to the current context of global free market economies, and it is a key agenda which drove the privatisation processes for many airports in Australia and around the world (Stevens, 2012). Under neo-liberalism, the inefficiency and failures of public resource management became a foundation for privatisation of these resources (Peck & Tickell, 2002). Neo-liberalism and privatisation was influenced by Adam Smith, who advocated that resource allocation was best served by a free market economy based on strong competition and self-interest (Humphreys, 1999). In

Australia, the Federal Government's Airports Act and National Aviation Policy, which are further discussed further in Section 2.3.3.4, also represent neo-liberal planning policies (Stevens, 2012).

2.3.2 DRIVERS OF AIRPORT PRIVATISATION

In 1987, British Airports Authority (BAA) was sold by Prime Minister Margaret Thatcher to the public via stock offering under the Airports Act 1986. This event is seen as a major driver for subsequent airport privatisations around the world (Baker & Freestone, 2008; de Neufville, 1999; Kramer, 2004). Three key drivers, which are further examined below, have underpinned the worldwide phenomenon of airport privatisation, including the generation of government revenue, profitability associated with aviation and non-aviation incomes and stimulation of competition and airport efficiency.

2.3.2.1 Generation of Government Revenue

The privatisation of airports has been a common instrument used by government agencies to generate cash inflows for reducing their debt (O'Donnell et al., 2011). A key attraction of airport privatisation is the substantial revenue that governments could acquire from the private industry in the process (Kramer, 2004). For example, in their privatisation process, Melbourne Airport and Brisbane Airport generated more than \$1.255 billion and \$1.314 billion in government revenue, respectively (The Australian National Audit Office, 1998). As governments have limited funding for infrastructure projects, privatisation helps reduce the resources required for airport improvements by shifting the financial responsibility to the private sector (Kramer, 2004).

2.3.2.2 Profitability Associated with both Aviation and Non-Aviation Incomes

Operators of privatised airports can capitalise on the magnitude and variety of income streams from the airports' aviation activities (such as aircraft landing and parking fees) and non-aviation services (such as commercial revenues from retail stores and advertising) (Kramer, 2004). Traditionally, aviation activities were the primary source of income for airports. However, given the changing role and nature of airports, non-aviation activities have in recent years become another important income source for airports (Zenglein & Müller, undated). Between 2009 and 2010, Brisbane Airport and Canberra Airport's non-aviation revenue contributed to 57.5 per cent and 80.1 per cent of the airports' total incomes, respectively (Australian Productivity Commission, undated).

During the marketing process of the Australian airports for privatisation, the sales team from the Federal Government emphasised the income opportunities from non-aviation uses within the airports,

including property development, car parking and other commercial activities (Baker & Freestone, 2008). This highlights the increasing importance of non-aviation income, which, in addition to revenue streams from aviation activities, is a major attraction for private investors to become involved in airport governance and management.

2.3.2.3 Stimulation of Competition and Efficiency

Traditionally, privatisation is seen as a means of overcoming inefficiencies associated with operation, planning and management of publicly owned enterprises (Domney et al., 2005). Public enterprises could be operationally inefficient due to pressures from political parties or trade unions (Boycko et al., 1996; Shirley & Walsh, 2000). On the other hand, private enterprises can achieve greater profitability due to lower political influence, stronger market-based incentives and their objective to achieve optimal financial performance (Vickers & Yarrow, 1991). To this end, managers of privatised enterprises often focus on maximising operational efficiencies and providing strong returns to shareholders (O'Donnell et al., 2011). The efficiency associated with private enterprises is a major motivator for governments to privatise airports.

Competition amongst privately operated corporations can stimulate these enterprises to become even more efficient in order to be more competitive in the marketplace. A major driver of airport privatisation is therefore to stimulate rivalry and competition amongst airports (Hooper, 2002). With privatised ownership and the resultant market competition, airports' quality and efficiency of services can be improved for airlines and passengers alike. The following quote from Jeff Fegan, chief executive of Dallas/Fort Worth Airport, demonstrates the airport's intention to become more efficient in order to attract more customers in a competitive marketplace (The Sydney Morning Herald, 2011):

We have Houston that's 200 to 300 miles south of us, we have Chicago ... Denver, Atlanta ... we have a bunch of different major [airport] hubs that we compete with and we want to make sure we are the most attractive, best-positioned airport out there so that we can bring in more service.

However, if a privatised airport has a monopoly and faces limited competition in the marketplace, its operators may abuse its market power by increasing user charges and reducing its service quality. This has been demonstrated by the case of Sydney Airport in which "monopoly rents" have been charged to airlines and passengers (O'Donnell et al., 2011, p. 76).

2.3.3 VARYING EXTENT OF PRIVATE SECTOR INVOLVEMENT

According to de Neufville (1999, p. 10), no airport is "fully privatised" given that privatised airports around the world are affected by substantial government control. While these airports are planned and operated by private corporations, they are not allowed by governments to engage in three specific

activities which are common in other industries dominated by private enterprises. First, they cannot establish their performance standards and are required to comply with aviation standards articulated by governments. Second, some privatised airports cannot freely enforce specific prices on airport-related services due to government regulations. Third, while manufacturers can traditionally limit access to their products through licenses, privatised airports must be equally open to all airline customers who meet minimum criteria (de Neufville, 1999).

No airport should be completely privatised because of the significant public interest in the manner in which airports, as important public infrastructure, are operated and developed (de Neufville, 1999). If airport planning is driven fully by private interests, the interests of the public could be ignored and therefore adversely affected. Two arrangements are proposed by de Neufville (1999) to effectively exercise government control on airport planning and development. The first option is to allow governments to regulate and control businesses of private airport operators. However, this practice often leads to adversarial relationships between private and public stakeholders. The second, preferred option is a collaborative partnership, in which governments are key partners in airport development. This arrangement is less adversarial than the first option and can promote more positive outcomes in airport planning and governance.

To illustrate how the extent of private industry involvement in airport governance can vary, the different airport privatisation models common in the United States, Asia, Europe and Australia are discussed below.

2.3.3.1 United States

Major privatised airports in the United States are planned and developed through collaborations between federal government, local governments and private companies. Proposals for major developments within airports are normally led by local governments. Funding for these plans is comprised of not only public revenue from the US Federal Aviation Administration but also financial contributions from airlines. Additionally, airlines have substantial power to influence airport development and management in the United States given their legal rights to veto investments in airports (de Neufville, 1999). This form of airport governance is highly representative of public-private partnership arrangements. However, due to the public interest in these facilities, these major commercial airports are still under the ownership of government authorities.

2.3.3.2 Asia

In recent years, there has been significant growth of air travel demand and activities throughout Asia. This change has placed enormous pressure on the region's existing airport infrastructure, signalling the need for development of new airports and upgrading of existing airports. The private sector has been extensively involved in this process. However, Asian governments have demonstrated a preference to retain the majority of control on airports given that many countries in Asia lack institutions capable of effectively regulating a complex aviation industry. To this end, they have engaged the private sector in order to procure a new source of finance for their airport development projects. In this regard, Build-Operate-Transfer (BOT) contracts and the establishment of airport companies for attracting private investments are common for airport infrastructure projects throughout Asia (Hooper, 2002).

2.3.3.3 Europe

Several airports throughout Europe are managed by mixed public-private firms, in which the ownership is divided between the public and private sectors. These firms, which operate under private commercial law (Warner & Bel, 2008), are categorised by the European Union as Institutional Public-Private Partnerships (IPPPs). IPPPs differ from Contractual Public-Private Partnerships (CPPP) where governments award a contract to the private industry to deliver a certain service. Under IPPP arrangements, governments in conjunction with private firms establish jointly owned firms in which governments can exercise control via property rights (Albalade et al., 2012). Smaller airports in Europe, however, are "still owned and operated by the public authorities in the public interest" (Turiak, 2013, p. 82).

2.3.3.4 Australia

As at September 2020, 21 major airports are privatised under the Airports Act. These airports are leased to private corporations for 50 years, with an option to extend the lease for an additional 49 years. Airport privatisation in Australia therefore implements leasehold rather than freehold sales. This effectively provides the Federal Government with an ongoing oversight role in monitoring not only development within the airports but also prices and charges imposed on airport users by the airport managers (O'Donnell et al., 2011).

As part of the lease arrangements, operators of these airports were granted the rights to operate and manage the airports. Additionally, they acquired a range of development rights with no land use restrictions, other than the need to comply with the Airports Act. Air traffic control and safety,

however, is primarily under the responsibilities of government authorities (Baker & Freestone, 2008) such as Airservices Australia and Civil Aviation Safety Authority. Under the Airports Act, operators of the privatised airports are required to prepare an airport master plan with a 20-year vision, which must be replaced every five years. These airport master plans are required to be made public to garner and incorporate feedback from local communities and stakeholders. Following the release of the Federal Government's National Aviation Policy White Paper in 2009, the privatised airports' operators are now required to prepare a Major Development Plan (MDP) for any proposed development project, which is associated with significant social, economic and/or environmental impacts and more than \$20 million in its construction cost (Office of Legislative Drafting and Publishing, 2011; Planning Institute of Australia, 2014). Before the proposed development project can commence, MDPs must first be approved by the Minister for Infrastructure, Transport and Regional Development (Baker & Freestone, 2008).

Having outlined the different extent of private industry involvement in airport governance and management around the world, key results of airport privatisation in Australia are discussed next.

2.3.4 OUTCOMES OF AIRPORT PRIVATISATION IN AUSTRALIA

2.3.4.1 Separation of Airport Planning and Town Planning Processes

As the privatised airports in Australia are located in boundaries of Federal Government jurisdictions, development within these airports is not subject to state and local government planning instruments under the Airports Act. The ability of privatised airport lessees to bypass these regulations is a source of planning and development conflicts across several Australian cities (Stevens, 2006; Stevens & Baker, 2013). Local councils and state governments' input into airport planning process is limited to the feedback they can provide during the consultation processes for draft airport master plans. Meanwhile, operators of privatised airports have limited input on surrounding development, which is under the jurisdiction of local governments. This can become an issue of concern for airport operators when residential development encroaches into approach and departure flight paths (Stevens et al., 2010).

Town planning and airport planning has historically been separate process in Australia. Even prior to the Airports Act, planning and development of airports, considered to have national significance, was under the control the Federal Government and not subject to local and state planning regulations. This regulatory environment was not an issue in the past given that many airports were located at least 20 kilometres away from urban centres. As such, any development within airport boundaries had

relatively little or no impact on local communities. However, the rapid urban growth since the 1980s has led to co-location of airports and urban communities as is the case for cities such as Melbourne, Sydney, Brisbane and the Gold Coast. As a result, any development within these airports is now likely to have implications on the immediate surrounding communities, and vice versa (Baker & Freestone, 2008).

2.3.4.2 Light-Handed Government Regulation of Privatised Airports

The Federal Government, aware of the significant market power held by the major Australian airports, implemented a price control mechanism on airport charges as the privatisation of the airports commenced in 1997. However, after the Productivity Commission's 2002 report, these price regulations were significantly reduced, and instead, a 'light-handed' approach was introduced to regulate airport prices (O'Donnell et al., 2011).

2.3.4.3 Commercial Objectives of Airport Operators

As a result of privatisation, many airport operators now seek to maximise returns on investment by increasing and diversifying commercial activities within airports. As such, airports, traditionally transport hubs, are now "mixed use activity centres of increasing regional significance" (Baker & Freestone, 2008, p. 1). Several private operators of airports in Australia have adopted commercial objectives in order to maximise revenue, improve service standards for airport customers and minimise risk associated with dependence solely on aviation revenue (Baker & Freestone, 2008). To this end, many Australian airports have been developing commercial facilities under the argument that this development is essential for maintaining steady revenue streams in light of recent uncertainty in the aviation market (Stevens et al., 2010).

Along with the traditional, ongoing concerns associated with airport noise and environmental impacts, commercial developments within privatised airports have often been sources of conflicts with local councils. These non-aviation uses are perceived to not only adversely affect the economic activity in the surrounding area but also generate additional traffic on the local transport infrastructure (Baker & Freestone, 2008). The ability of the privatised airports to undertake non-aviation development, particularly commercial development, without being subject to local and state planning laws has been challenged by several industry representatives. For example, the Planning Institute of Australia (2006), in their National Position Statement of "Development on Airport Land", questioned the ability of airports to bypass local and state controls for commercial development as it is in conflict with the competitive neutrality principle promoted by the National Competition Policy. Similarly, the

Shopping Centre Council of Australia (undated, p. 1) articulated that privatised airport operators have “an unfair advantage when developing airport land for commercial non-aviation purposes.” Without council and state planning controls, commercial development within these airports introduces not only additional competition to the local businesses, but also more traffic to and from the airports. The costs required for transport infrastructure investments to accommodate this additional traffic are not accounted for by the airports as commercial development in the privatised airports is not subject to council infrastructure charges. Therefore, such development ultimately puts additional strain on council revenue, the majority of which is funded by ratepayers.

2.3.4.4 Land Use Diversification in Airport Boundaries

Major airports in Australia, since their privatisation under Airports Act 1996, have evolved from public transport hubs to commercial entities with economic significance for their local regions (Baker & Freestone, 2008; Gerber, 2002; Stevens, 2012). Aviation revenue in these airports is now only a part of the entire ‘airport business’ where a range of non-aviation land uses operate simultaneously (Stevens, 2006). As such many of these airports now contain a diversity of land uses relating to both aviation and non-aviation activities. Some of the non-aviation land uses within these airports include office spaces, retail, industrial and aviation educational precincts (Freestone & Baker, 2010). However, the introduction of such non-aviation land uses on airport land has, on several occasions, led to airport operators’ conflicts with local government and/or state government agencies (Cohen & Brown, 2017).

Having discussed the phenomenon of airport privatisation in terms of its historical origin, drivers and outcomes, the next section of the literature review examines local and regional economic development.

2.4 LOCAL AND REGIONAL ECONOMIC DEVELOPMENT

This section of the literature review defines economic development and explores key differences between local economic development and regional economic development.

2.4.1 DEFINITION OF ECONOMIC DEVELOPMENT

The traditional definition of economic development is that of wealth creation (Leigh & Blakely, 2013). To this end, economic development is often linked with ‘economic growth’, which can primarily be achieved through increasing a tax base and creating additional employment (Armstrong

& Taylor, 2000; Fitzgerald & Leigh, 2002; Malizia & Feser, 1999). Through the coordination and provision of such infrastructure as housing, sewers and roads, planners play an important role in maximising economic growth. They also act as ‘crisis managers’ by ensuring that economic crises are avoided (Allmendinger, 2017). However, simply focusing on economic growth can adversely impact the foundation for economic development due to several issues such as income inequality, limited natural resources and inadequate education for and skill level of labour. Unequal living standard and wellbeing between places with similar income levels has led to dissatisfaction with the conventional economic development methodology (Sen, 1999). As such, economic development literature and practices are beginning to transition away from ‘growth’ to ‘development’, in which greater attention is given to the following three factors: standard of living, equality and sustainable resource use and production (Leigh & Blakely, 2013). As a field of study, economic development was not conceptualised until after WWII (Malizia & Feser, 1999). During the post-WWII recovery period, there was widespread desire amongst several countries to avoid replicating the problems experienced throughout the Great Depression, which had been caused by the narrow focus of economic growth (Deller & Goetz, 2009). The Local Government Commission (2004, p. 1) outlines the key differences between economic growth and economic development:

One of the biggest myths is that in order to foster economic development, a community must accept growth. The truth is that growth must be distinguished from development: growth means to get bigger; development means to get better – an increase in quality and diversity.

Whilst economic development facilitates an overall improvement in quality of life, economic growth is only concerned with generating additional economic activities and wealth, which may or may not lead to positive social outcomes due to issues such as inequitable income distribution. As such, Roy (2018, p. 2) notes that “economic growth does not automatically ensure that it would improve the living standards of large numbers of people,” particularly those in developing countries where income inequality is a common issue. Similarly, Todaro and Smith (2020) provide a distinction between traditional and contemporary economic development measures. They note that traditional economic development measures are concerned with ‘economic growth’ or monetary factors (e.g. income per capita, gross national income and GDP) whereas contemporary indicators are related to quality of life (e.g. income distribution equality, employment and poverty reduction). To achieve higher living standards, economic development is concerned with not only the traditional objective of efficiently allocating resources, but also several other mechanisms across multiple realms. These include the social, political, economic and institutional domains and both the public and private sectors.

Canzanelli (2001, p. 24) argues that economic development is a “means for achieving wellbeing, according to the culture and the conditions of certain populations” rather than simply being an objective. As such, economic development is highly dependent on context and its processes and targets should therefore differ according to the region and the needs of its population. Stimson et al. (2006) propose that economic development is associated with both qualitative and quantitative dimensions. They also list the following examples of qualitative and quantitative indicators of economic development:

- ✈ **Qualitative** – social and financial equity, sustainable development, employment and quality of life;
- ✈ **Quantitative** – wealth and income levels, financial security and goods and services availability.

According to Leigh and Blakely (2013), the underlying rationale of economic development theories can be expressed through the following formula:

$C \times R$, where

- ✈ **C** is a locality’s **capacity** (e.g. social, economic, political and technological capacity); and
- ✈ **R** is a locality’s **resources** (e.g. natural resources, location, capital investment and labour).

The formula above illustrates that economic development within a locality can be achieved through a combination of both capacity and resources within the area. The absence or scarcity of one of these two factors would significantly hinder the locality’s economic development progress. Conversely, a multiplier effect exists in which an increase in capacity or resources will amplify economic development progress. In today’s global economy with advanced technologies, cities dependent on a single industry or a narrow industrial base are highly vulnerable to the relocation of industry operators and their capital (Leigh & Blakely, 2013). Therefore, in their pursuit of economic development, government agencies should focus on diversifying the economic sectors of their cities to ensure their economic resilience, particularly in an event of unexpected global economic downturns.

2.4.2 DIFFERENCES BETWEEN LOCAL ECONOMIC DEVELOPMENT AND REGIONAL ECONOMIC DEVELOPMENT

The terms ‘local’ economic development and ‘regional’ economic development are both extensively used in the literature and practical applications and consequently appear to be interchangeable. However, although some similarities exist between the two terms, they have varying definitions due to their context-dependent nature (Storper, 2000). Therefore, this section investigates the key differences between local economic development and regional economic development.

According to Beer and Maude (2002), there are minor, but important differences between local economic development and regional development. Much of the discussion in British or American publications in the economic development field is on **local economic development**, a general term referring to when a rural area, city or town is in the process of working to achieve economic growth. However, such a process is normally referred to as **regional economic development** in countries such as Australia. Beer and Maude (2002, p. 4) suggest that although the differences between the two terms “are relatively unimportant, they are most accurately separated by scale: geographic scale and the size of programs and expenditure.”

In their discussion on local and regional economic development, Pike et al. (2006) differentiate various scales of social, ecological, political and economic processes relevant to economic development according to their responsible parties as shown in Table 2.3 below.

Table 2.3: Scales, Processes and Responsible Parties for Economic Development (Source: Pike et al. (2006))

Scale	Socio-Economic Process	Responsible Parties
Global	Trading regime liberalisation	International agencies such as the World Trade Organization and the International Monetary Fund
Macro-Regional	Expansion of information and communication technology networks	The European Union and private providers
National	Inflating housing prices	Central banks
Sub-National	Transport infrastructure upgrades	Government public transport agencies and private companies
Regional	Retention of university graduates as labour	Universities, employers and training providers
Sub-Regional	Labour market contraction	Employers, chambers of commerce and trade unions
Local	Local currency experimentation	Households
Neighbourhood	Social segregation	Local governments and community groups
Community	Adult literacy advancement	Education institutions and households

As shown in Table 2.3 above, each scale of economic development is associated with specific processes, for which specific parties from the public, private and/or community sectors are responsible. Beer and Maude (2002) indicate that local and regional economic development both aims to advance the economy or well-being of a local area albeit at different scales. To achieve this, several strategies exist, some of which include the following:

- ✈ Increasing the level of Gross Regional Product;
- ✈ Reducing unemployment level;
- ✈ Attracting inward investment;
- ✈ Improving local quality of life;
- ✈ Enhancing local infrastructure;
- ✈ Stimulating business start-ups;
- ✈ Improving viability of local businesses; and
- ✈ Reducing income inequality within the region.

In addition to the strategies above, universities also potentially play a major role in regional economic development in the following ways (Goldstein & Renault, 2004):

- ✈ The generation of knowledge through research;
- ✈ The creation of knowledge workers through education;
- ✈ Technology development and transfer; and
- ✈ The establishment of a favourable milieu.

Similarly, based on a case study analysis of the University of Waterloo, Canada, Bramwell and Wolfe (2008, p. 1175) propose that “the contribution of some universities to local and regional economic dynamism is much richer than overly mechanistic depictions suggest”. They argue that universities generate not only knowledge and researchers but also several other knowledge transfer mechanisms. Some of these mechanisms include the creation and attraction of talent to the economy and collaboration with local industry partners where both formal and informal technical support is provided by the universities. As such, responsible agencies should ensure that a sufficient number of universities are located in a region and graduates from these institutions are retained as local workforce.

The discussion above illustrates that whilst regional and local economic development shares the same broad objective of promoting quality of life, wealth and income equality, the two terms vary in terms of their spatial and investment scales. Local economic development is typically more limited than regional economic development in terms of geographical scale and expenditure level.

Having discussed the definition of economic development and the key differences between local economic development and regional economic development, the next section of the literature review investigates the relationship between airports and economic development.

2.5 AIRPORTS AND ECONOMIC DEVELOPMENT

The following aspects of the relationship between airports and economic development are investigated in this section:

- ✈ The role of airports in economic development;
- ✈ Economic development contribution of airports; and
- ✈ The influence of land use, transport and stakeholder relationships on the economic development contribution of airports.

2.5.1 THE ROLE OF AIRPORTS IN ECONOMIC DEVELOPMENT

For a long time, the planning literature has recognised the importance of transport infrastructure for promoting regional economic development (Mosbah & Ryerson, 2016). In the context of airports, a wealth of literature, which links airports with economic development, currently exists. According to Hakfoort et al. (2001), airports now function not only as transport nodes but also as major drivers of local economy. Airports improve transport accessibility of cities and regions, which is a key catalyst for economic development (Olipra & Augustyniak, 2015). Accessibility and mobility, both of which are facilitated by airports, are two key drivers of economic development, particularly in the high-income, market-based economies (Button, 2010). According to Higgins and Savoie (2017), due to the uneven spatial distribution of people and resources, decisions have to be made in relation to the location of economic activities. Transport costs and the proximity to markets and resources are major determinants for this decision-making process. These factors can be significantly reduced by the presence of a well-connected airport. As such, airports can assist in the development of new economic activities, particularly for regional and remote areas. The findings of a study conducted by Donehue and Baker (2012) indicate that remote, rural and regional airports in Australia airports play an important role in promoting economic development for their host regions. They also discover potential diversity in how these airports contribute to their local economies. In this regard, local fishing, tourism or mining industries are indicated by research participants as having benefited from the presence of an airport.

The relationship between airports and economic development is not one-way. Whilst airports do contribute to economic development in their host region, economic development also leads to increased passenger and freight volume for airports. This then leads to expansion of airport facilities to enable airports to efficiently handle additional traffic capacity, thus, in theory, leading to further economic development for the region. Therefore, a multiplier effect exists when a city with an airport

experiences economic development and/or a growth in airport traffic volume (Button et al., 2010; Schaar & Sherry, 2010; Yao & Yang, 2008).

Florida et al. (2015) argue that airports play a significant role in regional economic development through two channels, namely people and freight movement, with the former contributing more to economic development. The authors also propose that airports' impacts on regional economic development differ according to their size and scale. Similarly, Button and Yuan (2013), based on their analysis of 35 airports across the United States, suggest that air freight movement is a positive driver for local economic development. Green (2007, p. 110) echoes a similar sentiment to Florida et al. (2015), suggesting that passenger boardings per capita and passenger originations per capita are "powerful predictors of population growth and employment growth." On the other hand, he proposes that freight movement at an airport is not a powerful driver of economic development given that warehouses are becoming increasingly automated and freight-related employment is not highly paid. On the policy side, given that many local governments view airport passenger volume as a key driver of their regional economic growth, several local and regional leaders have shown interests in promoting local economic development through an airport (Mosbah & Ryerson, 2016).

A more significant regional economic driver than passenger volume is the number of destinations connected to airports, according to Bilotkach (2015), who studies the link between commercial aircraft traffic and economic development at major airports in the United States. It is found that the number of destinations connected with non-stop flights has a significant impact on the following three economic development indicators: employment level, average income and the number of business establishments. Meanwhile, passenger traffic volume affects employment and income levels, but not number of business establishments. Bilotkach (2015) concluded his study with an implication for airport-driven economic development: creating new aircraft routes from an airport to new destinations will lead to more positive impact on local economy than expanding existing services from the airport to existing destinations. Likewise, Olipra and Augustyniak (2015) propose that for the purpose of stimulating economic development, regional policies should focus on increasing the number of destinations connected to an airport. Doing so could attract inward investment and facilitate business development through increasing business contacts and market access for local firms. However, it is important that these destinations are connected by non-stop flights given that business travellers view direct flight connections "as the most important factor in determining the choice of the airport in planning air travel" (Olipra & Augustyniak, 2015, p. 188).

According to Campante and Yanagizawa-Drott (2018), airports facilitate the movement of people, which in turn helps increase the movement of capital between cities, thus stimulating local economic development. The reasoning behind this is that even though capital flows can now easily happen across the globe due to technological advancements, face-to-face contact between people still remains an essential element for business development.

Tittle et al. (2012), in their study of 33 commercial airports in the United States, discover that airport runway capacity has a positive effect on economic development. Specifically, the number of runways and the maximum runway length at an airport were both found to positively correlate with gross metropolitan product of the host region of an airport.

Planning Institute of Australia (2014) states that airports, in addition to facilitating air travel services, play an important economic role by providing jobs, goods and services across several industries including hospitality, retail, service and aviation. Economic impacts generated by airports are broadly classified into four categories as outlined in Table 2.4 below.

Table 2.4: Categories of Economic Impacts Generated by Airports (Sources: ACIL Tasman (2011) and Airports Council International and York Aviation (2004))

Impact	Description
Direct	Impacts generated by an airport's operation
Indirect	Impacts generated by the supply chain for airport's operation
Induced	Impacts generated from wages being spent by airport workers and airport supply chain workers
Catalytic	Wider impacts airports have on other stakeholders and other industries in the economy

Nevertheless, according to Button (2010), airports cannot be considered in isolation from airlines given that most of their economic contributions are based on the volume of passengers and freight. The economic market for airline services is not only complicated but also prone to severe instabilities, which can significantly limit economic contributions of airports to their host region.

2.5.1.1 Economic Contribution of Airports in Australia

The Australian Government (2019a) notes that airports in Australia are “are a major component of the national transport infrastructure and make a significant contribution to Australia's overall economic prosperity.” Consequently, the government is committed to ongoing investment in aviation infrastructure as a key objective. The major airports in Australia have been under Federal legislation prior to and after their privatisation given that they are “areas of national importance for the economic growth of the country” (Stevens, 2012, p. 5). Stevens (2012) argues that the profitability and survival

of major international airports in Australia is essential for the economic prosperity of not only the host region of the airports, but also the state and the entire nation they are situated in. The total estimated value of economic contribution of Australia's airports in 2016-17 was \$34.6 billion, which is equivalent to two per cent of Australia's overall GDP for the financial year (Deloitte Access Economics, 2018).

Having provided an overview of the economic significance of airports, the literature review now discusses key economic development contributions of airports.

2.5.2 ECONOMIC DEVELOPMENT CONTRIBUTION OF AIRPORTS

Airports broadly contribute to the economic development of their host region in two ways, including employment generation and advancement of industry sectors, both of which are further examined in this section.

2.5.2.1 Employment Generation

Airports generate employment not only on but also outside their land. Three different types of employment, which are outlined with description and examples in Table 2.5 below, are generated by airports.

Table 2.5: Three Types of Employment Created by Airports (Sources: Air Transport Action Group (2005) and Chalabi (2002))

Employment	Description	Examples
Direct	Jobs which are created in airports and are directly related to airport operations	Air traffic controllers, check-in staff, on-site retail staff and baggage-handling staff
Indirect	Jobs linked to supplying products or services to airports	Workers in aviation fuel suppliers, construction companies and manufacturers of goods sold at airports
	Jobs in the tourism and hospitality industries created from spending of airport visitors	Hotel staff and theme park staff
Induced	Jobs created from wages spent by people employed in direct or indirect jobs created by airports	Jobs in retail and service industries

For every US\$1 billion invested in airport development, approximately 40,000 to 50,000 jobs are created (Kramer, 2004). This translates into one job created per US\$20,000 to US\$25,000 of investment on airport development. Each direct job generated by airports was found by Hakfoort et al. (2001) to lead to one indirect job and one induced job. According to Chalabi (2002), for every direct job, one indirect job and 2.2 induced jobs (1.6 from direct and 0.6 from indirect) are created.

In 2004, the aviation industry directly contributed £11.4 billion to the GDP of the United Kingdom (UK), creating a total of 186,000 jobs. It was also estimated that visitors to the United Kingdom contributed more than £12 billion per year to the country’s tourism, which generated 170,000 indirect jobs in the economy (Oxford Economics, 2006). According to Herndon (1998), Dallas/Fort Worth International (DFW) Airport was a major driver for regional employment from 1970 to 1998. The Metroplex, the four-county region surrounding DFW Airport, had experienced substantial growth of 148 per cent in employment in comparison to the national growth rate of 67 per cent. Meanwhile, Amsterdam Schiphol Airport’s growth between 1987 and 1998 created a total of 42,000 jobs in the Greater Amsterdam region (Hakfoort et al., 2001). Key facts and statistics on employment generated by ten major Australian airports, including Gold Coast Airport, are highlighted by the Australian Government (2013) based on its review of these airports. Figure 2.2 below provides a summary of these findings.



Figure 2.2: Summary of Findings on Employment Generated by Ten Major Australian Airports (Source: Australian Government (2013))⁷

⁷ Figure 2.2 is created by the author through summarising the findings published by the Australian Government (2013).

2.5.2.2 Advancement of Industry Sectors

Airports contribute to the advancement of several industry sectors in their host region, including tourism, freight, medical tourism, high-tech and service and knowledge and creative industries. These industry sectors are each discussed below in terms of how airports can advance them.

i) Tourism Industry

The critical role of transport in promoting the tourism industry is “widely acknowledged in the literature” (Debbage, 2002, p. 933). As airports facilitate air transport between destinations, they play a significant role in supporting the growth of tourism around the world. Given that air transport and airports were historically established to provide a faster, more convenient transport mode for tourists, airports are “indispensable for tourism” and the growth of the tourism industry (Air Transport Action Group, 2005, p. 9). Globally, between 30 and 40 per cent of all international tourists travel by air (Page, 1999), a figure which illustrates the importance of air transport and airports to the tourism industry around the world.

Australia’s tourism industry is highly dependent on airports, particularly for facilitating visitations from international tourists. In 2016-17, eight million, or 97 per cent, of all international tourists travelled to Australia by air and contributed \$27 billion towards the Australian economy through their spending (Deloitte Access Economics, 2018). The principal reason behind Australia’s reliance on airports for international tourism is the country’s ocean-locked nature as an island and relatively isolated location from the rest of the world, which implies that air travel is the only means of rapid, inward transport for international visitors. Similarly, airports also play a major role in enabling Australia’s domestic tourism activity, but due to a different reason, namely the significant geographical distances between the major cities in the country. According to Deloitte Access Economics (2018), Australia’s domestic tourism activity supported by airports contributed approximately \$10.6 billion and 121,2000 jobs to the country’s economy in 2016-17.

ii) Freight Industry

Airports have played an increasingly important role in the global freight industry in recent years, with air freight accounting for approximately 40 per cent and one per cent of international exports by value and weight, respectively (The International Bank for Reconstruction and Development & The World Bank, 2009). Therefore, the majority of goods carried by aircraft are high-value, low-density goods. Examples of such goods are small electronic products such as smartphones. Perishables, which are

highly time-sensitive goods, also account for a significant proportion of air freight (The International Bank for Reconstruction and Development & The World Bank, 2009).

Gardiner et al. (2005) conduct an international survey on 39 airlines to identify key factors which influence their choice of airport for cargo activities. Lower fees for landing, handling and fuel and the quality of freight infrastructure and facilities are found to be the two most important factors. As such, in their respective planning processes, airports and government agencies should ensure that freight infrastructure is adequately available within and around airports. Additionally, the availability of cold storage facilities with seamless access to aircraft are important particularly for exporters of perishables. In this regard, flower exporters are typically “intensive users” of cold storage facilities (The International Bank for Reconstruction and Development & The World Bank, 2009, p. 29).

Nevertheless, night curfews are the most frequently perceived barriers for freight airlines (Buyck, 2002; Gardiner et al., 2005). However, many air cargo operators in the United States and Europe are experiencing increasing challenges in locating airports with no night-time restrictions (Gardiner et al., 2005). Therefore, for airports to successfully attract freight operators, Shaw (1993) suggests that airports have unrestricted evening access for all freight aircraft.

iii) Medical Tourism Industry

Medical tourism refers to when “consumers elect to travel across international borders with the intention of receiving some form of medical treatment ... [which] may span the full range of medical services, but most commonly includes dental care, cosmetic surgery, elective surgery, and fertility treatment” (Lunt et al., 2011, p. 7). Underpinned by globalisation, in which consumers’ mobility and information flow have increased exponentially, medical tourism has grown exponentially over the past few decades due to five principal drivers (Kelley, 2013):

- ✈ More advanced technology;
- ✈ Higher quality associated with medically necessary procedures;
- ✈ Quicker access for medically necessary procedures;
- ✈ Lower costs associated with medically necessary procedures; and
- ✈ Lower costs associated with discretionary procedures.

In recent years, there has been a growing number of consumers traveling from more developed countries to less developed countries for the purpose of medical tourism. This trend is propelled by three specific factors, including the availability of low-cost treatments in the less developed nations, the ease of information access by the Internet and the increasingly widespread availability of low-cost flights (Lunt et al., 2011). Given that medical tourism involves international traveling, airports

play a critical role in supporting this industry. Some airports, such as Munich International Airport, encompass a hospital which exclusively provides healthcare services for medical tourists, an arrangement Ko (2011, p. 33) refers to as the “fly-in & airport service model” of medical tourism. An area’s appeal as a medical tourism destination is influenced by several factors, which can be classified into the four categories as follows (Cormany, 2008):

- ✈ Medical facilities and services;
- ✈ Hotel and food/beverage;
- ✈ Tourism support facilities and services; and
- ✈ Governmental and national factors.

The following five factors associated with airports are included under the tourism support facilities and services category above (Cormany, 2008):

- ✈ Availability of direct flights from major cities;
- ✈ The number of airlines servicing the airport;
- ✈ Availability of accommodation options for the disabled;
- ✈ Airfare rates; and
- ✈ Frequency of flights.

For a destination to successfully attract medical tourists, not only should healthcare facilities be located at or in proximity to an airport, but also airport operators should ensure that the five factors above are appropriately considered for airports’ development and flight services.

iv) High-Tech and Service Industries

Air transport has been linked to growth of high-technology and service industries. By encouraging networking and exchange with companies located in other cities or countries, airports can “act as a spur to innovation” for local businesses (Air Transport Action Group, 2005, p. 9). According to Oxford Economics (2006), high-tech companies and financial and business services play a significant role in the United Kingdom’s future economic prosperity, and air services are critical to the growth of these industries. Similarly, San Jose International Airport has been recognised as a key driver of the rapid growth and development of Silicon Valley, a major high-tech hub of the world (Goldfisher, 1999).

Airports, which provide convenient access to air transport, can attract international companies to locate in a city (Air Transport Action Group, 2005). If an airport provides frequent services to various destinations, it effectively allows businesses within the airport’s host city to conveniently conduct face-to-face contact with businesses in other cities. In such a situation, the airport can attract new companies to the airport’s local region and create new jobs in the region (Brueckner, 2003).

According to Brueckner (2003), a 10 per cent increase in passenger enplanements⁸ (equates to a 1 per cent increase in employment in service industries.

A quarter of companies involved in the study by Oxford Economics (2006) revealed that access to air services affects their decision on the location of their operations in the United Kingdom. Without adequate airport development, air transport demands of several corporations may not be met, forcing them to relocate to other cities (Kramer, 2004). Cincinnati/Northern Kentucky International (CVG) Airport, meanwhile, has played a major role in attracting businesses to its host region (Achkar, 1999). The number of foreign-owned companies in the region increased from 70 in 1987 to 250 in 1999. Additionally, high-technology jobs in Cincinnati increased from approximately 65,000 in 1989 to 80,000 in 1996.

v) Knowledge and Creative Industries

According to Neal (2012), there is an association between airport connectivity and knowledge-based and creative employment within a city. During economic downturns, airport activities follow creative jobs whereas during economic turnarounds, creative jobs follow airport activities. Similarly, regions with airports were found by Florida et al. (2012) to have higher levels of creative workers. Nevertheless, the number of creative workers is affected by not only just having an airport, but also the size and scale of airport activities. Chen et al. (2018, p. 326) suggest that airports contribute to regional economic development by “attracting and retaining talent” and distance to airports negatively affects talent share in a region. In other words, the closer an area is to an airport, the greater the area’s talent share in the airport’s host region.

2.5.3 THE INFLUENCE OF PLANNING FACTORS ON THE ECONOMIC DEVELOPMENT CONTRIBUTION OF AIRPORTS

The following planning factors, all of which are further examined in this section, can potentially influence the economic development contribution of airports to their host region: land use, planning frameworks, transport infrastructure and stakeholder relationships.

⁸ Passenger enplanements refer to the number of passengers who board an aircraft at an airport, not including arriving or transit passengers (Landrum & Brown, 2013).

2.5.3.1 Land Use

Land uses within an airport can be grouped into two broad categories, namely the airside and the landside⁹ (Sherry, 2009; Zhang et al., 2018). The airside is associated with aircraft operations and facilitates a range of “activities required to prepare aircraft for flight” (Zhang et al., 2018, p. 878). The Australian Airports Association (2015) describes the airside as the part of an airport where unrestricted access is provided for aircraft movement and does not generally permit access by unauthorised personnel (e.g. passengers) due to security and safety reasons. The airside comprises three primary areas, each of which serves a different purpose. Firstly, the movement area, which also includes any part of the airport used for aircraft maintenance, facilitates surface movement of aircraft. Secondly, the manoeuvring area enables take-off and landing of aircraft and typically consists of runways and taxiways. Thirdly, the apron area is where aircraft are parked and where most ground handling activities occur. Some examples of ground handling activities include passenger movement, luggage and freight loading/unloading and aircraft cleaning and fuelling. Common uses associated with the airside include (Sherry, 2009; Zhang et al., 2018):

- ✈ **Runway** – a path used by aircraft for take-offs and landing;
- ✈ **Taxiway** – a path for aircraft to travel between different facilities within an airport; and
- ✈ **Air traffic control** – a facility where ground-based controllers direct or provide advice to aircraft through controlled and non-controlled airspaces, respectively.

The landside, meanwhile, comprises a range of non-aviation uses which are essential to an airport such as freight warehouses and passenger terminals (Zhang et al., 2018). Due to the aforementioned security concerns, access between landside areas and airside areas is typically strictly controlled and monitored at most airports (Sherry, 2009). Some of the most common uses within the landside are (Ranjith et al., 2018; Sherry, 2009; Zhang et al., 2018):

- ✈ **Parking lot** – a facility providing parking spaces for staff and passengers;
- ✈ **Access road** – a roadway providing access into and out of the airport;
- ✈ **Fuel tank farm** – an area where aircraft fuel is stored;
- ✈ **Terminal** (also called ‘concourse’) – a multi-purpose building where passengers can purchase tickets, check-in, pass through the security process, check or claim luggage and board aircraft;
- ✈ **Freight warehouse** – a storage area for freight to be transported to/from aircraft; and
- ✈ **Duty-free shops** – retail uses where passengers can purchase tax-free goods.

⁹ In the literature and industry publications, ‘airside’ and ‘landside’ are also commonly referred to as ‘aviation’ and ‘non-aviation’, respectively.

Meanwhile, according to Cohen and Brown (2017), land within an around an airport can be broadly classified into two categories, namely airside land and groundside land, both of which are further described with examples in Table 2.6 below.

Table 2.6: Airside Land and Groundside Land (Source: Cohen and Brown (2017))

Land	Description	Common Uses
Airside Land	Land with direct access to an airport's runway or taxiway	Aviation-related uses that require direct access to a runway such as aircraft maintenance facilities, freight warehouses and other aviation facilities
Groundside Land	Land with no direct access to an airport's runway or taxiway	Aviation-related uses which do not require direct access to a runway such as rental car companies and flight catering businesses

Cohen and Brown (2017) suggest that for the purpose of promoting the economic development contribution of airports, there is a need to transition from the traditional distinction between 'aviation-related' and 'non-aviation related' businesses for land inside and around an airport. In this regard, a new category of 'aviation-dependent' businesses should be established. These businesses are reliant on at least one of the following factors for their ongoing viability and profitability:

- ✈ Airport passengers (e.g. hotels, shopping centres and conference venues);
- ✈ Freight services (e.g. postal businesses and cold storage facilities); and
- ✈ Proximity to an airport (e.g. corporate offices and JIT manufacturers).

To amplify the economic development contribution of an airport, planners should ensure that aviation-dependent businesses are concentrated within and around the airport. Airports provide economic development opportunities to advance the freight and medical tourism industries of the airports' host region. To successfully capitalise on these opportunities, freight hubs and medical centres should be located inside or in proximity to airports.

A number of airport-driven urban development models, including the Aerotropolis, have been conceptualised in the literature. These models advocate a concentration of airport-compatible and airport-dependent businesses and land uses around an airport in order to promote and capitalise on the potential economic benefits of the airport. However, these development concepts are questioned by Cidell (2015), who argues that even though the relative level of local economic and quality of life costs are the highest in the vicinity of an airport in comparison to other parts of the airport's host region, the majority of economic development benefits from the airport often occur elsewhere in the region. As such, planners should ensure that land uses, which are highly sensitive to airports' negative externalities such as noise pollution (e.g. residential land uses), are located far away from airports to minimise the economic and quality of life costs incurred by the airports.

2.5.3.2 Planning Frameworks

The following quote from Cohen and Brown (2017, p. 332) demonstrates a potential issue associated with attracting aviation-dependent businesses to airport land and the surrounding area of an airport:

An optimal regional approach would be [to] ensure that the lands at or close to an airport, that are not required for aviation-related uses, are occupied by those industries with the greatest need for proximity to air transportation services. **Ordinarily, one would expect the market to do this, but if there are regulatory prohibitions that prevent “aviation dependent” businesses from locating at an airport because they are not deemed to be “aviation-related” in the traditional sense, then there is an inefficient land allocation.** (emphasis added)

As illustrated in the quote above, statutory planning frameworks can impose restrictions on attracting aviation-dependent businesses to airport land and its surroundings. In Australia, all land around the Federally-owned airports is under the jurisdiction of local or state government as it does not fall under the statutory influence of the Airports Act. Therefore, state and local governments should ensure that both their strategic and statutory land use planning frameworks for all airport-adjacent land encourage and allow such land to be developed in the manner that accommodates or allows aviation-dependent businesses to be located near an airport. Similarly, to capitalise on airports' potential contribution to the advancement of freight and medical tourism industries, strategic and statutory planning frameworks should also facilitate the development of freight processing facilities and medical centres in proximity to airports.

2.5.3.3 Transport Infrastructure

Transport infrastructure, when efficiently linked with airports to increase their connectivity and accessibility to the rest of their host region, can amplify the economic development contribution of these airports. Specifically, an efficient linkage between airports and rail can further increase an airport's economic development contribution. A study by the American Public Transport Association (APTA, 2013) discovers that an airport with a direct connection to a rail system could contribute to the local tourism industry by boosting hotel occupancy in the airport's host region. In this regard, hotels in cities with airport-rail connections, on average, experience 10.9 per cent better performance, which includes room rates and revenue earned, than hotels in cities with no rail connection to an airport. Hotels within 400 metres from a rail station linked to an airport are also found to benefit from 12.5 per cent higher occupancy rate and 48.6 per cent higher average room rates than hotels with no airport-linked rail station in proximity.

Benefits from airport rail links are not limited to just the tourism industry, but also applicable to the wider economy. In their study on 82 cities with the world's 100 busiest airports across 10 regions,

Murakami et al. (2016) discover a positive correlation between airport rail links and economic productivity. The increase in economic output is attributable to three key outcomes from having an airport rail link in a city:

- ✈ Decreases in local transportation and environmental costs;
- ✈ Higher accessibility of the regional market; and
- ✈ Higher number of aviation-oriented business activities.

Nevertheless, rather than utilising rail as a single transport solution for connecting airports with their host region, for the purpose of promoting economic development contribution of airports, Murakami et al. (2016) recommend an economical adaptation of multimodal transport options, including rail, bus, shared-ride vehicle, taxi, rental car and private car. Schalk and Ward (2011) echo a similar sentiment, noting that enabling multimodal connections between airports and other transport modes is essential for promoting economic development contribution of airports through increasing the efficiency of both passengers and freight movement.

2.5.3.4 Stakeholder Relationships

Table 2.7 below broadly outlines the range of stakeholders who are relevant to airports' operation and planning and development processes.

Table 2.7: Stakeholders Relevant to Airports' Operation and Planning and Development Processes (Source: Schalk and Ward (2011))¹⁰

Type of Stakeholders	Stakeholders
Regulatory Agencies	Local councils, state governments and Federal Government
Other Government Agencies	Transport agencies, military and regional planning entities
Airport Customers	Airlines, airport tenants, airport business partners and airport passengers
Local Communities	Local residents, community groups, environmental groups, economic development organisations, tourists, event/conference attendees, sports teams, academic staff, members of institutional sectors and representatives of real estate/development sectors

As shown in Table 2.6, due to the large scale and complexity of airports' operation and impacts, several types of stakeholders are involved in the operation and planning and development processes of airports. The large range of stakeholders relevant to airports implies that an "airport is a complex, collaborative service environment [where] some stakeholders have objectives for the airport whose

¹⁰ The list provided in Table 2.7 is not exhaustive given that depending on the nature of the airport, there can be an extensive range of relevant stakeholders.

fulfillment is not fully under the control of airport management” (Schaar & Sherry, 2010, p. 1). As illustrated in the analysis of airport stakeholders conducted by Schaar and Sherry (2010), some of these stakeholders have conflicting goals in relation to their interest in airports. As such, Schalk and Ward (2011) recommend that common themes which emerge across stakeholder interests be observed and harnessed to create “an effective framework for the dialogue that leads to the best vision, goals and objectives.” To identify these stakeholder interests and their common themes, they suggest individual and small-group meetings where all needs and concerns of stakeholders can be effectively identified through informal discussions.

It is widely known and documented across both the media and the literature that airports have historically shared an adversarial relationship with their local communities due to a range of negative externalities that they generate, which particularly affect community members located in proximity (Mosbah & Ryerson, 2016). Some of the most common negative externalities include noise pollution from aircraft and air and water pollution associated with airport operations. Community oppositions against airports in terms of their operation and planning and development processes can limit economic development contribution of airports by creating project delays. To ensure more community acceptance for airport master plans and future development, airport operators should facilitate early participation by all local community planners and representatives in the master planning process, which can lead to “opportunities to link the community vision with the airport vision” (Schalk & Ward, 2011, p. 11). Doing so would not only generate local community support but also solicit useful information for airport master plans and development projects (Schalk & Ward, 2011).

Having discussed airports in the context of economic development, including their role in economic development, their economic development contribution and how several planning factors can influence their economic development contribution, the next section of the literature review investigates cross-border planning.

2.6 CROSS-BORDER PLANNING

Cross-border planning has significant relevance to the case study of Gold Coast Airport due to its location across the state border separating QLD and NSW and the local government border between the CoGC and Tweed Shire Council. It should be noted, however, that cross-border planning is not relevant to only Gold Coast Airport. Several other airports, which service and impact a broad catchment area outside the jurisdiction that they are situated in, may also be subject to the urban

development and governance mechanisms of several government agencies. The following aspects of cross-border planning are examined in this section of the literature review:

- ✈ The increasing importance of cross-border planning;
- ✈ Overview of cross-border planning in Australia;
- ✈ Lessons from cross-border planning for Albury-Wodonga (NSW-VIC); and
- ✈ Lessons from cross-border planning for Canberra and its surrounding shires (ACT-NSW).

2.6.1 THE INCREASING IMPORTANCE OF CROSS-BORDER PLANNING

According to O'Hare (2019), polycentric city regions, which contain several urban centres or CBDs rather than a single urban core, are increasingly expanding across state and national borders. These regions are evident throughout the world, including in Europe, Asia, the Americas and North America. He lists the following regions as examples of cross-border polycentric city regions: 1) San Diego (United States) – Tijuana (Mexico), 2) Aachen (Germany) – Maastricht (Netherlands) – Liège (Belgium), and 3) Shenzhen, its neighbouring Hong Kong and its nearby Pearl River Delta cities. As these cross-border urban regions increasingly emerge around the world, urban planners are required to embed cross-border considerations into their planning work and policies. Peña (2018, p. 1) defines cross-border planning as “an institution-building process to achieve mutually beneficial outcomes” for both sides of the border. He proposes that the key emphasis of cross-border planning is on facilitating collective action related to the natural and urban environments shared by adjoining regions or nations.

However, as different countries have unique institutional and legal frameworks in place, “true cross-border planning (in terms of detailed planning) is very rare” according to Giacometti and Lange Scherbenske (2015, p. 26). Due to varying legal frameworks, procedures and routines, the “different institutional settings” of the adjoining regions often clash with one another within cross-border regions (Jacobs, 2014, p. 68). In other words, due to regional differentiation, there is a separation of planning systems and processes across a regional or country border. According to Singh-Peterson et al. (2013), several institutional arrangements can prevent the implementation of integrated, cross-border planning initiatives. These include spatial boundaries (local and/or state jurisdictions), vertical boundaries (the interactions between local, state and national government agencies) and sectoral boundaries. Giacometti and Lange Scherbenske (2015) suggest that cross-border collaboration between different government agencies can instead be developed and integrated to mitigate cross-border conflicts.

A prime example where several cross-border regions currently exist is Europe. According to Medeiros (2014, p. 363), cross-border collaboration is “an essential part of European integration” given the close relationships that adjacent countries in Europe share with one another. Similarly, Giacometti and Lange Scherbenske (2015) note that there has been an emerging need for closer cross-border cooperation in urban planning given the increasing integration between European countries.

The European Commission (1997) proposes three approaches to cross-border planning, which are outlined in Table 2.8 below.

Table 2.8: Three Approaches to Cross-Border Planning (Source: The European Commission (1997))

Approach	Description
Non-Institutionalised Cooperation	As a first step taken prior to more extensive consultation and joint decision-making between all authorities across the border, this approach includes exchange of information, plans, policies and other matters.
Formal Cooperation	This approach encapsulates a formal arrangement where cross-border joint working groups or committees are established, and draft plans and policies are consulted across the border. Joint studies may also be instigated to investigate a range of cross-border matters.
Common Decision-Making	This approach involves joint decision-making between all authorities across the border for all cross-border matters. Common policies and guidelines are developed and implemented for the cross-border region.

A variable scale of cross-border collaboration can be observed in the three approaches outlined in Table 2.8. ‘Non-institutionalised cooperation’ is a more informal approach and a preliminary step prior to a ‘formal cooperation’. As such, this step involves the least amount of cross-border collaboration between authorities. In his discussion cross-border planning and cooperation, Herzog (2000) provides several examples of informal and formal cross-border cooperation. Informal cooperation can include meetings amongst local and higher-tier government agencies and non-binding agreements to cooperate on a range of local matters. More formal cooperation, meanwhile, can encompass such arrangements as binding treaties and meetings with memoranda of agreement. On the other end of the scale is ‘common decision-making’ where there is an extensive level of cross-border collaboration as not only are decisions made jointly across the border, but also standardised plans are adopted for the cross-border region, thus minimising trans-border conflicts.

According to Medeiros (2014), there have been a growing number of cross-border partnerships across the European Union. There is a wealth of literature on cross-border planning issues in Europe. Nevertheless, he notes that the European Commission’s typology of cross-border collaboration has not been advanced further in the literature. Based on an analysis of three cross-border regions along the German-Polish border, Knippschild (2011, p. 642) provides the following key recommendations

“as hints towards avoiding the most common causes of communication defects” which can occur within transborder cities and regions:

- ✈ Restrict the initial spatial dimension of the cross-border cooperation area, which can be expanded later as necessary;
- ✈ Establish legitimate, ongoing cross-border organisational units such as steering committees and joint decision-making agencies; and
- ✈ Set up a coordination office, which comprises representatives of all cooperating stakeholders from both sides of the border.

Table 2.9 below outlines examples of successful cross-border planning initiatives around the world.

Table 2.9: Examples of Successful Cross-Border Planning Initiatives around the World¹¹

Location	Cross-Border Initiative/Arrangement
The United States-Mexico Border	A robust operational framework currently exists for the United States-Mexico border. This includes the La Paz Agreement, which was signed by the two countries' presidents in 1983 and functions as a comprehensive, binding accord between the countries to address environmental issues affecting the border. Since its original conception, the treaty has been not only updated with several annexes but also implemented into operational plans for the border. The principal plan driven by the La Paz Agreement is Border 2012, which contains key objectives and actions derived from the accord. Two cross-border agencies have also been established to improve the quality of life along the border: the Border Environment Cooperation Commission and the U.S.-Mexico Border Health Commission (Peña, 2018).
The Germany-Poland Border	In 2016, a strategic plan for the cross-border region around the Germany-Poland border was implemented. The plan, titled 'Common Future Vision for the German-Polish Interaction Area – Horizon 2030', encompasses a 160-square-kilometre region and more than 21 million population. The plan was prepared by the German-Polish Spatial Development Committee, a cross-border committee comprising representatives from German and Polish government agencies at both the regional and national levels. The preparation of the plan also included community participation from both sides of the border (Caesar & Pallagst, 2018).
Cascadia (Washington State-British Columbia)	The Cascadia region, which encompasses part of the United States-Canada border and includes Washington State and British Columbia, originated as a concept in the late 1980s and has become increasingly associated with political and economic notions throughout the years. Cascadia is widely considered the most successful cross-border region along the border due to two key mechanisms. Firstly, the Cascadia Innovation Corridor initiative, initially driven by Microsoft, has solicited extensive stakeholder participation from both the public and private sectors. The initiative, which seeks to position the cross-border region as a global innovation and commerce hub, has led to a Memorandum of Understanding (MoU) between Washington State and British Columbia on economic development for the region. Secondly, as part of the Cascadia Innovation Corridor initiative, a steering committee was established in 2018. The committee, led by two representatives from each side of the border, comprises seven sub-committees, each of which focuses on a specific theme (Cappellano et al., 2020).

¹¹ The case studies outlined in Table 2.9 represent examples of international cross-border regions. The case study of Gold Coast Airport being examined in this research is situated in a transborder region spanning two states and two LGAs.

2.6.2 OVERVIEW OF CROSS-BORDER PLANNING IN AUSTRALIA

Australia, as an island continent, does not share its national border with any other country. The country, however, comprises six different states and two territories, each governed by a different statutory planning framework administered by its respective state/territory government agency. Thus, cross-border planning and collaboration plays a major role in Australia where several large-scale communities adjoin and share a close relationship with one another across a state/territory border.

Nevertheless, according to O'Hare (2011), even though Australian state and territory borders are the key sites of expanding trans-border city regions, there has been limited acknowledgment of the need for a more integrated cross-border planning of these regions. This has resulted in disjointed planning processes and outcomes across state borders. O'Hare (2019) also reviews Australian case studies of cross-border city regions. He portrays the NSW Government as the country's leader in cross-border planning given that the following three trans-border city regions are located on the state's border:

- ✈ **Albury (NSW) and Wodonga (VIC)**, where “fluctuating levels of collaborative planning efforts since the early 1970s” can be observed (O'Hare, 2019, p. 2083);
- ✈ **Canberra (ACT) and its surrounding rural shires of NSW**, where socioeconomic and physical links across the state border are evident; and
- ✈ **The Gold Coast (QLD) and Tweed Shire (NSW)**, both of which are located approximately one hour from Brisbane, the capital city of QLD.

However, although the ACT and NSW governments have displayed substantial collaborative efforts in the planning of their cross-border city regions, the Victorian and QLD governments have demonstrated relatively limited commitment to cross-border planning. This thesis reviews the existing cross-border planning commitments from the NSW and QLD governments for the Gold Coast-Tweed Shire region in relation to planning for local and regional economic development associated with Gold Coast Airport (Section 5.3.3). Existing cross-border planning arrangements for Albury-Wodonga (NSW-VIC) and Canberra and surrounding shires (ACT-NSW) are investigated for lessons for cross-border planning.

2.6.3 LESSONS FROM CROSS-BORDER PLANNING FOR ALBURY-WODONGA (NSW-VIC)

Albury and Wodonga, located in the states of NSW and Victoria, respectively, are situated on opposite side of the Murray River, Australia's longest river which stretches across most of the northern Victorian border. Figure 2.3 on the following page illustrates a map of the Albury-Wodonga region.

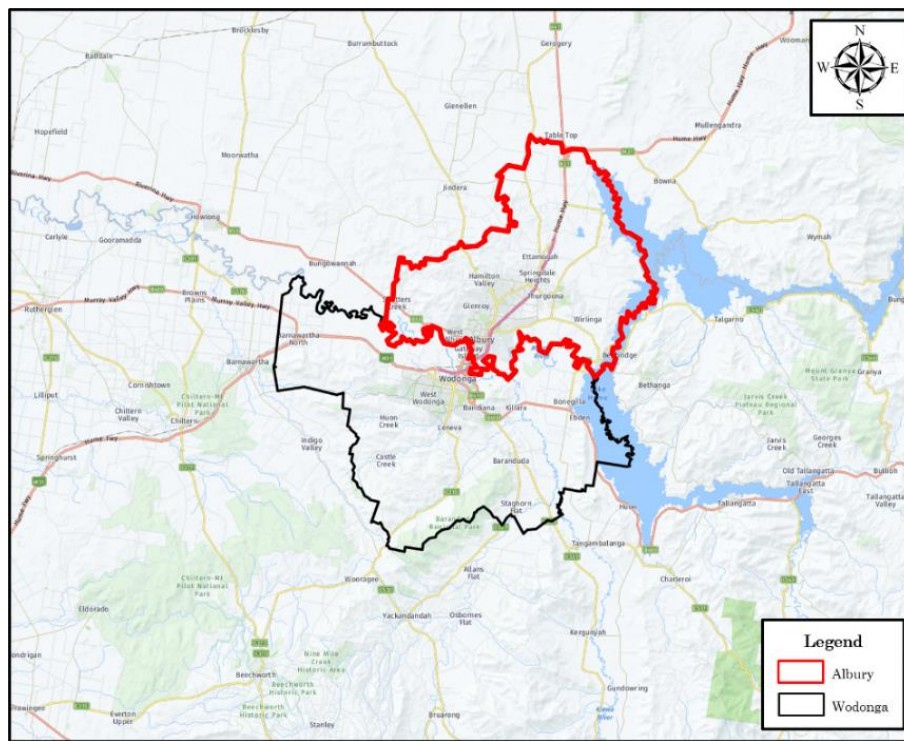


Figure 2.3: Map of the Albury-Wodonga Cross-Border Region¹²

Both towns were initially established to service the nearby agricultural region. In the second half of the twentieth century, Albury and Wodonga eventually developed into cities as they began to emerge as manufacturing centres for rural products such as wool. Presently, the towns function as major regional centres with several important regional services including state government departments, education, hospitals amongst others (O'Hare, 2019).

In 1967, driven by a desire to decentralise urban population and development from Melbourne, the Victorian Government made a proposal for planning and development of Wodonga and Albury into “one complex” for the purpose of “accelerated development” to the Australian Government and the NSW Government (Pennay, 2005, as cited in O'Hare, 2019). Six years later, underpinned by National Growth Centres, a federal initiative, and a legislation implemented by the Australian Government, the NSW Government and the Victorian Government, the Albury-Wodonga Development Corporation was established as a strategic planning authority for the Albury-Wodonga area, thus formally designating the towns as a cross-border region (Pennay, 2005, as cited in O'Hare, 2019).

¹² Figure 2.3 is created and labelled by the author using satellite imagery from .id (2019a, 2019c). The imagery was compiled and presented by .id, the population experts. www.id.com.au. This material is a derivative of ABS Data that can be accessed from the website of the Australian Bureau of Statistics at www.abs.gov.au, and which data can be licensed on terms published on the ABS website. The replicated Map Data in the imagery from .id belongs to HERE (2016).

However, the abrupt removal of the Whitlam federal government in 1975 led to the repeal of the National Growth Centres strategy, which effectively eliminated the planning authority of the Albury-Wodonga Development Corporation. The corporation formally dissolved in 2007, after which cross-border collaboration in the Albury-Wodonga region was delegated to the local councils of the two cities “via issues-based organisations and an informal Alliance of Councils and Shires of the Upper Murray” (O'Hare, 2019, p. 2084). The new arrangement illustrates a more locally driven approach, but with weaker links with the NSW and Victorian governments and less engagement with the region's surrounding shires (O'Hare, 2019).

A joint strategic plan titled ‘Two Cities One Community: Strategic Plan 2017-2021’ was adopted by the local governments of Albury and Wodonga in 2017. Upon the implementation of this plan, the mayors of Albury and Wodonga made the following joint statement (Albury City & City of Wodonga, 2020):

Albury and Wodonga are intrinsically linked but interdependent, functioning separately and working together. Our community does not necessarily see a border. They cross a river to share facilities, venues, infrastructure and services. They expect community leaders to adopt a regional perspective and advocate to state and federal governments on issues that impact their day to day lives.

The plan functions as a “twin cities plan rather than a city region plan” given that it excludes the surrounding shires of the Albury-Wodonga region which had been previously included in the Growth Centre initiative in the early 1970s (O'Hare, 2019, p. 2085). However, there is uneven recognition of, and thus policy directions for, the cross-border region from the NSW and Victorian governments in their regional plans that cover Albury and Wodonga, respectively. In this regard, the NSW Government's Riverina Regional Plan demonstrates significantly greater recognition of the region than the Victorian Government's Hume Regional Growth Plan does (O'Hare, 2019).

Both state governments have recently appointed Cross-Border Commissioners to address a number of ongoing issues affecting residents and businesses situated in cross-border regions. On the NSW side, to strengthen its cross-border relationship with adjacent states, the NSW Government established an Office of the NSW Cross-Border Commissioner in 2012, which “identifies and helps resolve issues that occur by being located near a state border” (NSW Government, undated-a). To this end, the office aids businesses, organisations and individuals that live, work and function in cross-border communities by connecting them with an applicable agency to address their concerns. A NSW Cross-Border Commissioner was appointed by the office in July 2014 to “advocate for businesses, organisations and residents in border communities” (NSW Government, undated-a). Meanwhile, the Victorian Government, “after pressure from Murray River communities,” appointed a Cross-Border

Commissioner in 2018 (O'Hare, 2019, p. 2087). The role of the commissioner is “to work with border residents, businesses and community organisations to identify and advocate for change along Victoria’s borders” (Department of Jobs, Precincts and Regions, 2020). One of the responsibilities of the commissioner, in addition to collaborating with various Victorian Government departments and agencies, is specifically collaborating with the NSW Cross-Border Commissioner. However, although the NSW Cross-Border Commissioner has aided in the formation of cross-border MoU with the ACT and QLD governments, no such agreement has been formed with the Victorian Government (O'Hare, 2019).

The discussion above demonstrates that cross-border collaboration and planning for the Albury-Wodonga region are strongly evident at the local government level. At the state government level, however, uneven cross-border efforts can be observed based on the current regional plans in place, with the NSW Government demonstrating more proactive recognition of and support for the region. However, the recent appointment of a Cross-Border Commissioner by the Victorian Government demonstrates the state government’s renewed commitment to cross-border planning.

2.6.4 LESSONS FROM CROSS-BORDER PLANNING FOR CANBERRA AND SURROUNDING SHIRES (ACT-NSW)

Canberra, the capital city of Australia, is located in the Australian Capital Territory (ACT). Figure 2.4 on the following page displays a map of Canberra’s location.

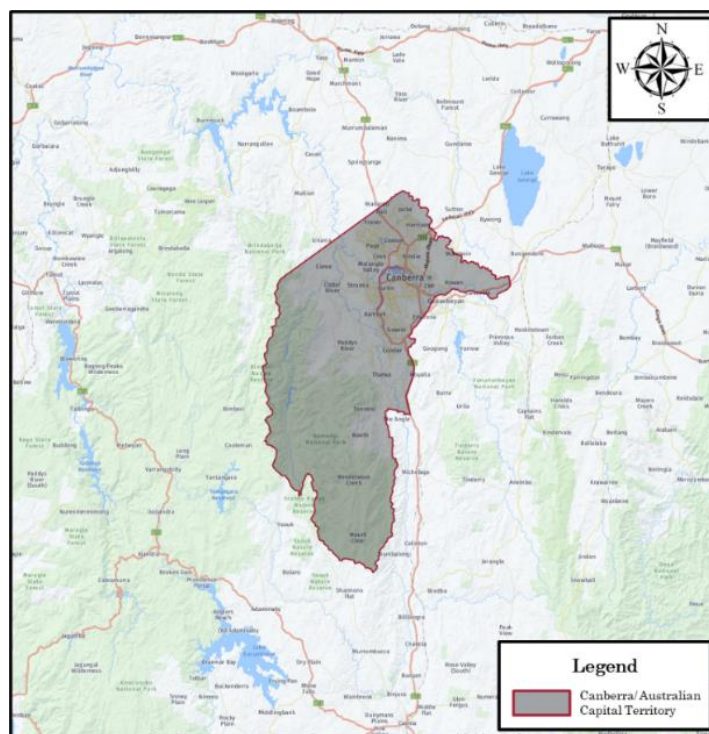


Figure 2.4: Map of Canberra/ACT and Its Surrounding NSW Rural Shires¹³

Canberra, home to 427,704 population in 2019 (.id, 2019b), is surrounded by several rural shires of NSW as shown in Figure 2.4 above. As the only city in the Territory, urban planning for Canberra is the responsibility of the ACT Planning Authority, effectively a state government agency, which contrasts with most other LGAs in Australia where planning is done by local government.

In recent decades, Canberra has shared a strong, interstate cross-border relationship with its surrounding rural shires. By the 1990s, there was widespread recognition that Canberra had been functioning as an important metropolitan centre for the neighbouring shires. During this period, planners from Canberra increasingly participated in the planning processes of the adjoining NSW shires (O'Hare, 2019). Earlier, a proposal was put forward to extend the ACT border into NSW to include the surrounding shires in the 1960-70s. The proposition, which was driven by a political desire to establish Canberra as a linear city, sought to enable the city to accommodate its long-term population growth and urban development more effectively (Hu, 2020). Although the border extension did not ultimately happen, the proposal illustrates the close cross-border relationship between Canberra and its surrounding shires over several decades.

¹³ Figure 2.4 is created by the author using satellite imagery from .id (2019b). The imagery was compiled and presented by .id, the population experts. www.id.com.au. This material is a derivative of ABS Data that can be accessed from the website of the Australian Bureau of Statistics at www.abs.gov.au, and which data can be licensed on terms published on the ABS website. The replicated Map Data in the imagery from .id belongs to HERE (2016).

Based on his analysis of three Australian case studies of three cross-border regions of NSW, O'Hare (2019, p. 2092) proposes that “the ACT and NSW Governments, together with surrounding local governments [in the ACT-NSW cross-border region], provide the most exemplary approaches to collaboration in trans-border planning.” The success in this regard has been accumulated over more than 25 years of collaboration between the governments and is attributable to six critical success factors, which are outlined in Table 2.10 below.

Table 2.10: Critical Success Factors of ACT-NSW Cross-Border Collaboration (Source: O'Hare (2019))

Critical Success Factor	Description
Cross-border government cooperation	There has been ongoing cross-border cooperation between governments at the state and territory level and their respective planners.
Political commitment to a Sydney-Canberra Corridor, a cross-border planning initiative	The Sydney-Canberra Corridor Strategy was initially implemented in 1995. The strategy proposed a network of towns along a 200-kilometre highway and rail corridor linking the two cities. Since then, both government agencies have implemented their own follow-up plans, including the ACT Government's 'The ACT and Sub-Region Plan' in 1998 and the NSW Government's 'Sydney-Canberra Corridor Regional Strategy 2007-31' in 2007.
Existence of and continued state government support for a cross-border MoU	A MoU between the ACT and NSW governments was signed by both authorities in 2006 and has continued to receive support and renewed implementation by the parties.
Rural shires' intent to reap the benefits of their proximity to Canberra	Canberra, as the capital city of Australia located in the ACT, is not only home to a large population base of approximately 400,000 but also one of the major economic hubs of Australia. As such, the NSW local governments of the surrounding rural shires have displayed the desire to benefit from their LGAs' proximity to Canberra socially, economically and culturally.
Proactive addressing of cross-border issues in formal plans	The ACT and NSW governments, along with NSW local governments of the ACT-adjointing LGAs, have illustrated a consistent record of addressing cross-border issues in their respective planning documents.
NSW Cross-border Commissioner's involvement	The NSW Cross-border Commissioner has been involved in the process of expanding planning collaboration across the ACT-NSW border.

O'Hare (2019) recommends that critical success factors outlined in Table 2.10 above be implemented in other transborder regions. The following four success criteria for cross-border planning emerge from reviewing the case studies of Albury-Wodonga and Canberra and its surrounding shires:

- ✈ Existence of, and continuous support for, a cross-border MoU;
- ✈ Appointment of a cross-border commissioner by government agencies on both sides of the border;
- ✈ Ongoing cross-border government collaboration at both the local and state levels; and
- ✈ Demonstration of government commitment to cross-border collaboration, from both sides of the border, through planning frameworks.

The success criteria above will be applied to the case study of Gold Coast Airport in Chapter 5.

2.7 CONCLUSION

This section serves as a conclusion to this literature review chapter and comprises three sub-sections. Firstly, a summary of the literature review findings is provided. Secondly, existing literature gaps based on the literature review conducted are identified. Finally, the section discusses links between the literature review themes and the research questions.

2.7.1 SUMMARY OF LITERATURE REVIEW FINDINGS

Airports, which comprise facilities for accommodating the arrival, departure and surface movement of aircraft, enable air transport for passengers and freight. Land uses within an airport can be classified into two broad categories, namely the airside and the landside. The airside is associated with aviation uses which provide unrestricted access and infrastructure to enable aircraft movements. The landside, meanwhile, comprises a range non-aviation uses which are essential to an airport operation. From an urban planning and development perspective, airports are considered the fifth and the latest wave of transport infrastructure which significantly transforms the way cities develop and function. In this regard, several theoretical models of airport-driven urban development have been conceptualised and implemented. One of the most well-known models is the Aerotropolis, which addresses the concentration of airport-compatible industrial and commercial uses around an airport.

Since WWII, the global aviation industry has experienced a rapid growth due to the deregulation of the airline industry, which led to competition amongst airlines. As most airports were government-owned, government resources became strained due to the significant amount of investment required to accommodate such growth. The combination of this resource limitation and the increasingly widespread neo-liberalism concept led to the global phenomenon of airport privatisation, through which the management and/or operational responsibilities of airports are transferred to the private sector. Three principal drivers of airport privatisation include the generation of government revenue, the potential profitability associated with both aviation and non-aviation incomes generated by airports and the stimulation of competition and efficiency amongst airports. The extent of private sector involvement in the governance of privatised airports varies across the world. In Australia, the private sector effectively has a leasehold of the privatised airports, which grants them with planning and development rights for the airports. This arrangement has led to four key outcomes of airport privatisation in Australia, including the separation of airport planning and town planning processes, light-handed government regulation of the privatised airports, commercial objectives amongst the operators of these airports and land use diversification in the boundaries of these airports.

Economic development is a relatively new concept and focuses on broader quality of life indicators than economic growth, which is primarily concerned with maximising wealth. Although local economic development and regional economic development generally refer to the same process, the former is used more in British and American publications whereas the latter is a commonly used terms in other countries such as Australia. The principal difference between the two terms is the spatial scale and total expenditure, with regional economic development being larger than local economic development in relation to these factors.

Airports, as major transport infrastructure, play a significant role in the economic development process of their host region. A two-way relationship exists between airports and economic development where growth in one area will invariably stimulate growth in the other. Airports contribute to economic development through both employment generation and advancement of several industry sectors, including tourism, freight, medical tourism, high-tech and service and knowledge and creative industries. Four planning factors can potentially influence economic benefits of airports, including land use in and around airports, planning frameworks, local transport infrastructure and stakeholder relationships.

Lastly, cross-border planning is becoming increasingly important in today's context where a number of transborder polycentric regions exist, particularly in Australia where local government and state government boundaries separate several cross-border communities. However, a varying level of cross-border planning commitments from state governments can be observed in Australia, with the NSW Government illustrating the most proactive initiatives with government agencies of its adjacent states to date.

Figure 2.5 below displays a summary of the literature review findings outlined in this chapter.

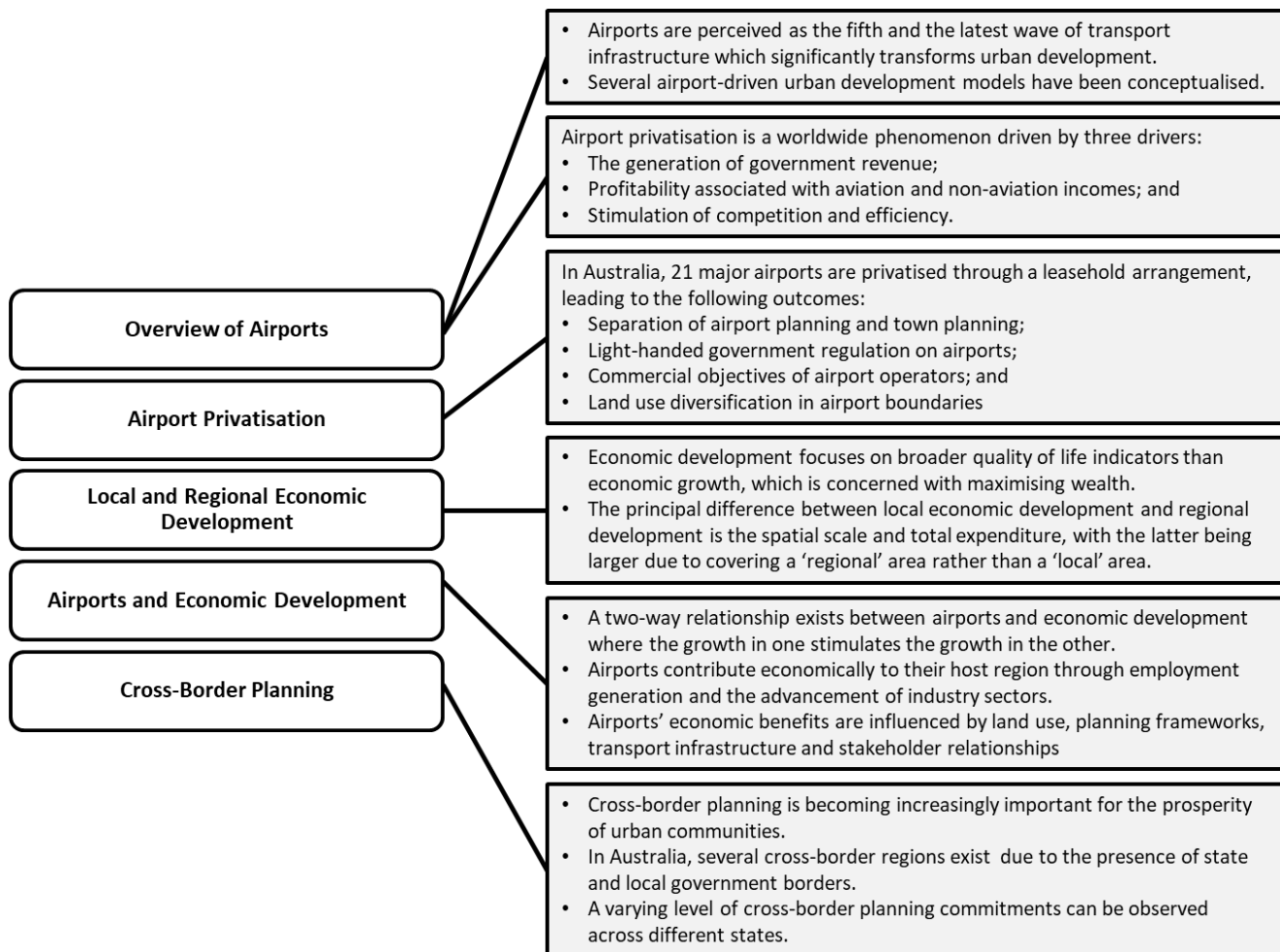


Figure 2.5: Summary of Literature Review Findings on Characteristics of Airports and Their Role in Local and Regional Economic Development

2.7.2 EXISTING LITERATURE GAPS

There has been substantial interest in the media on the economic development contribution of airports to their host region. However, many of the claims made in the media about airports' economic development contribution have not been supported by systematic studies (Green, 2007). Although planning literature has recognised the economic development contribution of various types of transport infrastructure, planning scholars have rarely focused on the role of airports in economic development despite their function as a "a major piece of transportation infrastructure" in today's context (Mosbah & Ryerson, 2016, p. 317). A similar sentiment is echoed by Freestone and Baker (2011, p. 263), who note that "airports have been relatively neglected in scholarly planning literature despite their historic role in shaping metropolitan form." In this regard, several past studies on the economic development role of airports (e.g. Button and Yuan (2013), Cidell (2015), Song and Ma (2006), Tittle et al. (2012) and Yao and Yang (2008)) have focused on the quantitative economic

benefits of airports, including one or more of the following: total number of direct, indirect and induced jobs created by airports; total incomes generated by airports' operation; and economic contribution to the host region in financial (\$) figures. Consequently, there is a literature gap on how a range of planning factors shape the economic development contribution of airports. This research aims to address this gap through the second, third and fourth research questions, which investigate the following themes in relation to how they impact the economic development contribution of Gold Coast Airport: strategic, statutory and cross-border planning frameworks; land use, transport and industry sectors; and stakeholder relationships, including community voice.

Most of the existing academic publications related to economic development contribution of airports focus on the United States context (e.g. Bilotkach (2015), Button and Yuan (2013), Chen et al. (2018), Cidell (2015), Florida et al. (2015), Green (2007), Mosbah and Ryerson (2016), Tittle et al. (2012) and Song and Ma (2006)). In contrast, studies focusing on airports in other contexts, including Australia, are relatively limited. Table 2.11 below outlines past urban planning studies on airports in the Australia context in terms of their research scope.

Table 2.11: Urban Planning Studies Focusing on Airports in the Australia Context

Researcher(s)	Research Scope
Stevens (2006)	The author discusses an overview of the changing role, scale and implication of airports around the world. The contemporary context of airports in Australia is outlined in relation to the Airports Act and the need for airports to incorporate non-aviation uses as additional revenue sources.
Baker and Freestone (2008)	The authors explore three impacts of the privatisation of major Australian airports under the Airports Act. These include the separation of land use planning processes for and around the airports, the transition of the role of the Federal Government from directly managing to planning and monitoring the airports and the emerging stakeholder conflicts from the airport privatisation process.
Walker and Stevens (2008)	The authors identify and categorise land uses on the land of the privatised Australian airports under the Airports Act. The land use categories developed in the paper are envisaged to assist airport and community planners in making more-informed land use planning decisions for airport master plans and town plans.
Freestone (2009)	The author, from the urban planning perspective, investigates several issues associated with airport-led urban development in Australia and around the world. Airport-led urban development is examined in terms of its trend and drivers.
Freestone and Baker (2010)	The authors examine challenges in land use planning around the privatised Australian airports emerging from the exclusion of state and local government influence from development within these airports.
Stevens et al. (2010)	Taking into consideration the changing nature of Australian airports in their urban context and the issues resulting from this phenomenon, the authors develop a conceptual model of the 'airport metropolis', which comprises an airport and its host region. The framework advocates for sustainability criteria under four different themes: economic development, infrastructure, land use and governance.

Researcher(s)	Research Scope
Freestone and Baker (2011)	The authors review a range of spatial planning models of airport-driven urban development which have been conceptualised in the planning literature. Planning issues associated with airport-driven urban development practices are discussed.
Baker and Freestone (2012)	The authors investigate two issues associated with land use planning arising from the privatisation of Australian airports under the Airports Act: the conflicting private and public values in relation to the role of airports and the difficulty of allocating land use planning responsibilities of government agencies for the airport and community interface.
Stevens (2012)	The author explores a range of issues relating to airport and regional land use planning in the Australia context. The historical evolution of the social, technological, environmental and economic roles of airports is also examined.
Stevens and Baker (2013)	Through case studies of Brisbane Airport, Adelaide Airport and Canberra Airport, the authors identify the current land use conflicts and issues existing in the airport metropolis interfaces in the Australia context.
Freestone and Wiesel (2015)	The authors examine the historical transformation of Canberra Airport from a dilapidated facility into an 'airport city' and identify five critical factors underpinning the process.

Several of the studies listed in Table 2.11 were undertaken as part of a multidisciplinary Australian Research Council Linkage Project,¹⁴ funded in 2007 to investigate the changing nature of airports in Australia, particularly due to the privatisation under the Airports Act and in relation to the interfaces of these airports and their surroundings. As illustrated across the research scopes outlined in Table 2.11, these studies have cumulatively covered airport-driven urban development and planning issues arising from the airport privatisation process, including land use and stakeholder concerns, in the Australia context. This research builds on this body of knowledge on Australian airports by investigating the role of Gold Coast Airport, also a privatised airport, in economic development.

The majority of the studies outlined Table 2.11 and existing academic publications on airports in other parts of the world (e.g. Chen et al. (2018), Cidell (2015), Cohen and Brown (2017), Debbage (2002), Ji et al. (2015), Murakami et al. (2016), Olipra and Augustyniak (2015), Song and Ma (2006) and Tittle et al. (2012)) have investigated larger airports located in a major or capital city or First-Tier Airports. Meanwhile, other studies (e.g. CDM Smith (2012), Deloitte Access Economics (2012) and Deloitte Access Economics (2018)) have investigated aggregate economic contribution of airports at a national level. Therefore, there is an existing literature gap on smaller airports in a regional or non-capital city. As such, the case study of Gold Coast Airport, as a smaller airport located in a regional area encompassing the Gold Coast and Tweed Shire, will yield useful lessons that contribute to the planning literature on the economic development role of second-tier airports.

¹⁴ The project is titled 'The Airport Metropolis' and its reference code is LP0775225.

2.7.3 LINKS BETWEEN LITERATURE REVIEW AND RESEARCH QUESTIONS

Figure 2.6 below illustrates the links between the literature review and the four research questions.

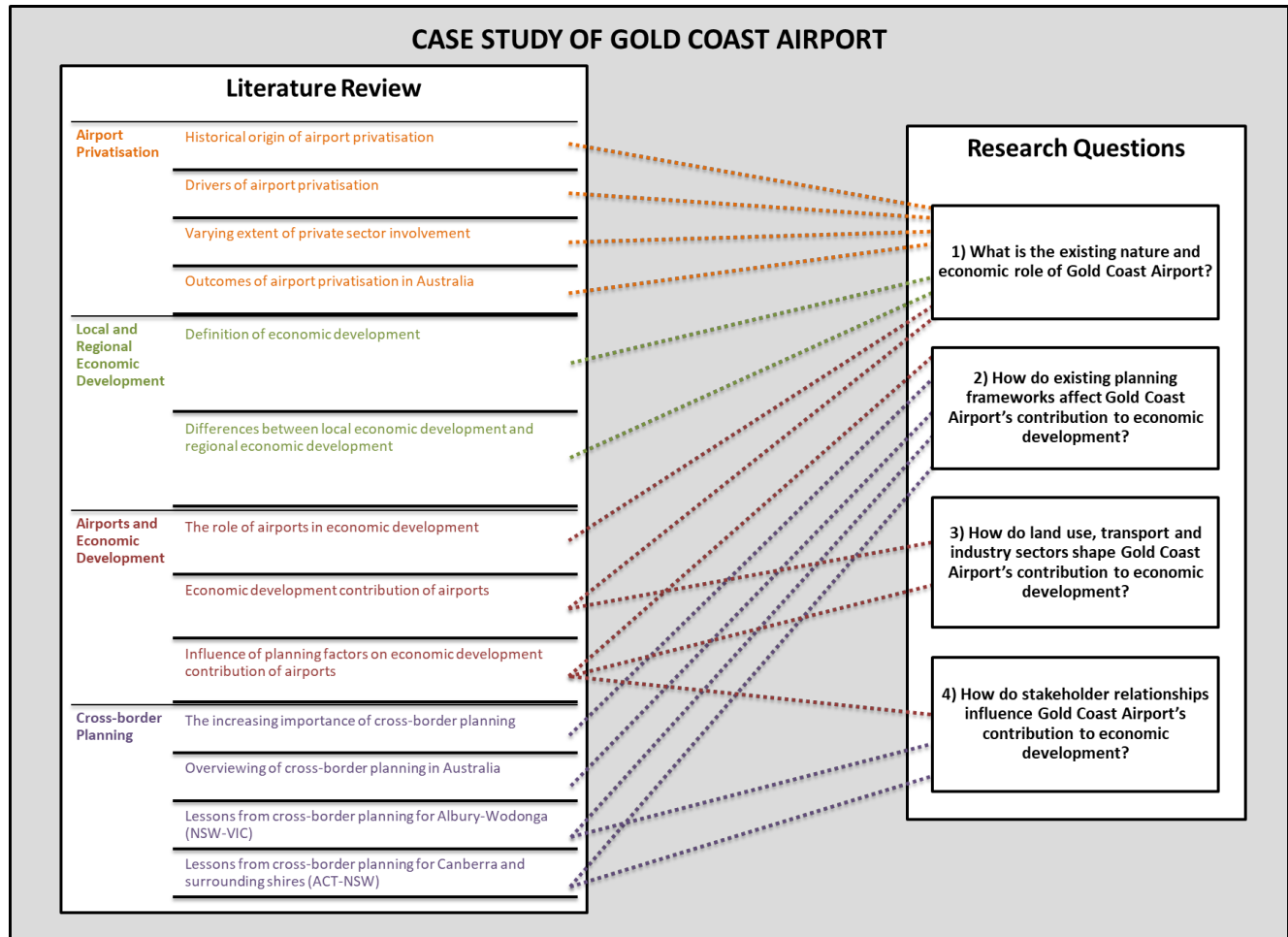


Figure 2.6: Links between Literature Review and Research Questions

Chapter 2 has presented literature review findings on the characteristics of airports and their role in local and regional economic development. The next chapter of the thesis outlines the research methods and methodology employed in this research.

CHAPTER 3: RESEARCH METHODS AND METHODOLOGY

3.1 INTRODUCTION

Chapter 3 outlines the research methods and methodology employed in this study. The chapter comprises four main sections. Firstly, a justification for the research approach undertaken in this study is discussed. Secondly, the research framework guiding this study is outlined. Thirdly, the different research methods implemented in this study are explained in relation to the research questions they seek to address. Fourthly, the chapter briefly discusses how the grounded theory approach has been implemented in this research to develop a new theory from the collected data.

3.2 JUSTIFICATION FOR RESEARCH APPROACH

The principal research objective of this study, “to investigate planning constraints and opportunities influencing Gold Coast Airport’s contribution to local and regional economic development,” seeks to understand how a range of planning factors impact a phenomenon, namely Gold Coast Airport’s economic development contribution. No controls of behavioural events are required in the process of acquiring such an understanding. These aspects of this research make single case study the most appropriate approach for this study (Yin, 2014). Investigating several airports, which implies the use of multiple case studies, can potentially provide richer data and stronger, more reliable evidence than a single case study (Gustafsson, 2017). However, Feagin et al. (1991) suggest that exploring more than one case in a study may dilute the richness of understanding that can be developed from the single case. Due to the time, resource and logistical constraints associated with undertaking a doctoral research, a single case study is more appropriate as it is less expensive and time-consuming than multiple case studies. Exploring a single case study in detail can also assist in developing not only high-quality theory but also a deeper understanding of the subject being investigated than examining multiple case studies (Gustafsson, 2017). Ozcan et al. (2017) outlines four key benefits of single case study research. Table 3.1 below outlines these benefits and how they can contribute to this research.

Table 3.1: Four Key Benefits of Single Case Study Research and their Contribution to this Research (Adopted from Ozcan et al. (2017))

Benefit	Contribution to Research
A comprehensive understanding of a complex phenomenon from different perspectives can be developed.	Through semi-structured interviews with key informants, which are further discussed in Section 3.4.3, this research investigates Gold Coast Airport’s economic development contribution from the perspectives of different stakeholders from both the public and private sectors. Doing so will allow a comprehensive understanding of how different planning factors influence the airport’s contribution to local and regional economic development.

Benefit	Contribution to Research
A phenomenon, which may not be easily observable to outsiders, can be closely examined.	This research investigates the role of Gold Coast Airport in local and regional economic development, which is a complex social phenomenon. The research closely examines such a phenomenon systematically through analysing several planning factors, including the airport’s existing nature and economic role, planning frameworks, land use, transport, industry sectors and stakeholder relationships.
The case being investigated may be an instantiation of an unusual phenomenon, for which several cases do not exist, and the examination of the case can lead to the emergence of new theory.	There are two highly unique attributes of Gold Coast Airport which strongly differentiate the airport from other airports, namely its cross-border location across two states and two LGAs and its co-location with a SCU campus. Therefore, by thoroughly examining Gold Coast Airport, new theory on economic development contribution of airports in a cross-border context can be conceptualised through this research. Additionally, new understanding of the economic development implications of the co-location of an airport and a university campus can be developed.
Investigating a single case in detail effectively allows a complex social phenomenon to be examined “at a fine-grained level of detail that cannot be achieved through multiple cases or other methods” (Ozcan et al., 2017, p. 93).	Airports contribute to local and regional economic development in several ways. However, airports are highly differentiated in terms of their governance structure and spatial, economic and social contexts. As such, an airport’s contribution to economic development would be not only significantly different from other airports’ economic development contribution but also a highly complex social phenomenon. Comparing several airports in this research could lead to a superficial understanding of the economic development contribution of airports. Conversely, comprehensively investigating only Gold Coast Airport will lead to a thorough understanding of how different planning factors influence an airport’s economic development contribution. Such knowledge can potentially be useful to stakeholders involved in economic development planning associated with an airport in Australia or around the world.

This research is qualitative in nature as it aims to develop new insights about a particular phenomenon, namely the role of Gold Coast Airport in local and regional economic development, in order to establish new concepts about the phenomenon (Leedy & Ormrod, 2005). The ‘new concepts’ being developed are planning constraints and opportunities influencing Gold Coast Airport’s economic development contribution, which will be conceptualised through answering the four research questions established earlier in Section 1.3. To answer the four research questions, through a multi-method approach, a variety of qualitative data, which serve as empirical materials for the research, is collected and analysed (Denzin & Lincoln, 2017).¹⁵ As discovered in the literature review, economic development contributions of airports can be influenced by several factors (e.g. airport privatisation, airport typology, airport location, planning frameworks, transport infrastructure and stakeholder relationships). As such, the economic development role of airports, the topic of investigation in this research, is a highly complex phenomenon. A multi-method approach, which is

¹⁵ Appendix 1 outlines the different data collected for this research.

employed in the majority of qualitative research (Flick, 2018), can assist in developing a comprehensive understanding of a phenomenon (Denzin & Lincoln, 2017), thus implying its usefulness for this research topic.

Table 3.2 below outlines five key benefits of qualitative research and how these benefits can contribute to this research.

Table 3.2: Five Key Benefits of Qualitative Research and their Contribution to this Research (Adopted from Creswell (2014), Mohajan (2018) and Yauch and Steudel (2003))

Benefit	Contribution to Research
Open-ended questioning in qualitative research uncovers new or unexpected phenomenon.	The qualitative nature of this research assists in discovering a range of planning factors that influence Gold Coast Airport's economic development contribution, including new factors that have not been documented in the literature.
Qualitative research enables the exploration and understanding of the perspectives of diverse groups of people.	An airport affects a range of local stakeholders economically. Therefore, exploring the perspectives of these stakeholders through semi-structured interviews, further discussed in Section 3.4.3, will assist in developing a comprehensive understanding of the nature of Gold Coast Airport's economic development contribution.
Qualitative research allows new insights to be developed from the more descriptive, narrative style of research in the absence of statistics.	Developing new insights will assist in identifying the range of planning constraints and opportunities that influence Gold Coast Airport's economic development contribution.
A small number of participants are required, thus allowing the research to be carried out even with limited resources.	The research is constrained by limited time and resources. Therefore, recruiting a small number of interview participants allows this research to be completed within this limitation.
Qualitative research offers richer insights into causes and directions associated with a phenomenon.	The research seeks to identify key planning factors that influence Gold Coast Airport's economic development contribution. These factors can be considered causes that affect the nature of the airport's economic role.

Having provided justification for the research approach undertaken in this study, the next section of the chapter outlines the research framework guiding the study.

3.3 RESEARCH FRAMEWORK

This section expands on the research framework guiding this study, which is briefly introduced previously in Section 1.3 and illustrated in Figure 3.1 below.

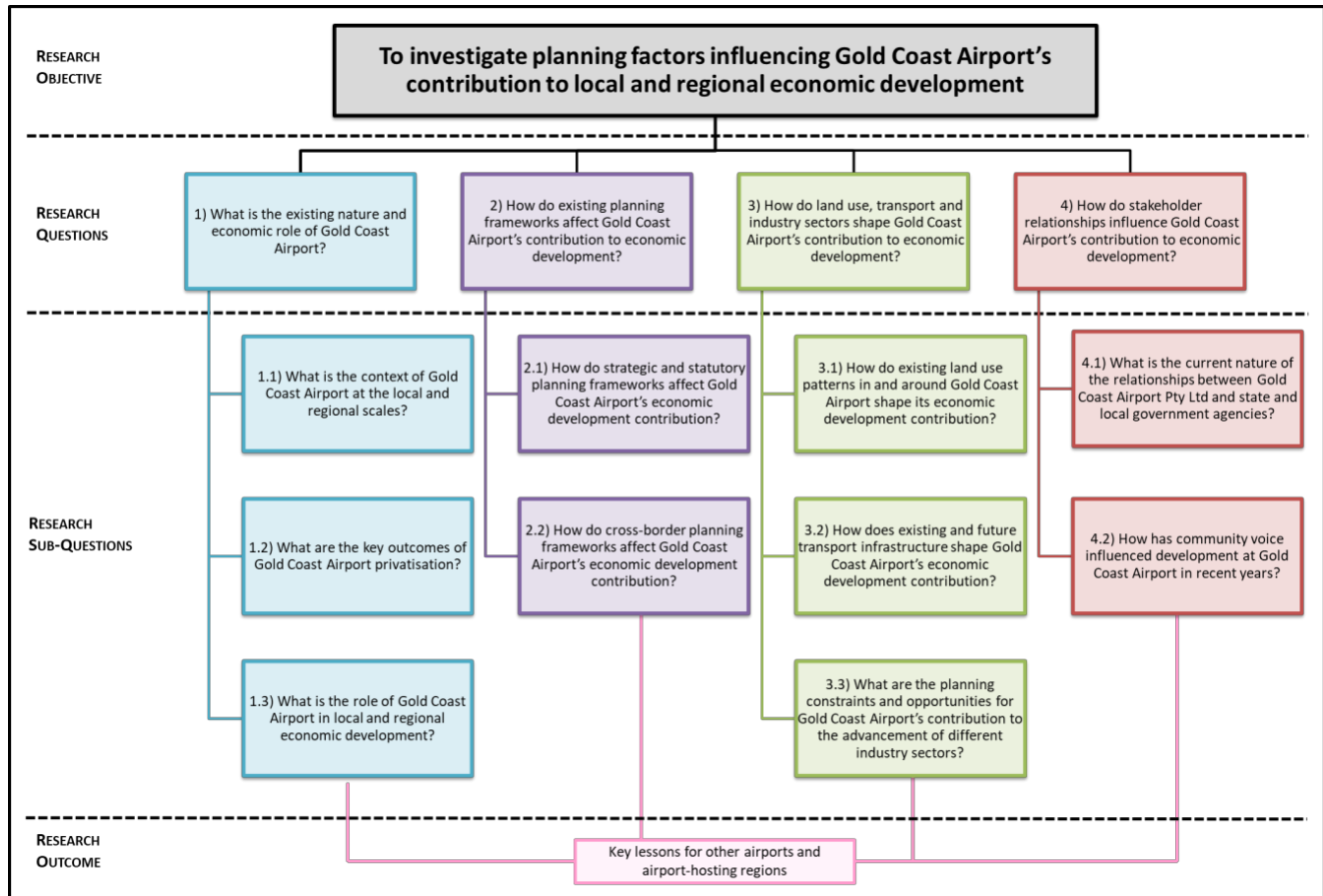


Figure 3.1: Thesis Research Framework

As shown in Figure 3.1 above, the principal research objective of this study is to investigate planning factors influencing Gold Coast Airport's contribution to local and regional economic development. To achieve this objective, the research is underpinned by four primary questions. The first research question is "What is the existing nature and economic role of Gold Coast Airport?" The purpose of this research question is to establish a context for the three subsequent research questions by exploring various characteristics of Gold Coast Airport from both urban planning and economic development perspectives. To this end, the research question is underpinned by three sub-questions. Sub-question #1.1 is "What is the context of Gold Coast Airport at the local and regional scales?" To address this sub-question, the thesis conducts a context analysis of Gold Coast Airport's surroundings at three different levels, including the regional, local government and local contexts. Given that Gold Coast Airport was privatised in 1998 under the Airport Act, sub-question #1.2, "What are the key outcomes

of Gold Coast Airport privation?” seeks to identify the key impacts of the airport’s privatisation. In response to this research question, the thesis provides a discussion on the fundamental changes to the airport’s focus and operation since its privatisation. Lastly, sub-question #1.3 is “What is the role of Gold Coast Airport in local and regional economic development?” The thesis answers this sub-question by investigating how Gold Coast Airport has contributed to the economy of not only the Gold Coast and Tweed Shire, but also the broader regions of SEQ and FNC.

The second research question is “How do existing planning frameworks affect Gold Coast Airport’s contribution to economic development?” Following the context established by the first research question, this research question explores the existing planning frameworks in terms of their potential influence on Gold Coast Airport’s economic development contribution. Three different types of planning frameworks, including strategic, statutory and cross-border instruments, are investigated in this research question. As such, the research question comprises two sub-questions. Sub-question #2.1 is “How do strategic and statutory planning frameworks affect Gold Coast Airport’s economic development contribution?” The thesis addresses this sub-question through reviewing the applicable strategic and statutory planning frameworks implemented by both the Federal, state and local governments and the private sector. Meanwhile, sub-question #2.2 is “How do cross-border planning frameworks affect Gold Coast Airport’s economic development contribution?” This sub-question recognises the cross-border nature of Gold Coast Airport in terms of its location and economic development contribution. To answer this sub-question, the thesis conducts a critical analysis of cross-border planning frameworks at the state and local levels in terms of their potential impacts on the economic development contribution of Gold Coast Airport.

The third research question is “How do land use, transport and industry sectors shape Gold Coast Airport’s contribution to economic development?” This research question investigates three specific themes which shape economic development contribution of Gold Coast Airport, namely land use, transport and industry sectors. Therefore, the research question is underlined by three sub-questions. Firstly, sub-question #3.1 is “How do existing land use patterns in and around Gold Coast Airport shape its economic development contribution?” The thesis addresses this sub-question through a spatial analysis of existing land uses in and around Gold Coast Airport to identify issues and opportunities that influence the airport’s economic development contribution. Secondly, sub-question #3.2 is “How does existing and future transport infrastructure shapes Gold Coast Airport’s economic development contribution?” To answer this sub-question, the thesis discusses key transport infrastructure limitations on and drivers of Gold Coast Airport’s economic development contribution.

The following transport modes, which service Gold Coast Airport, are considered in this sub-question: heavy rail, light rail, buses and cars. The thesis considers the planned extension of both light rail and heavy rail corridors to Gold Coast Airport and puts forth an argument on why, from an economic development perspective, the heavy rail corridor extension should be prioritised over the light rail. Thirdly, sub-question #3.3 is “What are the issues and opportunities for Gold Coast Airport’s contribution to the advancement of different industry sectors?” As Gold Coast Airport’s economic development contribution affects several industry sectors, this sub-question involves a discussion on key issues and opportunities for the airport’s contribution to the advancement of different industry sectors of the Gold Coast and Tweed Shire. Specifically, five different industries are explored in this sub-question, including freight, medical tourism, tourism, business and education.

The fourth and final research question is “How do stakeholder relationships influence Gold Coast Airport’s contribution to economic development?” This research question focuses on the nature of relationships between various relevant stakeholders and how they can influence the economic contribution of Gold Coast Airport. Three different types of stakeholder relationships are investigated in this research question, which consequently consists of two sub-questions. Sub-question #4.1 is “What is the current nature of the relationships between Gold Coast Airport Pty Ltd and state and local government agencies?” To address this sub-question, the thesis explores governance arrangements between state and local governments on both sides of the border. It specifically investigates how the existing financial support from the state governments on both sides of the border influences Gold Coast Airport’s economic development contribution. It investigates the relationships between GCAPL and local stakeholders, including councils and local destination marketing organisations. The thesis also examines cross-border relationships between government agencies at the local and state levels in terms of how they affect the economic development contribution of Gold Coast Airport. Lastly, sub-question #4.2 is “How has community voice influenced development at Gold Coast Airport in recent years?” The thesis answers this sub-question through investigating public response towards recent development projects at Gold Coast Airport, which are associated with significant economic development contribution, and the key driving factors of such sentiment.

Lastly, from the findings of the four research questions and their associated sub-questions above, the thesis draws key planning lessons and develops a conceptual framework of planning for local and regional development around an airport. These lessons, which have relevance for stakeholders relevant to the economic development planning process around an airport, can assist them in their planning processes and enhance the economic development contribution of the airport.

3.4 RESEARCH METHODS

The research methodology employs a mixed-method approach as shown in Figure 3.2 below, which illustrates the research methods employed for the four research questions. Each research method is assigned with a specific colour code.

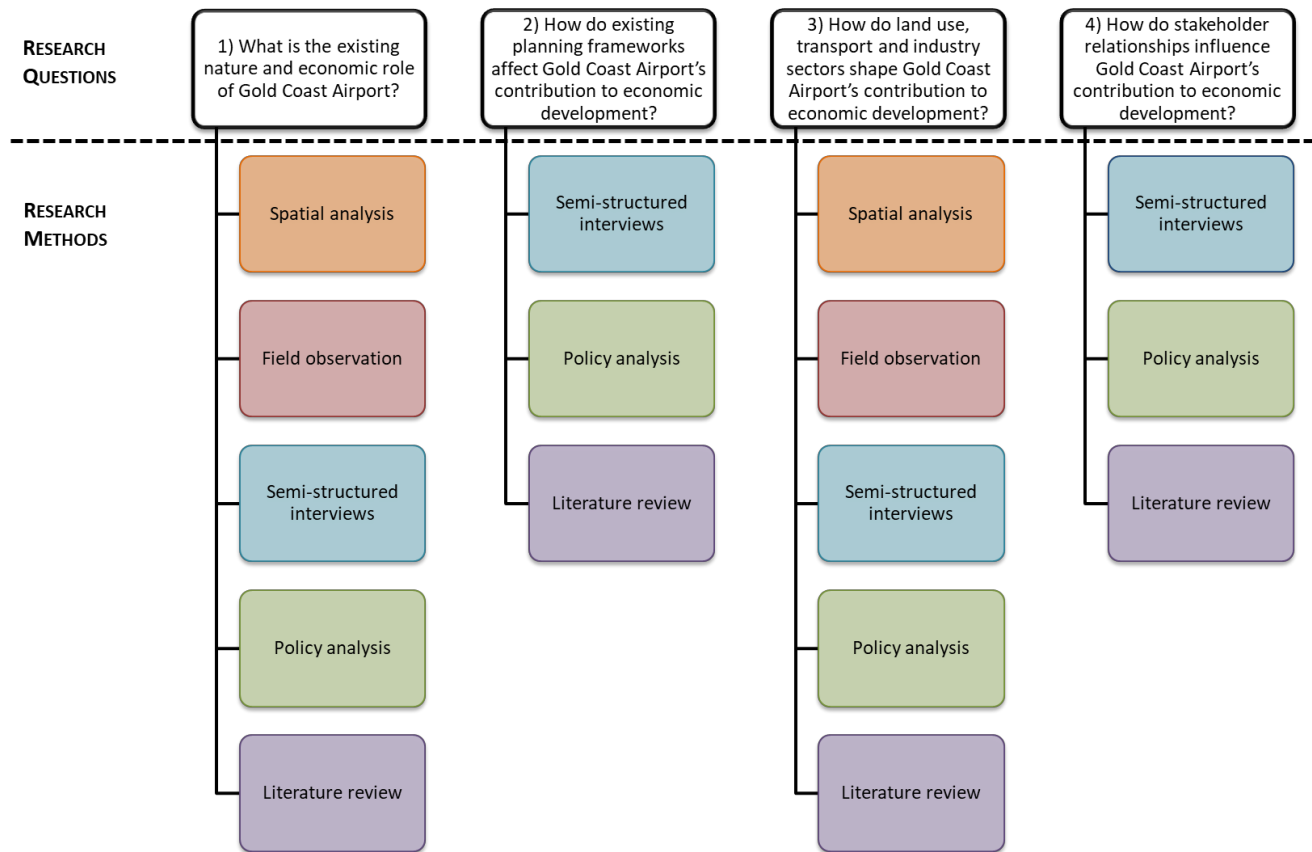


Figure 3.2: Research Methods Employed for the Four Research Questions¹⁶

As shown in Figure 3.2, the following five methods are employed across the four research questions, namely:

1. Spatial analysis
2. Field observation
3. Semi-structured interviews
4. Policy analysis
5. Literature review

¹⁶ Appendix 1 identifies the different data sources for the research methods outlined in Figure 3.2.

These methods are further elaborated below in terms of how they are implemented for the different research questions and sub-questions

3.4.1 SPATIAL ANALYSIS

In this research, spatial analysis is employed for the first and third research questions, outlined in Table 3.3 below.

Table 3.3: Research Questions Employing Spatial Analysis as a Research Method

Research Question #	Research Question
1	What is the existing nature and economic role of Gold Coast Airport?
3	How do land use, transport and industry sectors shape Gold Coast Airport's contribution to economic development?

In the first research question, “What is the existing nature and economic role of Gold Coast Airport?” spatial analysis is utilised for sub-question #1.1, “What is the context of Gold Coast Airport at the local and regional scales?” Specifically, this method was employed to analyse the following two land use patterns:

1. The local context of Gold Coast Airport's surroundings; and
2. Land uses in Gold Coast Airport.

To conduct a spatial analysis of the local context of Gold Coast Airport's surroundings, the research investigated the airport's environs within a three-kilometre radius from the airport. As part of this process, satellite imagery and land use maps from local councils' planning instruments listed in Appendix 1 were reviewed to examine the land use pattern around Gold Coast Airport on both the Gold Coast and Tweed Shire sides of the border. The spatial distribution pattern of the following types of land use was assessed:

- ✈ Residential land use;
- ✈ Commercial land use;
- ✈ Retail land use;
- ✈ Open space/community land use; and
- ✈ Nature reserves.

The land uses above were identified in three sequential steps, each of which utilises a different data source. Firstly, the land use maps from the two local councils were examined. These land use maps, which are based on the councils' planning schemes, are both strategic and statutory in nature as they outline the councils' long-term vision for the different sites around the airport, from which land use

codes are derived. These land use codes, which vary based on the zoning applied to the land parcel, must be followed by developers. Although the primary purpose of these land use maps is to illustrate the councils' land use vision, they are also representative of the existing uses in most, but not all, circumstances. As such, upon identifying Gold Coast Airport's surrounding land uses from the land use maps, two additional steps were employed to further verify these land uses. The second step involves an analysis of satellite imagery for the airport's vicinity. These satellite images were specifically examined to identify the distribution of open spaces, buildings and nature reserves. Lastly, the land use pattern identified so far was then verified through physical site visits by the author. Photos of Gold Coast Airport's surroundings, taken during the site visits, were used to supplement the spatial analysis conducted for the airport's environs. These photos are included in the thesis to supplement the land use discussion in Section 4.4.

Spatial analysis was also employed to analyse land use pattern within the boundary of Gold Coast Airport. Rather than utilising land use maps from the local councils, land use maps from the Gold Coast Airport 2017 Master Plan, which show existing land uses within the airport boundary, were examined. Similarly to the approach above, the spatial analysis was supplemented with satellite imagery and site visits by the author.

For the third research question, the research employs spatial analysis for sub-question #3.1, "How do existing land use patterns in and around Gold Coast Airport shape its economic development contribution?" In this regard, as part of the spatial analysis processes conducted for the airport's surrounding and internal land uses discussed above, specific land use constraints and opportunities, which can influence Gold Coast Airport's economic development contribution, are also identified. In this regard, as part of the spatial analysis, vacant land parcels in proximity to the airport are also investigated as potential land use opportunities.

3.4.2 FIELD OBSERVATION

Similarly to spatial analysis, field observation was employed for the first and third research questions, outlined in Table 3.4 below.

Table 3.4: Research Questions Employing Field Observation as a Research Method

Research Question #	Research Question
1	What is the existing nature and economic role of Gold Coast Airport?
3	How do land use, transport and industry sectors shape Gold Coast Airport's contribution to economic development?

The field observation was conducted through several physical site visits to Gold Coast Airport and its surroundings, which also assisted the author in verifying spatial analysis findings as discussed previously. In relation to the first research question, the site visits were conducted to address research sub-question #1.1, “What is the context of Gold Coast Airport at the local and regional scales?” In particular, site visits provided data to assist in developing an understanding of the local context of the airport through the identification land use and development patterns. For the third research question, meanwhile, the site visits address research sub-questions #3.1 and #3.2 as illustrated in Table 3.5 below.

Table 3.5: Research Questions Employing Field Observation as a Research Method

Research Sub-Question #	Purpose of Site Visits
3.1) How do existing land use patterns in and around Gold Coast Airport shape its economic development contribution	Through investigating the existing land use patterns both inside and around Gold Coast Airport, the site visits facilitated the identification of land use opportunities and constraints that can influence the airport’s economic development contribution.
3.2) How does existing and future transport infrastructure shape Gold Coast Airport’s economic development contribution?	The site visits involved a visual analysis of transport infrastructure inside and around Gold Coast Airport, which assists in developing an understanding of whether the existing infrastructure is a constraint or enabler of the airport’s economic development contribution.

3.4.3 SEMI-STRUCTURED INTERVIEWS

The research employs semi-structured interviews to source original insights from stakeholders relevant to the economic development planning around Gold Coast Airport. These insights provide useful, original data for all of the four research questions:

- 1) What is the existing nature and economic role of Gold Coast Airport?
- 2) How do existing planning frameworks affect Gold Coast Airport’s contribution to economic development?
- 3) How do land use, transport and industry sectors shape Gold Coast Airport’s contribution to economic development?
- 4) How do stakeholder relationships influence Gold Coast Airport’s contribution to economic development?

Sixteen participants were interviewed in this research. All potential participants were electronically provided with an explanatory statement letter, which introduces the research, highlights their potential contribution to the research and provides a confidentiality assurance for the interviews to be conducted. A copy of the letter can be found in Appendix 2.

The majority of the participants were recruited via snowball sampling, a frequently employed sampling method in qualitative research in the field of social sciences (Kirchherr & Charles, 2018).

These participants were recruited through referrals from the initially interviewed participants or the author's personal contacts. Although snowball sampling is associated with some limitations associated with the non-randomised selection process (Johnson, 2014), this technique was implemented due to the following two principal reasons:

- ✈ Several of the stakeholders relevant to the economic development planning process of Gold Coast Airport can be classified as “difficult-to-reach” (Kirchherr & Charles, 2018, p. 2) given the author's existing professional network; and
- ✈ The cost and efficiency advantages of snowball sampling (Johnson, 2014) imply that the method is an appropriate strategy given the time and resource limitations associated with doctoral research.

The interviews were conducted at either the office of the organisation that the interviewees represent, or a café near the office. All interviews were recorded electronically with a smartphone app with the interviewees' written consent acquired through an interview participant consent form, which can be found in Appendix 3. Two of the participants were interviewed simultaneously whereas the other 14 participants were interviewed individually. The interviews conducted are between 40 minutes and one hour in length. The interview participants were recruited across both the Gold Coast and Tweed Shire LGAs. The profile of the interview participants, which is intentionally kept broad to protect the identity of the interviewees, including the organisation that they represent and how they are identified throughout this thesis, is displayed in Table 3.6 below.

Table 3.6: Profile of Interview Participants Recruited in This Research and How They Are Identified throughout This Thesis¹⁷

Profile	Description	Number	Identification
Public Sector			
Urban planner*	An urban planner employed in a public organisation, who is involved in one or more of the following areas: economic development, strategic planning, statutory planning and infrastructure planning	5	<ul style="list-style-type: none"> ✈ Urban planner #1 ✈ Urban planner #2 ✈ Urban planner #3 ✈ Urban planner #4 ✈ Urban planner #5
Local community representative*	An individual employed by a public organisation, who advocates for the interests of local community members they represent	2	<ul style="list-style-type: none"> ✈ Local community representative #1 ✈ Local community representative #2
Senior manager*	A senior manager at an organisation	2	<ul style="list-style-type: none"> ✈ Senior manager #1 ✈ Senior manager #2

¹⁷ Relevant quotes are employed strategically to emphasise and highlight key ideas and findings discussed in chapters 4 to 7. As such, numbers are assigned to the interview participants marked with an asterisk (*) as they share the same profile as at least one other participant, to identify the individuals that the applicable quotes belong to.

Profile	Description	Number	Identification
Local destination marketing organisation representative*	A representative of an organisation which seeks to promote the Gold Coast or Tweed Shire LGA to potential visitors and investors	3	<ul style="list-style-type: none"> ➤ Local destination marketing organisation representative #1 ➤ Local destination marketing organisation representative #2 ➤ Local destination marketing organisation representative #3
Marketing officer	A marketing specialist whose principal role is to promote the organisation he/she is employed in	1	➤ Marketing officer
Private Sector			
Urban planner*	An urban planner employed in a private organisation, who is involved in one or more of the following areas: strategic planning and statutory planning	2	<ul style="list-style-type: none"> ➤ Urban planner #6 ➤ Urban planner #7
Local chamber of commerce representative	A representative of a chamber of commerce based in the Gold Coast or Tweed Shire LGA	1	➤ Local chamber of commerce representative

Due to their semi-structured nature, the interviews employed an open-ended questionnaire, which comprises three principal questions related to the four research questions as outlined in Table 3.7.

Table 3.7: Questions Employed in the Semi-Structured Interviews and Their Associated Research Questions

Research Question(s) #	Interview Question	Description
1	What is the past, present and future economic role of Gold Coast Airport for the Gold Coast/Tweed Shire?	The question seeks to understand the historical evolution of Gold Coast Airport's economic development role for the Gold Coast and Tweed Shire. The location in the question would reflect the LGA the stakeholder is based in.
2, 3 and 4	What are the key issues and opportunities for Gold Coast Airport's contribution to local and regional economic development?	This question seeks to identify planning factors that influence the local and regional economic development contribution of Gold Coast Airport. These factors would then be categorised according to their applicable theme (e.g. planning frameworks, land use, transport, industry sectors and stakeholder relationship).
4	How could stakeholders collaborate more effectively in economic development planning around Gold Coast Airport?	This question aims to identify key opportunities for promoting the economic development contribution of Gold Coast Airport through stakeholder collaboration.

The three questions outlined in Table 3.7 above were employed for all the conducted interviews. Depending on the answers provided by the interview participants, additional, 'probing' questions were also asked where possible. The purpose of these probing questions is to further understand important insights relevant to the research questions. Supplementary questions were also asked

depending on the profile of the interviewees. These questions seek to acquire specific insights from the interviewees’ professional role. An example of these supplementary questions is “How has Gold Coast Airport impacted the local businesses in this area?” This question is directed at the local chamber of commerce representative, who would have specialised insights on the local businesses in the area in which the organisation operates in. All interview records were transcribed electronically using Rev (rev.com), and all transcribed interview data were stored on the website. The interview transcriptions were then manually verified for greater accuracy and rewritten as necessary. The verified transcriptions were then closely investigated for common themes and relevant insights, which allowed an understanding of Gold Coast Airport’s economic development contributions to be developed. Specific key words related to the six themes, which are investigated across the four research questions, were looked for during the analysis of the interview transcripts. These themes include the nature and economic role of Gold Coast Airport, including its privatisation outcomes, planning frameworks, land use, transport infrastructure, industry sectors and stakeholder relationships. The important key words under the six research themes are listed in Table 3.8 below.

Table 3.8: Important Key Words under the Six Research Themes for Analysing Interview Transcripts

Theme	Key Words
Nature and economic role of Gold Coast Airport	<ul style="list-style-type: none"> ➤ Privatisation ➤ Economic development ➤ Economic impacts ➤ Economic benefits ➤ Economic contribution ➤ Access ➤ Domestic/international gateway ➤ Tourism ➤ Freight ➤ Employment ➤ Cross-border
Planning frameworks	<ul style="list-style-type: none"> ➤ Strategic plan/planning/policy ➤ Statutory plan/planning/policy ➤ Cross-border plan/planning/policy ➤ Land use zoning
Land use	<ul style="list-style-type: none"> ➤ Proximity ➤ Adjacent ➤ Sites ➤ Airport expansion ➤ Residential/commercial/retail/medical use/precinct/development ➤ Hotel/apartment accommodation

Theme	Key Words
Transport infrastructure	<ul style="list-style-type: none"> ✈ Light rail/tram ✈ Heavy rail ✈ Buses ✈ Public transport ✈ Car park ✈ Traffic ✈ Connectivity ✈ Access
Industry sectors	<ul style="list-style-type: none"> ✈ Local industry ✈ Tourism ✈ Freight ✈ Business ✈ Conference
Stakeholder relationships	<ul style="list-style-type: none"> ✈ Stakeholder collaboration/engagement/consultation/conflicts ✈ Public/private sector ✈ Federal/state/local government ✈ Local community members ✈ Local residents ✈ Community voice/support/opposition ✈ Funding/financial support ✈ Sponsorships

3.4.4 POLICY ANALYSIS

The research involves a policy analysis of several strategic and statutory planning documents, which are listed and described in Appendix 4. Several strategic and statutory planning documents from all tiers of government in Australia and GCAPL were analysed as part of this process. These documents cumulatively establish strategic, statutory and cross-border planning frameworks that Gold Coast Airport operates in, which can significantly promote or hinder economic development contribution of the airport. As such, the policy analysis findings directly contribute to the second research question, namely “How do existing planning frameworks affect Gold Coast Airport’s contribution to economic development?” and both its associated sub-questions. The policy analysis process involves searching for key words and phrases, which relate to the policy analysis purpose outlined for each policy document in Appendix 4. The total instances in which a relevant key word or phrase is mentioned in each document are counted. Following this, a thematic analysis is conducted for the sections which contain the key word or phrase in relation to the policy analysis purpose relevant to the document.

3.4.5 LITERATURE REVIEW

Literature reviews, distinct from the literature review conducted previously in Chapter 2, were implemented to provide supplementary data for the four research questions and their associated sub-questions where applicable.

The wide range of data accumulated from the from the mixed-method approach where five different methods are employed were then coded by identifying common themes, concepts and phrase, which collectively formed conceptual components. These conceptual components, specifically the different planning factors, were then examined in order to establish their relationship with the airport's economic development contribution to determine how they influence the airport's economic benefits. Once established, these relationships were then verified by cross-checking with other collected data. This process of data analysis follows the three stages of data analysis in the grounded theory methodology, including open coding, axial coding and selective coding (Noble & Mitchell, 2016). By collecting, analysing and understanding the data collected and coding them , the research, through a grounded theory approach, allowed theory building to be facilitated from the collected data (Glaser & Strauss, 1967; Welsh, 2002). The new theory developed through this research is associated with the planning factors influencing the economic development contribution of Gold Coast Airport.

3.5 CONCLUSION

Chapter 3 has outlined the research methods and methodology employed in this study and provided a justification for the research approach. The research investigates a single case study due to the time and resource limitation associated with this research and the potential richness in insights that can be acquired from comprehensively analysing one case study. The research is qualitative in nature as the principal objective of this study seeks to develop new insights and understanding about a phenomenon, namely how several planning factors have influenced the role of Gold Coast Airport in local and regional economic development. The research addresses four research questions:

- 1) What is the existing nature and economic role of Gold Coast Airport?
- 2) How do existing planning frameworks affect Gold Coast Airport's contribution to economic development?
- 3) How do land use, transport and industry sectors shape Gold Coast Airport's contribution to economic development?
- 4) How do stakeholder relationships influence Gold Coast Airport's contribution to economic development?

The research employs a mixed-method approach where the following five methods of data collection and analysis are utilised throughout the four research questions: spatial analysis, field observation, semi-structured interviews, policy analysis and literature review. Through the implementation of five different methods and the grounded theory approach to analyse the wide range of data to develop a new theory, the research represents an innovative planning investigation into the role of Gold Coast Airport in local and regional economic development contribution.

The next chapter addresses the first research question, “What is the existing nature and economic role of Gold Coast Airport?” by investigating the nature of Gold Coast Airport and its role in local and regional economic development.

**CHAPTER 4: THE NATURE OF GOLD COAST AIRPORT
AND ITS ROLE IN LOCAL AND REGIONAL ECONOMIC
DEVELOPMENT**

4.1 INTRODUCTION

Chapter 4 addresses the first research question by examining the existing nature of Gold Coast Airport and its economic development role at the local and regional scales. Figure 4.1 below illustrates the research question and its associated sub-research questions.

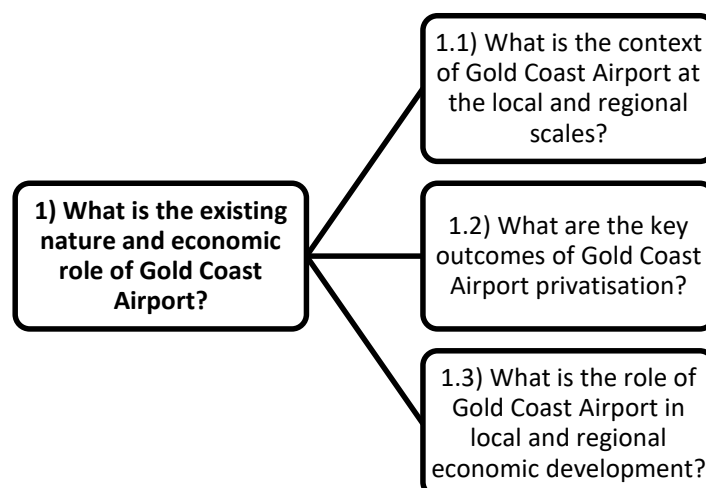


Figure 4.1: Research Question #1 and Its Associated Sub-Questions

The chapter establishes a context for the research topic, namely Gold Coast Airport’s contribution to local and regional economic development. As previously highlighted in Section 2.4.2, the primary distinction between local economic development and regional economic development is their geographical scale, with the former being smaller. As such, this chapter examines Gold Coast Airport’s spatial context at three different scales, which are outlined in Table 4.1 below.

Table 4.1: Three Scales of Gold Coast Airport’s Spatial Context Examined in Chapter 4¹⁸

Scale	Description
Regional Context	The two state regions that Gold Coast Airport spans, namely South East Queensland (SEQ) and Far North Coast (FNC), are broadly examined in terms of their LGAs, population profile, transport infrastructure and planning frameworks. The context analysis also investigates the nature of the competition between Gold Coast Airport and other nearby airports across both states.
LGA Context	The Gold Coast and Tweed Shire, the two LGAs Gold Coast Airport is situated across, are explored in relation to their population and economic profiles, local governments and planning frameworks. The existing economic links between the two LGAs are also inspected.
Local Context	The surrounding features and land use patterns of Gold Coast Airport are analysed. Key land use observations are then drawn from the analysis.

¹⁸ The three scales outlined in Table 4.1 have been chosen for Gold Coast Airport based on its context, with the regional context being the largest and the local context being the smallest in terms of spatial scale. As airport contexts can vary significantly, the interpretation of ‘local’ and ‘regional’ scales should be adapted according to the airport being examined.

The chapter is organised into six main sections. Firstly, Section 4.2 provides an overview of the regional context of Gold Coast Airport, in which the two neighbouring regions of SEQ and FNC that the airport situates across are discussed. The section then outlines the existing nature of competition between Gold Coast Airport and other airports in the SEQ and FNC regions. Secondly, Section 4.3 investigates the LGA context of Gold Coast Airport by examining the Gold Coast and Tweed Shire, the two LGAs the airport spans across, and the economic links between them. Thirdly, Section 4.4 discusses Gold Coast Airport's local context through an analysis of the existing land use patterns in the airport's surroundings on both the Gold Coast and Tweed Shire sides of the border. The section concludes with key land use observations, which are relevant to the second and third research questions and further expanded in Chapters 5 and 6. Collectively, Sections 4.2, 4.3 and 4.4 address research sub-question #1.1.

The fourth part of this chapter, Section 4.5, explores the key characteristics of Gold Coast Airport. This section commences with an overview of Gold Coast Airport in terms of its location and history before discussing the current land uses in the airport. The section then investigates the key outcomes of the privatisation process of Gold Coast Airport, thereby addressing research sub-question #1.2. Following this, Section 4.6 classifies Gold Coast Airports as a Second-Tier Airport. A conceptual classification for Australian airports is developed by the author based on a literature review of airport classifications around the world. The conceptual classification is then applied to Gold Coast Airport by considering its existing characteristics and functions. Lastly, Section 4.7 outlines the current role of Gold Coast Airport in local and regional economic development by discussing the nature of its economic contributions, thus addressing research sub-question #1.3.

4.2 REGIONAL CONTEXT OF GOLD COAST AIRPORT

This section explores the regional context of Gold Coast Airport. It firstly provides a broad overview of the regional context. Next, the two adjacent regions that the airport spans, namely SEQ and FNC, are discussed in terms of their geographic and demographic profiles and planning frameworks. Lastly, the nature of competition between Gold Coast Airport and nearby airports is examined.

4.2.1 OVERVIEW

Figure 4.2 below displays a regional context map of Gold Coast Airport and its nearby LGAs. Given its location across the QLD-NSW state border, Gold Coast Airport services not only SEQ region but also the FNC region. The two regions of SEQ and FNC are further discussed in this section.



Figure 4.2: Regional Context Map of Gold Coast Airport and Its Nearby LGAs¹⁹

4.2.2 SOUTH EAST QUEENSLAND

Located on the south-eastern end of QLD, SEQ comprises 3,554,819 (.id, 2019j), or 69.78 per cent, of Queensland's 5,094,510 total population in 2019 (.id, 2019i). Therefore, SEQ is currently the most populated region of the state. With an expected population growth of nearly 2 million over the next 25 years (QLD Government, 2017a), SEQ, as one of the fastest growing regions in Australia, comprises 12 LGAs as displayed in Figure 4.3 on the following page.

¹⁹ Figure 4.2 is created and labelled by the author using satellite imagery from Queensland Globe (QLD Government, 2020e). The imagery is used under the CC BY 3.0 AU license (Creative Commons, undated-a; QLD Government, 2021a).

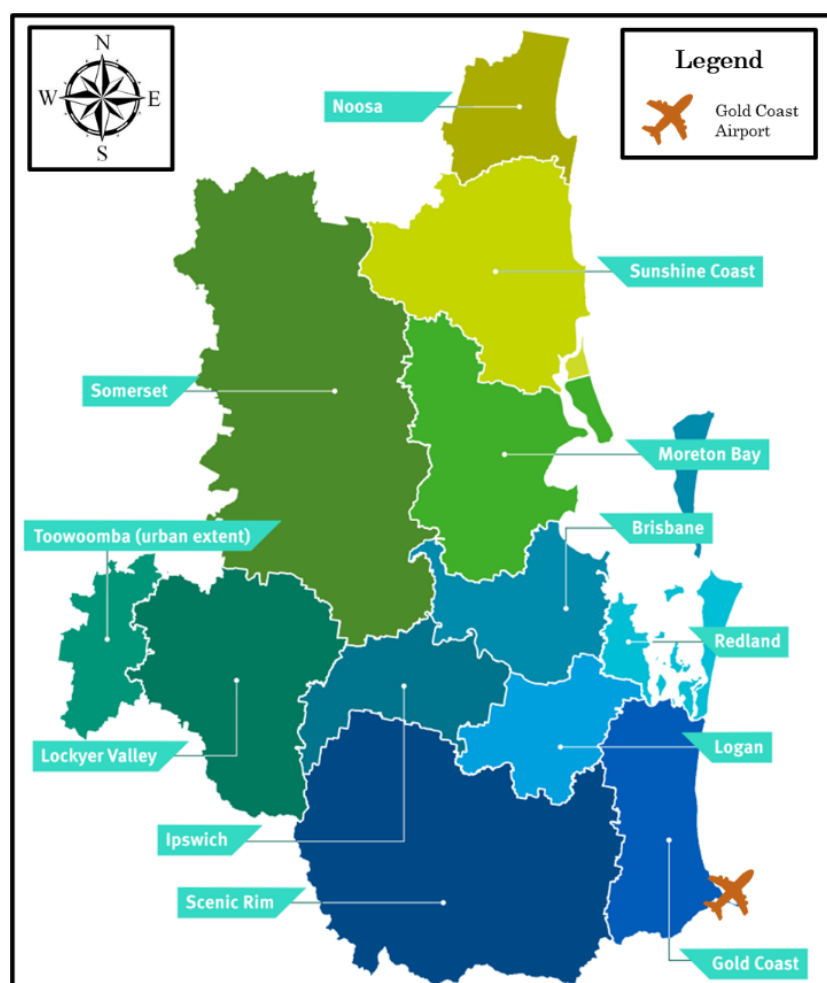


Figure 4.3: Local Government Areas in SEQ²⁰

As the state’s capital city, Brisbane is the most populous LGA in not only the SEQ region but also the entire QLD with a population figure of 1,253,982 in 2019 (Brisbane City Council, 2020). The Gold Coast, meanwhile, is the second most populous LGA in SEQ and QLD. Brisbane and the Gold Coast are the two largest LGAs in Australia in terms of population size due to a series of local government amalgamations in the past.

²⁰ Figure 4.3 is created and labelled by the author with a source imagery from the QLD Government (2017a). The imagery is used under the CC BY 4.0 license (Creative Commons, undated-b; QLD Government, 2021c).

Due to their historical expansions of urban areas, the Sunshine Coast, Brisbane and the Gold Coast now share close economic and social ties, creating “one of the world’s longest urban coastal strips” known as “the 200 Kilometre City” (Spearritt, 2009, p. 87). The 200 Kilometre City is linked together with the Pacific Highway,²¹ which runs from Brisbane to Sydney and importantly links SEQ with the Far North Coast (FNC) region. The network of the Pacific Highway, which is 790 kilometres in length and situated along the east coast of Australia, is shown in Figure 4.4,²² which also illustrates the major coastal towns serviced by the highway. A heavy rail system operated by TransLink, a state government agency, services the region and is directly linked to Brisbane Airport. The heavy rail network is also connected to a light rail corridor on the Gold Coast, which extends from Helensvale Station to Broadbeach South Station.

Future growth and development throughout SEQ is guided by ShapingSEQ: South East Queensland Regional Plan 2017, a regional planning framework which establishes a planning framework that must be implemented by the 12 local governments in their respective planning schemes. The cover page of the regional plan, which has been effective since 11 August 2017, is illustrated in Figure 4.5.²³



Figure 4.4: Coastal Towns Connected by the Pacific Highway (Source: NSW Government (2017))

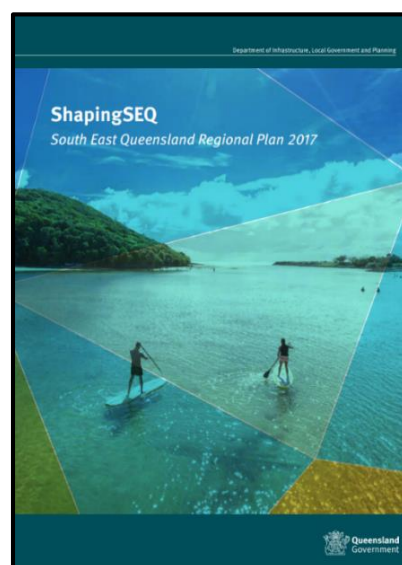


Figure 4.5: ShapingSEQ – the Regional Plan for SEQ (Source: QLD Government (2017a))

²¹ The Pacific Highway is also known as the Pacific Motorway and the M1 Motorway.

²² The source imagery in Figure 4.4 is used under the CC BY 4.0 license (Creative Commons, undated-b; NSW Government, 2020b).

²³ The source imagery in Figure 4.5 is used under the CC BY 4.0 license (Creative Commons, undated-b; QLD Government, 2021c).

4.2.3 FAR NORTH COAST

As part of the broader NSW North Coast region, the FNC region comprises a total of six LGAs including Tweed Shire, Byron Shire, Ballina Shire, Lismore, Richmond Valley and Kyogle. Figure 4.6 below displays the spatial distribution of these LGAs.

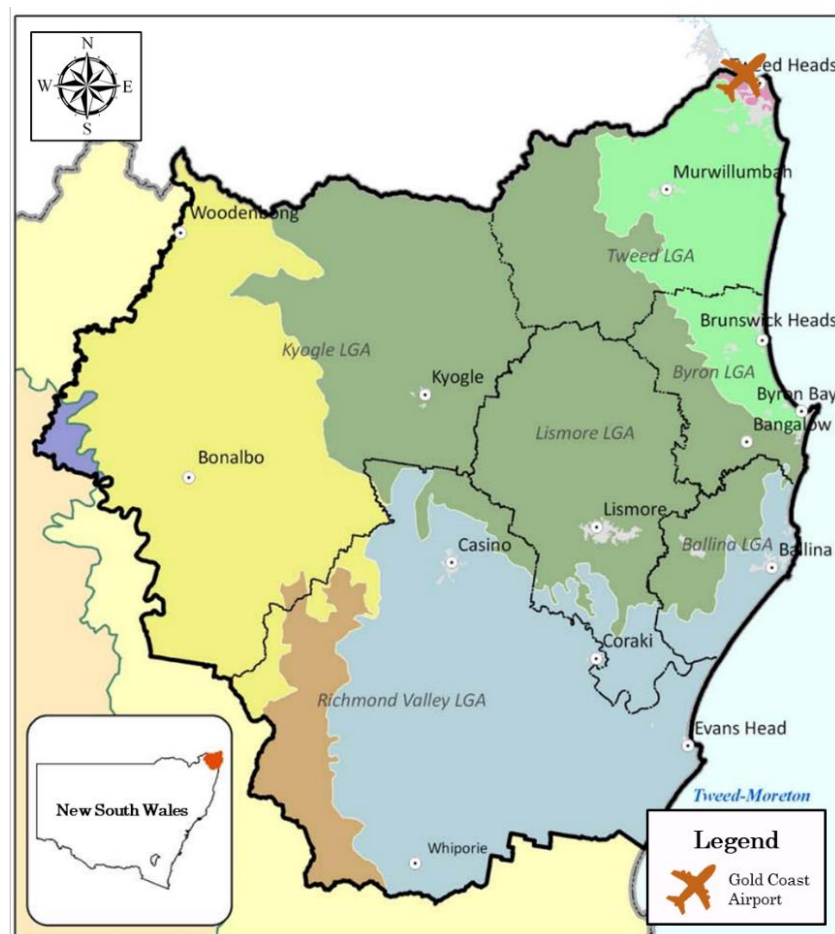


Figure 4.6: Local Government Areas in the Far North Coast Region²⁴

FNC is one of the most populated regions in the North Coast region given that it encompasses two of the region's four regional cities, namely Tweed Heads and Lismore, which are also displayed in Figure 4.6. In 2019, Tweed Heads and Lismore contain 8,654 and 43,692 population, respectively (.id, 2019g, 2019k). In 2020, the FNC region comprises a total population of 255,317, which is 3.13 per cent of NSW's 8,167,532 population.²⁵

²⁴ Figure 4.6 is created and labelled by the author using source imagery from the NSW Government (2010). The imagery is used under the CC BY 4.0 license (Creative Commons, undated-b; NSW Government, 2020c).

²⁵ The population figures presented are based on the ABS Estimated Resident Population (ERP) figures, which are compiled and presented by .id (2020). The population figure for FNC is calculated by the author using the ERP statistics of six LGAs located in the region.

Gold Coast Airport is described on Google Maps (Google, 2020b) as an “airport straddling Queensland and New South Wales with easy access to several resort cities.” The ‘resort cities’ in this description refer to the Gold Coast and to regional towns in FNC such as Kingscliff, Ballina and Byron Bay. This statement illustrates the important role of Gold Coast Airport in providing connectivity to these regional towns, which are all interconnected via the Pacific Highway. The Pacific Highway is indicated as “a key component in the North Coast’s success” both socially and economically (NSW Government, 2017, p. 11). The principal reason behind this fact is the highway’s cross-border linkage to SEQ, which links the SEQ and North Coast regions together. Brisbane Airport and Gold Coast Airport are both located along the motorway, thus providing the North Coast region with access to domestic and international destinations. The highway importantly acts as the primary transport corridor for the coastal suburbs and LGAs in FNC, thus increasing their accessibility and connectivity with the rest of the region and SEQ.

As “one of Australia’s most visited local government areas” (NSW Government, 2017, p. 62), Byron Shire is currently FNC’s tourism hotspot. This is due to Byron Bay, an increasingly popular, coastal tourism destination amongst both domestic and international visitors alike. In 2017/18, Byron Shire received more than 2 million visitors, cementing the region as “the 4th most visited destination in NSW and the 11th most visited in Australia amongst international visitors” (.id, 2018a, p. 6). Half of these visitors are day-trippers (.id, 2018a) due to the transport accessibility that the Pacific Highway provides, which effectively increases the accessibility of Byron Bay from other LGAs in both FNC and SEQ regions. Due to the connectivity provided by the Pacific Highway, Byron Bay is 48 minutes away from Gold Coast Airport by car.²⁶ The official regional plan for the FNC region is the North Coast Regional Plan 2036. This regional plan, effective since March 2017, encompasses not only FNC but also several other LGAs in the broader Northern NSW region.

Figure 4.7 on the following page displays Cape Byron Lighthouse, one of the major landmarks and tourist attractions in Byron Bay and “Australia’s most easterly point” (NSW Government, 2020a). Figure 4.8, meanwhile, illustrates the cover page of the North Coast Regional Plan 2036.²⁷

²⁶ This travelling time is based on Google Maps as at 24 April 2020 (Google, 2020b).

²⁷ The source imagery in Figure 4.8 is used under the CC BY 4.0 license (Creative Commons, undated-b; NSW Government, 2020b).



Figure 4.7: Cape Byron Lighthouse, A Popular Tourist Attraction in Byron Bay (Source: NSW Government (2020a))



Figure 4.8: North Coast Regional Plan 2036 – the Official Regional Plan for the Far North Coast Region (Source: NSW Government (2017))

4.2.4 COMPETITION BETWEEN GOLD COAST AIRPORT AND NEARBY AIRPORTS

Forsyth (2008, p. 75) suggests that there is generally “little scope for competition” amongst airports in Australia due to the low population density and the widespread geography of the country. However, he also notes that there are some exceptions to this, including Gold Coast Airport. In the SEQ and the Northern NSW regions, three commercial airports, namely Ballina Byron Gateway Airport, Brisbane Airport and Toowoomba Wellcamp Airport, are located in proximity to Gold Coast Airport as shown in Table 4.2 and Figure 4.9. Table 4.2 illustrates passenger volume statistics of the airports in 2019.

Table 4.2: Commercial Airports in Proximity to Gold Coast Airport

Airport	LGA(s)	Distance from Gold Coast Airport ²⁸	Passenger Volume in 2019 ²⁹			
			Total	Domestic	International	International %
Gold Coast Airport	City of Gold Coast and Tweed Shire	N/A	6,486,006	5,545,011	940,995	14.51%
Ballina Byron Gateway Airport	Ballina	88.6 kilometres (57 minutes)	533,279	533,279	0	0%

²⁸ These figures are based on driving distance on Google Maps as at 17 April 2020 (Google, 2020b).

²⁹ The passenger volume figures in Table 4.2, sourced from BITRE (2021), include both inbound passengers and outbound passengers.

Airport	LGA(s)	Distance from Gold Coast Airport ²⁸	Passenger Volume in 2019 ²⁹			
			Total	Domestic	International	International %
Brisbane Airport	Brisbane City	107 kilometres (1 hour and 13 minutes)	24,006,025	17,580,461	6,425,564	26.77%
Toowoomba Wellcamp Airport	Toowoomba	225 kilometres (2 hours and 29 minutes)	110,357	110,357	0	0%

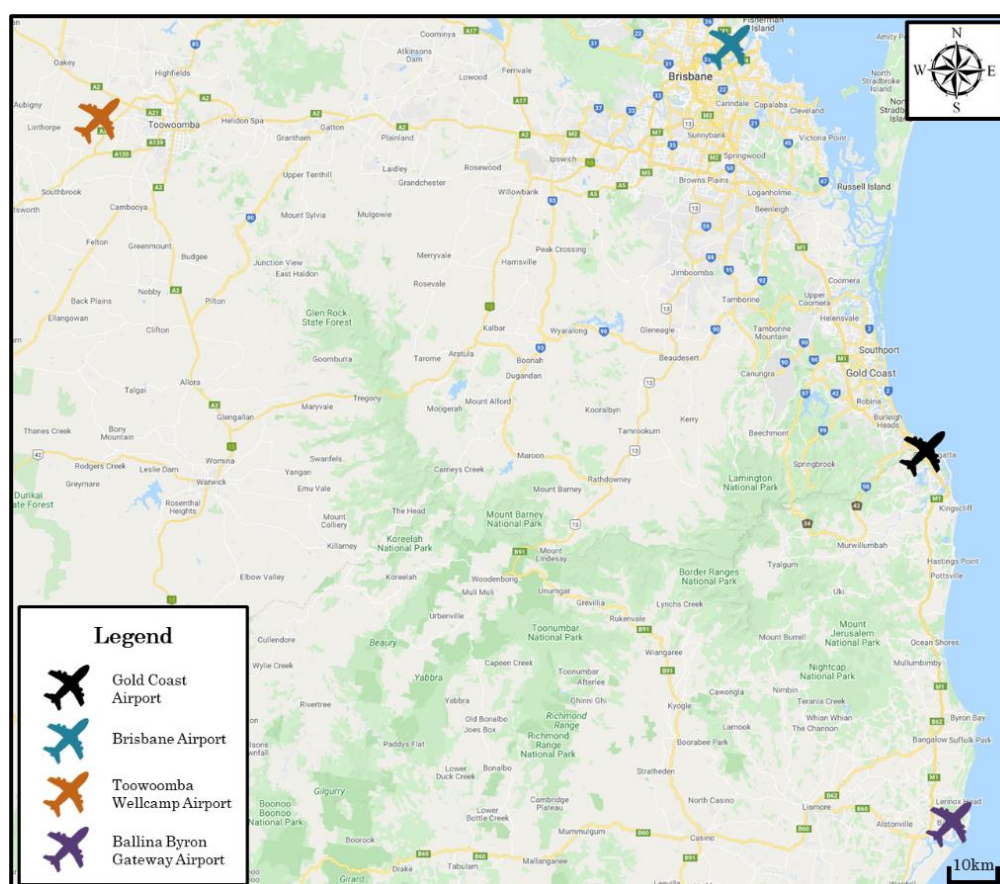


Figure 4.9: Commercial Airports in Proximity to Gold Coast Airport³⁰

There is limited competition for passenger volume between Gold Coast Airport and Toowoomba Wellcamp Airport and Ballina Byron Gateway Airport because Toowoomba Wellcamp Airport and Ballina Byron Gateway Airport are both domestic airports whereas Gold Coast Airport’s international market contributes a significant proportion (14.51 per cent) of their total passenger volume. Meanwhile, Toowoomba Wellcamp Airport has a strong operational focus on outbound freight

³⁰ Figure 4.9 is created by the author using satellite imagery from Google Maps (Google, 2020b).

services for agricultural products from Toowoomba and its surrounding region. Additionally, Toowoomba Wellcamp Airport and Ballina Byron Gateway Airport service different regions from Gold Coast Airport, for which the catchment area covers the Gold Coast, Tweed Shire, Logan and Brisbane City. Toowoomba Wellcamp Airport's catchment area is the Toowoomba Region whereas Ballina Byron Gateway Airport services the Northern NSW LGAs, including Ballina, Lennox Head, Byron Bay and Lismore.

On the other hand, there is direct competition between Brisbane Airport and Gold Coast Airport “across a limited range of services” (Forsyth, 2008, p. 75) due to four key reasons:

- ✈ Brisbane Airport provide both domestic and international flights, some of which service the same destinations served by flights at Gold Coast Airport;
- ✈ International flight traffic forms a significant proportion of both Gold Coast Airport and Brisbane Airport's total traffic (14.51 per cent and 26.77 per cent, respectively as shown in Table 4.2);
- ✈ Both airports are within one-hour distance by car (via the Pacific Highway) or public transport (using the TransLink-operated rail network) for residents of the Gold Coast, Logan and Brisbane LGAs, implying that the two airports have similar catchment areas for passengers; and
- ✈ The same LCCs operate from both Brisbane Airport and Gold Coast Airport, including JetStar and AirAsia.

According to urban planner #6, there is “a little bit” of competition between Gold Coast Airport and Brisbane Airport. However, the interviewee reveals that most of the competition has been from Brisbane Airport's side as the airport has been promoting the Gold Coast and its attractions on its website as per the quote below:

When you have a look at [Brisbane Airport's] website, they promote the Gold Coast destination a lot as well. So they ... promote Dreamworld, Sea World [and] all that stuff, which is technically, you know, the Gold Coast. **So, they are obviously trying to get a lot of the tourists that are flying to visit the Gold Coast to actually fly through them.** – urban planner #6 (emphasis added)

In light of the competition from Brisbane Airport, Gold Coast Airport has employed several strategies to promote itself and attract more customers from its catchment area. The urban planner above, when asked how Gold Coast Airport is differentiating itself from Brisbane Airport, reveals that the airport is promoting cheaper fares and convenience of getting to and from the airport. The quote on the following page illustrates the nature of these factors further:

Fares are cheaper [at Gold Coast Airport] than [at] Brisbane [Airport], and people would [think], ‘Should I drive to Brisbane Airport and pay \$50 a day for [airport] parking plus the airfares and going over the Gateway bridge and pay a \$6 [toll each way], or do I drive to Gold Coast [Airport]? It is probably another 15 minutes [of driving to Gold Coast Airport, compared to driving to Brisbane Airport]. I can park there for seven days for \$17 a day. And the airfares are a lot cheaper...’ **It is not just the fares, but it is also convenience, and that adds up.** I actually live in Brisbane for now and I fly out of Gold Coast [Airport] because I found it to be easier to drive 50 minutes than to drive half an hour and it is cheaper and easier to find car park [at Gold Coast Airport]. – urban planner #6 (emphases added)

Thus, both airfares and parking fees at Gold Coast Airport are lower than those at Brisbane Airport. GCAPL (2020) describes Gold Coast Airport as “Australia’s first dedicated low cost international airport.” Moreover, GCAPL is currently in the process of implementing a new brand for Gold Coast Airport to both further differentiate the airport from Brisbane Airport and better reflect the Gold Coast city’s reputation. These differentiation strategies are key results of the privatisation of Gold Coast Airport, which are further explored in Section 4.5.3.

Having explored the regional context of Gold Coast Airport by investigating not only the SEQ and FNC regions across which the airport is located and services, but also the existing competition between the airports and other nearby airports, the next section of the chapter investigates the LGA context of the airport.

4.3 LOCAL GOVERNMENT AREA CONTEXT OF GOLD COAST AIRPORT

This section investigates the LGA context of Gold Coast Airport. Firstly, a broad overview of the LGA context of the airport is provided. The Gold Coast and Tweed Shire LGAs are then examined in terms of its demographic and economic profile and planning frameworks. Lastly, the existing economic links between the two LGAs are discussed.

4.3.1 OVERVIEW

Figure 4.10 below illustrates the location of Gold Coast Airport at the LGA context, showing its position in relation to the Gold Coast-Tweed Shire region.

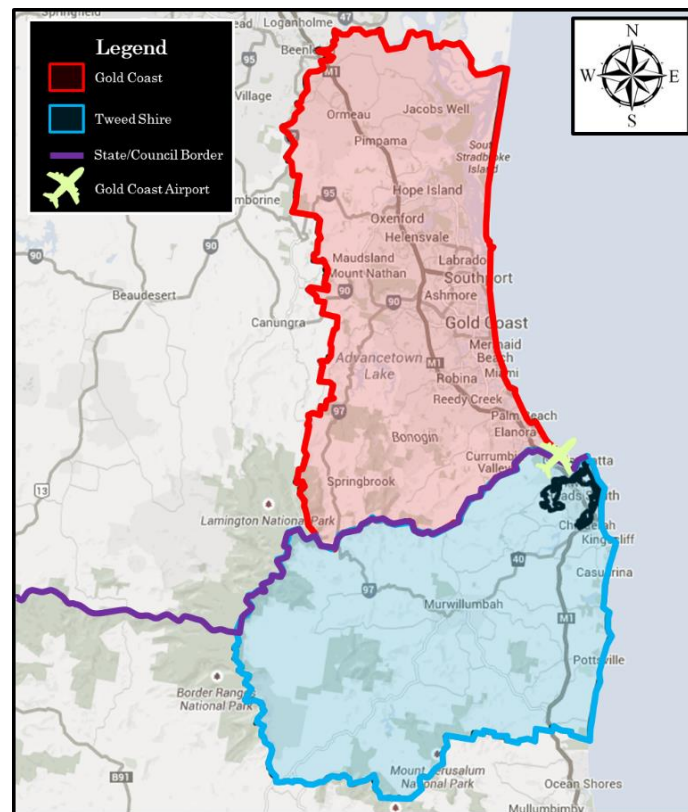


Figure 4.10: Map of the Gold Coast, Tweed Shire and Gold Coast Airport³¹

4.3.2 GOLD COAST

Located on the south-eastern corner of the state of Queensland, the Gold Coast is situated in the SEQ region to the south of Brisbane and to the north of Tweed Shire. Figure 4.11 on the following page displays the LGA boundary of the Gold Coast and the location of Gold Coast Airport.

³¹ Figure 4.10 is created and labelled by the author using satellite imagery from .id (2019s, 2019t). The imagery was compiled and presented by .id, the population experts. www.id.com.au. This material is a derivative of ABS Data that can be accessed from the website of the Australian Bureau of Statistics at www.abs.gov.au, and which data can be licensed on terms published on the ABS website. The replicated Map Data in the imagery from .id belongs to HERE (2016).

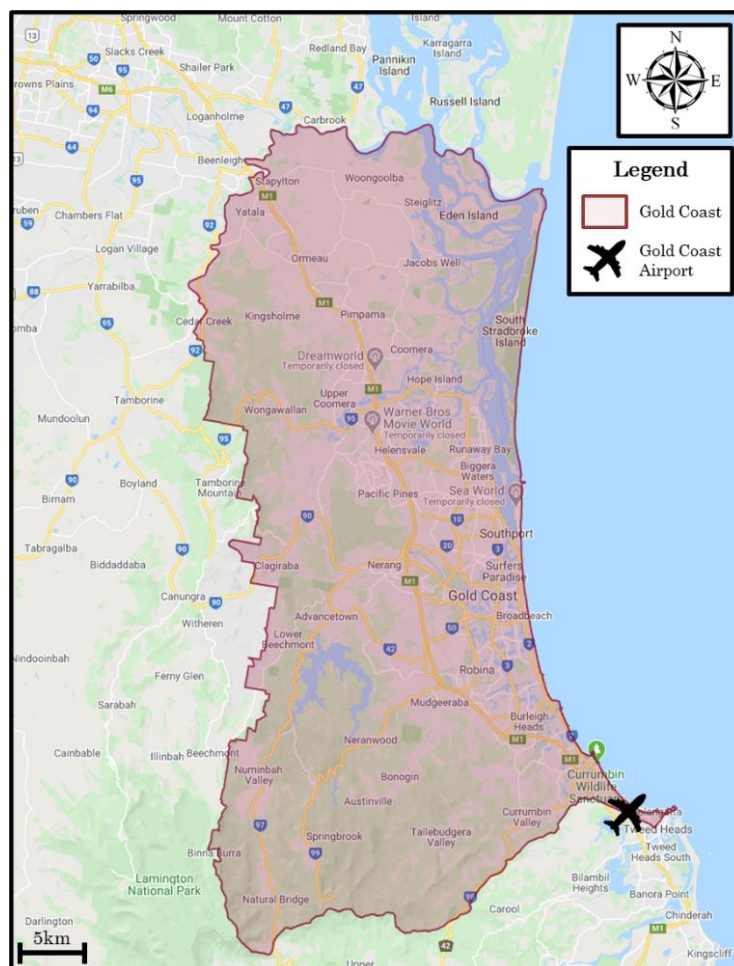


Figure 4.11: LGA Boundary of the Gold Coast³²

The following quote describes the rapid historical growth of the Gold Coast (Salt, 2015, p. 5):

Behold the Gold Coast. Sixth largest city on the Australian continent. **Non-existent at the time of the 1954 Census but today a metropolis of more than 600,000 residents ...** By the middle of this century the Gold Coast including the urban part of Tweed is projected to contain 1.2 million residents. At that time the Coast will still be this nation’s sixth largest city but it will also be a city of truly metropolitan scale. (emphasis added)

As illustrated in the quote above, the Gold Coast is a relatively young, but rapidly growing city. As the second fastest growing city in Australia behind Brisbane (.id, 2019h), the LGA is currently home to an estimated population figure of 620,518 in 2018/19 (.id, 2019s). The Gold Coast is experiencing a significant growth with its projected population figure to reach between 831,416 and 1,076,192 by 2041 (Queensland Government Statistician’s Office, 2018). With a total land area of 133,372 hectares, the Gold Coast’s population density is 4.65 persons per hectare (.id, 2019s).

³² Figure 4.11 is created by the author using satellite imagery from Electoral Commission Queensland (2020). The imagery is used under the CC BY 4.0 license (Creative Commons, undated-b; QLD Government, 2021b).

In 2018/19, a total of 315,688 Gold Coast residents were employed (.id, 2019d). Table 4.3 below displays the five largest industries on the Gold Coast by employment number in 2018/19.

Table 4.3: Five Largest Industries on the Gold Coast by Employment in 2018/19 (Source: .id (2019e))

Industry	Employment	
	Total	%
Retail Trade	40,111	13.2
Healthcare and Social Assistance	39,029	12.8
Construction	34,890	11.5
Accommodation and Food Services	32,537	10.7
Education and Training	26,582	8.7

The Gold Coast is a popular holiday destination domestically and internationally, with 4.2 million domestic overnight visitors and 1.1 million international visitors recorded in 2018/19, making the city the fourth most-visited destination in Australia (Destination Gold Coast, 2019). As such, the city's economy is primarily driven by its tourism industry, which contributed to 13.8 per cent of the gross regional product to the LGA's economy and employed one in six residents in 2018/19 (Destination Gold Coast, 2019). In addition, the various activities associated with tourism have driven the following three industries on the Gold Coast: retail trade, construction and accommodation and food services. However, as shown in Table 4.3, health care and social assistance and education and training are also major industries on the Gold Coast. Having hosted a variety of national and international events, the Gold Coast, also known as a city of events, was the host city of the 2018 Commonwealth Games.

The Gold Coast is governed and managed by the CoGC. Given that the Gold Coast is the second largest LGA in Australia behind Brisbane in terms of population size, the CoGC is also one of the largest employers on the Gold Coast. The council regulates land uses and development throughout its jurisdiction through the City Plan, the official planning scheme for the LGA.

4.3.3 TWEED SHIRE

Situated on the north-eastern corner of the state of NSW, Tweed Shire is located adjacent to both the Gold Coast and the state border. Figure 4.12 below displays the LGA boundary of Tweed Shire and the location of Gold Coast Airport.

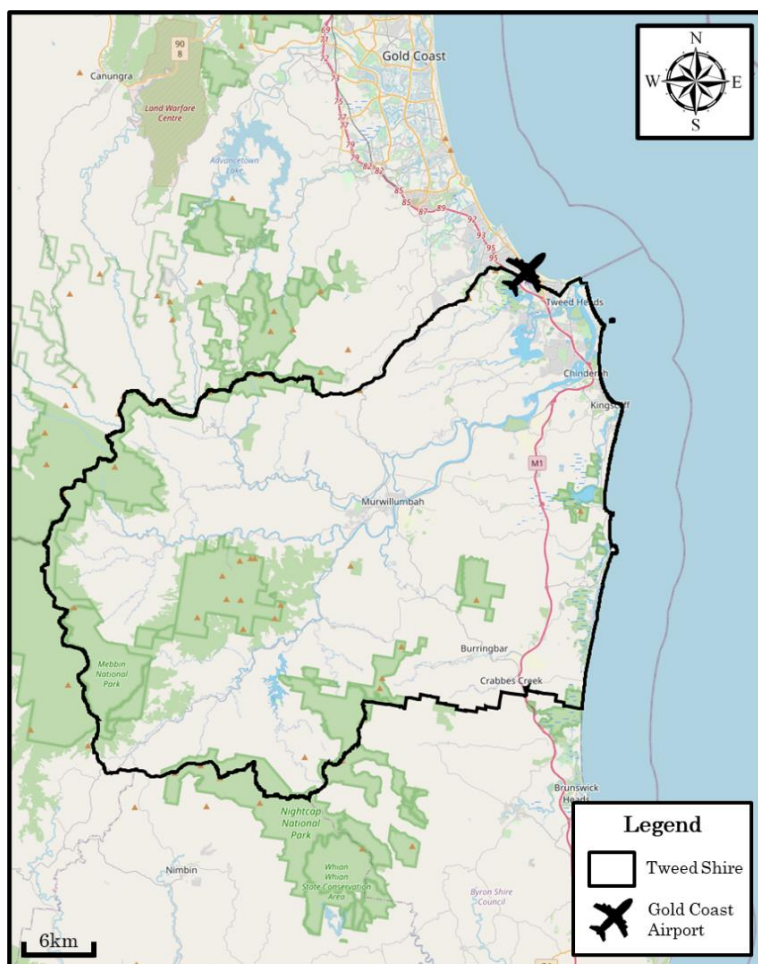


Figure 4.12: LGA Boundary of Tweed Shire³³

In addition to Lismore, Port Macquarie and Coffs Harbour, Tweed Heads, located on the northern end of Tweed Shire adjacent to Gold Coast Airport, has been designated as one of the four regional cities in the North Coast of NSW under the North Coast Regional Plan 2036. Tweed Shire comprises a total population of 97,001 in 2018/19 (.id, 2019p). The region covers a total land area of 130,918 hectares, which translates to a population density figure of 0.74 persons per hectare (.id, 2019t). In 2018/19, a total of 42,783 residents were employed (.id, 2019l). Table 4.4 on the following page displays the five largest industries on the Gold Coast by employment number in 2018/19.

³³ Figure 4.12 is created by the author using satellite imagery from Tweed Shire Council (undated-d). The imagery is used with permission from Tweed Shire Council, which retains its full copyright.

Table 4.4: Five Largest Industries in Tweed Shire by Employment in 2018/19 (Source: .id (2019o))

Industry	Employment	
	Total	%
Retail Trade	5,889	17.2
Healthcare and Social Assistance	5,640	16.5
Accommodation and Food Services	3,627	10.6
Construction	3,272	9.6
Education and Training	2,853	8.3

Although the exact order is different, the five largest industries in Tweed Shire are identical to those of the Gold Coast due to the emerging tourism industry in the region. Tweed Shire's tourism industry has grown rapidly in recent years as illustrated by the LGA's 72 per cent increase in the number of domestic daytrips from 765,053 in 2010/11 to 1,315,887 in 2018/19 in contrast to the state's total domestic daytrips, which only increased by 36 per cent over the same time frame from 50,103,881 to 68,235,949 (.id, 2019r). The majority of the daytrip traffic for Tweed Shire is from the Gold Coast and Brisbane, which are both within less than two hours in driving distance to the region. The growth in Tweed Shire's tourism industry in recent years can be principally attributed to the region's green reputation, underpinned by the wide availability of pristine natural assets throughout the region.

Planning for and governance of Tweed Shire is under the responsibility of Tweed Shire Council, which describes the LGA as "one of the most economically diverse non-metropolitan regions in Australia" (Tweed Shire Council, 2019b). With a strong foothold in agriculture, the region is well-known for its natural, scenic landscape and beauty. Land uses and development throughout Tweed Shire are regulated through three Local Environmental Plans (LEPs), which apply to different areas of the LGA and are listed in Table 4.5 below.

Table 4.5: Tweed Shire's Local Environmental Plans and Their Applicable Areas

Local Environmental Plan	Applicable Area
Tweed City Centre Local Environmental Plan 2012	Tweed Heads CBD Area
Tweed Local Environmental Plan 2014	The majority of the Tweed Shire LGA
Tweed Local Environmental Plan 2000	The rest of the Tweed Shire LGA not covered by the two LEPs above

The applicable areas of the three LEPs are highlighted in Figure 4.13 on the following page.

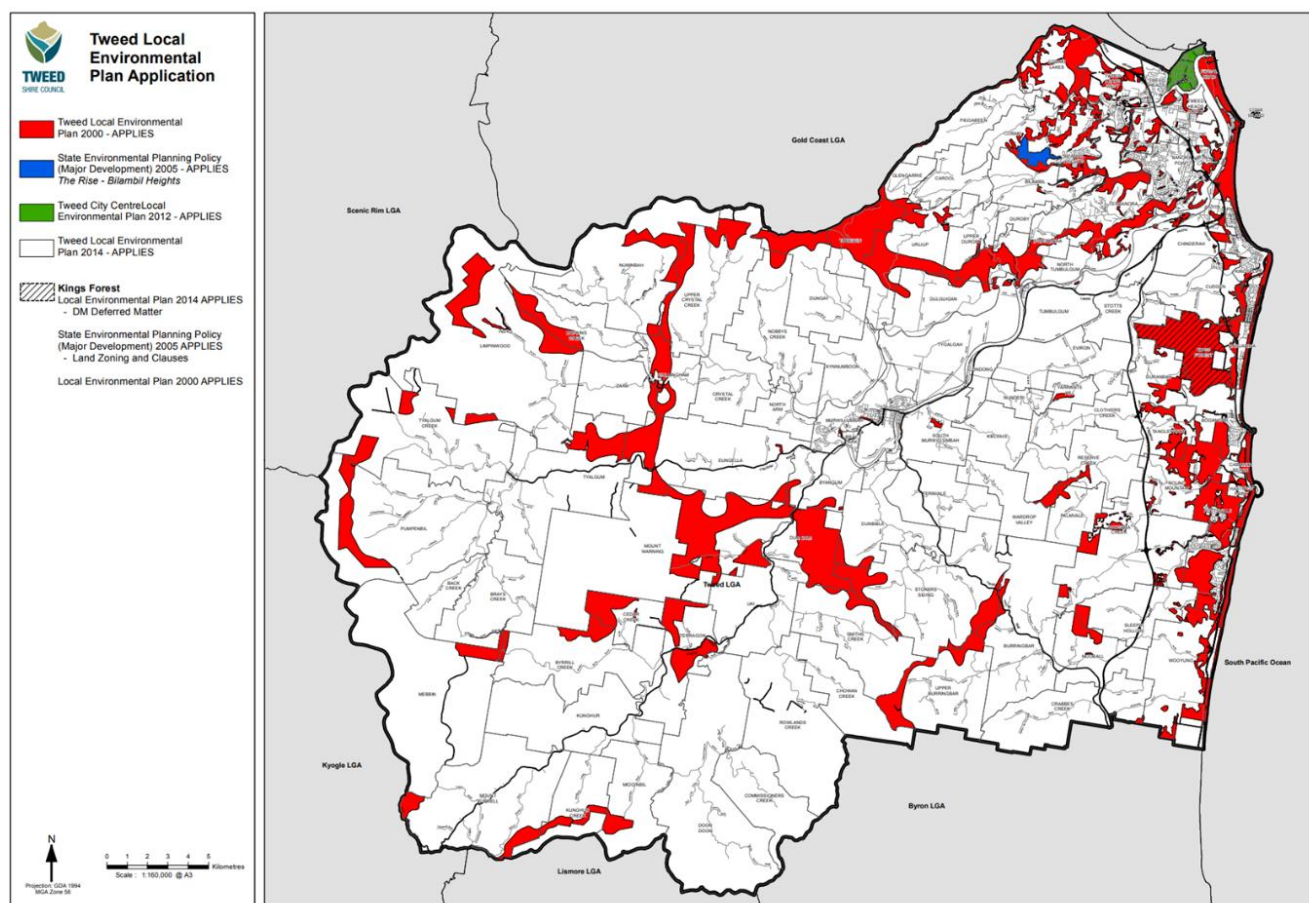


Figure 4.13: Spatial Application of Local Environmental Plans throughout Tweed Shire (Source: Tweed Shire Council (2017))³⁴

As shown in Figure 4.13, although the majority of Tweed Shire is governed by the Tweed Local LEP 2014 (highlighted in white), the immediate vicinity of Gold Coast Airport on the north eastern end of the LGA, is regulated by all three LEPs. The LEPs are supplemented by the Tweed Development Control Plan (DCP) 2008, which outlines detailed guidelines for different types of development.

4.3.4 ECONOMIC LINKS BETWEEN THE GOLD COAST AND TWEED SHIRE

Given that the Gold Coast and Tweed Shire adjoin one another, the two LGAs share strong economic links. The following quote illustrates the nature of these economic links further:

Although [Tweed Shire] is separate to the Gold Coast, **[the two Local Government Areas’ economies are intrinsically linked]**. If it is good for the Gold Coast, it is good for Tweed Shire ... And it is really a seamless border [between the two Local Government Areas] nowadays ... So, as the Gold Coast’s tourism [industry] has grown, so too has Tweed’s [tourism industry]. – senior manager #2 (emphasis added)

³⁴ The source imagery used in Figure 4.13 is used with permission from Tweed Shire Council, which retains its full copyright.

Tweed Shire is noted in the Tweed Shire Economic Development Strategy, the current economic development strategy in place for Tweed Shire, as being economically “influenced significantly by its location, just south of the Queensland border” (Ruzzene, 2014, p. 9). This statement illustrates the significance of the cross-border economic links for Tweed Shire’s economy.

On a more local scale, Gold Coast Airport is adjoined directly by two adjacent suburbs of Tweed Heads and Coolangatta, located in Tweed Shire and the Gold Coast, respectively. Due to their strong economic and social links, these suburbs are officially referred to as the ‘*twin towns*’ where “retail and business opportunities as well as healthcare and education services [are] used by residents from either side of the [state and council] border” (NSW Government, 2017, p. 12). Tweed Shire Council (2015, p. 2) notes in its submitted document to the Senate Rural and Regional Affairs and Transport References Committee that “... in fact the northern suburbs of Tweed Shire are essentially an extension of the Gold Coast urban area.”

The following two aspects of economic links between the Gold Coast and Tweed Shire are examined in this section: cross-border employment and links the tourism industries.

4.3.4.1 Cross-Border Employment

The Gold Coast and Tweed Shire are strongly linked in terms of cross-border employment. Table 4.6 below summarises the figures of cross-border employment in both LGAs.

Table 4.6: Comparison of Cross-Border Employment in Gold Coast and Tweed Shire³⁵
(Sources: .id (2019m) and Tweed Shire Council (undated-b))

	Gold Coast (2006)	Tweed Shire (2016)
Total Residents Employed in another LGA	3,591	12,415
Total Employed Residents in the LGA	219,444	39,139
Percentage of Employed Residents Who Worked in another LGA	1.64%	31.72%

As shown in Table 4.6, nearly one-third of Tweed Shire’s employed residents leave the LGA for employment in another LGA. The majority of these workers, however, are employed on the Gold Coast based on the following two testimonies:

³⁵ The data presented for the two LGAs in Table 4.6 pertains to different years due to the availability of statistics on cross-border employment. For the Tweed Shire figures, not all of the workers were employed on the Gold Coast although the majority of them were as per the discussion on this page. The Gold Coast figures, however, show the actual number of workers that were employed specifically in Tweed Shire.

- ✈ The Gold Coast is indicated in the Tweed Shire Economic Development Strategy as “a significant employer of Tweed Shire residents” (Ruzzene, 2014, p. 9); and
- ✈ According to urban planner #1, the Gold Coast is the principal place of employment for the workers who are employed outside Tweed Shire.

Conversely, the proportion of Gold Coast residents who work across the border in Tweed Shire is significantly lower than Tweed Shire’s figure. Urban planner #1 indicates such a brain-drain phenomenon as “a significant issue” for Tweed Shire given that the LGA is, “by far, the largest city [in the North Coast of NSW] that has the largest proportion of its working population living in Tweed Shire but working elsewhere.” Although the LGA, as discussed previously in Section 4.3.3, is designated as one of the four regional cities under the state government’s regional plan, the lack of locally employed workforce represents a substantial limitation to the region’s future growth as a regional city. Nevertheless, the urban planner believes there is an economic development opportunity in creating a major employment precinct in proximity and closely linked to Gold Coast Airport to retain more of Tweed Shire’s workers in the LGA. Section 6.2.4 further examines this prospect.

4.3.4.2 Links between the Tourism Industries

The Gold Coast, with more than six times the population figure of Tweed Shire, provides a large customer base for businesses located in Tweed Shire (Ruzzene, 2014). This is especially the case, according to urban planner #1, for businesses in the retail and hospitality industry which substantially benefits on day-trip visitors from the Gold Coast. These visitors comprise not only residents of the Gold Coast, but also domestic and international tourists that visit the Gold Coast through Gold Coast Airport. In this regard, the urban planner mentions that “as a secondary outcome, [tourists on the Gold Coast] spend a bit of time in the Tweed [Shire region].”

Tropical Fruit World, a fruit farm located in Tweed Shire and displayed in Figure 4.14 to the right, clearly exemplifies this trend. The farm regularly receives international visitors who “fly into the Gold Coast, get on the bus and come down to Tropical Fruit World, and their next destination is back across the border” according to urban planner #1. Therefore, the urban planner suggests that there is an opportunity to incentivise these tourists “spend a bit more time” in the Tweed Shire LGA.



**Figure 4.14: Tropical Fruit World
(Source: Author (2020))**

Having examined the LGA context of Gold Coast Airport through investigating the Gold Coast, Tweed Shire and the economic links between the two LGAs, the next section of the chapter explores the local context of the airport by reviewing the land uses and features in proximity to the airport.

4.4 LOCAL CONTEXT OF GOLD COAST AIRPORT

This section reviews the local context of Gold Coast Airport in terms of its surrounding land uses and features. To do so, the following two elements are investigated: the immediate surroundings of Gold Coast Airport, and the surrounding land uses of Gold Coast Airport on the Gold Coast and Tweed Shire side. Lastly, key land use observations are drawn from the analysis. These observations serve as foundations for further analysis in Chapter 6 in response to the third research question.

4.4.1 IMMEDIATE SURROUNDINGS OF GOLD COAST AIRPORT

Figure 4.15 displays a local context map of Gold Coast Airport, which highlights the airport's immediate surrounding features. The labelled parts of Figure 4.15 are further described in Table 4.7 below.³⁶

Figure 4.15: Local Context Map of Gold Coast Airport (Source: GCAPL (2017c))



Table 4.7: Description of the Labelled Parts in Figure 4.15

Label	Feature	Description
1	Betty Diamond Sports Complex	A multipurpose community park for sporting and community uses, which is further discussed in Section 4.4.2
2	Gold Coast Desalination Plant	A desalination plant servicing the Gold Coast, Logan and Brisbane with potable water in an event of extreme weather or severely limited water supply
3	Tugun Landfill	A local landfill site for solid waste
4	Regional Re-pump station	An ancillary facility for the Gold Coast Desalination Plant
5	Cobaki Lakes Development	A precinct for future residential, commercial and community uses, which is projected to make significant housing and employment contribution to the local economies

³⁶ The source imagery for Figure 4.15 is used with permission from GCAPL, which retains its full copyright.

Label	Feature	Description
6	Gold Coast Airport NSW Leased Area	Land owned by the NSW Government, which has been leased by Gold Coast Airport for the purpose of installing High Intensity Approach Lighting to enable safer aircraft landings in adverse weather conditions
7	Tweed Heads West Sewer Works	A sewage works facility servicing the Tweed Heads West community

4.4.2 SURROUNDING LAND USES OF GOLD COAST AIRPORT

4.4.2.1 Gold Coast Side

Figure 4.16 below displays land uses around Gold Coast Airport on the Gold Coast side under the CoGC’s City Plan.

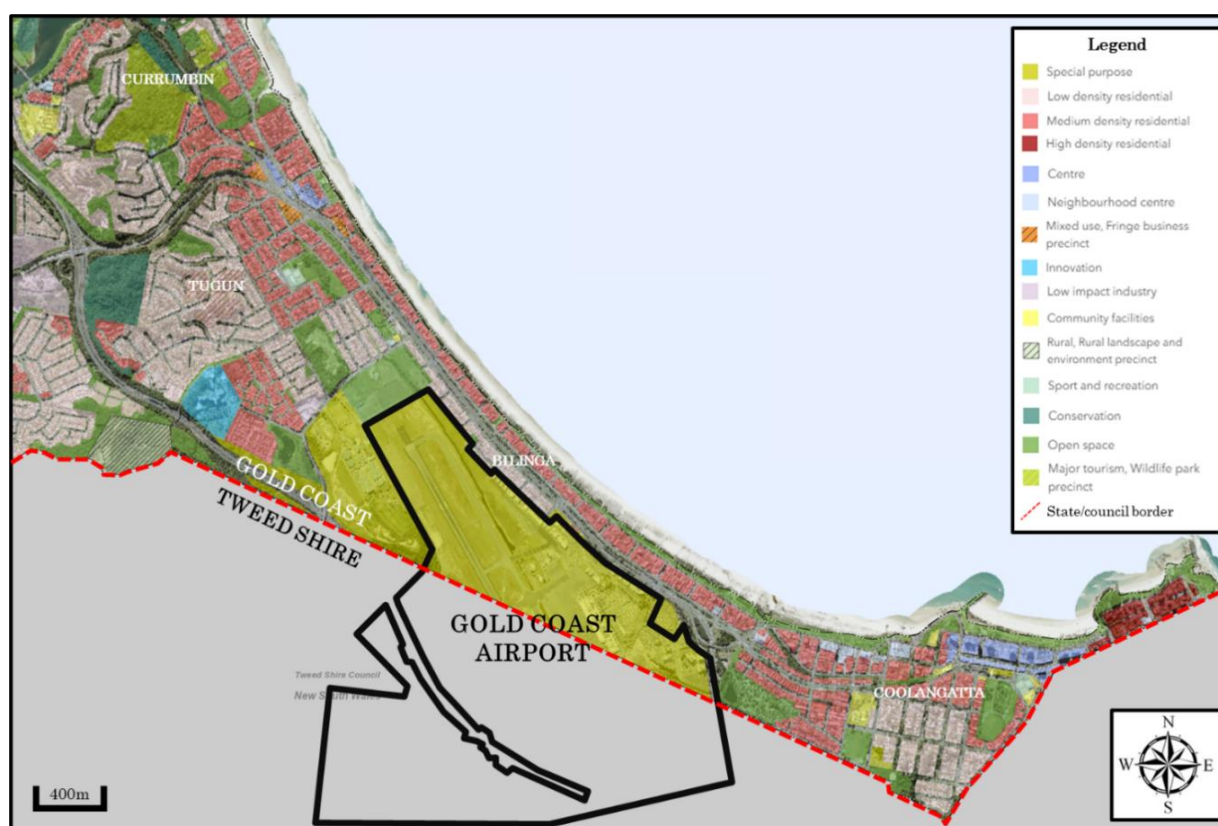


Figure 4.16: Land Uses around Gold Coast Airport on the Gold Coast Side³⁷

As shown in Figure 4.16, on the Gold Coast side, Gold Coast Airport is adjoined by four suburbs, namely Currumbin, Tugun, Bilinga and Coolangatta. These suburbs are collectively referred to as the ‘Southern Gold Coast’. Gold Coast Airport is predominantly surrounded by low- and medium-density

³⁷ Figure 4.16 is created and labelled by the author with source satellite imagery from the City Plan interactive mapping tool (Version 7) (CoGC, undated). The imagery is used with permission from the CoGC, which retains its full copyright.

residential uses. Low-density residential uses primarily comprise one- or two-storey detached dwellings as shown in Figure 4.17 below.



Figure 4.17: Low-Density Residential Uses on the Gold Coast Side (Source: Author (2020))

Medium-density residential uses, meanwhile, are located along the beachfront in Bilinga and Tugun and consist primarily of three-storey apartment buildings as shown in Figure 4.18 below.

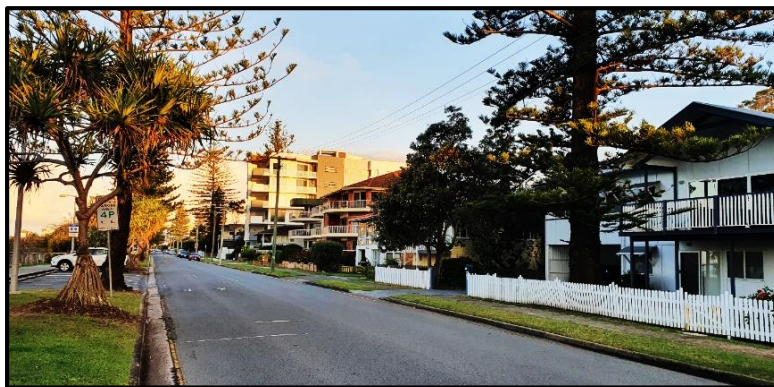


Figure 4.18: Medium-Density Residential Uses on the Gold Coast Side (Source: Author (2020))

High-density residential uses, with a maximum allowable building height of 38 metres, are located along the beachfront of Coolangatta and comprise apartment buildings ranging between three and twenty storeys. It should be noted, however, that even with the high-density residential use allowance from the planning scheme, no hotel accommodation currently exists around Gold Coast Airport on the Gold Coast side. Local community representative #2 reveals the lack of hotel accommodation as the principal limitation on promoting Gold Coast Airport's economic development contributions for the Southern Gold Coast region, an issue to be further discussed in Section 6.4.2.1.

In the Southern Gold Coast, there is a prevalent public sentiment to maintain the current 'village' atmosphere in the area according to urban planner #4. As such, local residents in the area generally oppose any major development or changes to the area which could alter the low-rise, low-density

character of the area, including the proposed light rail corridor extension to the Gold Coast Airport. The urban planner views this factor as a major limitation on future economic development contributions of Gold Coast Airport. Further discussion on this issue can be found in Section 7.4.3.

A mix of commercial, retail and community uses exist in both the ‘centre’ precincts and the ‘neighbourhood centre’ zone, located in Coolangatta as shown in Figure 4.16. Commercial and retail uses are predominantly in two-to-three-storey attached buildings located along a street front as shown in Figure 4.19 below, which also highlights high-rise apartment buildings discussed above.



Figure 4.19: Commercial and Retail Uses around Gold Coast Airport on the Gold Coast Side (Source: Author (2020))

Several community facilities exist in the vicinity of the airport, with Coolangatta State School in Coolangatta and Currumbin RSL in Currumbin as the key facilities in the area. Numerous parks and open spaces are scattered throughout the area and along the beachfront. Meanwhile, Betty Diamond Sports Complex is located directly adjacent to the northern end of Gold Coast Airport’s primary runway. The facility comprises a skate park, a dog exercise area and five separated ruby league fields. Figure 4.20 below displays Betty Diamond Sports Complex.



Figure 4.20: Betty Diamond Sports Complex (Source: Author (2020))

A Tugun Quarry Reserve is located opposite to Betty Diamond Sports Complex. Given the quarry reserve’s proximity to Gold Coast Airport, there is an opportunity to develop a freight hub to support

and promote the airport's freight activities, which is further examined in Section 6.2.4.2. Figure 4.21 outlines the location of the quarry reserve and Betty Diamond Sports Complex.



Figure 4.21: Location of Tugun Quarry Reserve and Betty Diamond Sports Complex³⁸

Tugun Hill Conservation Area, a nature reserve, is located to the north western side of the airport and marked as a conservation zone in Figure 4.16. Opposite to the nature reserve is another quarry, highlighted as a 'low impact industry' zone in Figure 4.16. A major tourist attraction is Currumbin Wildlife Sanctuary, marked as a 'major tourism, Wildlife park precinct' zone in Figure 4.16.

³⁸ Figure 4.21 is created and labelled by the author using source imagery from the CoGC (2017) and satellite imagery from Google Earth (Google, 2020a). The imagery from the CoGC is used with permission from the organisation, which retains its full copyright.

Advertised as “the Gold Coast’s most popular tourist destination” (Currumbin Wildlife Sanctuary, 2017), the zoological garden, the entrance of which is displayed in Figure 4.22 below, is a popular day-trip destination for both domestic and international visitors.

Directly to the west of Gold Coast Airport is a Gold Coast Desalination Plant, capable of producing up to 133 million litres of potable water on a daily basis. The facility, however, is generally on standby where it is operated at 33 per cent of maximum capacity (Seqwater, 2017). The plant costs approximately \$100,000 per day to run at full capacity, “a cost likely to be passed on to households” (McDonald, 2019). As such, the desalination plant primarily functions as a back-up potable water supplier.



Figure 4.22: Currumbin Wildlife Sanctuary
(Source: Kelsh (2016))

Several medical facilities and health specialist practices exist in proximity to Gold Coast Airport on the Gold Coast side. John Flynn Private Hospital (Figure 4.23), located in the innovation precinct to the west of the airport as shown in Figure 4.16, is a major private hospital on the Gold Coast with 361 beds. Established in 1993, the hospital “provides a wide range of health care services with a 24 hour emergency department” (Ramsay Health Care, 2020).



Figure 4.23: John Flynn Private Hospital
(Source: Author (2020))

In addition to John Flynn Private Hospital, two health clinics, namely Kalwun Health Services and SCU Health Clinic, are located on the eastern end of the airport land. Moreover, several other specialist medical practices are within a five-minute driving distance from Gold Coast Airport. These include orthopaedists, a radiologist and a urologist.

4.4.2.2 Tweed Shire Side

Figure 4.24 on the following page displays land uses around Gold Coast Airport on the Tweed Shire side, illustrated by the applicable land use regulations of Tweed Shire Council, namely Tweed City Centre LEP 2012, the Tweed LEP 2014 and the Tweed LEP 2000.

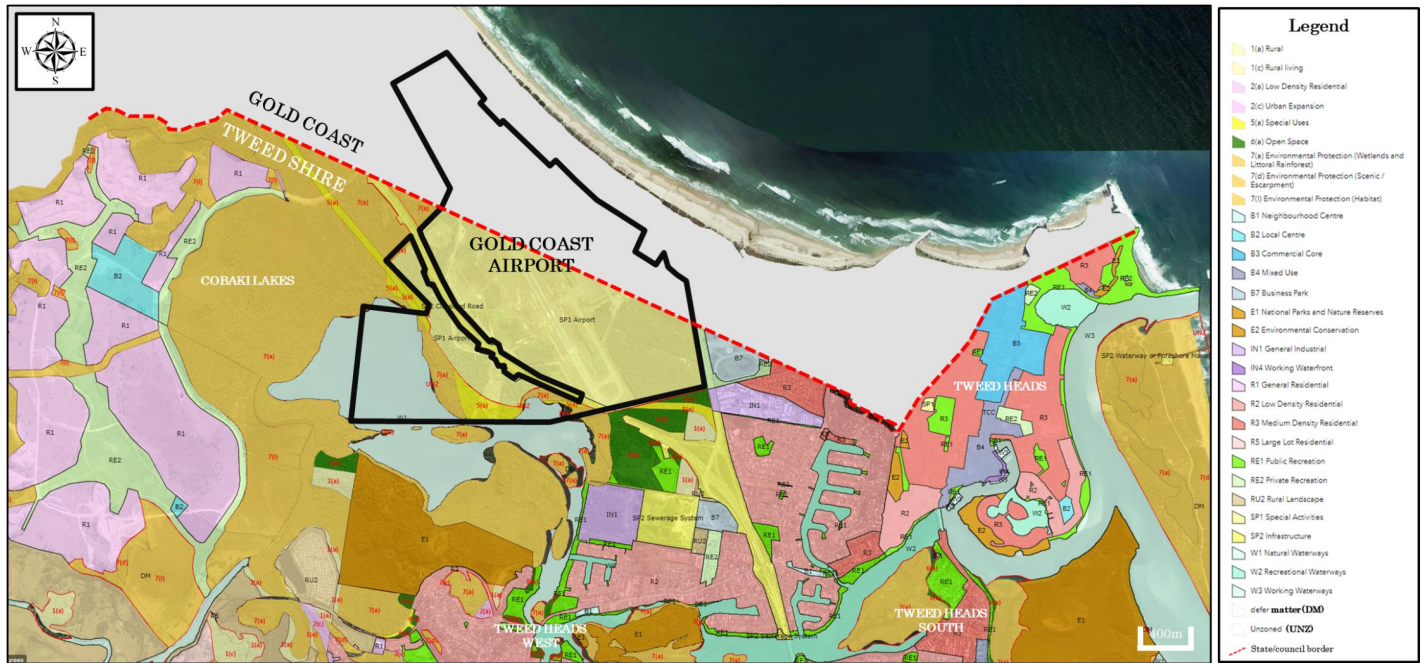


Figure 4.24: Land Uses around Gold Coast Airport on the Tweed Shire Side³⁹

³⁹ Figure 4.24 is created and labelled by the author with satellite imagery from the Tweed Online Mapping tool (Tweed Shire Council, undated-c). The imagery is used with permission from Tweed Shire Council, which retains its full copyright.

As shown in Figure 4.24, on the Tweed Shire side of the border, Gold Coast Airport is adjoined by the following suburbs: Tweed Heads, Tweed Heads West and Cobaki Lakes. A range of land uses exists in proximity to the airport on this side of the border. The Cobaki Lakes suburb, located next to the state and council border to the west of the airport, is a development site with an approval for a mixed-use development containing 5,500 dwellings to accommodate a population of 10,000 to 12,000. Cobaki Lakes is adjoined by Cobaki Creek and Cobaki Broadwater to the east, where development is prohibited under State Environment Planning Policy (Coastal Management) 2018⁴⁰ (Tweed Shire Council, 2018).

To the immediate south of Gold Coast Airport is a nature reserve, which is part of Cobaki Creek and Cobaki Broadwater. Parts of the reserve are zoned '1(a) Rural' or 'RU2 Rural Landscape', both of which permit small-scale urban development. Further south is a vacant industrial land (zoned 'IN1 General Industrial'), a sewage treatment plant (zoned 'SP2 Sewerage System') and a business park (zoned 'B7 Business Park') used for a landscape supply outlet and an airport parking facility.

Another business park exists on the immediate east of Gold Coast Airport on the Border Park site, which was previously used for greyhound racing prior to the state-wide ban of the practice in 2017. An existing business precinct zoned 'IN1 General Industrial' directly adjoins the Border Park site to the south. This business park, in conjunction with the currently vacant Border Park site, represents a major economic development opportunity to create an integrated airport-linked business precinct given its adjacent location to the airport. Section 6.2.4 further examines this prospect.

To the east of the airport is the Tweed Heads CBD area, which is governed by the Tweed City Centre LEP 2012 and directly adjoins and shares a close relationship with Coolangatta. Tweed Heads functions as the principal commercial and employment hub for Tweed Shire with a mix of different land uses, including open spaces, residential, commercial and retail uses. Meanwhile, Tweed Heads South, located further south from Tweed Heads across Terranora Creek, primarily comprises residential uses. The Tweed Heads CBD area and Tweed Heads South both contain a major shopping centre, namely Tweed Mall and Tweed City, respectively. Figure 4.25 on the following page displays the regulatory building height limits for Gold Coast Airport's vicinity on the Tweed Shire sides.

⁴⁰ State Environment Planning Policy (Coastal Management) 2018 superseded State Environment Planning Policy No. 14 – Coastal Wetlands on 3 April 2018 (Holt & Kazzi, 2018; NSW Government, undated-b).

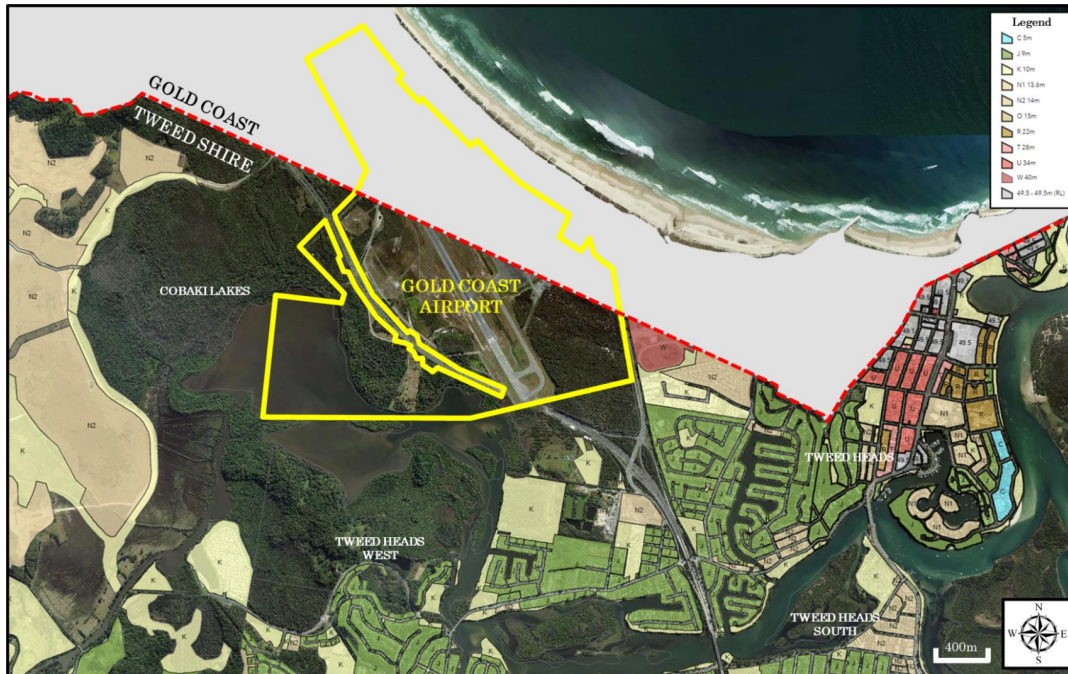


Figure 4.25: Building Height Limits around Gold Coast Airport on the Tweed Shire Side⁴¹

⁴¹ Figure 4.25 is created and labelled by the author with satellite imagery from Tweed Shire Council (undated-c). The imagery is used with permission from Tweed Shire Council, which retains its full copyright.

As shown in Figure 4.25, outside the Tweed Heads CBD area, apart from the Border Park site, the height limits in the developable areas are 14 metres or below, with the majority of the area being under a 9-metre height limit. Table 4.8 outlines the current building height limits on all residential development throughout Tweed Shire under Tweed Shire Council’s Development Control Plan 2008.

Table 4.8: Height Limits on Residential Development in Tweed Shire⁴²

Type of Residential Development	Building Height Limit	
	Metres	Storeys
Single, Detached Dwelling	9.0	3
Townhouse	9.0	3
Apartment Building	12.2	5
Shop-Top Housing	13.6	5

As Cobaki Lakes is currently vacant and undeveloped, the majority of existing dwellings to the south of Gold Coast Airport are, and will continue to remain, three storeys or lower. The permissible building heights in the Tweed Heads CBD area (Figure 4.26), however, are significantly higher, with the maximum figure of 49.5 metres (18 storeys) applied to several sites adjacent to Coolangatta and the state border.



Figure 4.26: View of the Tweed Heads CBD Area and Coolangatta (Source: Franchise Business (2019))

As shown in Figure 4.26, whilst there are a few medium-rise apartment buildings in Tweed Heads CBD with up to ten storeys, most of the existing development in the area is low-rise with three storeys or less. In contrast to Coolangatta where no hotel accommodation currently exists, a hotel is located in the Tweed Heads CBD. Mantra Twin Towns Clubs & Resort, a 4.5-star hotel, is sited next to the state/council border.

Coolangatta comprises a mix of serviced apartments, low-density residential uses and retail uses, thus servicing the needs of both locals and visitors. On the other hand, due to the general lack of tourist accommodation in the area, land uses in Tweed Heads CBD are evidently more oriented towards residents. The combination of different commercial and retail uses in Tweed Heads CBD provide not

⁴² All storey figures in Table 4.8 are based on the average height figure of 2.7 metres per storey, published by Tweed Shire Council (undated-a).

only employment but also a variety of goods and services to local residents. One of the two Tweed Shire Council administration offices, along with a council library, is located in Tweed Heads to provide council customer services to residents.



Figure 4.27: The Tweed Hospital
(Source: Todd (2018))

Similarly to the Gold Coast side, a major hospital, the Tweed Hospital (Figure 4.27), is located in proximity to Gold Coast Airport on the Tweed Shire side. The Tweed Hospital, located approximately six kilometres from Gold Coast Airport, is a 210-bed public hospital with a variety of medical services and a 24-hour operation (Todd, 2018). The hospital is undergoing a \$48-million redevelopment as part of the state government's investment in the development of a new

\$534-million Tweed Valley Hospital on a greenfield site located 15 kilometres from Gold Coast airport, due for completion by the end of 2022 (NSW Government, 2020e).

Several medical centres and clinics and variety of specialist medical practices are also located within a five-minute walking distance (400 metres) of the hospital. Some of the specialist medical services in the area include dentists, radiologists, ophthalmologists and psychiatrists.

4.4.3 KEY LAND USE OBSERVATIONS

The following three key land use observations, which are further elaborated below, arise from reviewing the local context of Gold Coast Airport on both the Gold Coast and Tweed Shire sides:

- ✈ Separation of planning regulations across the state/council border;
- ✈ Limited spatial expansion prospect for Gold Coast Airport;
- ✈ Opportunity to develop a large-scale business park linked to Gold Coast Airport; and
- ✈ Opportunity to create an integrated health hub for both locals and medical tourists.

4.4.3.1 Separation of Planning Regulations across the State/Council Border

Given that the land around Gold Coast Airport is under the jurisdictions of two different local councils and two state governments, there is a separation of land use planning policies for the airport's surroundings. Specifically, at the local council level, the CoGC and Tweed Shire Council have separate planning policies for their jurisdictions. In addition, the QLD Government and the NSW Government both have different planning frameworks for the airport's surroundings. Such a cross-

border disconnection of planning policies is a major impediment to Gold Coast Airport's economic development contribution, an issue which is further discussed in Section 5.3.2.

4.4.3.2 Limited Spatial Expansion Prospect for Gold Coast Airport

There is evidently a lack of land availability for GCAPL to spatially expand Gold Coast Airport in the future. On the Gold Coast side, the airport is immediately surrounded by low- and medium-density housing, which cannot be relocated. Meanwhile, there is abundance of land availability on the airport's adjoining area on the Tweed Shire side. However, the expansion of Gold Coast Airport on the southern end is significantly constrained due to two primary reasons. Firstly, this area is part the state-protected nature reserve where any kind of urban development is not permitted. Secondly, a large body of water adjoins the airport on its south and southwestern end, thus preventing any outward expansion of the airport in these directions. Section 6.2.1 further examines this issue of limited land availability for airport expansion.

4.4.3.3 Opportunity to Develop a Large-Scale Business Park Linked to Gold Coast Airport

On the Tweed Shire side of the border, the existence of a vacant Border Park site, which has been zoned for a future business park development, and the neighbouring industrial zone provides an opportunity to create a large-scale business park. The location of the site directly adjoins Gold Coast Airport, thus implying the potential to link the operations of businesses on this site with the airport. The potential economic development benefits of this business park are twofold. In addition to promoting additional economic development contribution of Gold Coast Airport, the business park can also function as a major employment precinct once operational. This can address the issue where nearly a third of all employed residents leave the LGA for employment on a daily basis by retaining more workers locally. Section 6.2.4 further elaborates on this land use prospect.

4.4.3.4 Opportunity to Create an Integrated Health Hub for both Locals and Medical Tourists

On both the Gold Coast and Tweed Shire sides, there are two major hospitals and several specialist medical services, clinics and medical centres. As such, there is a significant economic development opportunity to create not just two separate health precincts (one on each side of the state/council border), but to combine the two precincts into an integrated health hub for both the SEQ and FNC regions. This land use prospect is examined in further detail in Section 6.2.4.3. Given the existence of Gold Coast Airport in its proximity, this health hub could be developed and promoted in such a way that is specifically tailored to medical tourists. Section 6.2.4.3 discusses this opportunity in greater detail.

Having investigated the local context of Gold Coast Airport in terms of its surrounding land uses and features on both the Gold Coast and Tweed Shire sides of the border, the next section of the chapter explores the characteristics and role of the airport in local and regional economic development.

4.5 CHARACTERISTICS OF GOLD COAST AIRPORT

This section discusses the key characteristics of Gold Coast Airport. To do so, the section contains three sub-sections, which explore the following aspects of Gold Coast Airport:

- ✈ Overview of Gold Coast Airport;
- ✈ Land uses in Gold Coast Airport; and
- ✈ Key outcomes of Gold Coast Airport privatisation.

4.5.1 OVERVIEW OF GOLD COAST AIRPORT

Figure 4.28 below illustrates the location of Gold Coast Airport in relation to the nearby suburbs.

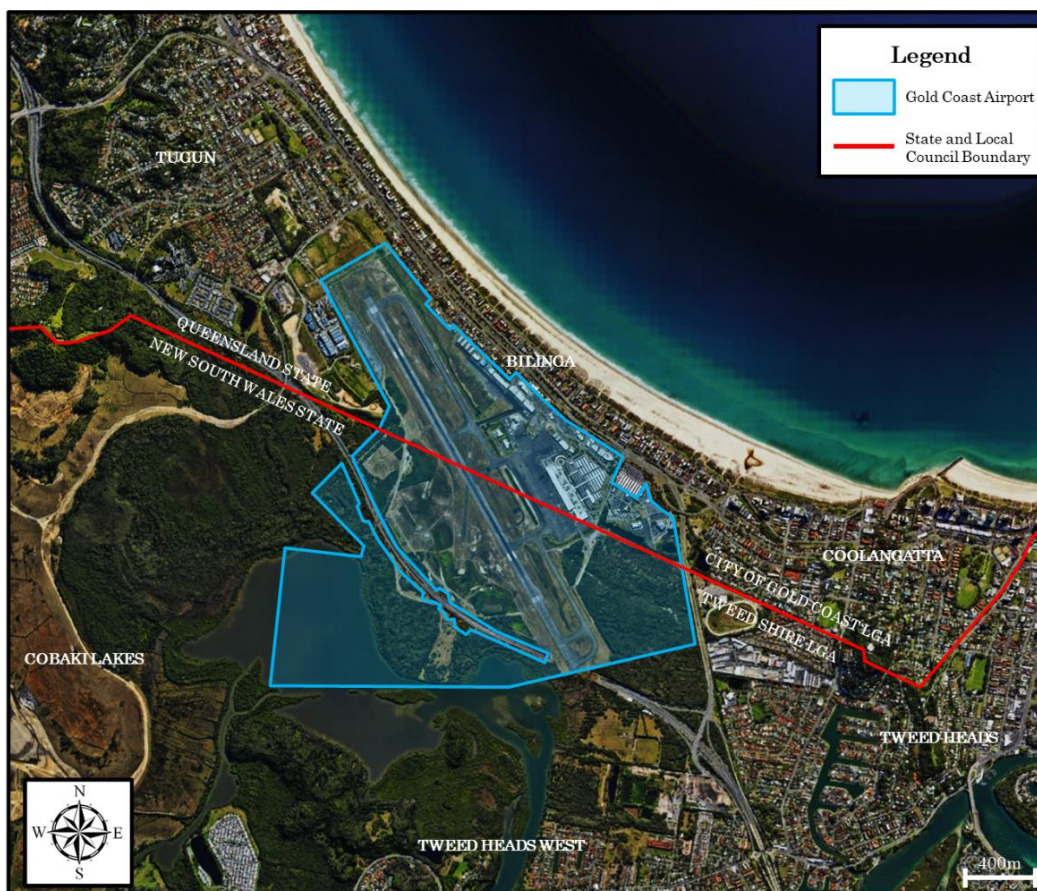


Figure 4.28: Aerial View of Gold Coast Airport and Its Surroundings⁴³

⁴³ Figure 4.28 is created and labelled by the author with satellite imagery from Google Earth (Google, 2020a).

As shown in Figure 4.28 above, Gold Coast Airport is situated across not only the local council boundary of the CoGC and Tweed Shire but also the state boundary of QLD and NSW. As such, the airport is located across two LGAs and two states. Operational since 1936, Gold Coast Airport was originally an emergency landing strip (GCAPL, 2011). Ownership of the airport was transferred to the Federal Government's Federal Airport Corporation in 1988. The airport was then privatised under the Airports Act on 29 May 1998 with GCAPL, wholly-owned and operated by QAL, as the Airport Leasing Company (GCAPL, 2019b). QAL also operates Townsville Airport, Mount Isa Airport and Longreach Airport, all of which are located in Queensland.

4.5.2 LAND USES IN GOLD COAST AIRPORT

Gold Coast Airport comprises 371 hectares of land, which is divided into five precincts based on their existing and future land uses. Figure 4.29 below displays a precinct map of Gold Coast Airport.

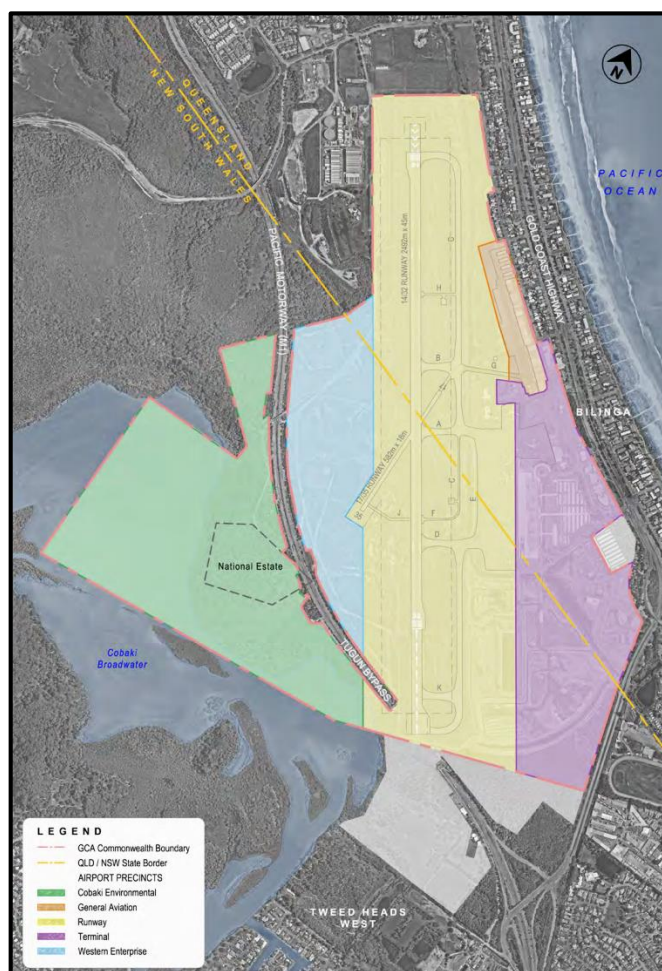


Figure 4.29: Precinct Map of Gold Coast Airport (Source: GCAPL (2017c))⁴⁴

⁴⁴ The source imagery for Figure 4.29 is used with permission from GCAPL, which retains its full copyright.

The five airport precincts are described in Table 4.9 below.

Table 4.9: Description of the Different Precincts in Gold Coast Airport (Source: GCAPL (2017c))

Area (hectares)	Description
Cobaki Environmental Precinct	
94	This precinct, located to the west of the Pacific Highway and the Tugun Bypass, comprises remnant natural vegetation and contains areas of cultural significance. GCAPL displays no intention to develop this precinct given that it is part of the part of the broader Cobaki Broadwater, a protected nature reserve examined earlier in Section 4.4.2.2
Western Enterprise Precinct	
39	As largely developed land, this precinct is preserved by GCAPL for aviation and non-aviation uses, including freight-related activities, in the future. However, the development of this precinct will only become possible after the existing aircraft navigational equipment on site from Airservices Australia is either decommissioned or relocated. The agency currently has no short-term plans to decommission or relocate the equipment.
Runway Precinct	
162	This precinct comprises runways and the lands used for all airside-related activities at the airport.
General Aviation Precinct	
8	This precinct contains aircraft maintenance facilities and a range of commercial and light industrial land uses relating to aviation. It also provides a variety of aviation support services.
Terminal Precinct	
68	As the part of the airport used primarily by airport passengers, this precinct houses a range of amenities to facilitate landside uses. Some of the key facilities in this precinct include terminal buildings, commercial uses, car parks, a university campus, car rental facilities, roads and public stops for taxis and buses.

As shown in Table 4.9, 94 hectares of the airport land is part of a protected nature reserve. Additionally, the Western Enterprise Precinct is also undevelopable until Airservices Australia relocates or decommissions its on-site equipment, the time frame for which is currently unknown. These two concurrent facts imply that 133 out of 371 hectares, or 35.85 per cent, of the airport land is effectively undevelopable, which is a major impediment to the airport's future expansion. Section 6.2.3 further examines this barrier from the economic development perspective. Figure 4.30 below illustrates the existing land uses within the boundary of Gold Coast Airport.

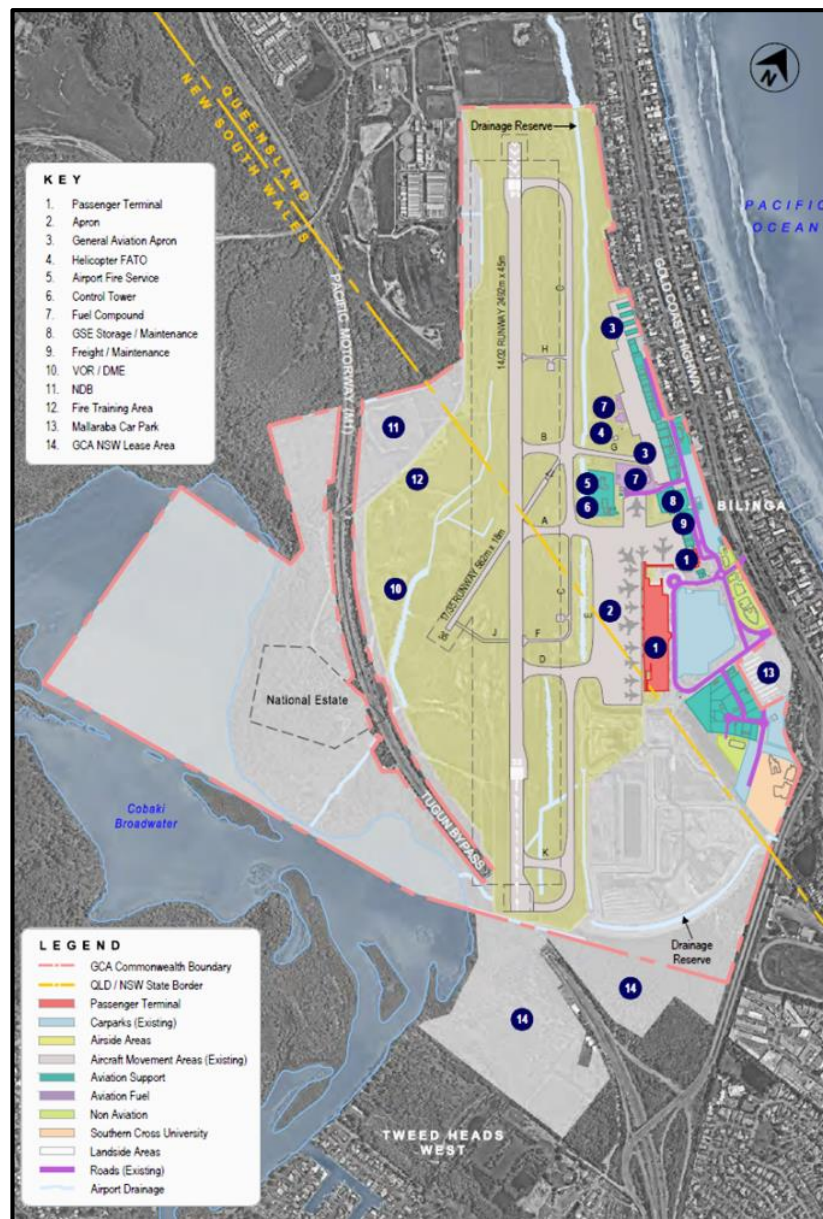


Figure 4.30: Existing Land Uses in Gold Coast Airport (Source: GCAPL (2017c))⁴⁵

As shown in Figure 4.30, the airport comprises two runways, namely Runway 14/35 and Runway 17/35. Runway 14/34, oriented from northwest to southeast, is the primary runway used by RPT aircraft. Meanwhile, Runway 17/35 is a narrower, shorter runway with a north-south alignment used exclusively by General Aviation (GA) aircraft. Runway 17/35 is restricted from further extension due to existing obstacles in the airport surroundings (GCAPL, 2017c). The airport has one passenger terminal, Terminal 1, which is labelled with ‘1’ in Figure 4.30 in and displayed in Figure 4.31 below

⁴⁵ The source imagery for Figure 4.30 is used with permission from GCAPL, which retains its full copyright.

To the north of Terminal 1 is Terminal 2, which provides ancillary support services for Terminal 1 and is not currently used by passengers.



Figure 4.31: Terminal 1 of Gold Coast Airport (Source: Weston and Potts (2016b))

GCAPL leases land parcels from the NSW Government outside the 371-hectare airport land, which is legally subject to the Airports Act and under the Federal Government ownership. This leased land, labelled ‘14’ and ‘GCA NSW Leased Area’ in Figure 4.30, will be used as for the installation of lighting equipment to enable safer aircraft landing. In addition to this leased area, GCAPL has purchased other land parcels on both the QLD and NSW sides, which the organisation “intends to develop in the next five to 10 years” (QAL, 2018, p. 5).

The airport comprises a freight processing area, labelled ‘9’ in Figure 4.30. Urban planner #5 remarks that most of the freight being processed at Gold Coast Airport arrives at the airport as additional cargo in the form of small packages on passenger aircraft. This fact is further supported by the airport master plan which states that the airport receives “freight transported in the bellyholds of the passenger aircraft” (GCAPL, 2017c, p. 101). At the airport, freight is unloaded from an aircraft on the apron area before being transported to freight handling buildings by trolleys. These buildings, which process both domestic and international freight and have “the ability to accommodate high value and time-sensitive freight” (GCAPL, 2017c, p. 31), are currently operated by Menzies Aviation and Qantas Freight.

Gold Coast Airport is accessible with one entrance via Terminal Drive, which is adjacent to the Mallaraba Car Park labelled ‘13’ in Figure 4.30. As shown in the directional signage located at the airport entrance (Figure 4.32), a left turn shortly after the entrance leads to a SCU campus, which is a highly noteworthy land use feature within the airport, particularly from the economic development perspective. The campus is located on the south-eastern end of the airport and highlighted in the light orange shade in Figure 4.30. As at 2018, Gold Coast Airport is noted by QAL (2018) as the only airport in Australia where a university campus is located directly within the airport boundary. There is strong land use synergy in the co-location of the airport and the university campus, which is further discussed in Section 6.2.1.2.



Figure 4.32: Directional Signage at Gold Coast Airport Entrance (Source: Author (2020))

The university campus is located adjacent to the airport’s long-term car parking area, highlighted in light blue in Figure 4.30 and labelled ‘budget parking’ in Figure 4.32 above. According to senior manager #1, the university campus is required to lease some of the parking spaces in the airport-owned car parking facility due to the limited car parking spaces within the campus boundary. In addition to the long-term parking zone, Gold Coast Airport has a short-term parking area labelled ‘terminal parking’ on the signage in Figure 4.32 and highlighted in light blue in Figure 4.30. The short-term parking area, accessible via a right turn shortly after the entrance signage, is located directly adjacent to the Terminal 1 building. Moreover, a second main entrance into the airport will be developed to the south of the SCU campus under the recently announced project to be jointly funded by both the QLD and NSW governments.

To the right of the airport entrance is Airport Central, highlighted in Figure 4.30 in light green as a ‘Non Aviation’ use. Airport Central is a 1.7-hectare mixed use complex with on-site parking and one-to-two-storey buildings. The site currently comprises a mix of retail and commercial uses and GCAPL’s corporate offices as shown in Figure 4.33 on the following page.



Figure 4.33: Airport Central and Its Current Uses (Source: Author (2020))

To the north of Airport Central is a zone highlighted as a ‘General Aviation’ precinct in Figure 4.29 and labelled ‘3’ (General Aviation Apron) in Figure 4.30. In addition to the uses outlined previously in Table 4.5, a field observation conducted by the author reveals that several aviation-related academic institutes are also located in this precinct. Figure 4.34 to the right displays Airways Aviation, one of the two institutes which provide commercial pilot training to SCU students through a partnership with the university.⁴⁶



Figure 4.34: Airways Aviation Building Located in Gold Coast Airport (Source: Author (2020))

Having provided an overview of land uses in Gold Coast Airport, the key outcomes of Gold Coast Airport privatisation are discussed next.

⁴⁶ The collaborative relationship between SCU, Gold Coast Airport and pilot training schools located in the airport, is further explored in Section 7.3.4.

4.5.3 KEY OUTCOMES OF GOLD COAST AIRPORT PRIVATISATION

The privatisation of Gold Coast Airport has led to the following five key outcomes, all of which are further examined in this section:

- ✈ Change of airport name and the creation of a new airport ‘brand’;
- ✈ Transition from a domestic airport to an international airport;
- ✈ Establishment as, and a subsequent transition away from, a low-cost carrier hub;
- ✈ Rapid growth in passenger volume; and
- ✈ Airport redevelopment projects.

4.5.3.1 Change of Airport Name and the Creation of a New Airport ‘Brand’

As the immediate outcome of the privatisation process, Gold Coast Airport’s name was changed from ‘Coolangatta Airport’ to ‘Gold Coast Airport’ in 1999, one year after the airport was leased to GCAPL (GCAPL, 2019b). Urban planner #2 perceives the name change as a strategic move to attract additional passengers to the airport through the use of the Gold Coast ‘brand’. Likewise, the local chamber of commerce representative views this name change for Gold Coast Airport as “a smart move” by GCAPL. Specifically, the new name leverages the airport’s location on the Gold Coast and the LGA’s reputation to domestic and international tourists into attracting more passengers, and therefore revenue, to the airport.

As briefly mentioned in Section 4.2.4, GCAPL is also implementing a new ‘brand’ for Gold Coast Airport. In this regard, according urban planner #6, to further differentiate Gold Coast Airport from Brisbane Airport, GCAPL is “soon going to have a brand rollout” for Gold Coast Airport. The urban planner reveals that the new brand of Gold Coast Airport will be based on the Gold Coast’s reputation as a place with a wealth of beaches and hinterland attractions and a relaxed lifestyle. Gold Coast Airport will reflect the city by encapsulating the “sense of fun [and] sense of playfulness” which are commonly associated with the Gold Coast. The interviewee indicates this branding strategy as a strategic move to distinguish Gold Coast Airport from Brisbane Airport, which is one of the airport’s competitors and has a “more corporate” brand. The following from the urban planner further explains this branding strategy:

[Brisbane Airport’s brand] is boring. **Gold Coast Airport is fun. Gold Coast Airport really is a reflection of the area that we live in and that is what [the airport is] trying to be. It is about the beach – [there is] a beach across the road [from the airport].** [The Gold Coast] actually is the premier tourist destination in Australia, so a lot of people come to the Gold Coast. Then we have also got the hinterland and all that, so [GCAPL is] really trying to capture that and then there is that sense of fun, sense of playfulness a little bit there as well. So that is what [Gold Coast Airport’s] difference is. – urban planner #6 (emphasis added)

As part of the new brand rollout initiative, the logo of Gold Coast Airport has recently changed as illustrated in Figure 4.35.



Figure 4.35: Logo Change for Gold Coast Airport⁴⁷

As shown in Figure 4.35, both the previous and current logos of Gold Coast Airport share the same characteristic in which three colours are used to represent the natural features the Gold Coast is renowned for as outlined in Table 4.10 below.

Table 4.10: Analysis of the Natural Features Represented by the Colours in Gold Coast Airport Logo

Colour	Natural Feature	Commentary
Gold	The beach	The beach is the most well-known feature of the Gold 'Coast', which is what the LGA name is based on. The city is rich in coastline, which stretches over 57 kilometres in distance.
Blue	The ocean	The ocean, adjoining the beach, is also a well-recognised feature of the LGA. The ocean of the Gold Coast is popular with surfers and has hosted several global surfing competition events in the past.
Green	The hinterland	The hinterland, which is situated inland on the west side of the Gold Coast and occupies the majority of the LGA's space, is increasingly becoming an acclaimed natural feature of the Gold Coast amongst both tourists and locals alike. "The Green behind the Gold" is a catchphrase commonly used to promote the hinterland area of the Gold Coast as a tourist attraction.

The representation of the Gold Coast in the logo of Gold Coast Airport explained above clearly illustrates GCAPL's intent to leverage the brand and reputation of the LGA into additional passenger volume for the airport. However, Tweed Shire, a LGA which the majority of Gold Coast Airport land is situated in, is completely excluded in the branding strategy for the airport, which has negative economic development implication for the LGA. Section 7.3.2.2 further examines the implication of excluding Tweed Shire in the airport marketing strategy. Additionally, Section 6.5 discusses the economic development significance of location names for businesses, including Gold Coast Airport.

⁴⁷ Figure 4.35 is created by the author using source imagery from Queensland University of Technology (undated) and GCAPL (2019d).

4.5.3.2 Transition from a Domestic Airport to an International Airport

The local chamber of commerce representative notes that Gold Coast Airport “has changed direction over the years” since its development and management rights were transferred from the Federal Government to GCAPL as part of the privatisation process under the Airports Act. The most notable change, according to the interviewee, is “a significant move away from purely domestic visitation ... to international [visitation].” In this regard, Japan was the first target market of GCAPL given its proximity to Gold Coast⁴⁸ before the airport subsequently established connections with Southeast Asian and Northeast Asian markets. Gold Coast Airport is currently connected to eleven domestic destinations and ten international destinations via direct flights. Table 4.11 and Figure 4.36 illustrate all the destinations currently connected to Gold Coast Airport.⁴⁹

Table 4.11: Destinations Connected to Gold Coast Airport via Direct Flights (Source: GCAPL (2017c))

Country	City(s)
Australia	Sydney, Melbourne, Adelaide, Perth, Townsville, Cairns, Canberra, Newcastle and Rockhampton
New Zealand	Christchurch, Auckland, Wellington and Queenstown
Malaysia	Kuala Lumpur
Fiji	Nadi
Japan	Tokyo and Osaka
China	Hong Kong
Singapore	N/A

⁴⁸ A direct flight between Gold Coast Airport and Narita International Airport, the primary international airport of Tokyo, Japan is approximately nine hours in duration.

⁴⁹ The destinations displayed in Table 4.11 and Figure 4.36 were current prior to the COVID-19 global pandemic, which significantly reduced the number of flights both in Australia and around the world.



Figure 4.36: Destinations Connected to Gold Coast Airport via Direct Flights (Source: GCAPL (2017c))⁵⁰

In addition to the destinations shown in Table 4.11 and Figure 4.36, Gold Coast Airport is also serviced by direct flights to Hobart, Australia and Seoul, South Korea (GCAPL, 2019d). The airport is connected to 27 international destinations listed in Table 4.12 via connecting flights.

Table 4.12: Destinations Connected to Gold Coast Airport via Connecting Flights (Source: GCAPL (2019d))

Country	City(s)
Indonesia	Bali
The Philippines	Manila
Thailand	Bangkok and Phuket
Vietnam	Hanoi and Ho Chi Minh City
India	Bangalore
China	Guangzhou, Shanghai, Hangzhou, Macau, Tianjin, Shenyang, Qingdao and Nanjing
Taiwan	Taipei
Maldives	Malé
Greece	Athens
Germany	Berlin
France	Paris

⁵⁰ The source imagery for Figure 4.36 is used with permission from GCAPL, which retains its full copyright.

Country	City(s)
United Kingdom	London
United States	Dallas, Houston, San Francisco and Los Angeles
Canada	Vancouver
Argentina	Buenos Aires

The establishment of Gold Coast Airport as an international airport implies that the privatisation of the airport has substantially increased the number of international visitors and overall passengers to the airport. However, the majority of passengers visiting Gold Coast Airport have visited the Gold Coast whilst Tweed Shire has received a small proportion of the airport's passengers, an issue further discussed in Section 4.7.1.6. This implies that the economic development benefits generated by the airport's transition into an international airport have primarily been distributed only to the Gold Coast.

4.5.3.3 Establishment as, and Subsequent Transition away from, a Low-Cost Carrier Hub

According to the local chamber of commerce representative, Gold Coast Airport's move to the international market occurred "at an opportune time with the [worldwide] development of low-cost carriers (LCCs)" in the mid-2000s. In this regard, low-cost carriers grew significantly with their number of scheduled seats tripled globally between 2000 and 2014 (Perry & Williams, 2015). According to the interviewee, during this time period, traditional legacy carriers such as Qantas and Virgin began to regionalise their services by shifting from servicing larger airports at major cities to also servicing smaller airports at non-capital cities, including Gold Coast Airport.

In a strategic move to position Gold Coast Airport as a specialised LCC hub – "Australia's first dedicated Low Cost Carrier Airport" (AZ Freight, 2012) – and capitalise on the growing LCC market, GCAPL completed a \$100 million redevelopment of the terminal building in January 2010. The effect of the redevelopment project, which created "the first purpose-built Low-Cost Carrier Terminal (LCCT) in Australia" (MPN Consulting, 2018) and enabled the airport to accommodate LCCs more efficiently, is twofold. Not only have visitors to the Gold Coast region gained greater access to lower airfares, but also residents have gained more access to low-cost air travel to major destinations throughout Australia and Asia-Pacific. The establishment of Gold Coast Airport as a LCC hub is one of the key drivers of the airport's rapid growth in recent years (Deloitte Access Economics, 2012). Figure 4.37 below displays the redeveloped terminal of Gold Coast Airport.



Figure 4.37: Redeveloped Gold Coast Airport Terminal – The First Purpose-built Low-Cost Carrier Terminal in Australia (Source: MPN Consulting (2018))

In line with the terminal redevelopment into a LCCT, Gold Coast Airport was extensively promoted in several media releases by GCAPL as a ‘low-cost carrier hub’ in the early 2010s. By 2012, around 78 per cent of all seat capacity at Gold Coast Airport was delivered by LCCs, thus illustrating the airport’s “very clear position in the market as a low cost carrier hub,” a characteristic noted by Airbiz (2012, p. 29) as the airport’s key strength. Shortly after the airport was privatised, GCAPL “actively sought to attract more LCCs” to Gold Coast Airport, an effort which resulted in an expansion of the airport’s network from three airlines with three routes in 2000 to nine airlines with 20 routes in 2016 (Aso, 2017, p. 7).

As a result of the growth in LCCs and the regionalisation of legacy carriers, Gold Coast Airport has expanded significantly in terms of passenger volume, a phenomenon observed by the local chamber of commerce representative and both local community representatives. Consequently, the airport is now sixth busiest airport in Australia with 6,486,006 total passengers recorded in 2018/19 in comparison to the figure of 1.8 million passengers serviced by the airport in 1998 (BITRE, 2021). Nevertheless, the airport has recently demonstrated an intent to transition away from being an LCC hub as per the quote below:

[The airport is] moving slowly [away from being a low-cost carrier hub]. Obviously, [it is] still are a low-cost carrier hub, but [it] also [has] full-service carriers as well. [The airport has] got Virgin Australia, which is a full-service carrier ... [It has] got Qantas that flies in. And [it] would definitely promote more of those full-service carriers ... Most of [the airport’s] international [flights] are low-risk, low-cost. **The only thing ... to clarify with the 'low cost' [aspect], it does not actually mean budget and all that stuff.** So for example, [the airport has] got Scoot [flights] that are coming in. They are flying with the brand-new Dreamliner aircraft, the widest aircraft at the moment, so this is new, new stuff. And the Wuhan flight with Jetstar – same thing. It is a Dreamliner. **There are a lot of people who go, "Oh, it is a low-cost Asian carrier or something. It must be cheap."** I mean, yes, the fares are [cheap] but the aircraft [are] still quality stuff. – urban planner #6 (emphases added)

The quote above illustrates that there is negative public perception commonly associated with LCCs. Such perception could be noted as a motivating factor behind the GCAPL's decision to transition Gold Coast Airport away from being a LCC hub. Another reason behind such a decision, according to local destination marketing organisation representative #1, is the fact that GCAPL now intends to attract flagship airlines with full service as shown in the quote below:

[Gold Coast Airport had] for several years [been saying,] “We will never have an air bridge. We are going to keep it low-cost. We are going to keep landing fees down because it is so competitive.” But I think the reality [is that] if they wanted to attract flagship airlines, they have to offer the facilities that other airports offer. So that is why they have had to make that shift to say, "Okay, well, we are going to have some air bridges and we are going to try to cater for flagship airlines [with] full service.” – local destination marketing organisation representative #1 (emphasis added)

The quote above illustrates that GCAPL, during its past pursuit to establish Gold Coast Airport as a specialised LCC hub, focused on keeping landing fees down for LCCs by keeping on-site facilities for aircraft streamlined with no air bridge. As such, the airport currently employs remote stands to board and disembark passengers from an aircraft as shown in Figure 4.38 below.



Figure 4.38: The Use of Remote Stands for Boarding and Disembarking Passengers at Gold Coast Airport (Source: @goldcoastairport (2020))

The lower landing fees resultant from the absence of air bridge at Gold Coast Airport would, in theory, be passed on to consumers as lower ticket prices, an outcome which strongly complements the operating model of LCCs. However, the organisation now intends to attract more full-service carriers to the airport. As part of GCAPL's endeavour to draw full-service carriers to the airport, the terminal building is expected to be equipped with four air bridges upon completion of Project LIFT (GCAPL, 2016), a major redevelopment project for the airport which is further discussed in Section 4.5.3.5.

The 240-page Gold Coast Airport master plan document mentions 'low-cost carriers' only three times in total and provides the following statement (GCAPL, 2017a, p. 44):

From strong success in the low-cost and international arena, Gold Coast Airport is developing and maturing as a gateway that enables and facilitates inbound visitation to the south east Queensland and northern New South Wales regions. (emphasis added)

The emphasised part of the quote above and the limited inclusion of LCCs in the airport master plan further reaffirm GCAPL’s current strategic intention to shift Gold Coast Airport away from the LCC focus it used to have in the past. Nevertheless, LCCs still contribute a significant proportion of aircraft traffic to the airport, which is now “the third busiest hub” for Jetstar, a leading Australian LCC (@goldcoastairport, 2020). Other LCCs that currently service Gold Coast Airport include AirAsia, Tigerair and Scoot. The airport is presently serviced by three full-service carriers, namely Virgin Australia, Qantas and Air New Zealand (GCAPL, 2019c).

4.5.3.4 Rapid Growth in Passenger Volume

Driven by the key privatisation outcomes discussed above, Gold Coast Airport has experienced significant growth in passenger since its privatisation in 1998. Figure 4.39 below illustrates the historical passenger movements at Gold Coast Airport and all airports in Australia from 1985-86 to 2013-14.

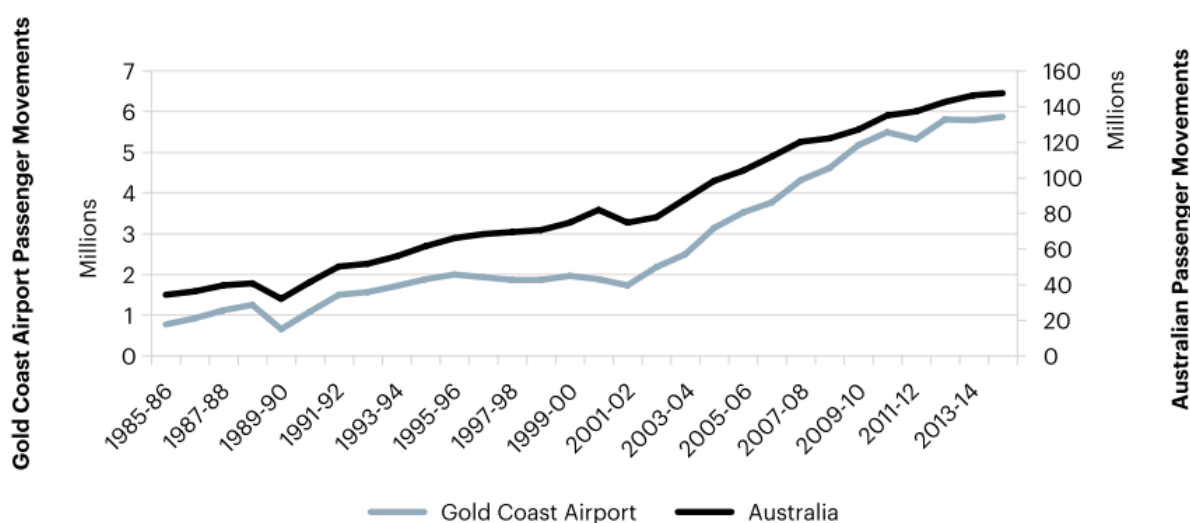


Figure 4.39: Passenger Movements at Gold Coast Airport and All Airports in Australia from 1985-86 to 2013-14 (Source: GCAPL (2017c))⁵¹

As shown in Figure 4.39, the growth trend of passenger volume at Gold Coast Airport is generally in line with the Australia trend. In 28 years, Gold Coast Airport’s passenger volume has experienced a sixfold increase, from just under 1 million passengers to just under 6 million passengers. Over the

⁵¹ The source imagery for Figure 4.39 is used with permission from GCAPL, which retains its full copyright.

same time frame, however, the nationwide passenger volume figure has grown approximately fivefold, from approximately 30 million passengers to just under 150 million passengers. These figures illustrate that, over the past three decades, Gold Coast Airport has experienced a faster growth rate in passenger volume than all Australian airports have. This fact is particularly highlighted by the fact that from 2006 to 2016, Gold Coast Airport’s annual passenger growth rate is 5.9 per cent in comparison to the Australian figure of just under four per cent (GCAPL, 2017c). These figures imply that Gold Coast Airport experienced approximately 1.5 times faster growth rate in passenger volume than all Australian airports did from 2006 to 2016. Consequently, Gold Coast Airport is now one of the busiest airports in Australia as shown in Figure 4.40 below, which compares the passenger volume of ten busiest airports in the country in 2019 and highlight Gold Coast Airport in gold.

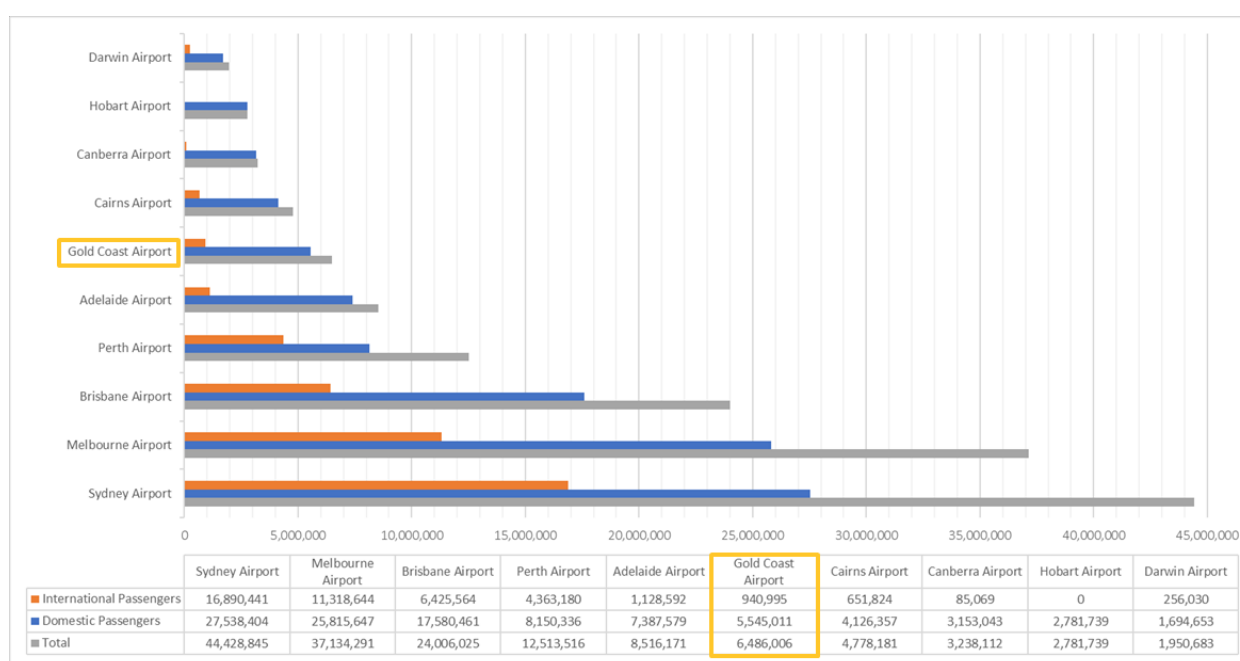


Figure 4.40: Ten Busiest Airports in Australia by Passenger Volume in 2019⁵²

With more than 420 flights operating on a weekly basis, Gold Coast Airport is now “the sixth busiest airport in Australia” (QAL, 2018, p. 5), as supported by statistics outlined in Figure 4.40. More than 6.6 million passengers travelled through Gold Coast Airport in 2017, an increase of 1.7 per cent compared to 2016 (QAL, 2018). This figure is more than double the airport’s passenger volume of around 3 million in 1997-98, the year prior to its privatisation, which is illustrated previously in Figure 4.39. Aso (2017, p. 6), who uses Gold Coast Airport as a case study of “successful airports in the Asia-Pacific region,” remarks that the airport’s passenger volume has undergone a “remarkable

⁵² Figure 4.40 is created by the author using airport traffic data published by BITRE (2021).

growth ... despite being located some 100 km from Brisbane Airport, whose annual passenger traffic exceeds 20 million,”

Such a rapid increase in passenger volume highlights the significant impact of the Gold Coast Airport’s privatisation on its passenger volume. Aso (2017) attributes the substantial growth of the airport’s passenger volume to its strong focus on LCCs in the past. He also notes that the airport’s success in operating as a LCC hub is primarily due to the ability of the GCAPL management team, which comprises members with airline experience, to attract LCCs to service the airport. In this regard, GCAPL has invested in several new facilities and implemented inexpensive charges and facilities for airlines to better accommodate LCCs.

4.5.3.5 Airport Redevelopment Projects

Since Gold Coast Airport was privatised in 1998, GCAPL has undertaken six major redevelopment projects for the airport as illustrated in Figure 4.41 below.

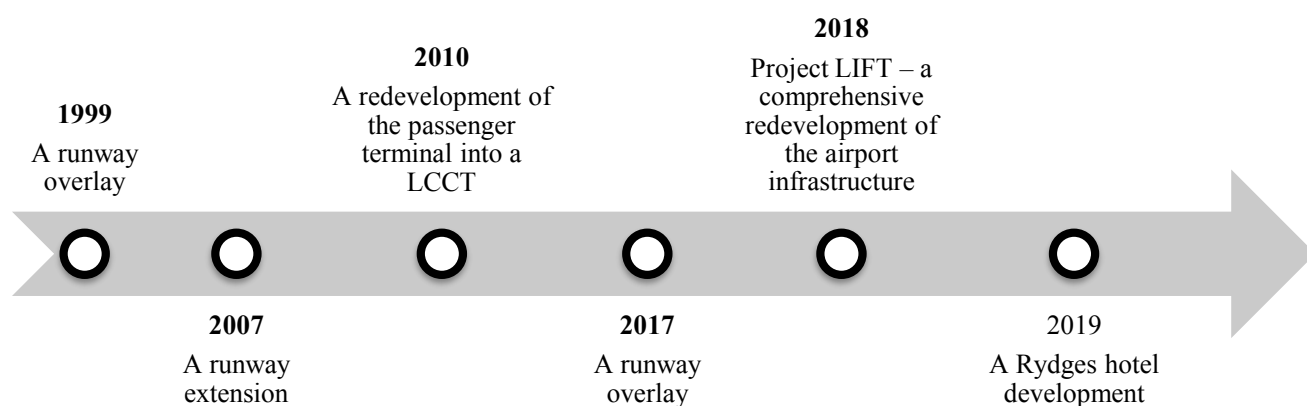


Figure 4.41: Major Redevelopment Projects at Gold Coast Airport since Privatisation in 1998 (Source: QAL (2019a))⁵³

Due to the rapid growth in passenger volume discussed previously, a major redevelopment project, ‘Project LIFT’ (Let’s Invest for Tomorrow), was initiated in 2018 to “address current infrastructure constraints and provide for the continued economic growth of the region” (QAL, 2018). The \$370-million project, which includes a 30,000-square-metre expansion of the terminal building, additional aircraft parking stands and an integrated ground transport infrastructure, is expected to increase the

⁵³ Figure 4.41 is created by the author using source information published by QAL (2019a).

airport's capacity in order to meet future passenger demand (GCAPL, 2019e). The project, which received a minister approval for its Major Development Plan in 2016, is underway as at May 2020.

In addition to Project LIFT, in 2019, GCAPL commenced the development of a \$50 million four-star Rydges hotel facility in on the airport land (Figure 4.42). Expected to complete in mid-2020, the hotel will include a total of 192 rooms and suites and conference and meeting facilities over seven storeys. It will also feature clear views to the nearby Kirra beach, the airport runway and the Gold Coast hinterland (Rydges, 2020).



Figure 4.42: Concept Design for Gold Coast Airport-based Rydges Hotel (Source: Rydges (2020))

The steady stream of redevelopment projects for Gold Coast Airport evidently illustrates significant positive impacts of the airport's privatisation in the form of private sector investment. These consist of a total of \$520 million for the airport's terminal redevelopment into a LCCT in 2010, Project LIFT in 2018 and the Rydges hotel development in 2019. In addition to these major projects, the airport's runway has undergone three upgrades, including two overlays and an extension.

Having examined the key outcomes of Gold Coast Airport privatisation, the next part of this section develops a conceptual classification for Australian airports, which is then used to classify Gold Coast Airport based on its characteristics.

4.6 CLASSIFICATION OF GOLD COAST AIRPORT

This section classifies Gold Coast Airport through three sub-sections. Firstly, a literature review on the existing airport classification around the world is conducted. Secondly, a conceptual classification for Australian airports is developed through analysing and synthesising the literature review findings. Lastly, the key characteristics of Gold Coast Airport as a Second-Tier Airport are identified and discussed.

4.6.1 AIRPORT CLASSIFICATION: A LITERATURE REVIEW

Several different criteria and definitions are used to classify airports around the world. Airports can be broadly classified with basic variables such as their annual volume of international passengers, annual volume of domestic passengers and number of gates (Adikariwattage et al., 2012; Turiak, 2013). Mayer (2016) notes that airport classifications to date are mainly based on the airport's size,

ownership, functional role, nature of traffic, network position and geographic position. Other variables which have been used to classify airports include:

- ✈ **Passenger connectivity**, which includes such factors as number of destinations serviced and number of seats available (Malighetti et al., 2009); and
- ✈ **Passenger profile** (Rodríguez-Déniz et al., 2013).

Mayer (2016) suggests that most airport classification generally only incorporates passenger-related variables and lacks consideration of freight activities and infrastructure at an airport. Sarkis and Talluri (2004) apply cargo tonnage as one of the classification criteria to their study of 44 airports in the United States. Nevertheless, airports with a primary focus on freight activities are normally labelled simply as ‘cargo airports’ (Mayer, 2016).

According to Krause and Koch (2006), airports can be broadly categorised into two different types based on the structure of the air traffic they service as shown in Table 4.13 below.

Table 4.13: Airport Types according to Traffic Structure (Source: Krause and Koch (2006))

Airport Type	Description
Origin-Destination Airports	Given their lack of hub operation, origin-destination airports have no transfer passengers. Peak traffic is usually experienced in morning and evening periods as overnight-parked aircrafts of a home carrier depart in the morning and arrive in the evening. Origin-destination airports function as the gateway to their local region. Any transfer traffic at these airports is limited to connecting international flights with small domestic airports.
Hub Airports	Hub airports primarily service hub-and-spoke operations. Passengers travelling from a spoke airport arrive at hub airports in order to be transferred to their connecting flight, which will transport them to their final, intended destination. Hub airports function as the central points of flight transfer for airlines.

The 1978 Airline Deregulation Act in the United States and the subsequent deregulation of the airline networks elsewhere towards the end of the 1970s have led to a significant increase in the number of hub airports around the world. This trend is attributable to the widespread transition amongst airlines from point-to-point to hub-and-spoke operations after the airline deregulation (Song & Ma, 2006), which is illustrated in Figure 4.43 below.

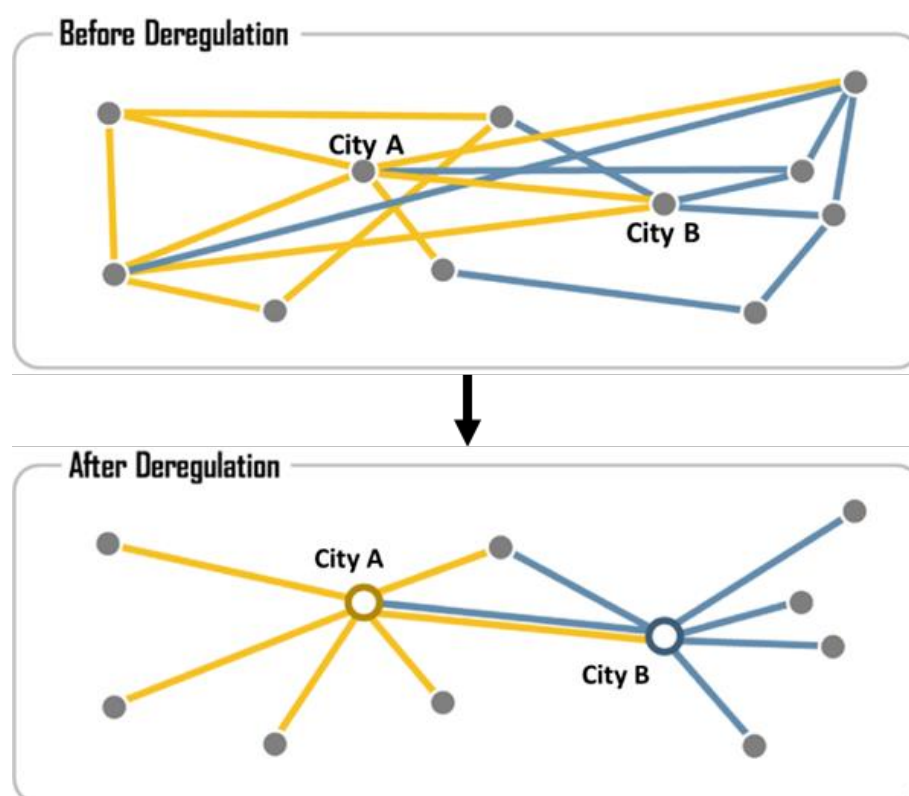


Figure 4.43: Evolution of Airline Networks from Point-to-Point to Hub-and-Spoke Operation after the Airline Deregulation⁵⁴

There are economic advantages associated with hub airports. According to Song and Ma (2006), a hub airport has significant implications on the local economy, which are the main driver behind local authorities' significant investment into creating hub airports in the United States. Some of the major economic benefits of a hub airport are outlined in Table 4.14 below.

Table 4.14: Economic Benefits of a Hub Airport (Source: Song and Ma (2006))

Economic Benefits	Description
Primary	More employment from establishing new services or expanding current services at the airport
Secondary	Long-term impacts from the airport's operation and indirect multiplier effects from ongoing income flows into the local economy from the airport's operation, which increases the overall level of economic activities, income and employment for the host region
Tertiary	Attraction of high-tech or knowledge firms and workers to the region, eventually leading to highly skilled and highly paid employment, which further increases the multiplier effects on the local economy

Further explanation on the key characteristics of point-to-point operation and hub-and-spoke operation can be found in Appendix C.

⁵⁴ Figure 4.43 is created and labelled by the author using source imagery from Rodrigue (2016).

4.6.1.1 Airport Classifications around the World

According to Todd et al. (2016), no universally accepted classification of airports currently exists. However, there are many ways to distinguish between airport types, which depend on a variety of factors and circumstances that led to the establishment of airports. These circumstances range from airports' historical context to other factors such as their geography, functions and political influence. Consequently, this has led to “a simplification of the true role of any airport, trading sophistication for clarity” (Todd et al., 2016, p. 143). They, however, argue that classification of airports is still resorted to as it allows some degree of categorising airport infrastructure, thus allowing generalisation. Additionally, due to the lack of standardised classification, an airport could fall under several categories spanning many classifications from various authorities around the world, all of which employ different terms and criteria. As such, this section discusses different airport classifications at the international level and in different regions, including the United States, Asia, Europe and Australia.

i) International Classification

According to the ICAO (2018), airports can be classified into one of three categories as shown in Table 4.15 below.

Table 4.15: ICAO's Airport Classification (Source: ICAO (2018))

Airport Category	Aircraft Traffic Density During Peak Hour
Light	Where the number of aircraft movements during the peak hour is lower than 15 for each individual runway, or lower than 20 for all the runways
Medium	Where the number of aircraft movements during the peak hour is between 16 and 25 for each individual runway, or between 20 and 35 for all the runways
Heavy	Where the number of aircraft movements during the peak hour is at least 26 for each individual runway, or at least 36 for all the runways

As shown in Table 4.15, the airport categories are based on aircraft traffic during the peak hour.

ii) United States

Airports in the United States are classified by two national agencies, namely the Federal Aviation Administration (FAA) and the National Aeronautics and Space Administration (NASA).

Federal Aviation Administration

The FAA (2015) classifies airports in the United States according to the type of activities undertaken (e.g. commercial service, cargo operation and general aviation). The following two criteria are considered when classifying airports into sub-categories:

- ✈ Number of passenger boardings per year; and
- ✈ Percentage of annual passenger boardings within the country.

Passenger boardings refer to the number of passengers boarding a commercial aircraft service at an airport. Using the two criteria above, four major airport categories currently exist in the United States. The first category is **Commercial Service Airports**, which are publicly owned airports with at least 2,500 passenger boardings per year and hosting scheduled passenger services. There are two sub-categories under Commercial Service Airports. **Non-primary Commercial Service Airports** are Commercial Service Airports with a passenger boardings figure between 2,500 and 9,999 per year. **Primary Commercial Service Airports**, on the other hand, are Commercial Service Airports with more than 10,000 passenger boardings per year. Primary Commercial Service Airports are also categorised further into hub types according to their percentage of annual passenger boardings within the United States as shown in Table 4.16 below.

Table 4.16: Commercial Airport Hub Categories in the United States (Source: FAA (2015))

Hub Category	Percentage of Annual Passenger Boardings
Large Hub Airports	One per cent or more
Medium Hub Airports	At least 0.25 per cent, but less than one per cent
Small Hub Airports	At least 0.05 per cent but less than 0.25 per cent
Non-hub Primary Airports	Less than 0.05 per cent but more than 10,000 annual passenger boardings

The second category is **Cargo Service Airports**, which are airports that are served by aircraft carrying cargo with annual landed weight⁵⁵ of more than 100 million pounds (equivalent to 45,359,237 kilogram) in addition to other air transportation services available. An airport in the United States could be classified as both a Cargo Service Airport and a Commercial Service Airport.

The third category is **General Aviation Airports**, which are airports for public use that have no scheduled service or have less than 2,500 annual passenger boardings. General aviation refers to flight

⁵⁵ Landed weight refers to the weight of aircraft which transport only cargo in intrastate, interstate and international air transportation (FAA, 2015).

activities that do not involve commercial air transportation or aerial work. Aerial work relates to aircraft activities for specialised services such as agriculture, photography and search and rescue. Examples of general aviation activities include business travel, flight instructions and emergency medical services (IAOPA Europe, undated). The majority of airports in the United States (88 per cent) fall under this category (FAA, 2015). General Aviation Airports are further classified into one of the five sub-categories (national, regional, local, basic and unclassified) according to the role that they play in the national aviation industry.

The fourth category is **Reliever Airports**, which are privately or publicly owned airports that have been designated by the FAA to relieve congestion at Commercial Service Airports and provide additional general aviation access to the public.

National Aeronautics and Space Administration (NASA)

According to NASA (undated), the following factors are considered when classifying an airport:

- ✈ Types of services provided at the airport;
- ✈ Size of aircrafts served by the airport;
- ✈ Length of the airport’s runway(s);
- ✈ The terminal facilities available at the airport; and
- ✈ The airport’s proximity to a major populated area.

Using the criteria above, seven types of airports exist in NASA’s airport classification as shown and described in Table 4.17 below.

Table 4.17: NASA’s Airport Classification (Source: NASA (undated))

Airport Type	Description
Rural Airstrip	A single, narrow strip of grass or pavement for aircrafts to take off and/or land
Private Airport	An airport owned by an individual or a group of individuals where access by other aircrafts is limited and often only allowed in case of emergency or with prior permission from the airport owner/s (Andrues, 2001)
Military Airport	An airport restricted to military aircraft activities such as flight testing and military training routes
Small Community Airport	An airport located in small communities which has a single airstrip utilised by private and small business aircrafts for general aviation purposes, but possesses no airport control tower
Regional Community airport	An airport located in a regional area which is larger than small community airports, has a control tower and facilities for instrument landing in poor visibility
Regional Airport	An airport supported by several communities which has a control tower, instrument landing facilities and regular airline services for both passengers and cargo alike

Airport Type	Description
Major City Airport	An airport located in a major city which has separate terminals for international and domestic flights, at least two long runways for larger aircrafts and fully functional control towers with instrument landing facilities

iii) Europe and the United Kingdom

According to Turiak (2013, p. 82), no “integrated, unified and complete European airport classification” currently exists. Due to this lack of standardised classification, a review of airport classifications in the United Kingdom is instead conducted in this section. The United Kingdom lacked an official hierarchy of airports until 1978, when the United Kingdom Government published a White Paper on Airports Policy (Maltby & White, 1982). Figure 4.44 below illustrates the four categories of airports specified in the White Paper.



Figure 4.44: Airport Categories in the United Kingdom (Source: Secretary of State for Trade (1978))

All the Gateway International Airports, with the exception of Manchester Airport and Glasgow Prestwick Airport, are located in London (Maltby & White, 1982). Gateway International Airports, unlike the other three airport categories, service international flights. Following the categorisation of airports in the 1978 White Paper, the United Kingdom Government encouraged additional investment in major regional airports in order to meet local demand and “shift the burden away from the London area airports” (Secretary of State for Transport, 1981). The government also supported further development of Manchester airport as the principal Gateway International Airport outside the London area (Secretary of State for Transport, 1981).

However, in line with the move towards a more open and competitive market in the United Kingdom and the rest of the world, “the strict categorization of airports by role” above was “ultimately abandoned” by the United Kingdom Government in the 1980s (Twomey & Tomkins, 2003, p. 191). The primary reason behind this decision is the United Kingdom Government’s view that the role and development of airports should be reflective of the level of consumer demand instead of the criteria assigned to them via one of the four airport categories (Twomey & Tomkins, 2003).

More recently, in her briefing paper for the United Kingdom Parliament, Butcher (2016) employs the term ‘regional airport’ to refer to a United Kingdom airport outside the South East of England. She

also notes that although this term is neither statutory nor legislative, it is extensively used in publications relating to airports in the United Kingdom. For instance, the term broadly includes airports which were not located in, or close to, London in the United Kingdom Government's June 1985 White Paper on Airports Policy (Secretary of State for Transport, 1985).

Meanwhile, the Transport Sub-committee of the Environment, Transport and Regional Affairs Select Committee (1998) refers to all United Kingdom airports other than the five 'London airports', which include Heathrow, Gatwick, Stansted, Luton and London City, as 'regional airports'. Similarly, the CASA (2018), in its Aviation Trends report for the third quarter of 2018, uses the term 'regional airport' to refer to all airports which do not fall under its 'London airports' category. In this regard, 'London airports' encompass the five 'London airports' above, with the addition of Southend, which was previously classified as a 'regional airport'. Table 4.18 below displays the total passengers at the six 'London airports' in the month of January 2020.

Table 4.18: Passengers and Aircraft Movements of the Six 'London Airports' in January 2020 (Source: CASA (2020b))

Airport	Total Passengers	Percentage of Passengers*	Passenger Volume Ranking*
Heathrow	81,058,000	27.3%	1
Gatwick	46,514,000	15.7%	2
Stansted	28,098,000	9.5%	4
Luton	18,268,000	6.2%	5
London City	5,116,000	1.7%	12
Southend	2,087,000	0.7%	18

* These figures are compared with all airports in the United Kingdom.

As shown in Table 4.18, the six London airports are not the six busiest airports in the United Kingdom in terms of passenger volume. These airports, however, are located in the greater metropolitan area of London as shown in Figure 4.45, which also displays the locations of Oxford and Lydd airports.

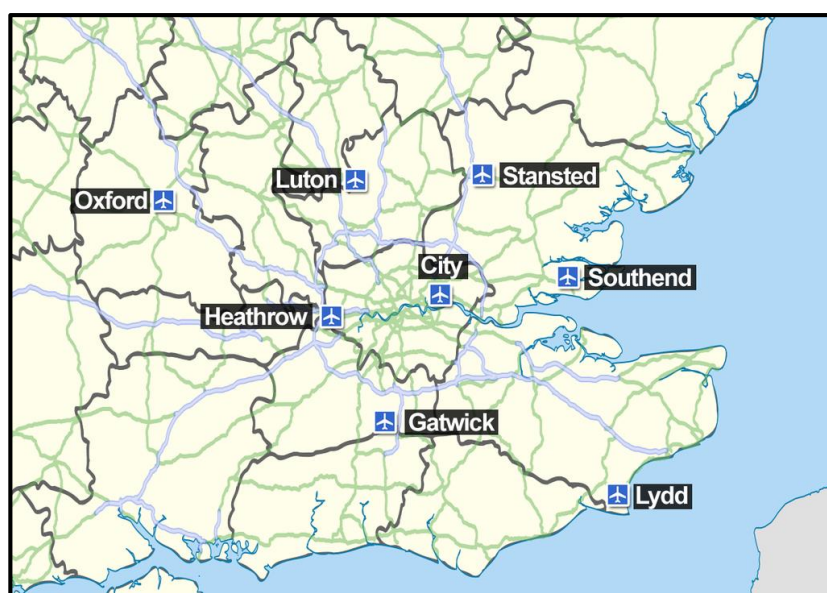


Figure 4.45: Geographic Locations of the Six ‘London Airports’, Including Lydd and Oxford Airports (Source: Elledge (2019))

While the six London airports are the only international airports in London, there are also several smaller, domestic airports in the region. Therefore, it can be observed that the six ‘London airports’ are classified based on two primary criteria, namely: 1) their geographic location within the London metropolitan area, and 2) their function as international airports. The six airports collectively form the ‘London Airport System’, which is the busiest network of nearby airports in the world by passenger volume (Egeland, 2018). However, given that there are a relatively small number of passengers at London City and Southend airports as shown in Table 4.18, passenger volume at individual airports is evidently a less important criterion in the classification of ‘London airports’ and ‘regional airports’ in the UK. Instead, the cumulative number of passengers of the larger airport system or network that an airport is part of, could be seen as a more relevant criterion for airport classification in the country.

iv) Australia

Under the CASR part 139, a Federal Government statutory framework which stipulates safety and service standards requirements for aerodromes in Australia, certified aerodromes service RPT or charter with at least 31 passengers whereas non-certified aerodromes are referred to as Aircraft Landing Areas. Aircraft Landing Areas are unregulated facilities and the use of these amenities is subject to the responsibility of an aircraft pilot to assess the facility’s suitability for their needs (CASA, 2020a). An airport is required to be certified with the CASA in order to service RPT flights (AAA, 2012).

International airports in Australia, under the Air Navigation Act 1920, are officially designated as international airports by the Minister for Infrastructure and Transport. These airports are classified according to the types of facilities available onsite. There are five categories of international airports in Australia, which are outlined and described in Table 4.19 below.

Table 4.19: Categories of International Airports in Australia
(Source: Australian Government (2018c))

Airport Category	Description
Major International Airport	Airports of entry and departure where all procedures relating to Australian Customs (customs), the Department of Immigration and Citizenship (immigration) and the Australian Quarantine Inspection Service (quarantine) and similar formalities are available and open to both scheduled and non-scheduled flights
Restricted Use International Airport	Airports of entry and departure where all procedures relating to customs, immigration and quarantine are available on a restricted basis only to flights which have received prior approval
Alternate International Airport	Airports specified in the flight plan at which a flight may land in the event that it cannot land at the originally designated airport
International Non-Scheduled Flight Airport	Airports where international non-scheduled flights may be granted with approval provided that prior notice is given, and no other form of international operation is allowed
External Territory International Airport	Airports located in an Australian External Territory where international flights can enter and depart and all procedures relating to customs, immigration and quarantine are available

According to the Australian Airports Association (AAA), the national membership-based body for airports in Australia, the airport industry in Australia can be separated into four broad categories, which are outlined in Table 4.20 below.

Table 4.20: Categories of Airports in Australia (Source: AAA (2019))

Airport Category	Description
Capital City and Major Privatised Airports	These airports are located in capital city of a state (e.g. Sydney and Melbourne), all of which have been privatised under the Airports Act.
Regional Airports	These airports are located in a regional area, the majority of which were owned and operated by the Federal Government primarily for military use prior to being transferred to the management and ownership of their relevant local governments.
Department of Defence Airports	These airports are under the ownership of and operation by the Department of Defence.
Completely Privately-Owned Airports and Air Strips	These airports and air strips are privately owned.

As at 2012, there are more than 2,000 airports and airfields in Australia, the majority of which are “small, private grass strips used predominantly by the owner of the land on which they sit and not available for public use,” and 317 airports certified by the CASA as “having significant RPT or

charter use or potential use” (AAA, 2012, p. 10). In addition to the four broad categories of airports outlined in Table 4.20, the AAA categorises its member airports into the following (Merkert, 2020):

- ✈ Tier 1 Capital City Airports;
- ✈ Tier 2 Non-Capital International Gateway Airports;
- ✈ Tier 3 Major Regional Airports with direct interstate services;
- ✈ Tier 4 Major Regional RPT airports without direct interstate services (with more than 20,000 passengers);
- ✈ Tier 5 Regional Airports without direct interstate services (with less than 20,000 passengers);
- ✈ Tier 6 Regional Airports without Regular Passenger Transport (RPT) services (general aviation activities only); and
- ✈ Tier 7 Remote Community Aerodromes, which are used for such purposes as medical emergencies)

According to the AAA (2019, p. 7), most airports in Australia are regional airports, which play a major role in the Australian aviation industry due to the “diverse aviation activities” and other beneficial outcomes that they facilitate for regional communities, such as:

- ✈ Flights from regional and rural areas, which allow remote workers and residents to access one of the major cities for a range of needs, such as healthcare and education;
- ✈ Emergency medical services for remote residents and workers, including those operated by the Royal Flying Doctor Service;
- ✈ Aerial firefighting in remote areas where road transport is limited or unavailable;
- ✈ The attraction of workers to, as well as their retention in, regional communities through minimising the sense of isolation involved in working in a remote area;
- ✈ Agricultural services such as crop dusting, which significantly improves the quality of vegetable and animal produce in Australia;
- ✈ Air freight services, which enable businesses to operate JIT inventories;
- ✈ Pilot training, which has no conflicts with the existing flight paths of capital city airports; and
- ✈ Aerial photography activities for regional areas.

As illustrated in the list above, regional airports, through the diverse range of aviation-related activities, play an important role both economically and socially for regional communities in Australia. Given the spatial distribution of urban development in Australia, many of these regional communities are located far away from major cities and are therefore reliant on airports to facilitate transport connections with the cities.

For the purpose of improving the safety and security, under a recently enacted statutory instrument, titled the ‘Aviation Transport Security Amendment (Security Controlled Airports) Regulations 2019’, airports in Australia are classified into a ‘tier’ according to the following two principal aspects of their profile: departing passenger numbers and aircraft size. The classification also considers the

overall risk profile of airports by considering the following factors (Office of Parliamentary Counsel, 2019):

- ✈ The regional profiles of the airports' location;
- ✈ Effectiveness of security measures;
- ✈ Individual operating environment of the airports; and
- ✈ The existing level of threat the airports are subject to.

In their study of challenges faced by smaller airports in inaccessible Australian communities, Donehue and Baker (2012) use the acronym RRR to refer to remote, rural and regional airports both internationally and in Australia. For the Australian context, they use the Australian Standard Geographical Classification (ASGC) Remoteness Structure, illustrated in Figure 4.46 below, to categorise RRR airports, the majority of which are owned and managed by local governments (Donehue & Baker, 2012), into three sub-categories.

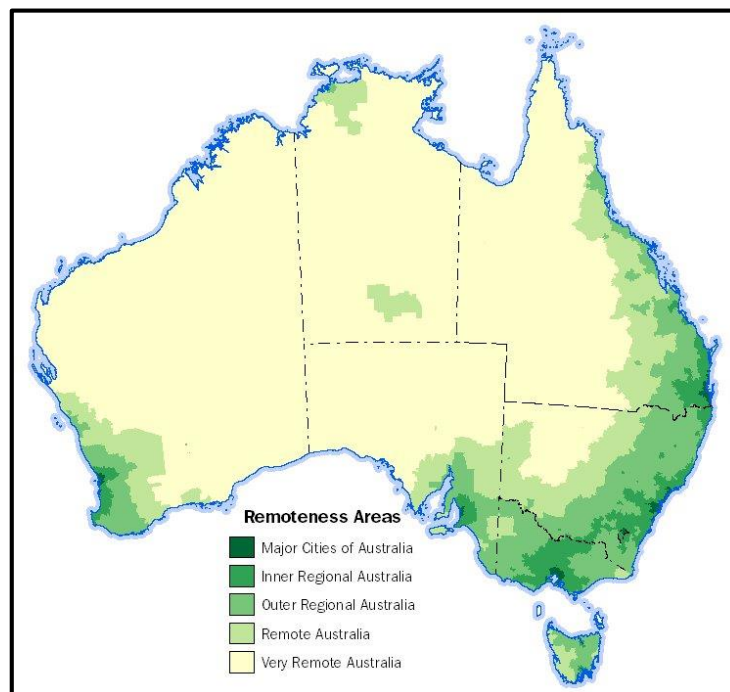


Figure 4.46: ASGC Remoteness Structure (Source: ABS (2016))⁵⁶

⁵⁶ Figure 4.46 is used under the CC BY 4.0 license (ABS, undated; Creative Commons, undated-b).

The sub-categories of RRR airports defined by Donehue and Baker (2012) are as follow:

- ✈ **Regional airports**, which are located in the ‘Inner Regional Australia’ and provide RPT to capital cities, ‘Outer Regional Area’ and ‘Remote Australia’ (e.g. Mackay Airport and Dubbo City Regional Airport);
- ✈ **Rural airports**, which are located in ‘Outer Regional Australia’ and facilitate both RPT services and general aviation activities; and
- ✈ **Remote airports**, which are located in ‘Remote Australia’ and ‘Very Remote Australia’ and facilitate RPT, general aviation and charters.

Having examined the impact of airline deregulation and the different airport classifications around the world, the next part of this section of the literature review analyses and synthesises these systems and propose a theoretical classification for Australian airports.

4.6.2 AIRPORT TIERS: A CONCEPTUAL CLASSIFICATION FOR AUSTRALIAN AIRPORTS

As illustrated in the literature review above, no official classification, which considers both domestic and international airports, currently exists for Australian airports. Additionally, the unofficial airport categories under the AAA’s classification are ambiguous and do not clearly define the role, function and characteristics of airports. As such, this section of the literature review synthesises and develops a conceptual classification for Australian airports based on an analysis of the findings on the evolution of airline networks, existing airport classifications used in the United States, the United Kingdom and Australia as well as the context of Australian airports.

Due to the global airline deregulation throughout the second half of the 20th century, airports around the world have transitioned from point-to-point networks to hub-and-spoke networks. In these arrangements, major airports located in capital cities and/or strategic locations function as central ‘hubs’ where passengers are able to change from one flight to another in order to access a ‘spokes’ airport which may be located in a remote or regional area.

No standard classifications for airports are currently in used in the global context, with the ICAO’s classification being the only classification being administered by an international agency in the aviation industry. However, as the ICAO’s airport classification only considers aircraft traffic at airports during the peak hour in its categorisation of airports, the system can be seen as lacking in scope and comprehensiveness. Meanwhile, different classifications are used in the United States and the United Kingdom.

The United States has two major airport classifications being administered by two different agencies, namely the FAA and NASA. Although the specific categories in the two classifications vary, both

agencies, in their classification of an airport, consider the range, nature and types of activities being undertaken at the airport (e.g. RPT, charter, cargo operation, landing strips, military use or general aviation). Table 4.21 below outlines the different criteria employed by the FAA and NASA in their airport classifications.

Table 4.21: Criteria Employed by the FAA and NASA in their Airport Classifications

Criterion	Description
FAA	
Airport Passenger Volume	The annual volume of passenger serviced by the airport
Percentage of National Passenger Volume	The percentage of national passenger volume that the airport services in a year
Relationship with Other Airports	The relationship of the airport with other airports, specifically the provision of traffic congestion relief for larger airports by providing alternative landing facilities for aircraft
Airport Ownership	The agency from the private or public sector, with the responsibility to operate, manage and develop the airport
NASA	
Airport Location	The proximity of the airport to a metropolitan area
Airport Facilities	The range of facilities available at the airport such as instrument landing facilities, control towers, the number of runways and separate domestic and international terminals

In the United Kingdom, an official classification for airports, which comprises four categories of airports according to their role, existed for less than a decade between the late 1970s and the 1980s. The United Kingdom Government abolished the airport classification due to its view that the categorisation was too strict and did not allow airports to efficiently develop according to their respective level of consumer demand.

Although no airport classification is currently in use in the United Kingdom, two categories of airports, namely ‘London airports’ and ‘regional airports’, have been widely used unofficially in recent years. These categories are based on the geographical location of airports. The six ‘London airports’ are all located in the greater metropolitan area of London and service 61.1 per cent of the United Kingdom’s air passenger traffic. As such, these ‘London airports’ play a significant role in the country’s aviation industry and are reflective of the metropolitan primacy structure of the United Kingdom, in which London is significantly larger than the next largest city in the country in terms of population, Birmingham. Thus, based on the use of these airport categories, the following two principal criteria are used in the unofficial classification of airports in the United Kingdom:

- ✈ Airport location (inside or outside the greater metropolitan area of London); and
- ✈ Airport passenger volume.

The unofficial airport classification in Australia, as advocated by the AAA, employs the following criteria in categorising airports:

- ✈ Airport location (in a capital city of a state, or in a regional area);
- ✈ Airport governance (managed and operated by a private organisation, local government or Federal Government); and
- ✈ Airport ownership (private ownership or government ownership).

However, the criteria above, including those used for the Federal Government's classification of international airports, do not consider the passenger volume of airports. Passenger volume, which is one of the principal criteria for categorising airports in the United States and the United Kingdom, is an important criterion for the classification of airports in Australia. This is due to the fact that several Australian airports that would normally be classified as 'regional airports' still service a large volume of passengers, thus playing a significant role in the Australian aviation industry. Table 4.22 below compares the passenger volume of the 20 busiest Australian airports in terms of their total passenger volume from June 2018 to June 2019.

Table 4.22: 20 Busiest Australian Airports in Terms of Passenger Volume from 2018/19 to 2019/20 (Source: BITRE (2021))

Airport ⁵⁷	Passengers			
	Domestic	International	Total	Percentage of National
<u>Sydney Airport</u>	27,468,585	16,907,184	44,375,769	27.21%
<u>Melbourne Airport</u>	25,707,624	11,349,566	37,057,190	22.72%
<u>Brisbane Airport</u>	17,375,423	6,247,822	23,623,245	14.48%
<u>Perth Airport</u>	8,071,468	4 333,913	12,405,381	7.61%
<u>Adelaide Airport</u>	7,306,666	1,061,511	8,368,177	5.13%
<u>Gold Coast Airport</u>	5,446,002	967,813	6,413,815	3.93%
Cairns Airport	4,198 110	660,699	4,858,809	2.98%
<u>Canberra Airport</u>	3,130 901	86,890	3,217,791	1.97%
<u>Hobart Airport</u>	2,725,559	0	2,725,559	1.67%
<u>Darwin Airport</u>	1,747,118	235,299	1,982,417	1.22%
<u>Townsville Airport</u>	1,592 371	2,064	1,594,435	0.98%
<u>Launceston Airport</u>	1,390,509	0	1,390,509	0.85%

⁵⁷ The airports that are located in a capital city of a state are emphasised with bold text whereas airports which have been privatised under the Airports Act are underlined.

Airport ⁵⁷	Passengers			
	Domestic	International	Total	Percentage of National
Newcastle Airport	1,257,648	6 687	1,264,335	0.78%
Sunshine Coast Airport	1,243,258	14 303	1,257,561	0.77%
Mackay Airport	821,759	0	821,759	0.50%
<u>Alice Springs Airport</u>	603 966	0	603 966	0.37%
Rockhampton Airport	552 623	0	552 623	0.34%
Ballina Byron Gateway Airport	534 073	0	534 073	0.33%
Ayers Rock Airport	456 851	0	456 851	0.28%
Karratha Airport	447 906	0	447 906	0.27%
All Australian Airports	120,976,664	42,121,004	163,097,668	N/A

As shown in Table 2.5, Gold Coast Airport and Cairns Airport serviced considerably more passengers than three out of the eight capital city airports in Australia. Under the AAA's unofficial classification of airports, Gold Coast Airport and Cairns would be considered 'regional airports' as they are not located in the capital city of their state, namely Brisbane. However, this category would inaccurately reflect the role and function of these airports as the sixth and seventh busiest airports in Australia.

The privatised airports in Australia are often referred to as 'major airports' (e.g. United Voice (2015, p. 5) and Donnet et al. (2018, p. 2)). However, as illustrated in Table 2.5, 12 of the 20 busiest Australian airports have been privatised. Meanwhile, a total of 21 Australian airports are currently leased to the private sector as at September 2020 (Australian Government, 2018a). These figures imply that not all of the privatised Australian airports service a significant number of passengers. Therefore, referring to these airports broadly as 'major airports' does not accurately reflect the passenger volume of these airports and may therefore create a public misconception that all privatised airports are major airports in Australia.

The AAA utilises a seven-tier system to categorise its member airports into different tiers based on the following five factors associated with airports: 1) location (capital city, non-capital city, regional area or remote community), 2) operation of airport (domestic or international), 3) passenger volume, 4) availability of direct interstate services (e.g. between Brisbane and Melbourne) and 5) facilitation of RPT services. Whilst this classification can be seen as being comprehensive in terms of criteria considered, the AAA has not elaborated on each airport category in detail, which can leave the seven tiers of airports open to varying interpretations by different parties.

The definition of RRR airports proposed by Donehue and Baker (2012) provides a useful foundation for categorising regional airports in Australia, which range considerably in their role, function and characteristics. Specifically, their use of the Remoteness Areas outlined in the ASGC Remoteness Structure, to categorise airports outside major cities into regional, rural and remote airports effectively embeds the context of these airports, which can vary significantly due to their degree of remoteness. Moreover, the ASGC Remoteness Structure outlines ‘Major Cities of Australia’, which encompasses both capital cities as well as major regional areas. This particular category of the ASGC Remoteness Structure can be used to classify major airports located outside capital cities based on their location in a major urban centre.

Through synthesising the findings above on airport classification, including airport categorising criteria used in the United States, the United Kingdom and Australia as well as the nature of Australian airports, a conceptual classification for Australian airports, comprising four categories, is developed and shown in Table 4.23 below.

Table 4.23: A Conceptual Classification for Australian Airports (Source: Author (2021))

Description	Examples
First-Tier Airports	
First-Tier Airports, all of which have been privatised under the Airports Act and are now under the management of private organisations, are located in a capital city of a state or territory (inside the ‘Major Cities of Australia’ zone of the ASGC Remoteness Structure (refer to Figure 4.46)). These airports play a major role in facilitating the movements of passengers and freight and function as major hubs for several airlines. With the exception of Hobart Airport, these airports also function as the principal international gateway for their respective state/territory. First-Tier Airports service the largest proportion of passengers amongst all airports in their respective state/territory.	Sydney Airport, Melbourne Airport and Brisbane Airport
Second-Tier Airports	
Second-Tier Airports, which can be under the management responsibility of a private organisation or local government, are located in a major regional city within the ‘Inner Regional Australia’ zone of the ASGC Remoteness Structure (refer to Figure 4.46) and play a major role in facilitating the movements of passengers and freight. They function as hubs for some airlines and service a significant proportion of passengers amongst all airports in their respective state. Second-Tier Airports may also service international flights. Second-Tier Airports, given the range of facilities available on site, can serve as alternative landing venues for First-Tier Airports in such events as highly congested aircraft traffic or poor weather conditions.	Gold Coast Airport, Cairns Airport and Newcastle Airport
Third-Tier Airports	

Description	Examples
<p>Third-Tier Airports, most of which are owned and managed by local councils, are located in a regional area within the 'Inner Regional Australia' or 'Outer Regional Australia' zone of the ASGC Remoteness Structure (refer to Figure 4.46) and primarily function as 'spokes' for First-Tier and Second-Tier airports. Third-Tier Airports service only domestic flights and a relatively limited number of passengers. Subject to the range of facilities available, Third-Tier airports can function as reliever airports for First-Tier and Second-Tier airports. In Australia, Third-Tier Airports play an important role in connecting regional communities with capital cities and major regional cities due to "the enormous distances that often exist between ... towns and cities" (Donehue & Baker, 2012, p. 232).</p>	<p>Rockhampton Airport, Armidale Airport and Mackay Airport</p>
Fourth-Tier Airports	
<p>Fourth-Tier Airports, the majority which are under the ownership and management of local councils, are located in a highly remote community classified as 'Remote Australia' or 'Very Remote Australia' under the ASGC Remoteness Structure (refer to Figure 4.46) and primarily facilitate general aviation activities such as pilot training, aerial work (e.g. aerial photography and agriculture), emergency medical services and leisurely flying activities. The range of facilities available at Fourth-Tier Airports are typically limited, thus only allowing smaller aircraft to use these airports. As such, RPT and charter flights servicing Fourth-Tier Airports may be available, but only in limited frequency.</p>	<p>Mount Isa Airport and Ceduna Airport</p>

The conceptual classification for Australian airports outlined in Table 2.6 is visually summarised in Figure 4.47 below.

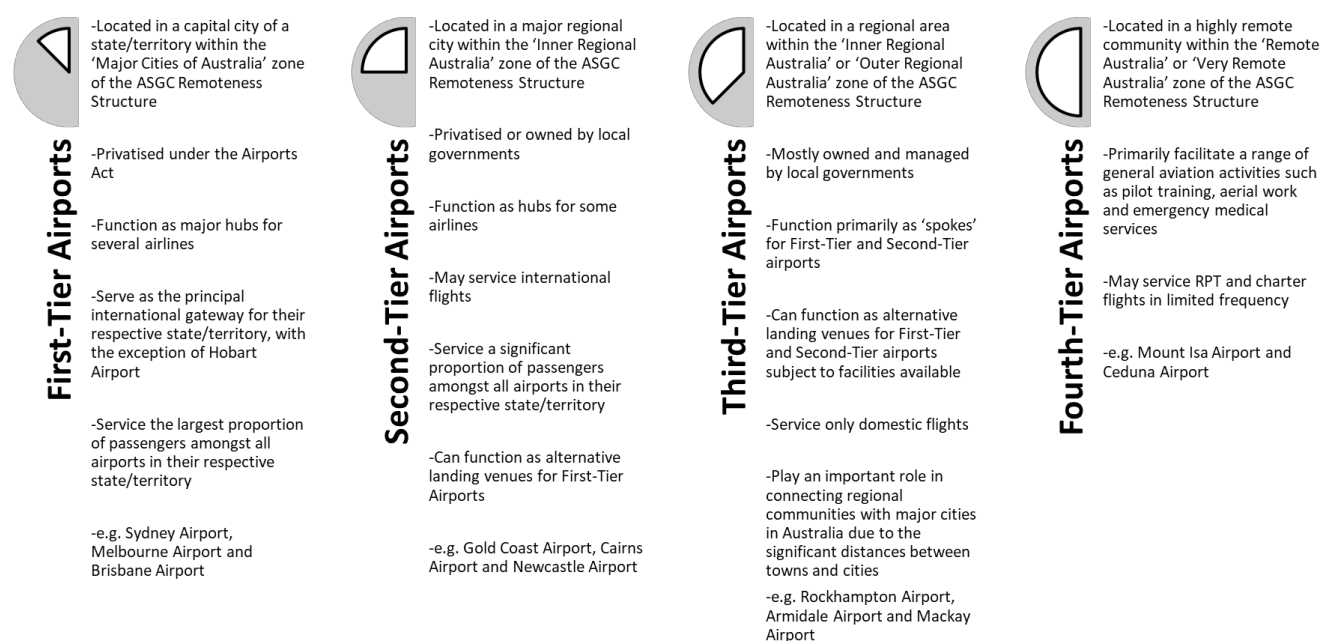


Figure 4.47: Conceptual Classification for Australian Airports (Source: Author (2021))

The term 'tier' has been used in the conceptual airport classification model as it can be defined as "one of several layers or levels" according to the Cambridge Dictionary (Cambridge University Press, 2020). As illustrated in the literature review airport typology, airports can vary widely in nature, location, function and operation. As such, they should be classified into 'tiers' where common criteria are used to separate airports into different levels. The term 'tier' has already been employed both in

the industry and the literature. For instance, the AAA, in its classification of its member airports, separates its member airports into seven tiers according to five different criteria. Meanwhile, de Neufville (2008, p. 35) refers to airports of Memphis and Louisville as “second tier airports.” Grubestic et al. (2009), in contrast, classifies airports around the world into several tiers based on their traffic flow and dominance over other airports, with Tier 1 airport exerting the most dominance over other airports.

The freight aspect of airport operations is deliberately excluded in the conceptual Australian airport classification and should be noted as a potential limitation to the overall applicability of the conceptual Australian airport classification. Freight activities within an airport, particularly those that deal with low-volume, high-value goods,⁵⁸ can result in significantly disproportionate contributions to local and regional economic development from the airport. Some airports in Australia, despite their smaller size, remote location and/or limited passenger number, process a substantial volume of high-value freight. An example of such airports is Toowoomba Wellcamp Airport. Toowoomba, the LGA that the airport is located in and services, is not only “the second most productive agriculture region in Australia [but also] connected to the nearby Western Downs and Lockyer Valley agricultural zone” (Dunne & Cotter, 2015, p. 3). As such, the airport was strategically built as “the only regional airport in Australia truly focused on growing a strong freight airline base rather than simply a passenger service facility” (id, undated, p. 1). Toowoomba Wellcamp Airport is the only airport in QLD with a dedicated 747-8F international freighter service (Toowoomba Regional Council, 2020). Since November 2016, the airport has been servicing two weekly flights, which transport agricultural produce from Toowoomba and its surrounding regions to Hong Kong, a gateway for customers in China (Sandilands, 2016). The airport, which is equipped with extensive cold storage facilities for perishable goods (Toowoomba Wellcamp Airport, 2021), will also receive up to \$10 million in funding support to upgrade the onsite trade distribution centre (Toowoomba Regional Council, 2020). These facts demonstrate Toowoomba Wellcamp Airport’s significance as a freight hub for QLD.

Some of the larger airports in Australia, which are located in a capital city and service a large number of passengers, process a low volume of high-value freight and/or have limited overall freight activities. Table 4.24 below compares passenger and international freight volume at Toowoomba Wellcamp Airport and capital city airports in 2018/19.

⁵⁸ Examples of low-volume, high-value goods include seafood, flowers, boutique agricultural produce, luxury fashion products and small electronic devices such as smartphones.

Table 4.24: Comparison of Passenger and International Freight Volume at Toowoomba Wellcamp Airport and Capital City Airports in 2018/19 (Source: BITRE (2021))

Airport	Total Passengers (million)	International Freight (tonnes)
Sydney Airport	44.38	533,610
Melbourne Airport	37.06	319,516
Brisbane Airport	23.62	139,763
Perth Airport	12.41	102,683
Adelaide Airport	8.37	32,207
Canberra Airport	3.22	83
Hobart Airport	2.73	0
Darwin Airport	1.98	475
Toowoomba Wellcamp Airport	0.11	1,213

As illustrated in Table 4.24, although the capital city airports in Australia all serviced a significant number of passengers in 2018/19, not all of them handled a large volume of international freight. Despite servicing a substantially larger number of passengers, Canberra, Hobart and Darwin, airports transported considerably smaller volume of international freight than Toowoomba Wellcamp Airport. These statistics illustrate the varying nature of freight activities amongst airports in Australia. Larger airports with significant passenger numbers do not necessarily have significant freight activities. Meanwhile, smaller airports with less passenger volume may process more freight than some of the larger airports located in a more urban region. These characteristics of airports in Australia indicate the unsuitability and lack of practicality of including freight volume as a criterion for the conceptual classification of Australian airports.

4.6.3 CHARACTERISTICS OF GOLD COAST AIRPORT AS A SECOND-TIER AIRPORT

This sub-section explores the characteristics of Gold Coast Airport, based on which the airport can be classified as a Second-Tier Airport using the author's conceptual classification of Australian airports developed in Section 4.6.2. There are six criteria associated with Second-Tier Airports:

- 1) Located in a major regional city within the 'Inner Regional Australia' zone of the ASGC Remoteness Structure;
- 2) Privatised or owned by local governments;
- 3) Function as hubs for some airlines;
- 4) May service international flights;
- 5) Service a significant amount of proportion of passengers amongst all airports in their respective state/territory; and
- 6) Can function as alternative landing venues for First-Tier Airports.

The six criteria above are applied to Gold Coast Airport in the discussion in this section to demonstrate the airport's characteristics as a Second-Tier Airport.

4.6.3.1 Location in a Major Regional City

Figure 4.48 below illustrates the location of Gold Coast Airport in relation to the ASGC Remoteness Structure.

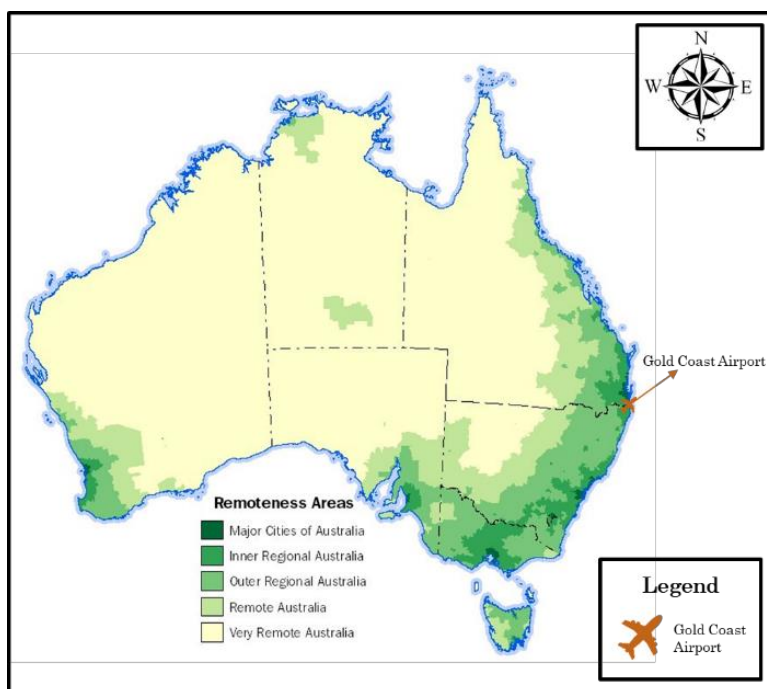


Figure 4.48: Location of Gold Coast Airport in Relation to the ASGC Remoteness Structure⁵⁹

As shown in Figure 4.48, Gold Coast Airport is located in a 'Inner Regional Australia' zone, which covers both the Gold Coast and Tweed Shire, the two LGAs the airport spans, as well as the nearby LGAs. In particular, the Gold Coast, a neighbouring LGA of Brisbane, is a major regional city with more than 600,000 population, a figure making the Gold Coast the second largest LGA both in QLD and Australia-wide in terms of population. Tweed Shire, meanwhile, comprises approximately 100,000 population, which ranks the LGA 25th out of 128 in NSW in relation to population size (ABS, 2020). Thus, the two LGAs comprise more than 700,000 population, cementing the region as a major regional city.

⁵⁹ Figure 4.48 is created by the author using a source imagery from ABS (2016). The imagery is used under the CC BY 4.0 license (ABS, undated; Creative Commons, undated-b).

4.6.3.2 Privatised under the Airports Act

Gold Coast Airport was privatised in 1998 and has since been under the management of GCAPL, a subsidiary of QAL. In addition to Gold Coast Airport, QAL also operates three other airports in QLD including Townsville Airport, Mount Isa Airport and Longreach Airport. Across the four airports, the organisation serviced more than 8.3 million passengers from 2018/19 to 2019/20 (QAL, 2019b), the majority of whom (77 per cent) visited Gold Coast Airport.⁶⁰

4.6.3.3 Function as Hubs for Airlines

Across the domestic and international RPT flights at Gold Coast Airport, the airport is serviced by several airlines, including Qantas, Jetstar, Virgin Australia, Tigerair, Jetgo, AirAsia X, Air New Zealand, Scoot and Hong Kong Airline. Out of all these airlines, however, Jetstar connects the airport to the most number of destinations (seven domestic destinations and eight international destinations) (GCAPL, 2017c). As such, Gold Coast Airport functions as one of the major hubs for Jetstar, which has a passenger lounge located in the airport terminal building (Jetstar, 2009).

4.6.3.4 Servicing International Flights

Officially, under the Air Navigation Act 1920, Gold Coast Airport is currently designated as a ‘Restricted Use International’ airport. As a Restricted Use International airport, Gold Coast Airport provides “Customs, Immigration, Biosecurity and similar services ... on a restricted basis, to flights with prior approval only” (Australian Government, 2018c). Given that the airport’s Terminal 1 services both domestic and international RPT flights, the facilities for screening international passengers are located in the terminal building.

Gold Coast Airport is connected to a total of 47 destinations, ten of which are domestic, via direct or indirect flights. As such, although the majority of the RPT flights being serviced by Gold Coast Airport are domestic, Gold Coast Airport also effectively functions as an international airport. In this regard, according to GCAPL (2017c, p. 35), Gold Coast Airport is “the only airport between Brisbane Airport to the north and Sydney Airport to the south with international flights.” GCAPL (2017c, p. 35) describes the role of Gold Coast Airport as follows:

⁶⁰ This percentage figure is calculated using the passenger volume statistics from BITRE (2021), which are outlined previously in Table 4.22.

As a regionally located airport it provides an important hub for regional domestic-only airports. It offers cost effective and convenient flights that **provide connections to international destinations for communities located outside the catchment of a capital city airport.** (emphasis added)

The ‘domestic-only airports’ above refer specifically to the two nearby airports, namely Ballina Byron Gateway Airport and Toowoomba Wellcamp Airport. These airports are located approximately one hour away from Gold Coast Airport in the regional areas of Toowoomba and Ballina, respectively. These airports service domestic RPT flights only, with Toowoomba Wellcamp Airport primarily focussing on facilitating freight movement for the agricultural industry of QLD and Ballina Byron Gateway Airport functioning as a domestic gateway for Byron Bay. Figure 4.49 below displays the location of Gold Coast Airport in relation to Toowoomba Wellcamp Airport, Ballina Byron Gateway Airport and Brisbane Airport.



Figure 4.49: Relative Locations of Gold Coast Airport, Brisbane Airport, Toowoomba Wellcamp Airport and Ballina Byron Gateway Airport⁶¹

⁶¹ Figure 4.49 is created and labelled by the author with a source imagery from Queensland Globe (QLD Government, 2020e). The imagery is used under the CC BY 3.0 AU license (Creative Commons, undated-a; QLD Government, 2021a).

As shown in Figure 4.49, Gold Coast Airport's location across the state and council border implies that the airport services the international transport needs of several LGAs close to the border, including Scenic Rim, Southern Downs Toowoomba, Lockyer, Ipswich, Logan, Redland, Byron, Lismore, Ballina, Richmond Valley, Kyogle and Tenterfield. Meanwhile, such needs are serviced by Brisbane Airport for the following LGAs located further north in SEQ: Redland, Logan, Ipswich, Lockyer Valley, Toowoomba, South Burnett, Somerset, Moreton Bay and Sunshine Coast. The relative locations of the four airports illustrated in Figure 4.49 imply that whilst the residents of regional communities around the state border have access to domestic RPT flights via Toowoomba Wellcamp Airport and Ballina Byron Gateway Airport, Gold Coast Airport plays a significant role in connecting these residents with international destinations.

4.6.3.5 Servicing a Significant Proportion of Passengers amongst all Airports in Queensland and New South Wales

Gold Coast Airport, as illustrated previously in Table 4.23, is currently the sixth busiest airport in Australia in terms of passenger volume, servicing a total of 6,413,815 passengers, equivalent to 3.93 per cent of all the country's passengers, from 2018/19 to 2019/20 (BITRE, 2021). These passenger statistics put Gold Coast Airport as the second busiest airport in both QLD and NSW states, behind Brisbane Airport (23,623,245 passengers) and Sydney Airport (44,375,769 passengers), respectively. The airport is one of the fastest growing airport in Australia in recent years (GCAPL, 2019a), an outcome that can be attributed to GCAPL's past focus on developing the airport as a specialised hub catering to LCCs. Approximately one-fifth of all passenger traffic serviced by Gold Coast Airport is international. As such, the plays a significant role as both a domestic and international gateway for both QLD and NSW.

4.6.3.6 Functioning as an Alternative Landing Venue for First-Tier Airports

In addition to functioning as a 'Restricted Use International' airport under the Air Navigation Act 1920, Gold Coast Airport is also designated as an 'Alternate International airport'. As such, the airport is "specified in the flight plan to which a flight may proceed when it becomes inadvisable to land at the airport of intended landing" (Australian Government, 2018c). In this regard, the airport has facilitated a small number of emergency landings in recent years. For instance, a Virgin Australia flight made an emergency landing on 5 June 2018 after its cockpit began smoking (Sun, 2018). More recently, a light plane made an emergency landing at Gold Coast Airport on 3 March 2020 following an issue with its landing gear (StClair, 2020).

Thus, based on the characteristics of Gold Coast Airport, the airport can be classified as a ‘**Second-Tier Airport**’ using the conceptual Australian airport classification proposed by the author previously in Section 4.6.2. Table 4.25 below summarises Gold Coast Airport’s attributes in relation to the criteria associated with the ‘Second-Tier Airport’ category.

Table 4.25: Summary of Gold Coast Airport’s Attributes as a Second-Tier Airport

Criterion	Gold Coast Airport’s Attribute
Located in a major regional city within the ‘Inner Regional Australia’ zone of the ASGC Remoteness Structure	Gold Coast Airport is located in a ‘Inner Regional Australia’ zone, which covers both the Gold Coast and Tweed Shire as well as the nearby LGAs.
May be privatised or owned by local governments	Gold Coast Airport was privatised in 1998 and has since been under the management of GCAPL, a subsidiary of QAL.
Function as hubs for some airlines	Gold Coast Airport functions as a major hub for Jetstar.
May service international flights	Although the majority of RPT traffic at Gold Coast Airport is domestic, the airport also services international flights, with connection to more than 37 international destinations, the majority of which are located in the Asia-Pacific region.
Service a significant amount of proportion of passengers amongst all airports in their respective state/territory	As the sixth busiest airport in terms of total passenger number in Australia, Gold Coast Airport not only is one of the fastest growing airports in the country, but also services the second largest proportion of passengers in QLD.
Can function as alternative landing venues for First-Tier Airports	Gold Coast Airport officially serves as an ‘Alternate International’ airport, thus implying its official status as an alternative landing venue for flights scheduled to land at other airport in cases of emergencies.

Having classified Gold Coast Airport as a Second-Tier Airport, the next section investigates the role of Gold Coast Airport in local and regional economic development.

4.7 THE ROLE OF GOLD COAST AIRPORT IN LOCAL & REGIONAL ECONOMIC DEVELOPMENT

This section explores the role of Gold Coast Airport in local and regional economic development.

The following aspects of the airport’s economic development contributions are examined:

- ✈ Rapidly increasing economic contributions from Gold Coast Airport;
- ✈ Widespread stakeholder recognition of Gold Coast Airport’s economic development contribution;
- ✈ Uneven cross-border economic development contributions from Gold Coast Airport;
- ✈ Employment contributions of Gold Coast Airport;
- ✈ Limited focus on freight activities; and
- ✈ Promotion of tourism industry.

4.7.1.1 Rapidly Increasing Economic Contributions from Gold Coast Airport

Table 4.26 below outlines Gold Coast Airport's economic contribution to the Gold Coast-Tweed Shire region in 2016 along with projected figures for 2022, 2027, 2032 and 2037.

Table 4.26: Gold Coast Airport's Economic Contributions to the Gold Coast-Tweed Shire Region (Source: GCAPL (2017c))

Economic Contribution	2016	2022	2027	2032	2037
Direct economic contribution to Gross Regional Product ⁶² (\$ million)	545	818	1,100	1,600	2,300
Airport-facilitated tourism contribution to Gross Regional Product (\$ million)	1,255	1,682	2,200	2,700	3,300
Total economic contribution to Gross Regional Product ⁶³ (\$ million)	1,800	2,500	3,300	4,300	5,600

The figures shown in Table 4.26 above illustrate Gold Coast Airport's significant economic contributions to both the Gold Coast and Tweed Shire, which will expectedly continue to increase in scale in the future. In addition to these figures, GCAPL (2017c) estimates that the \$1.8 billion Gross Regional Product contribution of the airport is equivalent to 5.7 per cent of the total Gross Regional Product figure for the Gold Coast-Tweed Shire region in 2016. The airport is estimated to have contributed \$2.9 billion contribution in Gross State Product to the state economies of Queensland and New South Wales in the same year. These economic contribution figures indicate that Gold Coast Airport plays a significant economic role not only at the local and regional levels, but also at the state level.

According to GCAPL (2017c), Gold Coast Airport's direct contribution to the Gross Regional Product of the Gold Coast and Tweed Shire was \$269 million in 2009. Hence, in only seven years from 2009 to 2016, the airport's direct economic contribution had significantly increased by \$276 million, or 102.6 per cent. Such a substantial increase in the airport's economic contribution is attributable to the rapid rise in the airport's passenger volume, which in turn led to increased economic activities and employment within the airport. Additionally, the growth figure implies that Gold Coast Airport's role in economic development has become more prominent over the years.

⁶² These figures include only the airport's direct economic impacts on the Gold Coast-Tweed Shire region.

⁶³ These figures include the airport's direct, indirect, induced and catalytic economic impacts on the Gold Coast-Tweed Shire region. The definitions of the four types of economic impacts can be found in Table 2.4, located in Section 2.5.1.

In terms of Gold Coast Airport's total economic contribution in 2016, GCAPL (2017c) estimates that \$1.25 billion out of \$1.8 billion is associated with tourism facilitated by the airport. Thus, 69.44 per cent of the airport's economic contribution is generated from tourism-related activities, highlighting that most of the airport's economic contribution to the Gold Coast-Tweed Shire region is from tourism facilitation, which is examined in Section 4.7.1.5.

4.7.1.2 Widespread Stakeholder Recognition of Gold Coast Airport's Economic Contribution

There is widespread recognition of Gold Coast Airport's significant economic development contribution amongst stakeholders on both the Gold Coast and Tweed Shire. GCAPL (2017c, p. 7) describes Gold Coast Airport as "an economic and aviation hub in the South East Queensland and Northern New South Wales regions." Thus, the organisation considers the airport to be a major regional economic driver. Similarly, Gold Coast Airport is perceived by all interview respondents as a major economic asset for both the Gold Coast and Tweed Shire as illustrated by the quotes below:

[Gold Coast Airport] is absolutely a strategic piece of city infrastructure. The fact that we actually have an international airport as opposed to a domestic airport is a huge benefit for a tourism city like the Gold Coast. – urban planner #3 (emphasis added)

[Gold Coast Airport is] just a little airport close to Brisbane, **but [it is] like an economic hub all the time.** – urban planner #6 (emphasis added)

The '2017 Master Plan: Summary Supplementary Report' document accompanies the 2017 airport master plan and comprises GCAPL's responses to public feedback on the draft master plan document. Based on the public feedback illustrated in the report, there is evidently pervasive public recognition of the airport's economic development role as shown by the public comments quoted in Figure 4.50 below.

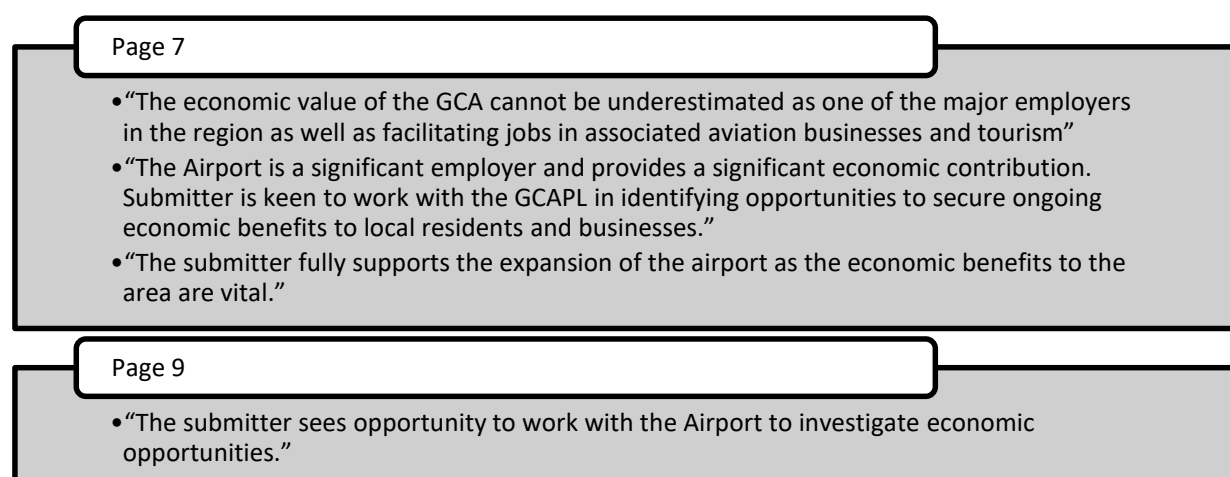


Figure 4.50: Public Comments on the Draft Gold Coast Airport 2017 Master Plan Demonstrating Public Awareness of the Airport's Economic Development Contribution (Source: GCAPL (2017b))

The analysis above evidently illustrates that there is widespread recognition of Gold Coast Airport's significant economic development contribution amongst local stakeholders.

4.7.1.3 Employment Contribution of Gold Coast Airport

Gold Coast Airport is described by GCAPL (2017c, p. 38) as “one of the largest employers in the region.” Table 4.27 below compares full-time employment created by Gold Coast Airport with the total employment in the Gold Coast-Tweed Shire region in 2016.

Table 4.27: Full-time Employment Created by Gold Coast Airport in Comparison with Total Employment in the Gold Coast-Tweed Shire Region in 2016
(Sources: .id (2019f, 2019n) and GCAPL (2017c))

Type of Employment	Employment Figure
Employment at Gold Coast Airport ⁶⁴	2,037
Regional Employment in Gold Coast and Tweed Shire Created by Gold Coast Airport ⁶⁵	14,740
Total Employment in the Gold Coast-Tweed Shire Region	259,501

As shown in Table 4.27, Gold Coast Airport is a significant employer for both the Gold Coast and Tweed Shire, employing a total of 14,740 people on a full-time basis. This figure equates to 5.68 per cent of the total full-time employees in the region. Direct employment and regional employment created by Gold Coast Airport are projected to reach 8,995 and 38,012, respectively, by 2037 (GCAPL, 2017c). These figures indicate substantial projected increases of 341.58 per cent and 157.88 per cent for direct employment and regional employment, respectively.

The statistics above evidently illustrate that Gold Coast Airport is a major employer for both the Gold Coast and Tweed Shire. Local community representative #1 reveals that a large number of Tweed Shire residents are employed by the airport and its associated businesses, which are located in and around the airport. Local community representative #2, meanwhile, notes that “a lot of employees [at] the airport live locally” in the surrounding suburbs of Gold Coast Airport, namely Currumbin, Bilinga, Coolangatta and Tweed Heads.

⁶⁴ This figure is direct employment within the boundary of Gold Coast Airport, created by the airport and other associated businesses, in 2016.

⁶⁵ This figure is the indirect, induced and catalytic employment created by Gold Coast Airport's operation and facilitation of tourism in 2016.

Thus, from the employment perspective, the Gold Coast Airport's location across the state and council border has been highly beneficial to the Gold Coast and Tweed Shire. In this regard, the airport's location has enabled a high level of accessibility for workers from both LGAs. The airport's accessibility to both regions' workers is further enabled by the Pacific Highway, which is situated adjacent to the airport on its eastern boundary and facilitates cross-border access between the LGAs.

4.7.1.4 Limited Focus on Freight Activities

Gold Coast Airport's primary function has been the transport of passengers. However, according to urban planner #5, there has been a limited volume of freight being transported with RPT flights that arrive at the airport. Urban planner #3 notes that the majority of inbound and outbound freight of the Gold Coast passes through Brisbane Airport and Port of Brisbane. Gold Coast Airport has dedicated freight processing facilities located to the north of the Terminal 1 building. Two freight forwarders currently service Gold Coast Airport on site and accommodate both domestic and international markets. In 2015, the airport processed a total of 3,764 tonnes, or 0.4 per cent, of Australia's international freight volume (GCAPL, 2017c). Thus, based on these findings, the airport has, to date, served a minor role in the freight industry of the Gold Coast-Tweed Shire region.

4.7.1.5 Promotion of Tourism Industry

Several interviewees consider Gold Coast Airport's principal economic development contribution to be providing 'access' to the Gold Coast-Tweed Shire region, which in turn led to promotion of the region's tourism. The local chamber of commerce representative refers to the airport as a "critical piece of infrastructure" and "an enabler" for the emerging tourism industry in the Tweed Shire LGA. Local community representative #1 echoes a similar sentiment, noting that the airport's "major contribution is its impact on [Tweed Shire's] tourism [industry]." The interviewee mentions that "the [tourism] benefits [that the Tweed Shire region receives] from the airport far outweigh any negative impacts" such as noise particularly given that modern aircraft "now are much quieter" than before.

In particular, Gold Coast Airport provides Tweed Shire with access for the increasing number of domestic tourists from Sydney and Melbourne, the two key markets to which the council is intending to promote the region as a visitation destination. The international market particularly from China is perceived by the interviewee to "have great potential" for the Tweed Shire region. Thus, Gold Coast Airport plays a critical role in connecting the region with China given that GCAPL "is quite aggressive in the new destinations it is securing" from the markets throughout Asia. Gold Coast Airport has also played an important role in the international tourism sector of Tweed Shire, which

has experienced a 10.4 per cent growth in international visitor nights from 257,851 in 2010/11 to 284,689 in 2018/19 (.id, 2019r).

Given Gold Coast Airport's network of flights and its location across both the Gold Coast and Tweed Shire, the airport importantly functions as both regions' gateway for both domestic and international visitors alike. The following interview quote illustrates the significance Gold Coast Airport to the Tweed Shire LGA:

I often told people that New South Wales' second international terminal is actually Gold Coast [Airport, partly in the neighbouring state of Queensland]. It is not Badgerys Creek's [forthcoming Western Sydney Airport] – it is Gold Coast [Airport], so I think [Tweed Shire is] very blessed as a region to have a domestic airport and an international airport so close. – senior manager #2

The quote above relates to the potential of the airport to contribute significantly to Tweed Shire's tourism industry through bringing in both domestic and international tourists.

Meanwhile, on the Gold Coast side, local destination marketing organisation representative #1 notes that the LGA's tourism industry is “just in a very fortunate position ... [to] have two airports,” namely Gold Coast Airport and Brisbane Airport, in proximity. Another representative from the same organisation also makes a similar observation, noting that “as a city, it is very rare ... to have two airports.” The CoGC and the general Gold Coast community strongly support the airport's expansion according to local community representative #2, whose quote below illustrates the nature of such support further:

We really want to see the expansion of the airport ... We want to see those air bridges because the more tourists we can get through [Gold Coast Airport] into the Gold Coast, the better the economy for us. – local community representative #2

As a city primarily dependent on tourism and its associated industries, the Gold Coast's economy evidently benefits significantly from Gold Coast Airport, particularly due the connection to the international market that the airport provides. In 2018/19, the Gold Coast serviced a total of 1.1 million visitors (Destination Gold Coast, 2019). The top five origins of international visitors in terms of the total visitors in 2018/19 and their total and average spending figures are shown in Table 4.28 on the following page.

Table 4.28: Top Five Origins of Gold Coast's International Visitors in 2018/19
(Source: Destination Gold Coast (2019))

Origin	Total Visitors	Total Spending	Average Spending per Visitor
China	271,000	\$378 million	\$1,394.83
New Zealand	209,000	\$219 million	\$1,047.85
Japan	73,000	\$145 million	\$1,986.30
United Kingdom	58,000	\$61 million	\$1,051.72
United States	42,000	\$68 million	\$1,619.05

Destination Gold Coast (2019, p. 19) indicates “the attraction of new air services into Gold Coast Airport” as being “critical to the continued growth of international visitation on the Gold Coast.” In this regard, the daily, direct, low-cost flights to Tokyo with JetStar has played a major role in attracting tourists from Japan, with a 13.4 per cent annual increase in visitor number in 2018/19.

4.7.1.6 Uneven Cross-Border Economic Development Contributions from Gold Coast Airport

Gold Coast Airport's cross-border location implies that the airport should contribute to the economic development of both the Gold Coast and Tweed Shire LGAs as well as the regions of SEQ and FNC. However, the research discovers that there has been significant unevenness in the airport's economic development contributions across the state and local council border.

All of the interviewed stakeholders based in the Tweed Shire LGA express the same concern related to the inequality of Gold Coast Airport's economic contributions. In this regard, the majority of the airport's economic contributions in recent years are perceived by the stakeholders to have primarily gone to the Gold Coast and QLD side of the border. The local chamber of commerce representative notes that although the airport has made significant economic development contributions, “what I find interesting is [that] nothing has come south of the border [towards the Tweed Shire region].” The interviewee also reveals that CoGC and the QLD Government “have been very smart about working with the airport to enable [economic development on the Gold Coast],” a relationship which is further examined in Section 7.3.3.

The principal reason behind the uneven cross-border economic contribution from Gold Coast Airport is the significantly higher number of airport passengers, who visit the Gold Coast as their intended destination, than the number of airport passengers who are Tweed Shire visitors. According to urban planner #1 and the local chamber of commerce representative, although the majority of Gold Coast Airport's land is located on the Tweed Shire jurisdiction, the region has been receiving a significantly lower number of visitations from airport passengers than the Gold Coast has. The local chamber of

commerce representative notes that “the quantum of actual people turning left and right [once they leave the airport] is questionable.” In this regard, a left turn would take passengers to the Gold Coast whereas a right turn would take them to Tweed Shire, the latter of which currently accounts for approximately a quarter of all passengers according to GCAPL in its prior correspondence with the interview respondent. The interviewee, however, believes the proportion of Tweed Shire visitors from Gold Coast Airport to be significantly lower than 25 per cent. The following quote from another interview participant also supports this observation:

Presently, the main issue with [Gold Coast Airport] is tourism ... **Approximately 10 or 15% [of airport passengers] will go south [to Tweed Shire] and the rest will go to the Gold Coast.** – urban planner #2 (emphasis added)

Chapter 4 has examined the nature of Gold Coast Airport and its role in local and regional economic development through investigating a number of topics. These include the airport’s regional, LGA and local contexts as well as its characteristics in terms of land uses, privatisation outcomes, attributes as a ‘Second-Tier Airport’ and economic development contributions. The next section of the chapter concludes with key findings in relation to research question #1 and its associated sub-questions.

4.8 CONCLUSION

Figure 4.51 below summarises the key findings on the characteristics and role of Gold Coast Airport in local and regional economic development, in relation to research question #1, “What is the existing nature and economic role of Gold Coast Airport” and its associated sub-questions.

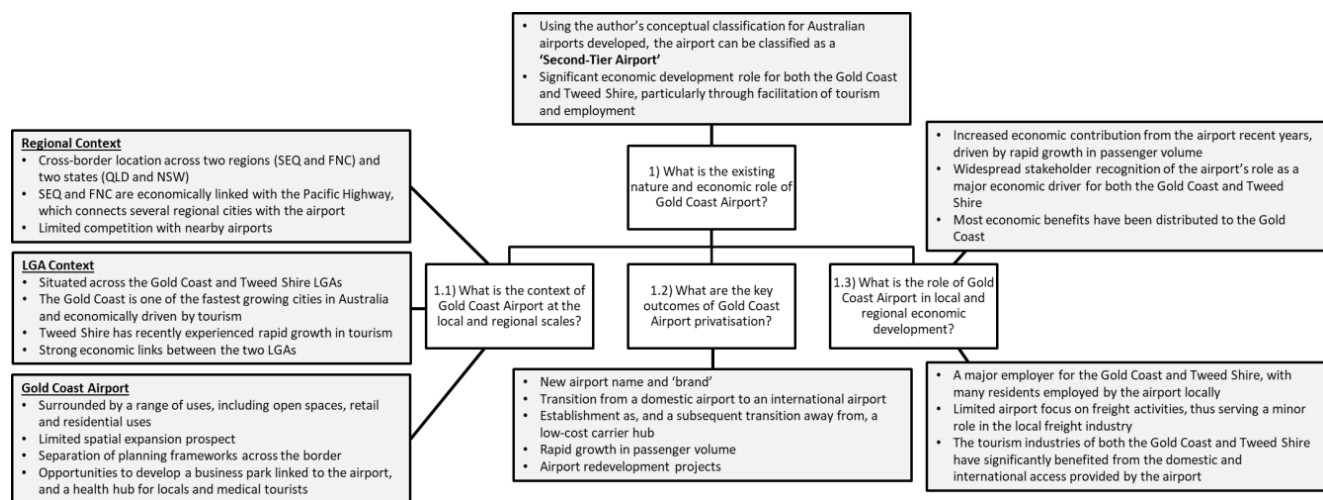


Figure 4.51: Summary of Key Findings on the Characteristics and Role of Gold Coast Airport in Local and Regional Economic Development

Research sub-question #1.1 is “**What is the context of Gold Coast Airport at the local and regional scales?**” In response to this sub-question, a context analysis has been conducted for Gold Coast Airport at three different scales, including the regional, local government and local contexts. At the regional context, Gold Coast Airport spans the border of SEQ and FNC, which are both linked by the interstate Pacific Highway. With approximately three and a half million population, SEQ is the largest region in QLD in terms of population and home to several major metropolitan centres including the ‘200 Kilometre City’ encompassing the Sunshine Coast, Brisbane and the Gold Coast. The region is serviced by a heavy rail system, which is linked to a light rail corridor on the Gold Coast. Meanwhile, FNC, as one of the most populated sub-regions in the broader North Coast region, comprises several regional towns, including Byron Bay, a popular international tourist destination located under 50 minutes from Gold Coast Airport. At the regional scale, Gold Coast Airport has limited competition against nearby airports. Nevertheless, some competition exists between Gold Coast Airport and Brisbane Airport given that both airports service similar destinations. In light of this competition, GCAPL has differentiated Gold Coast Airport from Brisbane Airport via competitive airfares and parking fees at the airport.

At the local government context, Gold Coast Airport spans the local council border of the Gold Coast and Tweed Shire Council. The Gold Coast, as one of the fastest growing cities in Australia with more than 600,000 current population, is the second largest LGA in both QLD and Australia in terms of population size. The Gold Coast, governed by the CoGC, is economically driven by its thriving tourism industry. On the other hand, Tweed Shire, an agriculturally driven LGA, is home to approximately 100,000 population. Tweed Shire has experienced an emerging tourism industry in recent years, driven primarily by daytrip visitors from the north side of the border. Governance of Tweed Shire is under the responsibility of Tweed Shire Council. The Gold Coast and Tweed Shire share strong economic links in two ways. Firstly, there is a significant level of cross-border employment where nearly one-third of Tweed Shire workers cross the border for employment on the Gold Coast on a daily basis. Such a brain-drain phenomenon represents a major economic loss for Tweed Shire and can hinder the LGA’s future growth. Secondly, the tourism industries of the two LGAs are inherently connected, with Tweed Shire economically benefiting from Gold Coast tourists who visit Tweed Shire as daytrip guests.

At the local context, Gold Coast Airport is adjoined by several suburbs and a range of land uses, including low- and medium-density residential uses, open spaces, commercial uses and retail uses. Given that the airport is surrounded by low-density residential uses to the north and protected nature

reserves and Pacific Highway to the south, there are limited prospects for the airport's spatial expansion. There is a land use opportunity to create an integrated health hub around Gold Coast Airport due to the existence of two major hospitals and several health practices in proximity to the airport. There is also an opportunity to develop large-scale business park closely linked to the airport on a vacant site on the Tweed Shire side of the border, which can help address the issue where a significant proportion of the Tweed Shire workers leave the LGA for employment elsewhere. However, there is a separation of planning regulations across the border, which presents an impediment to the airport's economic development contribution.

The next section the chapter investigated the characteristics and role of Gold Coast Airport in local and regional economic development. Established in 1936, Gold Coast Airport was originally an emergency landing strip before having its ownership transferred to the Federal Government in 1988. The airport was then privatised under the Airports Act in 1998 and has since been managed by GCAPL, a subsidiary of QAL. In relation to research sub-question #1.2, **“What are the key outcomes of Gold Coast airport privatisation?”** it is discovered that the privatisation of Gold Coast Airport has had significant impact on the airport. The transfer of management and operational rights of Gold Coast Airport from the Federal Government has significantly altered the airport's characteristics, role and function in five ways. Firstly, just one year after privatisation, the airport name was strategically changed from Coolangatta Airport, which is based on a nearby Gold Coast suburb, to Gold Coast Airport to leverage the existing reputation associated with the Gold Coast into additional passenger volume for the airport. The Gold Coast is also further incorporated into the airport branding, to capture the 'fun' atmosphere of the LGA. Secondly, Gold Coast Airport has transitioned from a domestic airport into an international airport, which has brought a significant volume of international visitors to the Gold Coast and Tweed Shire. Thirdly, the airport was specifically developed into a LCC hub to capitalise on the rapidly growing LCC industry around the world. In this regard, Terminal 1 building underwent a major redevelopment into a purpose-built LCC terminal. Nevertheless, GCAPL has recently begun transitioning Gold Coast Airport away from the LCC focus to attract flagship airlines to the airport. Fourthly, due to the GCAPL's success in attracting LCCs to Gold Coast Airport for both domestic and international flights, the airport has experienced rapid growth in passenger volume since its privatisation in 1998. Lastly, six major redevelopment projects, driven by the need to accommodate the growing passenger volume, have been undertaken for Gold Coast Airport since its privatisation. These projects include, two runway overlays, a runway extension, the aforementioned redevelopment of Terminal 1 into a LCC terminal, an on-site hotel development and a comprehensive redevelopment of the airport infrastructure.

As Gold Coast Airport primarily facilitates RPT services, the majority of the on-site land uses are aviation-related. Several aviation-related academic institutes are clustered in the airport's 'General Aviation' precinct. The most noteworthy land use feature of Gold Coast Airport is the existence of a SCU campus on the airport land, which has several economic development implications, which are further explored in Chapter 6. Gold Coast Airport is the only airport in Australia to encompass a university campus on site.

The next part of the chapter classified Gold Coast Airport through developing a conceptual classification for Australian airports based on a literature review, which was then applied to the airport. The airline deregulation in the second half of the 20th century led to an emergence of hub and spoke airports globally. Currently, several airport classifications, the majority of which only consider passenger-related variables, exist across the world. In Australia, international airports are classified into one of the five categories according to the types of flights they service and the availability of customs procedures available on site. However, an official classification, which comprehensively considers the characteristics, context, role and function of Australian airports, does not currently exist. As such, a conceptual airport classification has been developed through a synthesis of airport categorising criteria employed in the United States, the United Kingdom and Australia, with consideration of the context of Australian airports. The conceptual classification utilises a 'tier' system to classify Australian airports into the following four categories:

- 1) **First-Tier Airports**, which are located in a capital city, function as major hubs for several airlines and serve as the principal domestic and international gateway for their respective state/territory;
- 2) **Second-Tier Airports**, which are located in a major regional city, function as hubs for some airlines and service a significant proportion of passengers amongst all airports in their respective state/territory;
- 3) **Third-Tier Airports**, which are located in a regional area, function primarily as 'spokes' for First-Tier and Second-Tier airports and service only domestic flights; and
- 4) **Fourth-Tier Airports**, which are located in a highly remote community, primarily facilitate general aviation activities and may facilitate RPT and charter flights in limited frequency.

The research has discovered that Gold Coast Airport can be classified as a 'Second-Tier Airport' based on its characteristics, location, role and function and using the conceptual Australian airport classification above.

To address research question 1.3, "**What is the role of Gold Coast Airport in local and regional economic development?**" the final section of this chapter has investigated a number of factors related to the airport's economic development contribution. Due to the rapid growth in passenger volume,

Gold Coast Airport's economic development contribution has significantly increased in recent years. Moreover, the role of the airport as an economic development driver is widely recognised by all stakeholders across the Gold Coast and Tweed Shire. This recognition could be attributed to the fact that Gold Coast Airport, due to its cross-border location, is a major employer for both LGAs, locally employing nearby residents. Due to its strong emphasis on facilitating RPT flights, the airport has had limited focus on freight activities, thus serving a minor role in the freight industry of the Gold Coast and Tweed Shire. Meanwhile, the tourism industries of both LGAs have substantially benefited from the domestic and international access to the region enabled by Gold Coast. However, there is substantial unevenness in the cross-border distribution of the airport's economic benefits. Specifically, a significant proportion of the airport's economic development contribution is found to have been allocated to the Gold Coast given that the majority of the airport passengers visit the Gold Coast, rather than Tweed Shire, as their intended destination.

Based on the findings above, the chapter, in response to research question #4, **“What is the existing nature and economic role of Gold Coast Airport?”** discovers that the airport, as a Second-Tier Airport, has played a significant economic development role for both the Gold Coast and Tweed Shire LGAs, particularly through the facilitation of tourism and employment generation. The airport's cross-border location presents an opportunity for the airport to make significant economic development contribution at a regional level across the border. However, this opportunity has not been fully achieved given that the majority of the airport's economic benefits have been allocated to the Gold Coast and QLD side of the border.

Chapter 4 has addressed the first research question and its associated sub-questions by investigating the nature of Gold Coast Airport and its role in local and regional economic development. The findings from this chapter have established a clear context which provides a useful foundation for further analysis in the next three chapters, which address the other three research questions. The next chapter of this thesis, Chapter 5, examines a range of relevant planning frameworks in terms of how they influence Gold Coast Airport's economic development contribution.

**CHAPTER 5: PLANNING FRAMEWORKS: DRIVER OR
INHIBITOR OF GOLD COAST AIRPORT'S ECONOMIC
DEVELOPMENT CONTRIBUTION?**

5.1 INTRODUCTION

Chapter 5 conducts a comprehensive analysis of existing planning frameworks that affect the economic development contribution of Gold Coast Airport. The chapter is based on the second research question of this thesis. Figure 5.1 below outlines the research question and its associated sub-questions.

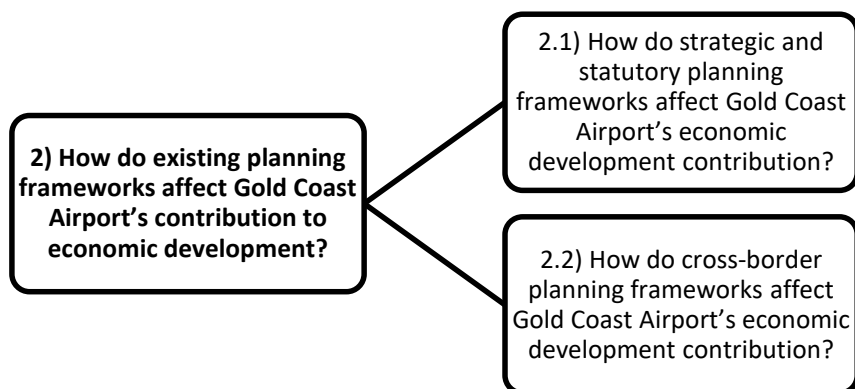


Figure 5.1: Research Question #2 and Its Associated Sub-Questions

To answer the second research question, the chapter comprises two major sections. Section 5.2 reviews a range of strategic and statutory planning instruments from Federal, state and local government agencies, GCAPL and other organisation in terms of their implications on the economic development contribution of Gold Coast Airport. Section 5.3 subsequently discusses cross-border planning frameworks from government agencies at both the state and local levels and assesses their potential influence on economic development contribution of Gold Coast Airport.

5.2 STRATEGIC AND STATUTORY PLANNING FRAMEWORKS

5.2.1 OVERVIEW

Section 5.2 addresses research sub-question #2.1, “How do strategic and statutory planning frameworks affect Gold Coast Airport's economic development contribution?” To do so, several strategic and statutory planning frameworks, which have influence on Gold Coast Airport and its surroundings, are reviewed in terms of how they can potentially affect the airport's local and regional economic development contribution.

Throughout the interviews conducted in this research, planning frameworks emerge as a common theme for influencing the economic development contribution of Gold Coast Airport. As such, strategic and statutory planning frameworks play an important role in promoting economic

development contribution of airports. However, there is currently a major challenge associated with the complex layer of planning frameworks affecting Gold Coast Airport and its surroundings, which is further examined below.

5.2.2 COMPLEX LAYER OF GOVERNMENT PLANNING FRAMEWORKS FOR GOLD COAST AIRPORT AND ITS SURROUNDINGS

Strategic and statutory planning frameworks from the local councils and the state governments across both sides of the border, in addition to the Airports Act legislation from the Federal Government, have cumulatively created a highly complex layer of planning policies and regulations from all three tiers of government. The quote below further affirms this finding:

It is a **minefield of complexity** because not only do you have the Federal legislation, the Airports Act [1996], [but also] you have Queensland state legislation, New South Wales state legislation and you have got [the City of Gold Coast’s] planning rules, [and] Tweed Shire [Council’s] planning rules [all intertwining together]. – urban planner #2 (emphasis added)

Table 5.1 below lists the different strategic and statutory planning frameworks from all tiers of government. The table also describes how the frameworks can potentially influence Gold Coast Airport’s economic development contribution.

Table 5.1: Strategic and Statutory Planning Instruments with Influence on Gold Coast Airport or Its Surroundings from Government Agencies at Different Levels

Agency	Framework(s)	Influence on Gold Coast Airport
Federal Level		
Federal Government	Airports Act 1996	This statutory framework stipulates a requirement for GCAPL to prepare a master plan for Gold Coast Airport every five years and a major development plan for any construction project costing more than \$20 million. These documents are subject to community consultation and minister’s approval. Thus, the legislation has a strong influence on Gold Coast Airport’s future development, thus directly affecting the airport’s local and regional economic development contribution.
State Level		
NSW Government	North Coast Regional Plan 2036	These strategic planning frameworks are regional plans which establish strategic directions for their respective region: ✈ FNC, in which Tweed Shire and part of Gold Coast Airport are located; and
QLD Government	ShapingSEQ: South East Queensland Regional Plan 2017	✈ SEQ, in which the Gold Coast and part of Gold Coast Airport are located. These state policies have a direct influence on the local council planning schemes, which are explained further below in this table.

Agency	Framework(s)	Influence on Gold Coast Airport
	State Planning Policy	This statutory planning framework comprises land use planning and development interests of the QLD Government, which must be incorporated into all local planning schemes in the state. One of the state interests in the document is ‘strategic airports and aviation facilities’, which aims to protect the ongoing operation of several airports across QLD, including Gold Coast Airport. The policy outlines performance outcomes which must be applied by the CoGC to specific development applications with potential impact on Gold Coast Airport’s operation. Thus, this framework can affect the types of economic activities and land uses around Gold Coast Airport.
NSW Government	<ul style="list-style-type: none"> ➤ Tweed City Centre LEP 2012 ➤ Tweed LEP 2014 ➤ Tweed LEP 2000 	These statutory planning frameworks regulate land uses around the airport on the Tweed Shire side of the border. They therefore directly influence the types of economic activities, and their compatibility with the airport, in the airport’s vicinity.
	State Environmental Planning Policies (SEPPs)	<p>As the principal environmental planning frameworks at the state level, SEPPs address a variety of planning issues throughout NSW. Once triggered, SEPPs override local planning frameworks to prohibit or enable specific types of development and grant the Planning Minister with the decision-making authority. A number of SEPPs affect the surrounding land of the airport on the NSW side. Some of these include:</p> <ul style="list-style-type: none"> ➤ SEPP (Coastal Management) 2018, applicable to Cobaki Creek and Cobaki Broadwater, and ➤ SEPP (State Significant Precincts) 2005, applicable to a site in Kings Forest, located approximately 30 minutes from Gold Coast Airport.⁶⁶ <p>The statutory influence of several SEPPs can significantly influence the types of land uses and economic activities around the airport on the NSW side of the border.</p>
Local Level		
City of Gold Coast	Gold Coast City Plan	The City Plan is the planning scheme which regulates land uses around the airport on the Gold Coast side of the border. It therefore directly influences the types of economic activities, and their compatibility with the airport, in the airport’s vicinity.
	Gold Coast City Transport Strategy 2031	These strategic plans outline the councils' intent for future transport infrastructure development in their respective jurisdiction. Hence, they have direct implications for transport access to and from Gold Coast Airport, which can influence the level of freight and passenger movement through the airport in the future.
Tweed Shire Council	Tweed Shire Transport Strategy	
	Tweed Shire Economic Development Strategy	These policy documents highlight economic development strategy for their respective LGAs. Key objectives, themes and outcomes for economic development discussed in these documents have a major influence on the councils’ planning scheme regulations. This in turn will influence future development around the airport. They also directly impact the magnitude of economic development contribution from Gold Coast Airport.
City of Gold Coast	Economic Development Strategy 2013 – 2023	

⁶⁶ This driving distance figure is based on Google Maps data as at March 2021 (Google, 2020b).

The combination of the planning frameworks outlined in Table 5.1 has effectively created a highly complex operational environment with intertwining planning frameworks, which could impede planning endeavours aiming to promote economic development through Gold Coast Airport. In this regard, stakeholders need to ensure that an economic development initiative associated with Gold Coast Airport prior to its implementation, does not clash with existing planning frameworks listed in Table 5.1. This requirement implies the necessity for more time and resources to be spent on comprehensive analysis and considerations in the process of planning for economic development associated with Gold Coast Airport. Similarly, although Gold Coast Airport is not directly subject to the influence of state and local planning frameworks outlined in Table 5.1 due to its status as a Federally-owned land under the Airports Act, GCAPL is still required to consider them in all its planning and development activities for the airport to ensure its future proposals are in line with the intent of the frameworks established by the state and local planning frameworks. Such a “minefield of complexity,” where several layer of planning policies and regulations from all tiers of government inextricably interweave, can create significant delays for not only economic development initiatives driven by local stakeholders, but also planning and development activities at Gold Coast Airport.

The remainder of Section 5.2 analyses several strategic and statutory planning frameworks, which have influence on the planning and development processes of Gold Coast Airport and its surrounding. These frameworks, which are categorised according to their spatial influence, are outlined in Table 5.1 below.

Table 5.2: Strategic and Statutory Planning Frameworks Examined in Section 5.2

Description	Planning Framework(s)	Agency
Planning Frameworks for Gold Coast Airport		
These planning frameworks directly influence the planning and development processes for Gold Coast Airport.	Airports Act 1996	Federal Government
	Gold Coast Airport 2017 Master Plan	Gold Coast Airport
Queensland State Planning Frameworks		
These planning frameworks, implemented by the QLD Government, affect planning and development processes for Gold Coast Airport’s surroundings on the QLD side of the border.	Economic Development Act 2012	Queensland Government
	State Planning Policy	
	ShapingSEQ: South East Queensland Regional Plan 2017	
Local Planning Frameworks for the Gold Coast		
These planning frameworks affect the planning and development processes for both Gold Coast Airport’s surroundings on the Gold Coast side of the border, and the broader Gold Coast LGA.	Economic Development Strategy 2013-2023	City of Gold Coast
	Gold Coast Destination Tourism Management Plan 2014-2020	Destination Gold Coast
	Gold Coast City Plan	City of Gold Coast

Description	Planning Framework(s)	Agency
New South Wales State Planning Frameworks		
These planning frameworks, implemented by the NSW Government, affect planning and development processes for Gold Coast Airport's surroundings on the NSW side of the border.	Economic Development Strategy for Regional NSW	NSW Government
	North Coast Regional Plan 2036	
	✈ Tweed City Centre LEP 2012	
	✈ Tweed LEP 2014 ✈ Tweed LEP 2000	
Local Planning Frameworks for Tweed Shire		
These planning frameworks affect the planning and development processes for both Gold Coast Airport's surroundings on the Tweed Shire side of the border, and the broader Tweed Shire LGA.	Tweed Shire Economic Development Strategy	Tweed Shire Council
	Destination Management Plan 2018-2030	The Tweed Tourism Company
	Local bylaws	Tweed Shire Council

5.2.3 PLANNING FRAMEWORKS FOR GOLD COAST AIRPORT

Two planning frameworks, which influence the planning and development processes for Gold Coast Airport are, examined in this sub-section. These include the Airports Act and the Gold Coast Airport 2017 Master Plan. The key findings in relation to these planning frameworks, which are further discussed below, are:

- ✈ Economic development constraints imposed by the Airports Act; and
- ✈ Recognition of Gold Coast Airport's economic development role in the Gold Coast Airport 2017 Master Plan.

5.2.3.1 Economic Development Constraints Imposed by the Airports Act 1996

The statutory planning instrument from the Federal Government which directly influences planning and development processes for Gold Coast Airport's land is the Airports Act. The legislation is discovered to be a barrier to economic development contribution of Gold Coast Airport due to the following three reasons, all of which are further examined below:

- ✈ Limited recognition of airports' economic development role;
- ✈ Airport development delays caused by MDPs; and
- ✈ Operational and planning restrictions on SCU.

i) Limited Recognition of Airports' Economic Development Role

The Airports Act recognises economic development role of airports in the following three ways (Office of Legislative Drafting and Publishing, 2011):

- ✈ One of the eight objectives of the legislation is “to promote the efficient and economic development and operation of airports.”
- ✈ Division 3 of Part 5 of the legislation, which is relating to “land use, planning and building controls,” outlines the statutory requirements for airport master plans. In this regard, the first of the seven purposes for airport master plans is to “establish the strategic direction for efficient and economic development at the airport over the planning period of the plan.”
- ✈ An airport master plan must outline “the likely effect of the proposed developments in the master plan on employment levels at the airport, and the local and regional economy” within first five-year time frame of the master plan.

As shown in the list above, there is some, albeit limited, recognition of economic development contribution of airports in the legislation. The act outlines a legislative requirement for operators of privatised airports to consider the economic impacts of their proposed development over the first five years of the 20-year outlook that airport master plans must consider. In this regard, long-term economic implications of an airport master plan's proposal may be disregarded by airport lessees, implying that long-term economic opportunities associated with airport development may not be capitalised on by operators of the privatised airports under the Airports Act.

In the specific case of Gold Coast Airport, there are two major limitations imposed by the Airports Act on economic development contribution of Gold Coast Airport. These include airport development delays and restrictions on SCU, both of which are further elaborated below.

ii) Airport Development Delays Caused by Major Development Plans

As examined previously in Section 2.3.3.4, under the Airports Act, all privatised airports in Australia, including Gold Coast Airport, are required to submit an MDP for any development project undertaken on the Federal airport land which exceeds \$20 million in construction cost. Since 2011, GCAPL has submitted four MDPs, which are outlined in Table 5.3 on the following page.

Table 5.3: Major Development Plans Submitted for Gold Coast Airport since 2011 (Sources: Connecting Southern Gold Coast (2019) and GCAPL (2017c))

Project	Approval Date
SCU Building C ⁶⁷	July 2015
Installation of an Instrument Landing System ⁶⁸	January 2016
Project LIFT	February 2016
Rydges hotel development ⁶⁹	September 2018

According to urban planner #6, MDPs serve a similar purpose as conventional development applications, which must be submitted to a local council or state government for an approval before development can legally commence on a land parcel. Instead of being lodged to a state or local government, however, MDPs must be submitted to the Australian Government for assessment and approval by the Minister for Infrastructure, Transport and Regional Development before the proposed development can legally proceed. Prior to receiving a Minister’s approval, all MDPs are required to undergo a public consultation period of 60 business days, or three months. Nevertheless, airport-lessee companies are able to request for a shorter public consultation period of not less than 15 business days (Office of Legislative Drafting and Publishing, 2011).

In addition to the public consultation period, the MDP assessment process takes approximately seven months according to the urban planner above. As such, once an MDP is lodged, the minister’s approval is typically received after ten months. This time frame is perceived by the interviewee as a ‘challenge’ and a ‘constraint’ for Gold Coast Airport given that it effectively creates delays for major development projects at the airport. As such, the Airports Act effectively postpones economic impacts that Gold Coast Airport contributes to the Gold Coast-Tweed Shire region through the creation of employment associated with its major development projects.

Nevertheless, urban planner #6 reveals that the Airport Act also provides a major opportunity for Gold Coast Airport and other privatised airports in Australia to expedite development projects with construction costs below \$20 million. For these projects, no extensive development plan is required to be submitted for approval prior to commencing development. Instead, only a more streamlined application “similar [to the process when applying for] a building approval or operational works [approval from a local council]” is required according to the urban planner, who indicates this process

⁶⁷ This project is further discussed on the next page.

⁶⁸ The Instrument Landing System is examined in greater detail in Section 7.4.2.

⁶⁹ Both the Project LIFT and the Rydges hotel development are previously discussed in Section 4.5.3.5.

as being “a much shorter period than going through a full development application process” associated with submitting an MDP. This process implies that Gold Coast Airport and other privatised airports in Australia can complete non-major development projects on airport land in a relatively short time frame, thus enabling economic benefits associated with such activities to be generated precipitously.

iii) Operational and Planning Restrictions on Southern Cross University

The land within the boundary of Gold Coast Airport is under the statutory influence of the Airports Act. Consequently, SCU's Gold Coast campus, which is situated on the land leased from GCAPL, is effectively subject to a range of restrictions in terms of its day-to-day operations and land use planning and development as shown in the following quote:

There are ... building restrictions and facility restrictions [on Southern Cross University] being [located on the land of Gold Coast] Airport. When [Southern Cross University] leases the land, [it does not] own [the] land. So [with the] campus in Lismore, [the university] owns the land – [it] can do whatever [it wants to] on that land. **[At Gold Coast Airport], the university is [restricted] by the rules imposed by [Gold Coast Airports Pty Ltd].** – senior manager #1 (emphasis added)

The quote above illustrates that SCU's Lismore campus, in contrast to its Gold Coast Airport campus, allows significantly more freedom in terms of land improvement. Three key restrictions currently affect SCU's Gold Coast Airport campus. The first restriction is on the university's daily operations, which is further described in the following quote:

[Southern Cross University is] not allowed to run any profit-making activities such as childcare [and other] paying facilities [on its Gold Coast Airport campus]. [The university is] not allowed to make money from the land and from [its] buildings – [it is only] allowed to provide education. **[The university is] allowed to provide certain commercial activities that will contribute to the provision of the education, but ... cannot provide commercial services that are open to the public.** – senior manager #1 (emphasis added)

As shown in the quote above, the university is restricted on the range of commercial activities it can have on campus. An example of such activities is café and dining as these facilities “service the staff and the students [at the campus]” according to senior manager #1. However, any commercial activities that generate revenues on campus must be delivered by third parties as they cannot be provided by the university directly. Although this operational restriction can help ensure that SCU only provides education and its associated services for its staff and students, the lack of operational flexibility imposed by the legal framework can significantly restrict the range of services that university occupants have access to on campus. Having limited commercial services available on campus could potentially reduce the attractiveness of the university campus to prospective staff and students in the future.

The second restriction imposed by the Airports Act is relating to SCU's planning and development process. Specifically, there is a requirement for SCU to acquire "dual permissions" prior to commencing any major development on campus which exceeds \$20 million in construction costs. In this regard, the university is firstly required to acquire a permission from GCAPL for its campus development proposal, which is then further expanded into an MDP through a collaboration between GCAPL and SCU. The MDP is then submitted to the Federal Government by GCAPL for approval by the Minister, which is the same process that other airport MDPs go through. Thus, the need to acquire development approvals from two different parties and the need to develop the initial development concept plan and the conversion of such a plan into an MDP, effectively create significant delays for any major development that SCU intends to undertake. The recently completed third campus building, namely Building C, which also includes the 500 car parking spaces previously discussed in Section 6.2.1, epitomises a major development project requiring dual permissions from GCAPL and the Federal Government.

The third restriction of the Airports Act on SCU aims to prevent potential visual obstructions, which can become hazards by limiting pilot's visibility during take-offs or landings of aircraft (Schalk & Ward, 2011). SCU is prohibited from introducing the following three built environment features on its Gold Coast Airport campus according to senior manager #1:

- ✈ Tall structures, which can potentially collide with an aircraft;
- ✈ Reflective materials, which can introduce glares and momentarily blind a pilot;
- ✈ Bright, flashing signage, which can also lead to glares.

These operational and land use restrictions on SCU are effectively statutory red tape which limits the extent to which SCU can plan and develop its campus in the future, which can adversely the ability for the campus to expand and accommodate its rapidly growing number of students. These restrictions, in addition to the high lease costs associated with the land the campus is situated on, imply financial burden for the university as shown in the following quote:

The main [disadvantage] for [Southern Cross University] is the restriction on [the university because] it is not [the university's] land. That is a big [issue]. Most universities own the land they sit on. This is an unusual situation ... so that causes [the university] problems. **It is a financial burden to the university as well. You can imagine [the land] is considered prime real estate and the leases are not cheap. It is not penny in rent. It is a lot of money.** – senior manager #1 (emphasis added)

The three limitations imposed by the Airports Act discussed above can potentially restrict the economic development contribution of Gold Coast Airport. In this regard, these limitations effectively impose delays on any major development projects associated with the SCU campus and

reduce the flexibility on not only its daily operational activities but also its future development. These outcomes, in addition to the financial constraint due to the high land lease costs, impose a significant degree of risks for SCU, which can increase the future likelihood of the university’s relocation of its Gold Coast campus away from Gold Coast Airport.

iv) Recent Streamlining of Master Plans and Major Development Plans under the Airports Amendment Act 2018

On 28 September 2018, the Airports Amendment Act 2018 was implemented by the Federal Government. The principal purpose of the legislation is to ‘streamline’ particular administrative arrangements relating to airport master plans and MDPs to “offer a more flexible, proportionate, efficiency-based regulatory approach” (Australian Government, 2020a). The legislation specifically introduces the following amendments to the Airport Act (Australian Government, 2018b):

- ✈ An extension to the master plan submission cycle from five years to eight years, applicable to new master plans submitted for 15 of the privatised airports, including Gold Coast Airport;
- ✈ A requirement for airport lessees to include an up-to-date airport noise level forecast with airport master plans;
- ✈ An increase in the monetary trigger for an MDP to be prepared and submitted, from \$20 million to \$25 million;
- ✈ An arrangement where the Minister has a total of 15 business days to approve or refuse an airport lessee’s request for a reduced consultation period associated with an MDP;
- ✈ The ability for the Minister to extend the time frame over which approved MDPs are required to be significantly completed, by up to two years; and
- ✈ The option for airport lessees to withdraw an approved MDP under specific circumstances.

As shown in the list above, the Airports Amendment Act 2018 considerably simplifies administrative arrangements associated with airport master plans and MDPs. These streamlined requirements may influence two of the three economic development constraints associated with the Airports Act, which are previously discussed in this section, as shown in Table 5.4 below.

Table 5.4: Potential Influence of the Airports Amendment Act 2018 on the Economic Development Constraints Associated with the Airports Act

Constraint	Potential Influence of the Legislation
Airport development delays caused by MDPs	The higher monetary trigger implies that GCAPL will potentially be able to undertake more development projects with no MDP submission requirement. As such, there may be less airport development delays caused by MDPs in the future, thus increasing the airport’s economic development contribution through the employment generation through such projects.
Operational and planning restrictions on SCU	The new amendments to the Airports Act do not alter the operational restrictions imposed on the university campus. Nevertheless, the increased monetary threshold for MDPs implies that the university can undertake more major campus developments without triggering the statutory requirement for MDPs to be prepared. As such, the university now has the ability to expand its Gold Coast campus and accommodate its rapidly growing number of students more easily.

5.2.3.2 Recognition of Gold Coast Airport’s Economic Development Role in the Gold Coast Airport 2017 Master Plan

Since the privatisation of Gold Coast Airport in 1998, GCAPL has produced and implemented a total of four master plans, which were published in 2001, 2006, 2011 and 2017. The recognition of the economic development role of Gold Coast Airport has been present in all the master plans since the 2006 Airport Master Plan, which articulates a central vision for the airport to make “a major contribution to the economic and social health of the community it served” (GCAPL, 2017c, p. 19). The vision of the 2011 Airport Master Plan, meanwhile, aims to “position the airport as a major economic generator, specifically for tourism, in the south east Queensland and northern New South Wales regions” (GCAPL, 2017c, p. 19).

The Gold Coast Airport 2017 Master Plan, as a 240-page strategic document outlining GCAPL’s development intentions and strategies for Gold Coast Airport, is the current version of the master plan in place for the airport. The document is found to demonstrate GCAPL’s extensive recognition of the role of Gold Coast Airport as a tourism gateway for not only the Gold Coast and Tweed Shire but also the broader SEQ and FNC regions as evident from the statements quoted in Figure 5.2 below.



Figure 5.2: Statements from Gold Coast Airport 2017 Master Plan Demonstrating GCAPL’s Recognition of Gold Coast Airport as a Local and Regional Transport Gateway (Source: GCAPL (2017c))⁷¹

⁷¹ Figure 5.2 is created by the author with quotes taken from GCAPL (2017c).

The document mentions ‘economic’, ‘economic development’ and ‘economy’ a total of 72 times, 5 times and 5 times, respectively, thus demonstrating GCAPL’s acknowledgment of the economic role of Gold Coast Airport. Section 3.12 of the master plan discusses the economic and regional significance of Gold Coast Airport. The section highlights current and projected economic contribution of the airport to the regional economies of the Gold Coast and Tweed Shire and the state economies of QLD and NSW, which is outlined previously in Section 4.7.

The central vision statement for the airport is “engaging customers, connecting communities, exceptional experiences” (GCAPL, 2017c, p. 9). The vision is supported by four development objectives, one of which is ‘economic growth’. The four development objectives are cross-referenced with the development projects for Gold Coast Airport in GCAPL’s five-year and 20-year development plans outlined in Section 12.0 of the airport master plan. Each project is specified in a table whether it supports the overall strategic intent of the four objectives as shown in Figure 5.3.





Project	Description	Trigger	 Economic Growth	 Environmental Sustainability	 Aviation Operations	 People
Stage 1 Terminal and apron redevelopment	Expansion and redevelopment of T1 Terminal	Passenger capacity requirements	✓	✓	✓	✓
Taxiway extension between taxiway A and D	Extension to existing taxiway to provide a full-length parallel taxiway to Runway 14/32	Subject to airside capacity requirements	✓	✓	✓	

Figure 5.3: Application of GCAPL’s Development Objectives to Airport Projects in the Gold Coast Airport 2017 Master Plan (Source: GCAPL (2017c))⁷²

The following airport projects, which are listed under the five-year development plan for Gold Coast Airport, are specified as supporting the economic growth development objective (GCAPL, 2017c):

- ✈ Expansion and redevelopment of the Terminal 1 building;
- ✈ Extension of the existing taxiway;
- ✈ Provision of a new taxiway linkage;
- ✈ Re-alignment of the existing taxiway and provision of additional aircraft parking area;
- ✈ Refurbishment of existing airport buildings to accommodate additional freight facility and other aviation support services;
- ✈ Provision of a hotel with 150 to 300 beds on airport land;
- ✈ Relocation of the runway landing threshold;
- ✈ Refurbishment and rebranding of the Airport Central building;
- ✈ Provision of a second access point from Gold Coast Airport to Gold Coast Highway; and
- ✈ Conversion of the car park facility adjacent to Terminal 1 building, to a multi-storey car park.

⁷² The source imagery for Figure 5.3 is used with permission from GCAPL, which retains its full copyright.

Meanwhile, the projects below, listed under the 20-year development plan for Gold Coast Airport, are indicated as complementing the 'economic growth' development objective (GCAPL, 2017c):

- ✈ Expansion of the airport's existing fuel farm;
- ✈ Development of additional hotel or serviced apartments;
- ✈ Development of commercial offices in the Terminal Precinct of the airport;
- ✈ Expansion of the multi-storey car park;
- ✈ Upgrade of the intersection where the airport's entrance is currently located; and
- ✈ Road upgrades.

As shown in the two lists above, an extensive number of future airport projects that support economic growth are evidently identified in the airport master plan. Nonetheless, the document does not elaborate on how each of these projects will lead to economic growth.

The 'economic growth' development objective outlined in the master plan is supported by the following three strategies (GCAPL, 2017c, p. 10):

- 1) "Provide aviation infrastructure to drive growth in the regional tourism sector;
- 2) Manage the business responsibly to develop the Airport site for future growth; and
- 3) Grow non-aero revenue through the property business."

In relation to the third strategy above, GCAPL notes that non-aviation property development is an essential element of an airport's operations given that it not only enhances economic feasibility but also promotes an airport's multi-purpose focus. These non-aviation uses effectively allow a range of land uses to be provided at Gold Coast Airport, thereby directly or indirectly promoting the airport's role as both "a regional economic and transport hub" (GCAPL, 2017c, p. 141).

In light of the future extension of the light rail and heavy rail corridors to Gold Coast Airport, which are previously discussed in Section 6.3.3, the master plan states that GCAPL has preserved specific parts of the airport land for accommodating the rail infrastructure in the future. Doing so is described by GCAPL (2017c, p. 20) as being "critical to preserve the future economic growth advantages of enhanced connectivity" provided by both the heavy rail and the light rail corridors.

GCAPL (2017c, p. 13) notes in the document that one of the principal purposes of an airport master plan is "establish the strategic direction for efficient and economic development at the airport over the planning period of the plan." Despite this recognition, however, the plan does not explicitly outline strategic directions for promoting local and regional economic development through Gold Coast Airport. Nevertheless, Section 8.0 of the document, which outlines GCAPL's future land use plans, identifies a range of the organisation's intent and land use opportunities, which can not only

enhance Gold Coast Airport's viability but also support its role as a regional economic hub, thus contributing to regional economic growth. These include the following:

- ✈ The need for GCAPL (2017c, p. 121) "to be innovative regarding the land use mix within the Airport boundaries;"
- ✈ GCAPL's aim to be responsive to the changing market and economic conditions and able to accommodate new commercial users to the airport, thereby "creating opportunities for allied uses to co-locate on airport land" (GCAPL, 2017c, p. 121);
- ✈ GCAPL's intent to be flexible with the long-term delivery of the airport's overall development by considering potential airport-compatible uses, which include "commercial uses that support the regional economic contribution of the Airport" (GCAPL, 2017c, p. 121);
- ✈ GCAPL's intent to ensure that future retail activities at Gold Coast Airport complement, rather than compete against, other existing and future retail centres in vicinity to the airport; and
- ✈ Incorporation of promoting Gold Coast Airport's role as a major economic hub as a key development objective for the airport's Terminal Precinct.

The airport master plan outlines the following state planning frameworks in terms of how they recognise and support Gold Coast Airport as both a regional gateway and an economic asset: QLD State Planning Policy, ShapingSEQ and NSW Far North Coast Regional Strategy. Meanwhile, at the local government level, the document notes that there is "continual and extensive consultation on the content and implementation of planning schemes ... between GCAPL and the respective local authorities," including the CoGC and TSC (GCAPL, 2017c, p. 126). The primary objective of the ongoing consultation with the two local government agencies is to minimise land use conflicts on both airport land and the airport's surroundings.

The master plan also outlines how the two local planning schemes have incorporated Gold Coast Airport into their respective strategic and statutory provisions, similarly to how the document highlights the state planning instruments. However, the document does not specify how GCAPL intends to leverage the strategic and statutory support from these state and local planning instruments into promoting Gold Coast Airport's economic development contribution at local and regional scales. GCAPL (2017c, p. 141) only notes that the property development strategy outlined in Section 9.0 of the airport master plan is "subject to the planning and approvals framework" established by the state and local planning instruments.

The master plan document is accompanied by a 24-page report titled '2017 Master Plan: Summary Supplementary Report', which outlines GCAPL's responses to public feedback on the master plan received during the community consultation period of the airport master planning process. The report mentions 'economic' and 'economy' a total of 24 and 3 times, respectively, once again demonstrating GCAPL's recognition of Gold Coast Airport's role in economic development contribution. GCAPL

(2017b, p. 8), in response to a suggestion that the airport be relocated or have no further development and that all international flights be diverted to Brisbane Airport, provides the following economic justification for Gold Coast Airport's existence and continual development:

Over the past 80 years Gold coast Airport has been a gateway to this region and has continually supported the regional economy and provision of employment. Currently Gold Coast Airport supports over 2,000 on airport jobs, during the life of this preliminary draft Master Plan this is expected to increase to 8,995 jobs.

Additionally, in reply to two submitted comments opposing the proposed ILS implementation at Gold Coast Airport, GCAPL (2017b, pp. 9, 15) cites the fact that "Gold Coast businesses and the Gold Coast economy will benefit from a reliable airport" as a justification for the ILS implementation at the airport, which would lead to higher operational safety for aircraft. Meanwhile, in response to a public comment acknowledging that "the airport is a significant employer and provides a significant economic contribution," GCAPL (2017b, p. 7) states that it "looks forward in working with stakeholders in identifying opportunities to secure ongoing economic benefits to local residents and businesses."

The analysis of the master plan and its supplementary report above evidently demonstrates that GCAPL extensively recognises the economic development role and contribution of Gold Coast Airport at both local and regional scales. The organisation justifies Gold Coast Airport's existence and recent development projects, which have been questioned by community members, with the economic development role of the airport. Nevertheless, the airport master plan does not illustrate how the economic development contribution of Gold Coast Airport will be further promoted in the future. Additionally, although strategic and statutory planning frameworks from local and state governments with influence on the airport's surrounding land uses are recognised in the airport master plan, GCAPL does not demonstrate how these planning instruments can be used to promote the economic development contribution of Gold Coast Airport.

5.2.4 QUEENSLAND STATE PLANNING FRAMEWORKS

Three QLD state planning frameworks influence Gold Coast Airport's economic development contribution: Economic Development Act 2012, State Planning Policy and ShapingSEQ. The key findings, which are further elaborated below, are as follows:

- ✈ Opportunity to create a Priority Development Area around Gold Coast Airport under the Economic Development Act 2012;
- ✈ Statutory protection of airport operation by State Planning Policy; and
- ✈ State government support for public transport connectivity to Gold Coast Airport in ShapingSEQ.

5.2.4.1 Opportunity to Create a Priority Development Area around Gold Coast Airport with the Economic Development Act 2012

The Economic Development Act 2012 is the principal statutory framework under which Economic Development Queensland, a state government agency, operates. As the QLD Government's "specialist land use planning and property development unit," Economic Development Queensland collaborates with councils and other local stakeholders to "create places and investment opportunities," thereby creating economic benefits for the broader state of QLD (Department of State Development, Tourism and Innovation, 2020). This outcome is achieved through the designation of specific zones throughout the state as 'Priority Development' Areas (PDAs), where land uses are governed under planning and development regulations called 'PDA Development Schemes'. These schemes are relatively streamlined with less 'red tapes' in comparison to council planning schemes, which can lead to fast-tracked development projects and attract investment for new development, thus creating positive economic outcomes.

As at August 2020, two out of 33 PDAs in Queensland are located on the Gold Coast. These are centred around Southport and Parklands. After the designations as PDAs, these two suburbs have significantly grown in terms of development density. Driven by the streamlined development scheme, several new residential towers have been developed over the past five years in Southport, the city's official Central Business District. Meanwhile, Parklands is the site for the Athletes' Village, which functioned as the principal accommodation facility for athletes during the 2018 Commonwealth Games event hosted on the Gold Coast. Development of the Athletes' Village was expedited under the Parklands PDA scheme and was completed on time ahead of the Commonwealth Games. Following the event's conclusion, the village underwent a transition into a mixed-use residential precinct for the general public called 'Smith Collective', with a total of 18 apartment buildings, 82 double-storey townhouses, which have a combined total of 1,251 apartment and townhouse units (Queensland Property Investor, 2018). Figure 5.4 on the following page displays an aerial view of the Smith Collective residential precinct.

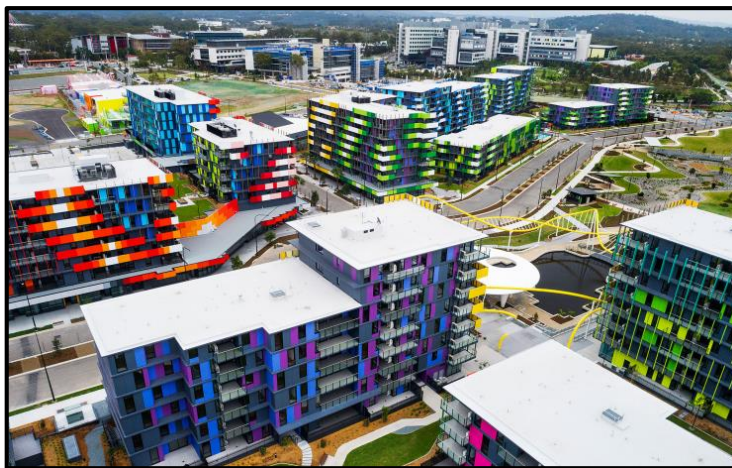


Figure 5.4: Aerial View of Smith Collective (Source: Arkhefield (undated))

Given the success of the PDA arrangement in driving development in Southport and Parklands, there is an opportunity to create a PDA around or in proximity to Gold Coast Airport to expedite the land use opportunities to be discussed in Section 6.2.4. Section 8.3.2.1 further elaborates on how the PDA can be implemented for the purpose of creating a cross-border airport city region centred around Gold Coast Airport.

5.2.4.2 Statutory Protection of Airport Operation by State Planning Policy

The QLD Government's State Planning Policy (SPP) was previously separated into several documents but has recently been consolidated into a single policy as part of the agency's state-wide planning policy reforms. The SPP outlines the state government's key interests which must be incorporated by local councils in QLD in their respective planning scheme. As such, the document, as an overarching planning framework for council planning schemes, can significantly influence land use regulations employed by local councils.

One of the five themes of state interests in the State Planning Policy is 'infrastructure', part of which is 'strategic airports and aviation facilities'. The document lists Gold Coast Airport as a 'strategic airport', thus implying that the state interests for strategic airports also apply to the CoGC's planning scheme. The QLD Government stipulates that local planning schemes must protect the ongoing operation of strategic airports and support the growth and development of the state's aviation industry (QLD Government, 2017b). As such, the majority of statutory requirements in relation to strategic airports are associated with protecting these facilities.

Nevertheless, the document specifies that any new development in an airport's vicinity must complement the airport's role as an "economic, freight and logistics hub" and maximises economic opportunities available around the airport (QLD Government, 2017b, p. 60). However, the QLD

Government does not provide further explanation on how this outcome can be achieved. Moreover, the policy does not provide specific examples or types of development that can enhance economic development opportunities around an airport. As such, although this specific requirement seeks to promote airport-enabled economic development, it is too general in its current scope and, consequently, may not lead to economically optimal land use outcomes around airports in QLD, including Gold Coast Airport.

5.2.4.3 State Government Support for Public Transport Connectivity to Gold Coast Airport in ShapingSEQ

ShapingSEQ is the official regional plan in place for the SEQ region in which the Gold Coast and Gold Coast Airport are located. Throughout the 192-page document, the QLD Government alludes to Gold Coast Airport a total of ten times. The plan highlights Gold Coast Airport as one of the five key infrastructures supporting different Regional Economic Clusters, which are locations with the highest concentration of economic activities, throughout SEQ. Specifically, the document lists Gold Coast Airport and Pacific Highway as the two “economic enabling infrastructures” for the ‘Southern Gateway’ Regional Economic Cluster⁷³ around Coolangatta, a suburb adjacent to the airport (QLD Government, 2017a). The plan notes, in its discussion on the 25-year strategic directions for Southern Gateway, the importance of extending the Gold Coast light rail corridor, which currently terminates in Broadbeach, to both Coolangatta and Gold Coast Airport for promoting economic activity in the cluster. In addition to the light rail extension, one of the strategic outcomes listed is the provision of high-frequency public transport to connect Southern Gateway and Gold Coast Airport with other key economic clusters on the Gold Coast.

ShapingSEQ, based on the discussion above, evidently demonstrates the QLD Government's recognition of the economic importance of Gold Coast Airport. The strategic directions and actions outlined in the plan illustrate the state government's support for additional public transport connectivity to Gold Coast Airport. However, beyond expressing support for public transport infrastructure for the airport, the document does not specify how the QLD Government intends to leverage the airport into promoting economic development for the Gold Coast and the broader SEQ region.

⁷³ Section 5.3.3 further explains the Southern Gateway Regional Economic Cluster.

5.2.5 LOCAL PLANNING FRAMEWORKS FOR THE GOLD COAST

The following three local planning frameworks affecting planning and development processes for Gold Coast Airport's surroundings on the Gold Coast side of the border are examined: Economic Development Strategy 2013-2023, Gold Coast Destination Tourism Management Plan 2014-2020 and the Gold Coast City Plan. The key analytical findings, discussed further below, are:

- ✈ Limited recognition of economic development opportunities associated with Gold Coast Airport in the Economic Development Strategy 2013-2023;
- ✈ Significance of Aviation access in the Gold Coast Destination Tourism Management Plan 2014-2020; and
- ✈ Lack of regulatory land use provisions for Gold Coast Airport's surroundings in the Gold Coast City Plan.

5.2.5.1 Limited Recognition of Economic Development Opportunities Associated with Gold Coast Airport in the Economic Development Strategy 2013-2023

The CoGC's economic development strategy for the Gold Coast is a 32-page document detailing the council's strategic vision and directions for promoting the city's economic development. However, throughout the document, the CoGC references Gold Coast Airport only twice. The first instance the airport is recognised in the plan is on the 'economic opportunity map' (Figure 5.5).⁷⁴

The economic opportunity map divides the Gold Coast into the northern, central and southern regions and identifies key economic opportunities throughout the LGA, one of which is Gold Coast Airport. The second mention of the airport is under 'infrastructure', one of the six themes of the plan's strategic directions. In this regard, one of the key activities to build "infrastructure that supports productivity and growth" is to "maximise economic opportunities associated with the future expansion of the Gold Coast Airport including its position as an economic gateway for freight logistics" (CoGC, 2013, p. 19). This statement illustrates the council's strategic aim to capitalise on the freight opportunities associated with the airport. However, beyond the development of the freight industry, the plan

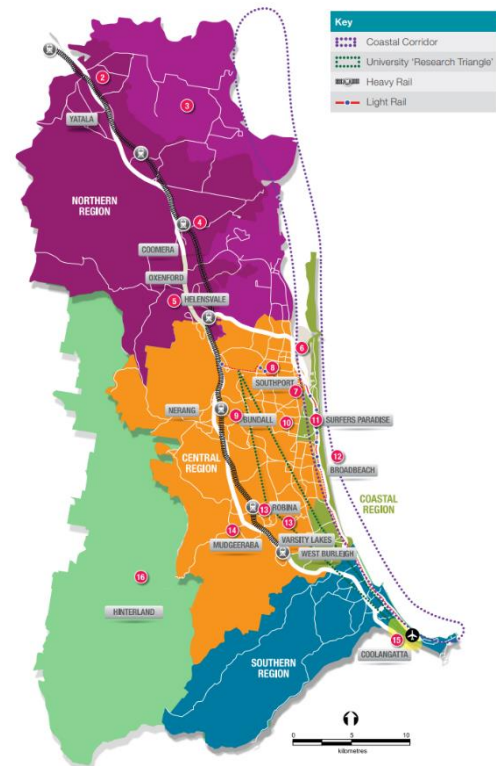


Figure 5.5: Gold Coast Economic Opportunity Map (Source: CoGC (2013))

⁷⁴ The source imagery for Figure 5.5 is used with permission from the CoGC, which retains its full copyright.

does not recognise or highlight how the council will leverage other economic opportunities that Gold Coast Airport provides such as tourism facilitation, attraction of investment and knowledge workers and businesses.

5.2.5.2 Significance of Aviation Access Significance in the Gold Coast Destination Tourism Management Plan 2014-2020

The Destination Tourism Management Plan, developed through a partnership between the CoGC, the QLD Government and Destination Gold Coast, outlines the stakeholders' strategic intent for the development of the Gold Coast's tourism industry. The 64-page document mentions 'aviation' a total of 9 times, thus illustrating the stakeholders' recognition of the role of the access provided by Gold Coast Airport in promoting the LGA's tourism industry, which is highly dependent on both domestic and international tourists alike as discussed previously in Section 4.3.2. The plan specifically highlights the "direct aviation access to the Chinese market" enabled by Gold Coast Airport as one of the five key 'growth imperatives' which are "critical to ... the Gold Coast visitor economy" (Destination Gold Coast et al., 2014, p. 8). However, the plan only makes a single reference to Gold Coast Airport. Specifically, Action 3.6 outlined in the plan seeks to "investigate the capacity for the long-term extension of the light rail to the Gold Coast Airport and connection to the heavy rail" (Destination Gold Coast et al., 2014, p. 35). Therefore, the Destination Tourism Management Plan evidently recognises the role of Gold Coast Airport in promoting the tourism sector of the Gold Coast. However, the planning framework does not specifically highlight how the airport will be leveraged in the future to further promote the Gold Coast as a tourism destination.

5.2.5.3 Lack of Regulatory Land Use Provisions for Gold Coast Airport's Surroundings in the Gold Coast City Plan

The Gold Coast City Plan, the statutory planning framework for the Gold Coast effectively functions as, designates Gold Coast Airport and its adjacent area to the north west where the Gold Coast Desalination Plant is located, with the 'Special Purpose' land use zone as shown in Figure 5.6 on the following page.

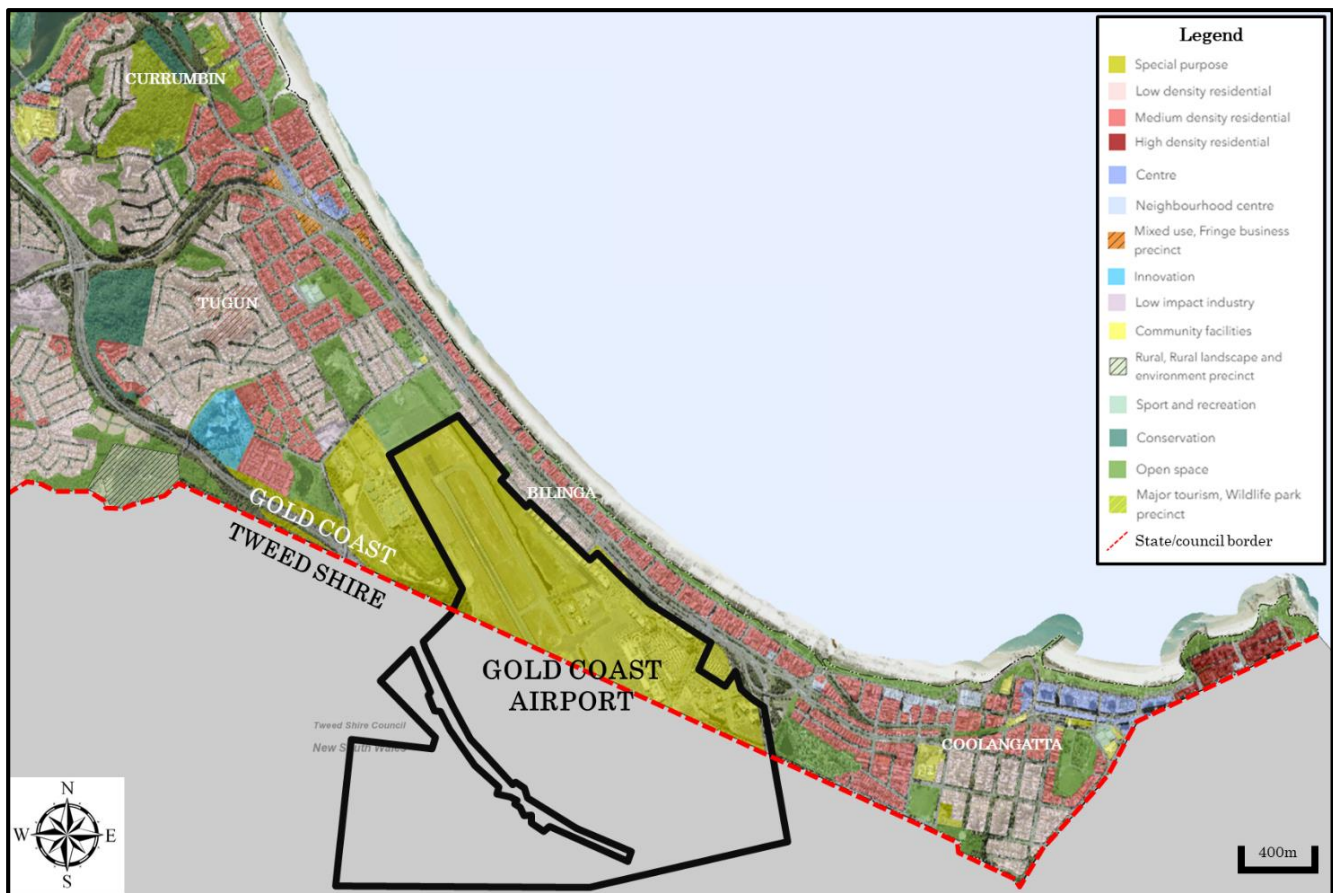


Figure 5.6: Gold Coast City Plan's Application of the 'Special Purpose' Land Use Zone to Gold Coast Airport and Its Adjacent Land⁷⁵

The Special Purpose zone is a standard zoning category applicable to areas where the City Plan does not have direct statutory influence on the planning and development processes given that they are subject to other legislation from another government agency. Gold Coast Airport has been assigned with the Special Purpose zone as the airport land is under the statutory influence of the Airports Act. The principal purpose of the Special Purpose zone is “to provide for public uses that are owned or operated by a government, statutory authority, government owned corporation, local government or private organisation in the course of a public utility undertaking, such as ... [an] airport” (CoGC, 2019b). In addition, the zone seeks to protect development within the applicable area “from encroachment by incompatible uses” (CoGC, 2019b). In terms of land uses permitted, the zone allows for the development of uses “that service the immediate workforce and complement the operation of the site” and “uses that do not compromise the intended use of the site” (CoGC, 2019b).

⁷⁵ Figure 5.6 is created and labelled by the author using satellite imagery from the City Plan interactive mapping tool (Version 7) (CoGC, undated). The imagery is used with permission from the CoGC, which retains its full copyright.

As such, the zone primarily aims to protect the operation and use of Gold Coast Airport, which is in line with the statutory requirement of the SPP previously examined in Section 5.2.4.2. However, given the land use allowance of the zone, the vacant around the Gold Coast Desalination Plant, which situates outside Gold Coast Airport's boundary, represents an economic development opportunity to create accommodation uses for workers at the airport or other uses that complement the airport's operation. Nevertheless, there is currently a lack of application of a land use zone to specifically protect and complement Gold Coast Airport in the airport's surroundings, which are currently subject to standard land use zones under the City Plan, to promote economic development contribution of the airport. As shown in Figure 5.6, Gold Coast Airport is surrounded predominantly by low-density and medium-density residential zones, which restricts the airport's prospect for spatial expansion.⁷⁶

According to urban planners #4 and #5, some of the land within Gold Coast Airport's boundary in the current version of the airport master plan is situated outside the Airports Act. As such, these land parcels, which were purchased by GCAPL, are subject to the Special Purpose zone of the City Plan. In this regard, urban planner #5 indicates that the application of "a generic Special Purpose zone around the airport ... does not let [GCAPL] to do much" in terms of possible development outcomes for the land that the organisation owns outside the Airports Act boundary. However, the urban planner reveals that there has been correspondence between GCAPL and the CoGC, which may lead to a revision of the City Plan land use zones around the airport over the next "five to ten years" to allow GCAPL to "get the growth opportunities they want". This correspondence illustrates the strong collaborative relationship between the two organisations.⁷⁷

5.2.5.4 New South Wales State Planning Frameworks

Three NSW Government planning frameworks influence the planning and development processes for Gold Coast Airport's surroundings on the NSW side of the border: Economic Development Strategy for Regional NSW, North Coast Regional Plan 2036 and three LEPs (namely, the Tweed City Centre LEP 2012, the Tweed LEP 2014 and the Tweed LEP 2000). The principal findings in relation to these planning frameworks, discussed further below, are as follow:

⁷⁶ Section 6.2.3 further examines the limited prospect for Gold Coast Airport's outward expansion.

⁷⁷ The collaborative relationship between the CoGC and GCAPL is closely investigated in Section 7.3.3.3

- ✈ Lack of strategic direction for promoting economic development contribution of airports in the Economic Development Strategy for Regional NSW;
- ✈ Extensive recognition of Gold Coast Airport in the North Coast Regional Plan 2036; and
- ✈ Lack of land use provision for Gold Coast Airport in LEPs.

5.2.5.5 Lack of Strategic Directions for Promoting Economic Development Contribution of Airports in the Economic Development Strategy for Regional NSW

The Economic Development Strategy for Regional NSW outlines the NSW Government’s strategic intent for promoting economic development in regional areas of the NSW state. Airports are stated only twice in the 85-page document, which specifies five primary economic development goals. The first mention of airports is in reference to the NSW Government’s allocation of \$127 million towards infrastructure projects, one category of which is airports, in regional NSW. The second instance, as part of Goal 3.1 to “deliver economic infrastructure,” lists “airport upgrades” as part of the \$110-million Regional Tourism Infrastructure Fund to be allocated by Infrastructure NSW (NSW Government, 2015, p. 28).

The Economy Development Strategy for Regional NSW does not outline how airports can be leveraged into economic development promotion for regional NSW. The strategic plan only briefly lists airports twice as one of the infrastructure categories that state government funding support is being allocated for. Therefore, the document, in its current format, does not establish a clear planning framework or strategic direction to promote economic development contribution from airports in regional NSW.

5.2.5.6 Extensive Recognition of Gold Coast Airport in the North Coast Regional Plan 2036

The North Coast Regional Plan is a regional plan implemented by the NSW Government to provide a 20-year planning vision and strategic directions for the NSW North Coast region where Gold Coast Airport and Tweed Shire are located. Table 5.5 below outlines the different instances where the document specifically recognises Gold Coast Airport.

Table 5.5: Recognitions of Gold Coast Airport the North Coast Regional Plan 2036 (Source: NSW Government (2017))

Page(s)	Recognition of Gold Coast Airport
10, 30 and 59	Gold Coast Airport is highlighted as a “Global Gateway” for the NSW North Coast region in three different context maps.
12	The airport is indicated as “the major international gateway to the [NSW North Coast] region.”
25	Gold Coast Airport, as a “region-shaping infrastructure,” provides NSW North Coast with opportunities to “build relationships across communities” by leveraging increasing connectivity provided by the airport’s recent expansion.

Page(s)	Recognition of Gold Coast Airport
25	The airport's upgrade through Project LIFT is acknowledged as a driver for increasing "the number of international and domestic visitors [who are] able to access the [NSW North Coast] region.
35	"An upgraded Gold Coast Airport" has provided NSW North Coast with "greater access" which will strengthen the region's economic role as a major tourism destination.
35	A 167 per cent projected increase in Gold Coast Airport passengers, from six million in 2016 to 16 million in 2036, is highlighted.
37	"Opportunities to further increase access to the Gold Coast Airport" are suggested as areas for investigation. The document notes that there is an opportunity to leverage both the airport's proximity to the NSW North Coast region and export opportunities for produce and products in the region.
38	As one of the five actions under Direction 10 ("facilitate air, rail and public transport infrastructure"), the document specifies that "airport-related employment opportunities and precincts" to take advantage of the airport's proposed expansion will be examined.
70	Gold Coast Airport is mentioned under the "Local Government Narratives" section where regional priorities and actions for promoting economic development, employment and housing for the different LGAs are outlined. In this regard, as an economic development strategy, opportunities driven by the airport are to be leveraged to "promote economic diversification and business, industrial and aviation-industry employment growth."

As shown in Table 5.5 above, Gold Coast Airport is referenced a total of 11 times in the NSW North Coast regional plan. However, these recognitions are considerably limited given that the document comprises a total of 96 pages. Additionally, only two actions, namely the final two recognitions outlined in Table 5.5, are specifically related to Gold Coast Airport. These actions, moreover, only indicate that Gold Coast Airport-related opportunities for the region will be explored at some point in the future rather than specifically outlining how the airport will be capitalised on for regional benefits. Meanwhile, eight of the other nine recognitions of Gold Coast Airport in the document only briefly acknowledge the airport as providing greater 'access' to the region. Thus, it can be observed that whilst the regional plan for the NSW North Coast region recognises the economic importance of Gold Coast Airport, the document does not illustrate clear strategic directions on how the airport's full economic development contribution potential will be capitalised on in the future.

5.2.5.7 Lack of Land Use Provision for Gold Coast Airport in Local Environmental Plans

As previously discussed in Section 4.3.3, land uses in the surroundings of Gold Coast Airport on the Tweed Shire side of the border are subject to one of the following three LEPs of the NSW Government, which function as statutory planning instruments: Tweed City Centre LEP 2012, the Tweed LEP 2014 and the Tweed LEP 2000. Figure 5.7 on the following page displays the distribution of land use zones under the three instruments.

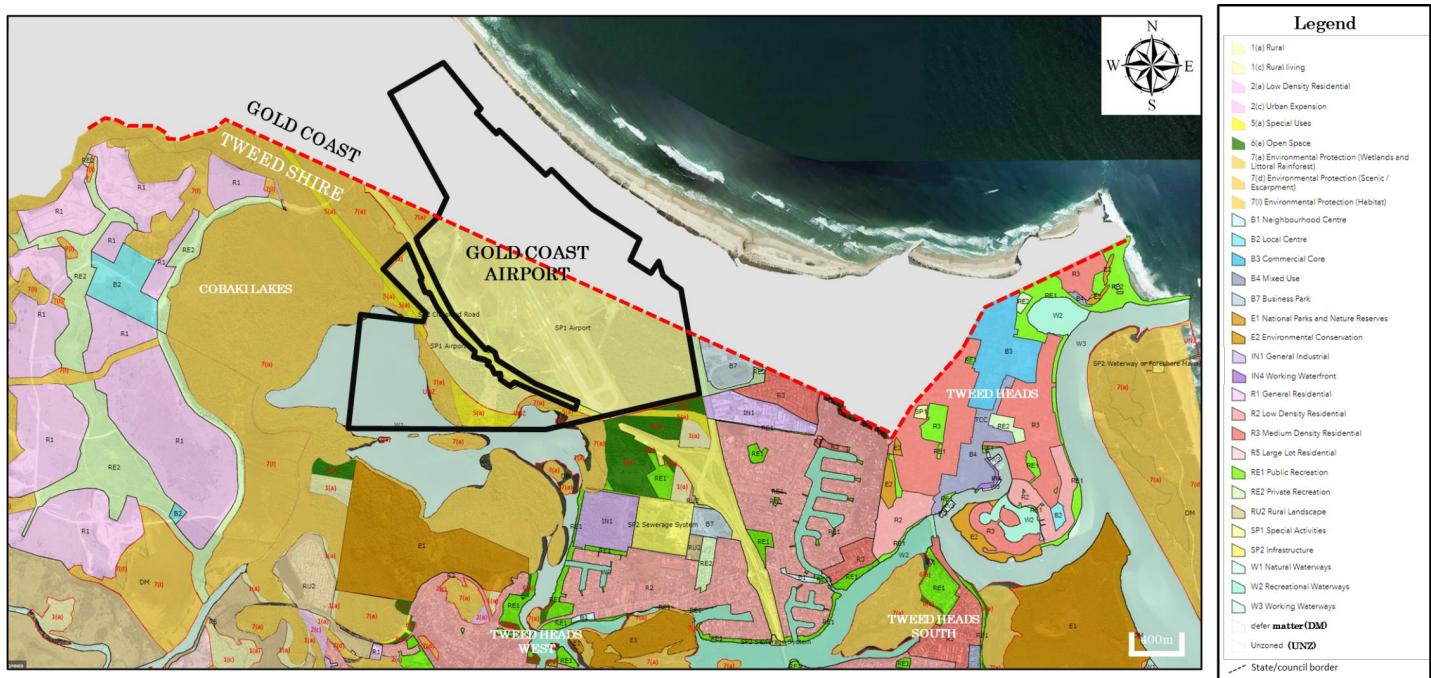


Figure 5.7: Land Use Zoning Regulation around Gold Coast Airport on the Tweed Shire Side of the Border⁷⁸

⁷⁸ Figure 5.7 is created and labelled by the author with satellite imagery from the Tweed Online Mapping tool (Tweed Shire Council, undated-c). The satellite imagery is used with permission from Tweed Shire Council, which retains its full copyright.

As shown in Figure 5.7, similarly to the Gold Coast side of the border, the majority of land use zones around Gold Coast Airport are low-density or medium-density residential. The airport is immediately adjoined by protected nature reserves to the west and south where urban development is not permitted. There is no specific land use zone specifically created to complement and capitalise on Gold Coast Airport's activities. As such, the current land use zoning regulation around Gold Coast Airport restricts both the airport's expansion prospect and the opportunity to facilitate development that promotes economic development contribution from the airport such as retail and freight uses.

Gold Coast Airport has been designated with the 'SP1' or 'Special Activities' zone under the Tweed LEP 2014. The principal objective of this zone is facilitate the following development outcomes: "special land uses that are not provided for in other zones ... sites with special natural characteristics that are not provided for in other zones ... [and] development that is in keeping with the special characteristics of the site or its existing or intended special use, and that minimises any adverse impacts on surrounding land" (NSW Government, 2020d). However, in contrast to the Gold Coast where the Special Purpose zone applies to both Gold Coast Airport and part of its surroundings, the SP1 zone applies only to the airport land where land uses are regulated under the Airports Act. Therefore, the SP1 zone is not conducive to promoting airport-compatible land uses around Gold Coast Airport, thus implying a loss of opportunity to promote economic development contribution of the airport through land use planning.

The Tweed City Centre LEP 2012 is accompanied by an 80-page strategic plan titled 'Tweed City Centre Plan Vision'. Although the vision document extensively references the Gold Coast, thus demonstrating the cross-border recognition of the NSW Government,⁷⁹ there is no single mention of Gold Coast Airport in the strategic plan, thus illustrating the lack of strategic direction for the CBD to capitalise on its proximity to Gold Coast Airport for promoting economic development.

The analysis above illustrates that the existing statutory planning instruments for land uses around Gold Coast Airport have made no provisions to capitalise on the potential economic development contribution from the airport. The airport is only assigned with a standard Special Purpose land use zone, which does not have any statutory influence on the airport due to being superseded by the Airports Act.

⁷⁹ Section 5.3.5 further examines the cross-border recognition of the Tweed City Centre Plan Vision and other strategic plans for Tweed Shire.

5.2.6 LOCAL PLANNING FRAMEWORKS FOR TWEED SHIRE

The following three local planning frameworks, which influence planning and development processes for both Gold Coast Airport's surroundings and the broader Tweed Shire LGA, are analysed: Tweed Shire Economic Development Strategy, Destination Management Plan 2018-2030 and local bylaws. The key findings in relation to these planning frameworks, which are further elaborated below, are:

- ✈ Clear intent to leverage the Gold Coast and Gold Coast Airport in the Tweed Shire Economic Development Strategy;
- ✈ Extensive recognition of economic development opportunity associated with Gold Coast Airport in the Destination Management Plan 2018-2030; and
- ✈ Restriction of local bylaws on Tweed Shire's agritourism opportunities.

5.2.6.1 Clear Intent to Leverage the Gold Coast and Gold Coast Airport in the Tweed Shire Economic Development Strategy

The Tweed Shire Economic Development Strategy Gold Coast Airport is mentioned a total of 13 times in this 40-page document. The plan is underpinned by seven "economic development pillars," one of which is "leveraging from Tweed's geographic location" and has the following vision (Ruzzene, 2014, p. 27):

Tweed Shire effectively **leverages off its strategic location in proximity to the Gold Coast Airport and South East Queensland** through attraction of investment and growth in targeted sectors. (emphasis added)

The economic development strategy indicates that Tweed Shire is "exceptionally well located on the fringe to the Gold Coast City Region, one and a quarter hours from Brisbane and two minutes to the Gold Coast Airport" (Ruzzene, 2014, p. 27). Moreover, the Pacific Highway is noted as a major transport infrastructure connecting Tweed Shire to the Gold Coast, Gold Coast Airport and Brisbane. The highway is indicated in the economic development strategy as an opportunity to further leverage these destinations into promoting economic development for Tweed Shire.

Given its strategic location, Tweed Shire Council intends to not only promote Tweed Shire as "an attractive place for investment" but also instigate growth in specific industries "that can leverage off the proximity to [Gold Coast] Airport and South East Queensland" (Ruzzene, 2014, p. 27). Three key projects are outlined under this economic development objective. Firstly, a feasibility study will be conducted to assess the need and opportunities for a transport and freight hub to take direct advantage of the Gold Coast Airport's air freight potential. Secondly, another feasibility study will be undertaken on the potential development of a masterplanned "education, research and business park" on a greenfield site, taking advantage of proximity to Gold Coast Airport and the SCU campus"

(Ruzzene, 2014, p. 27). Lastly, the supply and quality of industrial and commercial land will be continually monitored to ensure future growth in different industries is adequately accommodated. The first two projects are directly aimed at capitalising on the location of Gold Coast Airport on the northern end of Tweed Shire's border.

Overall, the strategic plan evidently recognises the economic development opportunity associated Tweed Shire's location adjacent to both the Gold Coast and Gold Coast Airport. In this regard, the strategy demonstrates Tweed Shire Council's clear intent to leverage both the airport and the Gold Coast into promoting economic development for the Tweed Shire LGA.

5.2.6.2 Extensive Recognition of Economic Opportunity Associated with Gold Coast Airport in the Destination Management Plan 2018-2030

Tweed Shire Council recently contracted the Tweed Tourism Company as the official body responsible for developing the tourism industry in Tweed Shire. In late 2019, the organisation developed a Destination Management Plan 2018-2030 document as a strategic plan to further promote the LGA as a tourism destination. The 46-page document references Gold Coast Airport seven times. The plan notes an issue where "the Tweed's share of international visitation ... is surprisingly low, given the size of the market in the neighbouring LGAs and the proximity to Gold Coast Airport" (The Tweed Tourism Company, 2019, p. 12). The emphasised part of the quoted statement specifically refers to the Gold Coast and Byron Shire, which both receive a significant number of international visitors. Specifically, the plan highlights that out of Tweed Shire's 1,880,000 visitors in 2018, only 24,000, or 1.28 per cent, of these were international overnight visitors. The plan highlights this issue as an area of high priority focus where "Tweed must improve this [international overnight visitor] figure with a focused effort and investment" (The Tweed Tourism Company, 2019, p. 11).

One of the "key actions to consider" listed in the document is to "create a strategic partnership with Gold Coast Airport targeting high yield export markets with connections via Gold Coast Airport" (The Tweed Tourism Company, 2019, p. 18). This statement is in line with the findings on opportunities for produce exports via the airport to be further discussed in Section 6.4.1.4. The plan also highlights the following strategic intent as part of its discussion on promoting Tweed Shire as an attractive destination to visitors (The Tweed Tourism Company, 2019, p. 22):

Given the location and proximity of Gold Coast Airport, long-term strategic priorities need to focus on developing both the demand in high yielding export and domestic markets that are drawn to our core attributes and experiences. (emphasis added)

The quote illustrates strong recognition of Gold Coast Airport as an economic enabler to promote Tweed Shire as a visitation destination to both domestic and international tourists alike. The plan also states that “with Gold Coast Airport located so close, the Tweed is very well placed to develop the medium sized conference market with investment in infrastructure” (The Tweed Tourism Company, 2019, p. 27). This statement, which is consistent with the opportunity to promote Tweed Shire’s conferencing industry to be examined in Section 6.4.3.2, demonstrates the organisation’s recognition of the prospect of leveraging the airport into fostering the LGA’s conferencing industry.

Lastly, the plan lists collaboration with Gold Coast Airport “to grow New Zealand and other key markets” of tourists for the Tweed Shire region as a strategic action (The Tweed Tourism Company, 2019, p. 42). This statement implies TSC’s intent on collaboration with the airport in marketing Tweed Shire to domestic and international markets.

As shown in the discussion above, the Destination Management Plan 2018-2030 extensively recognises the economic opportunity to leverage Tweed Shire’s proximity to Gold Coast Airport for promoting the LGA as a tourism and conferencing destination. The plan clearly incorporates Gold Coast Airport into its strategic intent, directions and actions and specifies collaboration with the airport as being key for developing the region’s tourism and conferencing industries. Therefore, the plan is highly conducive to promoting economic development contribution of Gold Coast Airport for the Tweed Shire region in the future.

5.2.6.3 Restriction of Local Bylaws on Tweed Shire’s Agritourism Opportunity

Agritourism⁸⁰ is indicated by the local chamber of commerce representative as one of the long-term, ongoing airport-driven markets for Tweed Shire. In this market, Working Holiday (subclass 417) Visa holders can engage in three months, or at least 88 days, of agricultural work in a regional area to become eligible for a second Working Holiday visa once their first visa, which is valid for one year, expires. Table 5.6 on the following page illustrates the number of first and second Working Holiday visa applications granted since the 2014-2015 financial year.

⁸⁰ Agritourism, which traditionally referred to farm stays and visits to vineyards, broadly encompasses several activities involving both agriculture and tourism. It involves visiting a farm or a food-related business for the purpose of education, enjoyment or participation in an activity or event (Australian Regional Tourism Limited, undated).

Table 5.6: Number of First and Second Working Holiday (Subclass 417) Visas Granted from 2014-2015 to 2018-2019 (Source: Department of Home Affairs (2019))

Financial Year	Total Number of First Working Holiday Visas	Total Number of Second Working Holiday Visas	Percentage of First Visa Holders Being Granted with a Second Visa ⁸¹ (%)
2014-2015	173,491	41,339	N/A
2015-2016	159,409	36,264	20.9
2016-2017	157,858	34,097	21.4
2017-2018	152,622	32,828	20.8
2018-2019	142,805	37,418	24.5

Table 5.6 shows a consistent trend of 20.9 to 24.5 per cent of first Working Holiday visa holders who applied and were granted with a second Working Holiday visa. Thus, there has been a steady level of demand for agricultural work in Australia. This implies a major economic opportunity to Tweed Shire, a LGA where agriculture plays an important role in the economy, given the accessibility of the region provided by Gold Coast Airport. According to the interviewee, there has been a considerable amount of interest for agricultural work in Tweed Shire from Working Holiday visa holders, particularly those from Singapore and Malaysia. However, Tweed Shire Council's bylaws do not permit farm owners in Tweed Shire to engage overseas workers in agricultural employment as shown in the following quote:

The market is there [for overseas agricultural workers to be employed in Tweed Shire]. [Gold Coast Airport] enables [and] facilitates [agritourism]. **Council is the blockage**, so it is about changing those plans, changing policy **[and creating a] paradigmatic shift in the thinking of council to be from roads and rubbish to [become] an economic enabler**. – local chamber of commerce representative (emphases added)

Therefore, Tweed Shire Council's statutory planning framework is currently preventing a major agritourism opportunity from being exploited in the Tweed Shire region. The quote above illustrates the need for the council to become more proactive in economic development planning by revising its planning regulations to not only permit but also facilitate, rather than prohibit, agritourism arrangements for overseas workers. Doing so will allow Tweed Shire Council to proactively promote economic development in the Tweed Shire region and capitalise on the accessibility provided by Gold Coast Airport.

⁸¹ The percentage figures are calculated by dividing the number of second Working Holiday visas granted in each financial year by the number of first Working Holiday visas granted in the previous financial year. First Working Holiday visa holders need to stay in Australia first for up to one year prior to being eligible for their second Working Holiday visa.

5.3 CROSS-BORDER PLANNING FRAMEWORKS

5.3.1 OVERVIEW

Section 5.3 addresses research sub-question #2.2, “How do cross-border planning frameworks affect Gold Coast Airport’s economic development contribution?” To do so, the existing cross-border planning policies in place at both the state and local government levels on both sides of the border are comprehensively examined in terms of how they potentially affect Gold Coast Airport’s economic development contribution.

Cross-border planning is particularly important for the cross-border region of SEQ and FNC across which Gold Coast Airport situates. SEQ is not only one of the most populous and fastest growing regions in Australia, but also home to the ‘200 Kilometre City’ as discussed in Section 4.2.2. As the 200 Kilometre City, encompassing Sunshine Coast, Brisbane and the Gold Coast, continues to experience growth and outward expansion, the cross-border relationship between SEQ and the neighbouring FNC will become even more critical to the prosperity of both regions.

Gold Coast Airport is located across not only the two LGAs of Tweed Shire and the Gold Coast, but also the two state jurisdictions of NSW and QLD. According to urban planner #1, the airport’s cross-border location implies that it generates significant cross-border economic outcomes for both the Gold Coast and Tweed Shire, the SEQ and FNC regions and the broader states of QLD and NSW. As such, the urban planner argues that there is potential for the airport to generate “enhanced benefit to the local community, regionally, state-wide and to the point of being a nationally significant piece of infrastructure.” In this regard, cross-border planning frameworks can lead to greater economic development contribution from Gold Coast Airport to both sides of the border.

However, the border emerges as a key limitation to Gold Coast Airport’s economic development contribution. The following four cross-border planning issues, which undermine the airport’s potential economic contributions and are further discussed below, are discovered:

- ✈ Exclusion of Gold Coast and Tweed Shire in Council of Mayors SEQ;
- ✈ Uneven cross-border planning commitments from QLD and NSW governments;
- ✈ Cross-border separation of land use regulation; and
- ✈ Contrasting cross-border recognitions in planning frameworks.

5.3.2 EXCLUSION OF GOLD COAST AND TWEED SHIRE FROM COUNCIL OF MAYORS SEQ

The Council of Mayors SEQ (COMSEQ) is an independent local government advocacy organisation established in 2005 “to represent the interests of one of the nation’s fastest growing regions – South East Queensland” (COMSEQ, 2020a). To date, the organisation, which comprises nine out of 12 local councils from the SEQ region, has implemented several initiatives to advance the SEQ region, some of which are outlined in Table 5.7 below.

Table 5.7: Recent Initiatives Driven by COMSEQ (Source: COMSEQ (2020b))

Initiative	Year	Description
SEQ COVID-19 Relief Portal	2020	An online information portal where users can search for an up-to-date list of relief measures and economic stimulus packages provided by the different local governments
2032 SEQ Olympic and Paralympic Games Feasibility Study	2020	A study investigating “whether an Olympic Games bid could be a catalyst to expedite infrastructure delivery, boost the economy and significantly raise the [SEQ] region’s profile on the international stage” (COMSEQ, 2020b)
Transforming SEQ – The SEQ City Deal Proposition	2019	A funding partnership between the Australian, Queensland and local governments to drive long-term investment and economic growth in the SEQ region and position the region as a “high-performing polycentric city region” (O’Hare, 2019, p. 2090)
SEQ People Mass Movement Study	2019	A strategic transport planning document for the region
SEQ Food Trails	2018	An online platform where users can share their food experiences throughout the region

However, the CoGC and Tweed Shire Council are not part of COMSEQ (O’Hare, 2019). Consequently, the recently proposed SEQ City Deal partnership is highly lacking in terms of cross-border recognition (O’Hare, 2019, p. 2090). The proposal, as part of COMSEQ’s initiatives, only makes a single reference to the state border as a southern end of the SEQ region and does not recognise the opportunity to facilitate the creation of a cross-border city region (COMSEQ & Queensland Government, 2019, p. 8; O’Hare, 2019). Nevertheless, it was announced on in early 2020 that the CoGC would re-join the organisation from 1 July 2020 (COMSEQ, 2020c; Pavitt, 2020), which could lead to future implications on cross-border planning for both the Gold Coast-Tweed Shire region and Gold Coast Airport’s economic development contribution.

5.3.3 UNEVEN CROSS-BORDER PLANNING COMMITMENTS FROM QUEENSLAND AND NEW SOUTH WALES GOVERNMENTS

Although the CoGC and Tweed Shire Council have not been participating in COMSEQ, some collaboration exists across the two councils. In this regard, an agreement between the two councils is currently in place to facilitate bi-monthly meetings between their strategic planning teams to

coordinate planning matters. In reality, however, such communications occur less frequently (O'Hare, 2019). At the state level, the existing cross-border planning arrangement for the SEQ-FNC region is currently “significantly under-developed, particularly from the Queensland side” (O'Hare, 2019, p. 2090). This section examines the uneven cross-border planning commitments from the two state governments

5.3.3.1 Memorandum of Understanding for Cross-border Collaboration

A MoU for cross-border collaboration, titled ‘Queensland and New South Wales Statement of Principles and Priorities for Cross-border Collaboration 2016-2019’ (Figure 5.8),⁸² currently exists between the QLD and NSW governments (O'Hare, 2019).

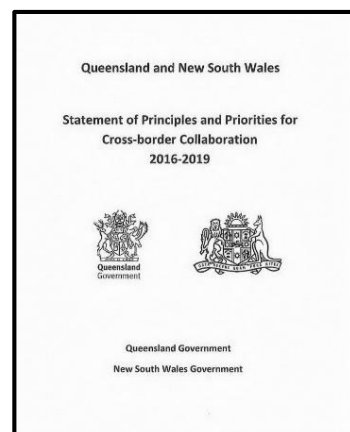


Figure 5.8: Cross-Border MoU between QLD and NSW Governments (Source: QLD Government and NSW Government (2017))

Table 5.8 below lists and describes the four key focus areas specified in the QLD-NSW MoU.

Table 5.8: Four Focus Areas of the QLD-NSW Cross-Border MoU (Source: QLD Government and NSW Government (2017))

Focus Area	Description
Regional economic development	<ul style="list-style-type: none"> ✈ Facilitation of access to businesses and services in towns near the state border by both Queensland and NSW residents ✈ Cross-border collaboration in terms of “planning, infrastructure, connectivity and regional governance” (QLD Government & NSW Government, 2017, p. 3)
Aligning services and sharing information	<ul style="list-style-type: none"> ✈ Equitable access to services across the border for residents by alignment of services provided by both state governments ✈ Enhanced cross-border sharing of information between agencies to provide appropriate services to families working, living or relocating across the border
Local transport	<ul style="list-style-type: none"> ✈ Seamless local public transport system for residents of cross-border communities
Issues of national significance	<ul style="list-style-type: none"> ✈ Protection of domestic and family violence victims ✈ Consistent waste management practices ✈ Implementation of the National Disability Insurance Scheme

⁸² The source imagery for Figure 5.8 is used under the CC BY 4.0 license (Creative Commons, undated-b; QLD Government, 2021b).

Despite the existence of the cross-border MoU, the two state governments have displayed “starkly contrasting levels of commitment” to the MoU through their respective state regional plans (O'Hare, 2019, p. 2091), which are further discussed below.

5.3.3.2 South East Queensland and New South Wales North Coast Regional Plans: Uneven Cross-border Considerations

Although the regional plans were implemented shortly after the MoU was renewed in 2017, ShapingSEQ has not addressed the MoU's four focus areas adequately. According to O'Hare (2019, p. 2091), the plan “largely ignores” the SEQ-FNC border, and only briefly recognises the cross-border aspect of the SEQ region through the following:

- ✈ Acknowledgement of opportunities for the NSW North Coast region to capitalise on the rapid population growth and employment market of SEQ;
- ✈ Recognition of the potential of the Gondwana Rainforests, a World Heritage asset spanning the state border, to contribute to SEQ's tourism industry;
- ✈ Awareness that infrastructure upgrades can further connect the SEQ and FNC regions, thus increasing access to recreation and employment and strengthening the flow of knowledge, goods and services; and
- ✈ Designation of a district spanning across the SEQ-FNC border as a ‘Regional Economic Cluster’, which refers to an area that “demonstrates synergies across important economic and employment areas” (QLD Government, 2017a, p. 58).

With several Regional Economic Clusters assigned throughout the region, the border-spanning cluster is termed ‘Southern Gateway’ and encompasses Gold Coast Airport, Coolangatta, Bilinga and parts of Tweed Heads as illustrated in Figure 5.9 on the following page.



Figure 5.9: ‘Southern Gateway’ Regional Economic Cluster under ShapingSEQ (Source: QLD Government (2017a))⁸³

ShapingSEQ describes Southern Gateway as an “emerging Regional Economic Cluster” which provides services across different industries including health (through John Flynn Hospital, the Tweed Hospital and other medical specialists), tertiary education (through a SCU campus), manufacturing (based on aviation industries with Gold Coast Airport as the key enabler), and tourism (through tourist attractions based around beaches situated at Bilinga and Coolangatta) (QLD Government, 2017a, p. 142). The plan recognises opportunities to increase cross-border trade given that Tweed Shire residents can and do use various services located in Bilinga and Coolangatta. In this regard, an extension of the Gold Coast light rail infrastructure to both Gold Coast Airport and Coolangatta is acknowledged as an accelerator of economic activity in the Southern Gateway.

Although ShapingSEQ designates Gold Coast Airport as a ‘strategic airport’ for the SEQ region, in contrast to several other airports such as Brisbane Airport and Cairns Airport which are both noted as impacting three LGAs each, the document only lists the Gold Coast as the only LGA impacted by the airport. The exclusion of Tweed Shire, which is located immediately adjacent to both the Gold Coast and Gold Coast Airport, illustrates the QLD Government’s lack of cross-border considerations for the airport’s economic significance.

⁸³ The source imagery for Figure 5.9 is used under the CC BY 4.0 license (Creative Commons, undated-b; QLD Government, 2021b).

On the contrary, the North Coast Regional Plan 2036, the regional plan for the FNC and its neighbouring regions, encompasses cross-border planning substantially more than ShapingSEQ does (O'Hare, 2019). Part of the plan's Vision statement specifies the following (NSW Government, 2017, p. 8):

Northern communities have established important links and are integrated with a burgeoning South East Queensland. Hinterland and rural communities are making the most of the increasing global demand for their high-quality agricultural products. **Southern and coastal communities are building relationships and leveraging opportunities from the Pacific Highway upgrade.** (emphases added)

The emphasised parts of the quoted Vision statement above illustrate the NSW Government's recognition of the opportunities presented by the FNC's adjacent location to SEQ, and the importance of the Pacific Highway in terms of linking the FNC and SEQ regions together. As part of its discussion on leveraging the Pacific Highway, the plan outlines several "cross-border opportunities with South East Queensland," including the following (NSW Government, 2017, p. 12):

- ✈ Cross-border access, enabled by the Pacific Highway, provides the FNC and the broader North Coast region with an opportunity to provide housing, jobs, tourism and recreation activities to service the increasing demand from SEQ's rapid population growth;
- ✈ Gold Coast Airport's function as the "major international gateway" to the FNC and the broader North Coast region; and
- ✈ The expansions of Gold Coast Airport and Toowoomba Wellcamp Airport, which present the FNC and the broader North Coast region with "new tourism and freight movement opportunities."

In addition, the plan's fifth direction (out of a total of 25 directions), as part of the second of the four goals to achieve "a thriving, interconnected economy," is to "strengthen communities of interest and cross-regional relationships" (NSW Government, 2017, p. 25). The direction is associated with the following four key actions:

- ✈ Cross-border collaboration on the provision of residential and employment land and industry development;
- ✈ Integration of cross-border land use planning and removal of restrictions on economic, housing and jobs growth;
- ✈ Ongoing collaboration and land use planning between the CoGC and Tweed Shire Council; and
- ✈ Preparation of a regional economic development strategy which underpins economic growth opportunities.

As shown in the list above, three out of the four actions directly incorporate cross-border planning considerations. Figure 5.10 on the following page illustrates a strategy map for the FNC region under the North Coast Regional Plan 2036.

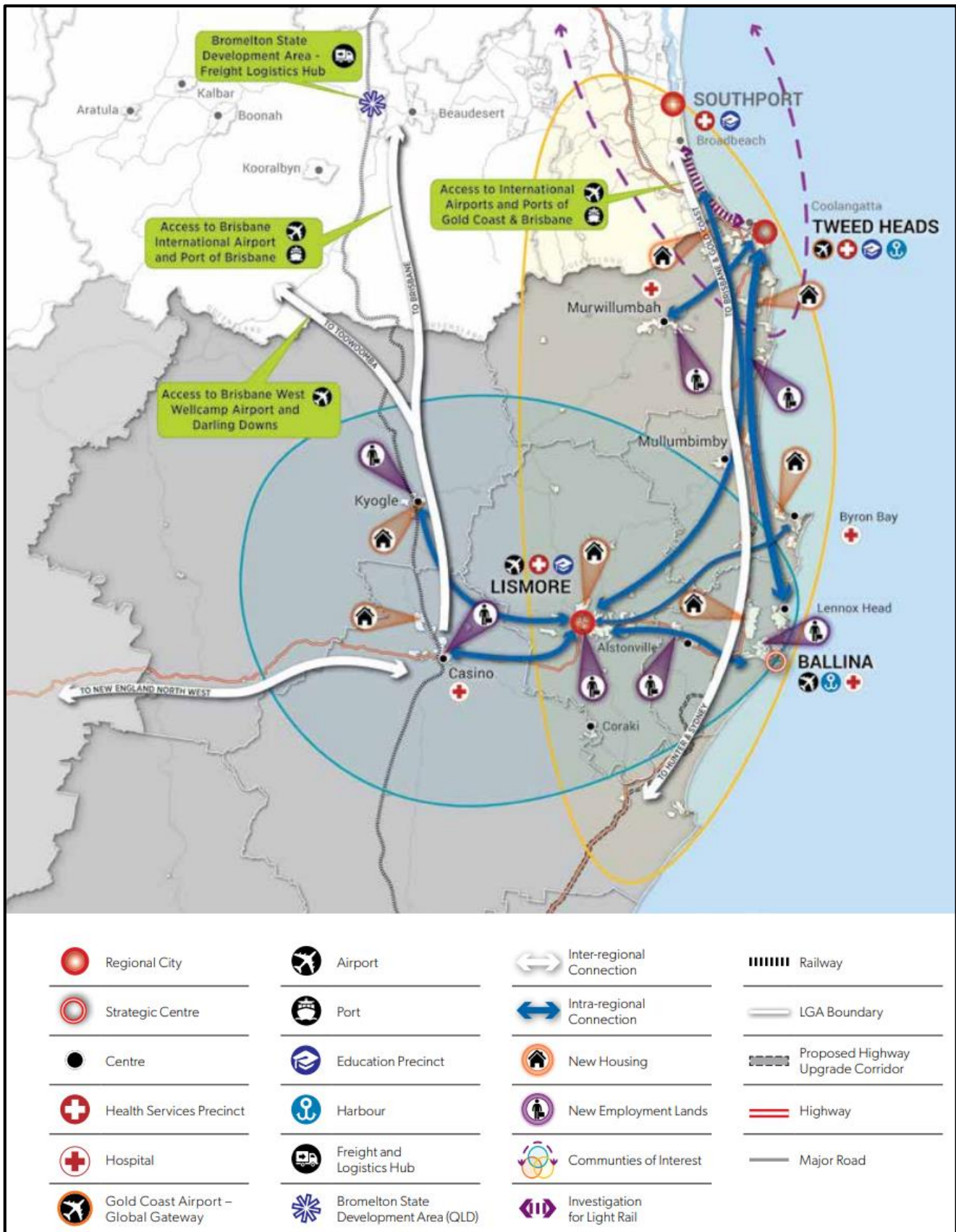


Figure 5.10: Strategic Context Map for the Far North Coast Region in the North Coast Regional Plan 2036 (Source: NSW Government (2017))⁸⁴

As illustrated in Figure 5.10, the plan considers several cross-border opportunities associated with the SEQ region, including:

- ✈ Inter-regional connection via the Sydney-Brisbane railway corridor,⁸⁵ which links with the new Bromelton freight logistic hub⁸⁶
- ✈ Coastal, inter-regional connection via the Pacific Highway to the Gold Coast, two international airports (Brisbane Airport and Gold Coast Airport) and Port of Brisbane;
- ✈ Recognition of the potential Gold Coast light rail extension from Broadbeach to Coolangatta;
- ✈ Inclusion of parts of the Gold Coast as part of two out of three 'communities of interest' – one comprising Tweed Heads and the Gold Coast and the other comprising the Gold Coast and the FNC region's coastal LGAs;
- ✈ Recognition of the Southport CBD of the Gold Coast as a 'Regional City' and its additional roles as a 'Health Services Precinct' and an 'Education Precinct'

The analysis above illustrates that there are significant differences in how the QLD and NSW governments incorporate cross-border planning into their respective regional plans for SEQ and North Coast NSW. The QLD Government has scarcely acknowledged the importance of the cross-border relationship SEQ has with the neighbouring FNC region. On the other hand, the NSW Government has evidently recognised cross-border opportunities available to the FNC and the broader North Coast region from not only the SEQ region, but also the Pacific Highway. Whilst the NSW Government "acknowledges [the] importance" of cross-border collaboration, the QLD Government "downplays it" (O'Hare, 2019, p. 2091). Although cross-border recognitions are evident in both text and mapping formats in the North Coast Regional Plan 2036, they are significantly limited in ShapingSEQ.

5.3.3.3 NSW Cross-Border Commissioner

As previously discussed in Section 2.6.4, the NSW Government established an Office of the NSW Cross-border Commissioner in 2012 to identify and address issues affecting cross-border communities in NSW. The NSW Cross-border Commissioner, appointed in 2014, in conjunction with the QLD Government and local councils, will "integrate cross-border servicing and land use planning to remove any barriers to economic, housing and jobs growth (NSW Government, 2017, p. 12). The NSW Cross-border Commissioner has recognised several key cross-border issues affecting residents and businesses located in the cross-border region. These include time zone differences due to daylight

⁸⁴ The source imagery for Figure 5.10 is used under the CC BY 4.0 license (Creative Commons, undated-b; NSW Government, 2020b).

⁸⁵ The Sydney-Brisbane railway corridor is part of the national standard-gauge rail network.

⁸⁶ The Bromelton freight logistic hub is part of the Bromelton State Development Area (SDA), a 15,610-hectare precinct located in Beaudesert along the national standard-gauge rail network. In addition to housing a freight hub, the site is home to several high-impact, rail-dependent industries and will have 1800 additional hectares of land developed for future industrial uses (QLD Government, 2020a).

saving time in summer, different trade licenses and registrations across the border, policing and legal differences, fees and costs, transport, healthcare, education, community services, tourism, environment and emergency responses. These issues are addressed in the North Coast Regional Plan 2036, which also specifies the NSW Cross-border Commissioner as “a key agent in achieving the Plan’s cross-border outcomes” (O’Hare, 2019, p. 2082). Meanwhile, on the QLD side of the border, no department or commissioner has been appointed by the QLD Government to directly manage cross-border matters. A Tweed Shire councillor has recently advocated for a cross-border commissioner to be appointed by the QLD Government as “a matter of urgency” (Halloran, 2020). The commissioner appointment is being requested to address several cross-border issues affecting Gold Coast and Tweed Shire residents living near the state/council border, which have been exacerbated by the border restrictions associated with the COVID-19 pandemic.

Based on the analysis above, the majority of existing cross-border initiatives for the SEQ-FNC region are evidently being driven by the NSW Government whereas the QLD Government has displayed limited commitment to cross-border planning in its regional plan for SEQ. Nevertheless, the QLD Government is currently collaborating with the NSW Government to renew the cross-border MoU (QLD Government, 2020d).

5.3.4 CROSS-BORDER SEPARATION OF LAND USE REGULATION

A major cross-border issue articulated by several of the interviewed urban planners stems from the separation of local government planning policies across the state/council border. A quote below illustrates the impact of such an urban governance arrangement:

That [state] line on the map means nothing to tourists [and] to many business people, **but to policy and [urban] planners, it means everything – nothing can cross it.** – local chamber of commerce representative (emphasis added)

The quote above indicates that the two local councils have not collaborated sufficiently in cross-border policy planning. In this regard, the agencies’ planning policies only extend to the state/council border and do not consider their compatibility with the planning agenda of the other state and local governments. On the statutory side, the cross-border separation of planning is visually evident from the voids shown in the CoGC and Tweed Shire Council’s land use zoning maps for the area surrounding Gold Coast Airport, which are previously analysed in Section 4.4.3.1 and shown in Figure 5.11 on the following page.

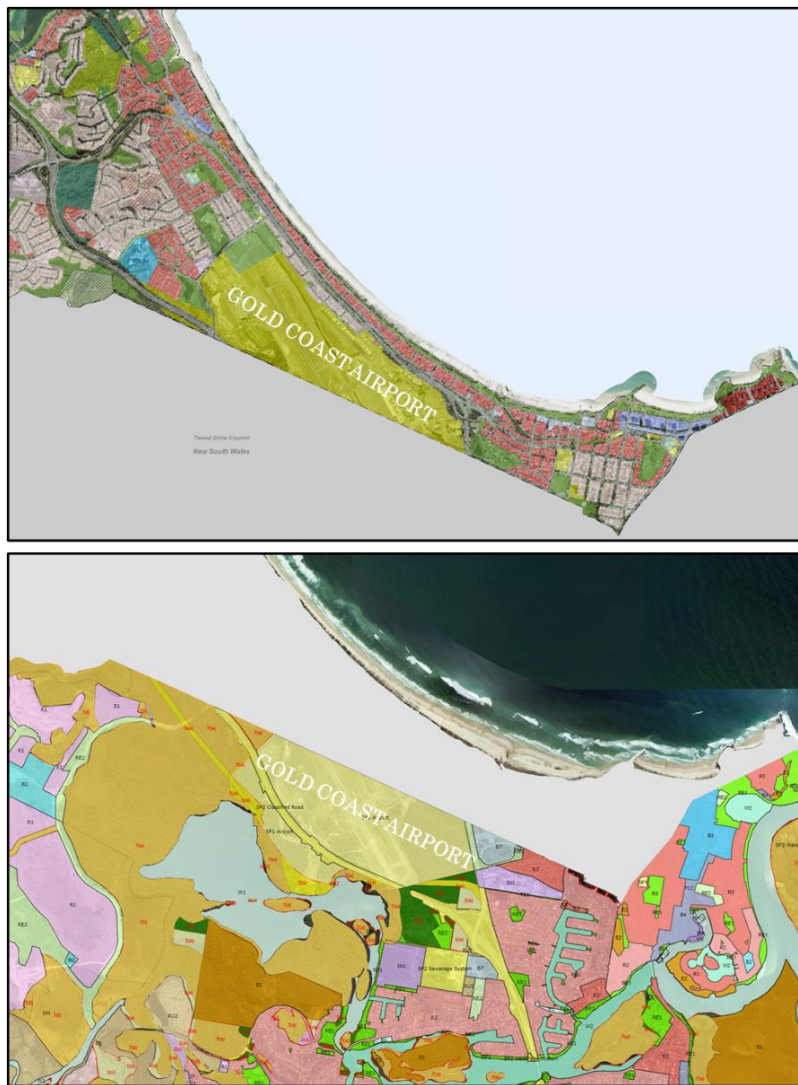


Figure 5.11: Council Land Use Maps of Gold Coast Airport's Surroundings⁸⁷

Figure 5.11 above illustrates that there is no formal recognition of the planning policies across the border as the LGA beyond the border is simply greyed out in the land use maps. As briefly mentioned previously in Section 4.4.3, the two local councils use different land use zone codes for their respective jurisdiction in the cross-border area around Gold Coast Airport. Figure 5.12 on the following page illustrates the different land use zone codes utilised by the CoGC and Tweed Shire Council around Gold Coast Airport.

⁸⁷ Figure 5.11 is created and labelled by the author using satellite imagery from the City Plan interactive mapping tool (Version 7) (CoGC, undated) and the Tweed Online Mapping tool (Tweed Shire Council, undated-c). The imagery has been used with permission from the CoGC and Tweed Shire council, which retain its full copyright.

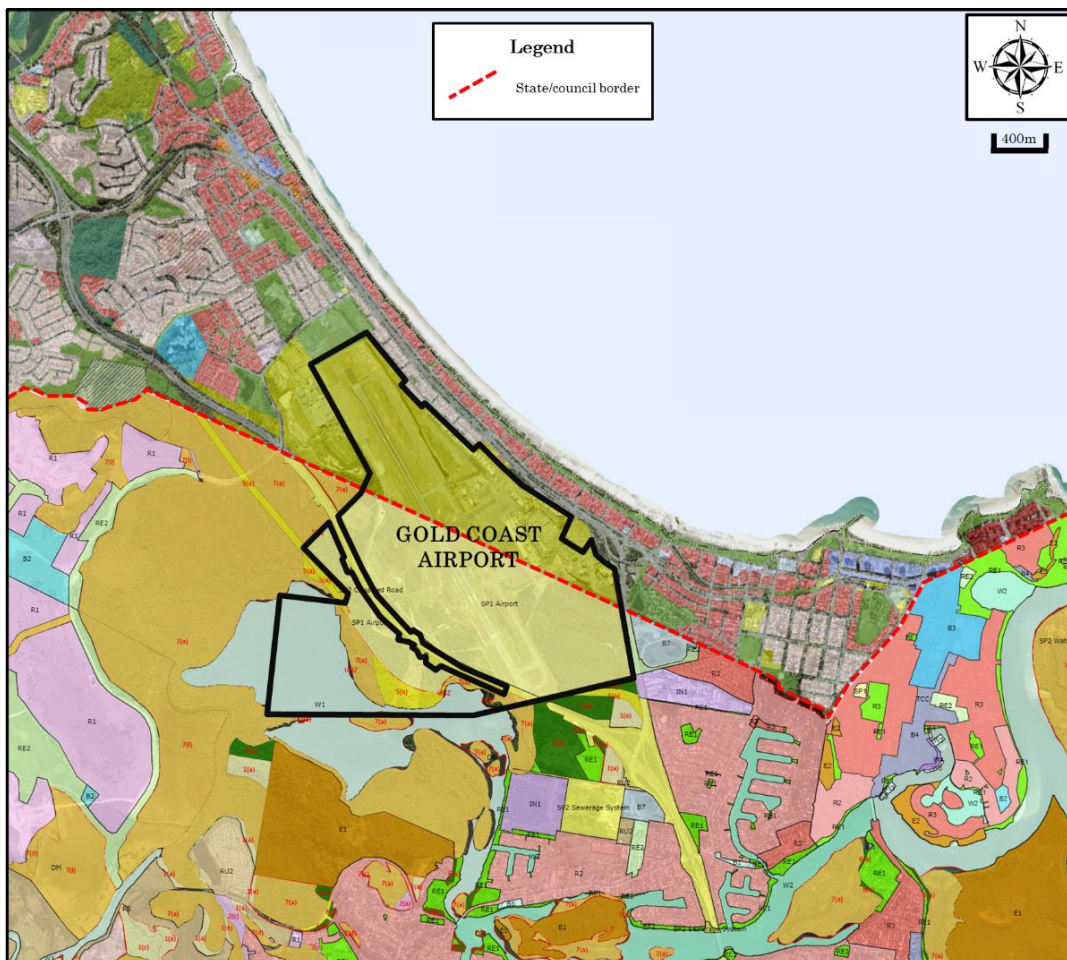


Figure 5.12: Separation of Planning Processes and Regulations around Gold Coast Airport⁸⁸

A direct consequence of having two different sets of land use regulations from two local governments is the resulting high level of complexity associated with development activities involving several sites on both sides of the border by a private development company. This outcome can act as a major barrier to new development projects in proximity to Gold Coast Airport. According to urban planner #6, the rules and regulations imposed by the different state and local government agencies are “the biggest constraint” for GCAPL in relation to its planning and development activities for Gold Coast Airport. In this regard, the added regulatory complexity created by the separation of planning policies could become a significant challenge for the airport’s future expansion into the land outside the airport boundary.⁸⁹ Therefore, from an economic development perspective, the added complexity from

⁸⁸ Figure 5.12 is created and labelled by the author by combining satellite imagery from the City Plan interactive mapping tool (Version 7) (CoGC, undated) and the Tweed Online Mapping tool (Tweed Shire Council, undated-c). The imagery has been used with permission from the CoGC and Tweed Shire Council, which retain its full copyright. This integrated graphic is not available to users of the two councils’ planning instruments.

⁸⁹ GCAPL has purchased land parcels on both sides of the state/council border with the intention to develop them over the next five to ten years. As these sites are located outside the Federally owned land under the Airports Act, they are subject to local and state planning frameworks.

different land use regulations from the two local councils can be seen as a major impediment to the airport's future economic development contribution.

5.3.5 CONTRASTING CROSS-BORDER RECOGNITIONS IN PLANNING FRAMEWORKS

On the strategic planning front for promoting economic development at the local government level, the CoGC's Gold Coast economic development strategy document does not currently make any reference to the Tweed Shire LGA. The absence of allusion to Tweed Shire in the CoGC's strategic plan implies an absence of cross-border perspective in the council's strategic plan. The lack of cross-border planning commitment is also evident from the fact that there has been limited cross-border collaboration from the CoGC in economic development initiatives associated with Gold Coast Airport, which is further discussed in Section 7.3.1.

In contrast, however, on the Tweed Shire side, there are significantly greater cross-border considerations across the local strategic plans currently in place for the LGA. The Gold Coast is referenced a total of 15 times throughout the Tweed Shire Economic Development Strategy document. The main ways in which the LGA is recognised in the strategic plan are as follows (Ruzzene, 2014):

- ✈ Tweed Shire's economy is intrinsically influenced by its proximity to the Gold Coast.
- ✈ The Gold Coast not only is a major employer of Tweed Shire residents, but also, with its population of more than half a million, provides a significant catchment market for businesses in Tweed Shire.
- ✈ The proximity of Tweed Heads, the CBD of Tweed Shire, to the Gold Coast is economically beneficial to Tweed Heads.
- ✈ On the tourism side, rather than competing with the Gold Coast for tourists, Tweed Shire Council intends "to develop Tweed Shire as a unique destination that sets it apart from the neighbouring Gold Coast" (Ruzzene, 2014, p. 24).

The Tweed City Centre Plan Vision is a strategic document accompanying the Tweed City Centre LEP 2012, which is applicable to the Tweed City Centre area located adjacent to both Gold Coast Airport and the Coolangatta suburb of the Gold Coast. The document references the Gold Coast 39 times, thus illustrating significant cross-border recognition from the NSW Government. The 'Economic Development' section of the plan illustrates an awareness of the opportunity for Tweed Heads to capitalise on the rapid growth of the Gold Coast and SEQ (NSW Government, 2011, p. 38):

Gold Coast, just over the border from Tweed Heads, has resulted in the emergence of a successfully diversified economy, with a greater proportion of high value-added employment than in the Tweed. The nature and magnitude of this growth presents Tweed Heads with an opportunity to provide some of the estimated 425,000 jobs which will be required to meet the demands of expected regional growth in Southeast Queensland.

The extensive cross-border recognition of the Gold Coast in Tweed Shire's strategic plans can potentially serve as a driver for future collaboration between Tweed Shire Council and the CoGC, which has been limited to date and is further examined in Section 7.3.1.

5.4 CONCLUSION

To address research question #2, "How do existing planning frameworks affect Gold Coast Airport's contribution to economic development?" Chapter 5 has conducted an analysis of several planning frameworks in place to determine if they inhibit or drive the airport's economic development contribution. This section concludes the chapter with key findings in response to the research question and its associated sub-questions.

5.4.1 STRATEGIC AND STATUTORY FRAMEWORKS: INHIBITOR OF GOLD COAST AIRPORT'S ECONOMIC DEVELOPMENT CONTRIBUTION

The chapter has addressed research sub-question #2.1, "How do strategic and statutory planning frameworks affect Gold Coast Airport's economic development contribution?" by reviewing several strategic and statutory planning frameworks implemented by government agencies at all tiers and private organisations. It is discovered that due to the cross-border location of Gold Coast Airport across two LGAs and two states, the airport and its surroundings are subject to the influence of several strategic and statutory planning frameworks at the state and local government levels. Meanwhile, the Airports Act, administered by the Federal Government, implies that planning and development on the airport's land is both controlled and protected by Federal influence. The intertwining of government planning frameworks from all three tiers of government agencies has created a highly complex operational environment where any economic development strategy associated with Gold Coast Airport needs to be ensured it does not contradict existing planning frameworks already in place. Table 5.9 summarises the key analytical findings of how the different strategic and statutory planning frameworks affect Gold Coast Airport's economic development contribution.

Table 5.9: Summary of Key Findings on Influence of Strategic and Statutory Planning Frameworks on Economic Development Contribution of Gold Coast Airport

Planning Framework(s)	Key Findings
Planning Frameworks for Gold Coast Airport	
Airports Act 1996 (Federal Government)	The Airports Act is not conducive to promoting economic development contribution of Gold Coast Airport and other privatised airports in Australia. This is primarily due to the legislation's ambiguous requirement for the airports to promote economic development and outline their economic development contribution from proposed developments. Further, the requirement for airport lessees to prepare and submit MDPs for major development projects exceeding \$20 million in construction creates delays in planning processes for Gold Coast Airport's major development projects, thus delaying the airport's economic development contribution. Lastly, the Airports Act imposes several operational and planning restrictions on SCU, which is a lessee on Gold Coast Airport's land. These restrictions are effectively statutory red tape which not only limits the ability and flexibility for SCU's future planning and development for its Gold Coast campus, thus impeding the university's ability to grow and accommodate its rapidly growing student number.
Gold Coast Airport 2017 Master Plan (GCAPL)	The airport master plan extensively recognises and outlines Gold Coast Airport's economic development role and contribution to both the local and regional economies. The plan demonstrates GCAPL's awareness of existing government planning frameworks and how they potentially impact the airport. The airport's existence, operation and proposed developments are justified with their economic development contribution GCAPL, which illustrates the organisation's awareness of the significance of the airport's role in economic development. However, the document does not highlight how GCAPL intends to further promote the airport's economic development contribution.
Queensland State Planning Frameworks	
Economic Development Act 2012 (QLD Government)	The Economic Development Act 2012 provides an opportunity to create a PDA around Gold Coast Airport to fast-track new development around Gold Coast Airport and achieve the land use opportunities to be further discussed in Section 6.2.
State Planning Policy (QLD Government)	The policy seeks to ensure that local councils' planning schemes protect the ongoing operation of airports in QLD, thus implying that the CoGC's City Plan needs to ensure land uses around Gold Coast Airport do not adversely impede Gold Coast Airport's activities. Additionally, the policy stipulates that new developments near an airport complement the airport's role as a freight hub and maximise economic opportunities around the airport. However, these statutory requirements are ambiguous and do not specify what types of development should occur in proximity to an airport.
ShapingSEQ: South East Queensland Regional Plan 2017 (QLD Government)	The QLD Government expresses support in the regional plan for enhancing public transport connectivity to Gold Coast Airport, which is noted as an economic driving infrastructure along with the adjoining Pacific Highway. Nevertheless, the document does not specify how the QLD Government intends to leverage the airport into promoting economic development for the Gold Coast and the broader SEQ region.
Local Planning Frameworks for the Gold Coast	
Economic Development Strategy 2013-2023 (CoGC)	Although the document designates Gold Coast Airport as an 'economic opportunity' for the Gold Coast, it does not provide further elaboration on how the airport contributes to the LGA's economy. The strategic plan demonstrates the CoGC's intent to capitalise on Gold Coast Airport as a gateway for freight activities. However, specific strategies for leveraging the airport into promoting the LGA's economic development are not outlined in the framework.

Planning Framework(s)	Key Findings
Gold Coast Destination Tourism Management Plan 2014-2020 (Destination Gold Coast)	The strategic document recognises Gold Coast Airport's role in providing aviation access, which is noted as a driver the LGA's tourism economy. One of the actions outlined in the plan is the investigation into the eventual extension of the light rail and heavy rail corridors to Gold Coast Airport. Nonetheless, the plan does not specify strategies to further promote the LGA as a tourism destination through Gold Coast Airport.
Gold Coast City Plan (CoGC)	The planning scheme does not make special land use provisions around Gold Coast Airport to facilitate the development of airport-compatible land uses that promote the airport's economic development contribution (e.g. a freight hub). However, parts of the airport's surroundings are designated with the Special Purpose zone, which provides an opportunity to develop such uses in the future.
New South Wales State Planning Frameworks	
Economic Development Strategy for Regional NSW (NSW Government)	The planning framework does not incorporate any strategic directions for leveraging airports into promoting economic development in regional NSW.
North Coast Regional Plan 2036 (NSW Government)	The regional plan demonstrates extensive recognition of Gold Coast Airport as both a global gateway and an economic development driver for the NSW North Coast region. However, the document outlines no specific strategy for capitalising Gold Coast Airport as an economic development driver for the region.
NSW Government's LEPs: ✈ Tweed City Centre LEP 2012 ✈ Tweed LEP 2014 ✈ Tweed LEP 2000	Similarly to the Gold Coast City Plan, these LEPs do not make any specific land use provisions for the surrounding area of Gold Coast Airport on the Tweed Shire side of the border, to complement the airport. The accompanying strategic plan of the Tweed City Centre LEP 2012 does not make any reference to Gold Coast Airport. As such, the LEPs are not conducive to increasing the economic development contribution of Gold Coast Airport for the Tweed Shire region.
Local Planning Frameworks for Tweed Shire	
Tweed Shire Economic Development Strategy (Tweed Shire Council)	The strategic plan demonstrates a clear intent to leverage Tweed Shire's proximity to both the Gold Coast and Gold Coast Airport into promoting economic development in Tweed Shire. Specific economic development strategies aiming to capitalise on Gold Coast Airport are outlined in the document.
Destination Management Plan 2018-2030 (The Tweed Tourism Company)	Similarly to the economic development strategy above, the planning framework extensively recognises the economic development opportunity associated with Gold Coast Airport for Tweed Shire. The plan indicates the creation of a partnership with the airport and the advancement of Tweed Shire's conference market as key actions to promote the LGA as a visitation destination.
Local bylaws (Tweed Shire Council)	The existing local bylaws imposed by Tweed Shire Council do not permit overseas workers to engage in agricultural employment in rural farms throughout the LGA. This restriction prevents a major agritourism opportunity from being exploited in Tweed Shire.

It is evident across the key findings outlined in Table 5.3 that amongst the planning frameworks reviewed, there is widespread recognition of the economic development role of Gold Coast Airport at both local and regional scales. However, the majority of the strategic frameworks have not specifically outlined directions or actions to further promote the airport's economic development contribution in the future. Nevertheless, the local planning frameworks for Tweed Shire not only

demonstrate significant recognition of economic development opportunities associated with Gold Coast Airport, but also clearly outline actions to pursue these opportunities. Meanwhile, the existing statutory frameworks for regulating land uses around Gold Coast Airport have not made provisions to encourage the development of uses with activities that complement Gold Coast Airport and further promote its economic development contribution to the Gold Coast-Tweed Shire region.

Therefore, based on the findings on strategic and statutory planning frameworks affecting Gold Coast Airport and its surroundings, the research discovers that, in response to research sub-question #2.1, the existing strategic and planning frameworks are currently inhibiting, rather than driving, Gold Coast Airport's economic development contribution.

5.4.2 CROSS-BORDER PLANNING FRAMEWORKS: LIMITATION FROM THE GOLD COAST AND QUEENSLAND SIDE OF THE BORDER

In response to research sub-question #2.2, "How do cross-border planning frameworks affect Gold Coast Airport's economic development contribution?" the chapter has conducted an analysis of the existing cross-border planning arrangements at both the state and local government levels. Four key findings emerge from the analysis. Firstly, the exclusion of the CoGC and Tweed Shire Council from COMSEQ effectively led to a lost opportunity for incorporating the cross-border region of the Gold Coast and Tweed Shire in the recently proposed SEQ City Deal partnership, which could otherwise lead to increased investment and economic growth for the region, including Gold Coast Airport.

Secondly, although a MoU for cross-border collaboration exists between the QLD and NSW governments, there is currently an uneven level of commitments to this agreement from the two state governments, with the former incorporating significantly less cross-border planning considerations into its recent planning frameworks. In *ShapingSEQ*, the QLD Government has demonstrated limited recognition of the state border and the cross-border opportunities associated with the neighbouring FNC region. The document does not acknowledge the cross-border economic development contribution of Gold Coast Airport towards Tweed Shire and the broader FNC region. In contrast, the NSW Government has incorporated significantly more cross-border planning acknowledgements into its regional plan for the NSW North Coast region by extensively recognising economic development opportunities associated with the region's proximity to the Gold Coast, SEQ and Gold Coast Airport. The NSW Government also has an Office of the NSW Cross-border Commissioner and a formally appointed NSW Cross-border Commissioner to directly identify and address issues affecting residents living in cross-border regions throughout the state. Meanwhile, no such arrangements exist on the QLD side of the border.

Thirdly, at the local level, there is a clear cross-border separation of land use planning frameworks. Two separate systems of land use zoning regulation, which are administered by different government agencies across the border, are currently applied to Gold Coast Airport’s surroundings. This creates a highly complex planning context, which is a major constraint to future expansion of Gold Coast Airport, for which GCAPL has acquired land parcels outside the Federal land on both sides of the border. Additionally, the increased complexity in the planning frameworks can deter future development projects around Gold Coast Airport.

Fourthly, on the strategic planning front, the CoGC’s economic development strategy lacks cross-border recognition of the neighbouring Tweed Shire and FNC. On the contrary, Tweed Shire Council’s economic development plan and Tweed City Centre Plan Vision both extensively recognise the opportunities to leverage Tweed Shire’s proximity to the Gold Coast into the advancement of the LGA’s economy.

Based on the key findings above on cross-border planning arrangements in place, it is discovered that, in relation to research sub-question #2.2, the existing cross-border planning frameworks are not conducive to promoting Gold Coast Airport’ economic development contribution. There are limited cross-border planning commitments from the state and local governments on the QLD side of the border whereas the NSW Government and Tweed Shire Council demonstrate a significantly higher level of cross-border recognition in their respective planning frameworks. Table 5.10 below applies three of the four success criteria for cross-border planning⁹⁰ to the region of Gold Coast Airport.

Table 5.10: Application of Success Criteria for Cross-Border Planning from Albury-Wodonga and Canberra and Its Surrounding NSW Shires, to the Gold Coast Airport Region

Criterion	Cross-Border Planning Frameworks for the Gold Coast Airport Region
1) Existence of, and continuous support for, a cross-border MoU	The NSW and QLD governments both have a cross-border MoU, which outlines four focus areas covering regional economic development, service alignment and information sharing, transport infrastructure and issues of national significance.
2) Appointment of a cross-border commissioner by government agencies on both sides of the border	In 2014, a cross-border commissioner and an Office of the NSW Cross-border Commissioner were appointed by the NSW Government to manage issues affecting cross-border regions in NSW. However, no such department or commissioner has been appointed on the QLD side of the border.

⁹⁰ These success criteria were developed from a review of the case studies of the two cross-border regions of Albury-Wodonga and Canberra and its surrounding shires of NSW (Section 2.6). One of the criteria focuses on cross-border government collaboration at both the local and state levels. As this criterion is applicable to Chapter 7, which investigates stakeholder relationships, the lesson will be applied to the findings in Chapter 7 (Section 7.5).

Criterion	Cross-Border Planning Frameworks for the Gold Coast Airport Region
3) Demonstration of government commitment to cross-border collaboration, from both sides of the border, through planning frameworks	Amongst the regional plans across the border, the NSW Government demonstrates a significantly higher level of cross-border consideration than the QLD Government does. Similarly, at the local government level, there are substantially greater cross-border recognitions across strategic planning frameworks on the Tweed Shire side of the border. There is a cross-border separation of land use regulations in the existing local planning frameworks, resulting in a highly complex environment for future development activities around Gold Coast Airport.

Based on Table 5.10 above, it can be observed that the existing cross-border planning frameworks for the region of Gold Coast Airport do not entirely satisfy all the success criteria, particularly the third criterion. This analysis suggests that there is a considerable room for improvement in the cross-border planning frameworks currently in place.

5.4.3 SUMMARY OF KEY FINDINGS

In relation to the second research question, “How do existing planning frameworks affect Gold Coast Airport’s contribution to economic development?”, the findings for the two research sub-questions outlined above indicate that the planning frameworks in place inhibit, rather than facilitate, the economic development contribution of Gold Coast Airport. Figure 5.13 below summarises the key findings of this chapter in relation to the research question and its associated sub-questions.

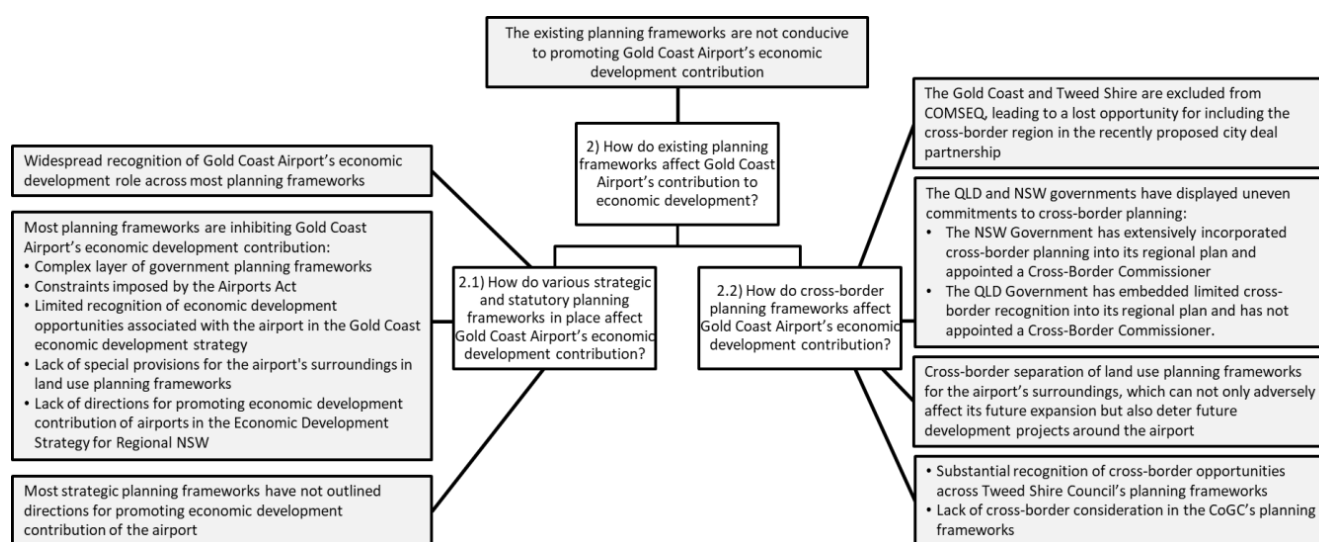


Figure 5.13: Summary of Findings on How Planning Frameworks Affect Gold Coast Airport’s Economic Development Contribution

Having answered the second research question and its associated sub-questions in this chapter, the thesis next addresses the third research question and its sub-questions in the following chapter, Chapter 6, which focuses on how land use, transport and industry sectors shape Gold Coast Airport’s contribution to economic development.

**CHAPTER 6: THE INFLUENCE OF LAND USE,
TRANSPORT AND INDUSTRIES ON GOLD COAST
AIRPORT'S ECONOMIC DEVELOPMENT
CONTRIBUTION**

6.1 INTRODUCTION

Chapter 6 focuses on the themes of land use, transport and industry sectors in relation to how they shape Gold Coast Airport’s economic development contribution. The chapter addresses the third research question, which is outlined in Figure 6.1 below along with its sub-questions.

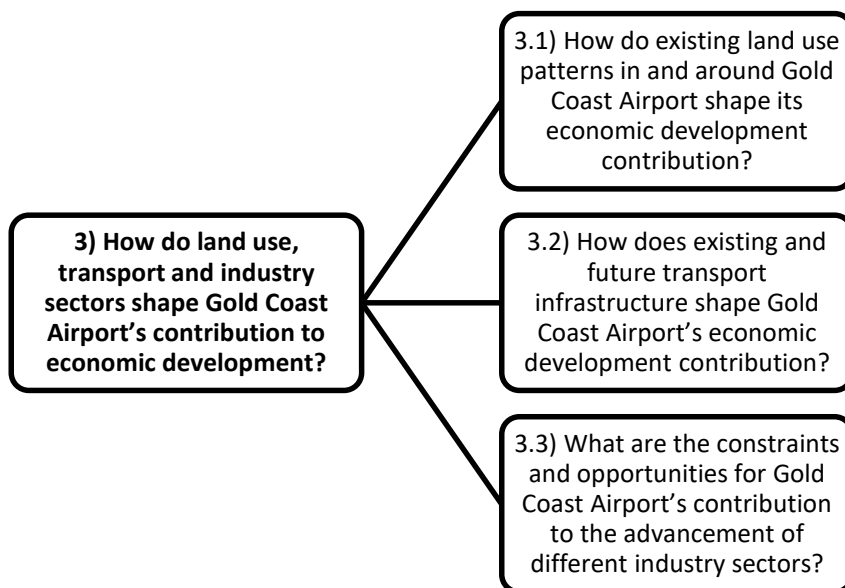


Figure 6.1: Research Question #3 and Its Associated Sub-Questions

The chapter comprises four major sections. Firstly, Section 6.2, which addresses sub-question #3.1, examines the existing land use patterns in and around Gold Coast Airport in terms of how they shape the airport’s economic development contribution. Secondly, to answer sub-question #3.2, Section 6.3 discusses the influence of existing and future transport infrastructure on Gold Coast Airport’s economic development contribution. The section also discusses the planned extension of the heavy rail and light rail corridors to Gold Coast Airport, which will significantly increase the accessibility of the airport to the rest of the Gold Coast. The two rail options are critically reviewed and an economic argument for prioritising the heavy rail from an economic development perspective is put forward. Thirdly, in response to sub-question #3.3, Section 6.4 discusses the current constraints and opportunities for Gold Coast Airport’s contribution to the advancement of different industry sectors for the Gold Coast and Tweed Shire. Specifically, three different industries are examined, including freight, tourism and business. Lastly, Section 6.5 focuses on location names, which emerges in this research as an important factor with potential influence on Gold Coast Airport’s economic development contribution in the future. The section examines how location names have been used by local businesses to attract more customers and how they could also be incorporated into Gold Coast Airport to promote greater awareness of the Tweed Shire region, thus promoting its tourism industry.

6.2 LAND USE IN AND AROUND GOLD COAST AIRPORT

Four aspects of land use in and around Gold Coast Airport are examined in relation in terms of how they affect Gold Coast Airport's economic development contribution:

- ✈ Land use synergy between SCU and Gold Coast Airport;
- ✈ Car parking limitations for SCU;
- ✈ Limited spatial expansion prospect for Gold Coast Airport; and
- ✈ Opportunities for Gold Coast Airport-compatible development.

6.2.1 LAND USE SYNERGY BETWEEN SOUTHERN CROSS UNIVERSITY AND GOLD COAST AIRPORT

A unique aspect of Gold Coast Airport is the fact that a university campus of SCU is located near the airport's terminal. The co-location of a SCU campus and Gold Coast Airport is discovered to have created land use synergy, leading to three positive outcomes for SCU, which are further examined below:

- ✈ The attraction of fly-in, fly-out (FIFO) students;
- ✈ Opportunity to provide airport management courses at SCU; and
- ✈ Psychological benefits of airport location for SCU occupants.

6.2.1.1 Attraction of Fly-in, Fly-out Students

To take advantage of its unique location on airport land, SCU has been running several of its courses at the Gold Coast Airport campus in an 'intensive mode' to attract FIFO students. Such an arrangement is illustrated in the quote below:

[Southern Cross University have] fly-in, fly-out type courses that you can do [where they] do not need people to fly in and [stay] here for three years. People can fly in for a week or fly in for a weekend. We run intensive law courses for our Bachelor [of] Laws, but they are run over weekends, so we will have distance education students fly, stay locally, attend the course and fly back out again really easily. **And you see here people just wheel in their suitcase and they just walk to the airport ... It is very seamless – that ease of traveling to [the campus, enabled by the airport] and staying [nearby] ...** They can just walk across the highway with their suitcase and stay in [a serviced apartment] across the road. Everything is here. Everything is very close by and quite attractive. – senior manager #1 (emphasis added)

The quote above illustrates that SCU's location adjacent to Gold Coast Airport is highly conducive to attracting FIFO students. The wide availability of accommodation in the form of serviced

apartments near the university campus, meanwhile, allows FIFO students to stay throughout the duration of their intensive classes prior to flying back to their home city.⁹¹

6.2.1.2 Opportunity to Provide Airport Management Courses at Southern Cross University

The co-location of the Gold Coast Airport and a SCU campus implies a major opportunity to promote the education industry of the Gold Coast-Tweed Shire region in the field of aviation studies. This opportunity can in particular capitalise on the rapid growth of the civil aviation industry in China over the past decade, which is illustrated by the key statistics outlined in Figure 6.2 below.

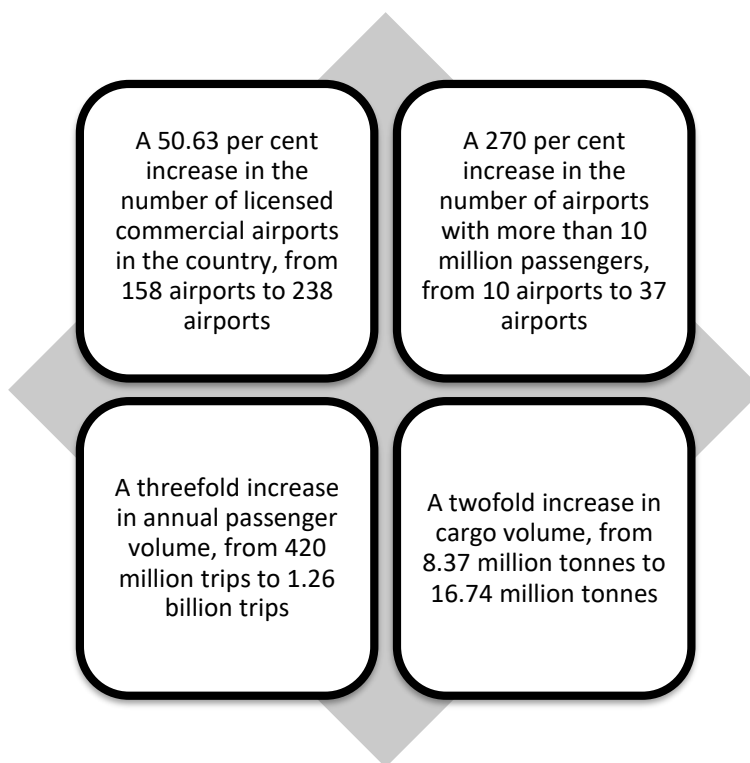


Figure 6.2: Rapid Growth of the Civil Aviation Industry in China from 2009 to 2019
 (Source: State Council of the People’s Republic of China (2019))

In line with China’s civil aviation industry trend above, local destination marketing organisation representative #1 notes that in recent years, there have been an increasing number of newly developed airports in China in line with the country’s rapid economic growth. Thus, there is now higher demand for workforce to operate these airports in China. SCU could capitalise on this trend by introducing airport management courses specifically targeted at airport workers in China in a FIFO arrangement.

⁹¹ Conventionally, each university class is run once a week over a period of 12 weeks. Classes in an intensive delivery mode, meanwhile, are condensed into blocks of successive classes over the period of a few days. Intensive classes reduce the number of commutes students need to make to the university campus, which can increase the attractiveness of courses to distant students.

Gold Coast Airport currently has services eight cities in China, including Guangzhou, Hangzhou, Macau, Nanjing, Qingdao, Shanghai, Shenyang and Tianjin via indirect RPT flights. These links to cities in China can potentially help promote airport management courses to FIFO students in China. However, it should be noted that there are no direct flights to these cities from Gold Coast Airport and at least one stopover is required on the flight routes between Gold Coast Airport and these destinations. Therefore, to increase the likelihood of success for airport management courses targeted at Chinese airport workers, SCU could collaborate with Gold Coast Airport to action the following:

- ✈ Investigate China's civil aviation industry to identify cities with the highest demand for new airport workers, i.e. cities with the highest number of newly established airports;
- ✈ Collaborate with government officials and/or airport operators in these cities to establish new, direct flight routes to Gold Coast Airport;
- ✈ Establish airport management courses in an intensive mode, with flexible scheduling to accommodate both the timetables of airport workers from China and the timing of the flights above; and
- ✈ Utilise equipment and facilities of Gold Coast Airport for the purpose of providing hands-on training for students in airport management classes.

6.2.1.3 Psychological Benefits of Airport Location for Southern Cross University Occupants

According to the marketing officer, the SCU campus location adjacent to Gold Coast Airport's terminal building and runway has been highly beneficial in terms of providing an 'exciting' atmosphere to the students on campus. The quote below further illustrates the nature of such atmosphere:

When [there are] site inspections [on campus], whether it is international students or agents or domestic students, just being around here and seeing what is happening with the airplanes at the airport. **It is an exciting location.** I think that comes across the students. **There is a lot happening here and they see this is quite an exciting location in which to study.** And I do not think there [are] many universities in the world that are so close to an airport. – marketing officer (emphases added)

The marketing officer reveals further that the 'vibrant' atmosphere creates a "feeling of excitement" particularly for students enrolled in the tourism and hospitality field at the campus.⁹² In this context, the airport environment "helps to reinforce why they are studying" by providing a 'firsthand' experience where students can "see the real kind of tourism industry in action while they are studying." This psychological benefit is not only limited to students but also extends to staff as the airport environment is noted by the marketing officer as "an exciting place to work [at]." Therefore,

⁹² As at May 2020, SCU provides eight different courses in tourism and hospitality management across the undergraduate and graduate levels at its Gold Coast Airport campus. These include four bachelor's degrees, a graduate certificate, a graduate diploma and two master's degrees.

Gold Coast Airport, as a landmark, provides psychological benefits to staff and students at SCU, potentially resulting in higher productivity in their work or study while they are on campus.

6.2.2 CAR PARKING LIMITATIONS FOR SOUTHERN CROSS UNIVERSITY

Senior manager #1 reveals that the primary concern for the Gold Coast Airport campus of SCU is related to the on-site car parking facility. Specifically, there are two key problems. Firstly, the campus currently has a significantly limited amount of car parking spaces. The interviewee specifically highlights the parking issue as “an enormous difficulty [for SCU] ... because [the university campus is] restricted space-wise.” Currently, the university has a total of 1,800 parking spaces according to the senior manager. The interviewee also reveals that the campus has experienced a significant growth in student number, from 200 in 2011 to more than 4,000 in 2018.⁹³ Considering the relative numbers of students and car parking spaces available, a significant shortage of car parking, which is used by not only SCU's students but also its staff, has become a major operational issue for the university, particularly because the campus requires a significant amount of car parking spaces. The car parking limitation is a major issue for SCU as there is substantial car parking demand amongst its staff and students, which is fuelled by two key factors, including the location of the campus away from the major urban centres of the Gold Coast and the lack of public transport connectivity to the campus. These two factors are further examined below.

The location of SCU's Gold Coast campus in relation to the existing major urban centres of the Gold Coast is discovered as the principal reason behind the university's substantial car parking needs. Figure 6.3 on the following page illustrates the existing population distribution pattern in terms of density on the Gold Coast as at 2013.

⁹³As at 2019, the Gold Coast campus is the largest out of all three SCU campuses in terms of student number, with 5,695 students attending the campus throughout the year. The Lismore and Coffs Harbour campuses of the university, meanwhile, were attended by 2,413 and 1,167 students, respectively, in the same year (SCU, 2019a).

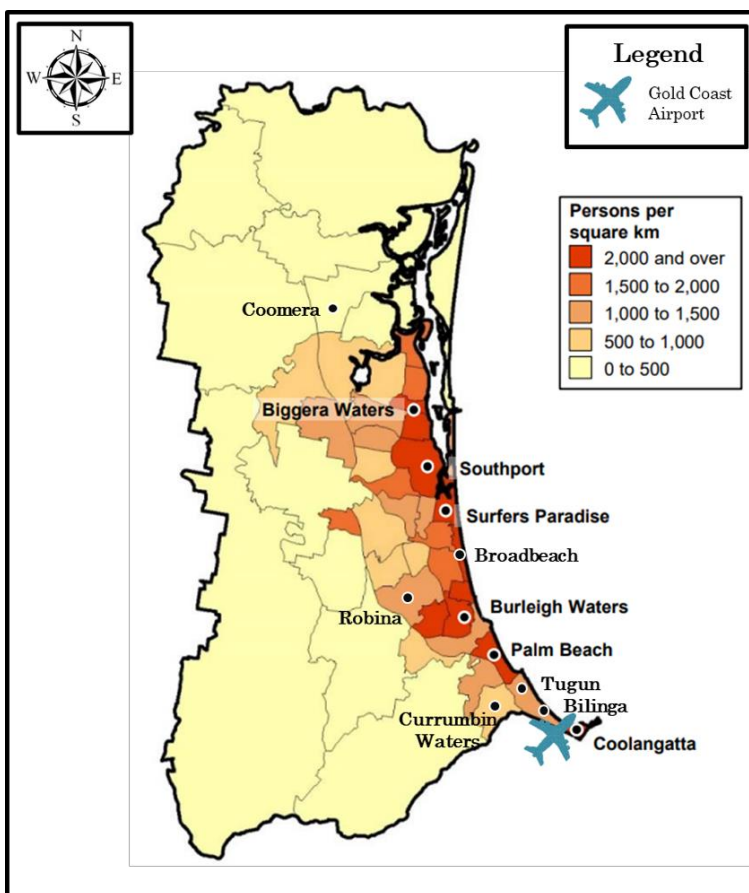


Figure 6.3: Population Density throughout the Gold Coast as at 2013⁹⁴

As shown in Figure 6.3 above, the most densely populated parts of the Gold Coast with at least 2,000 persons per square kilometre are located between Burleigh Waters and Biggera Waters. Meanwhile, three of the four surrounding suburbs of Gold Coast Airport, namely Bilinga, Tugun and Currumbin Waters, contain significantly lower population density with between 500 and 1,500 persons per square kilometre. Additionally, the Gold Coast currently has four regional centres, namely Robina, Broadbeach, Southport and Coomera (Salt, 2015). These regional centres are located more than 30 minutes by car, or more than one hour by public transport, from Gold Coast Airport. The traveling time between the airport and the regional centres is substantial due to their relative locations – Gold Coast Airport sits on the south-eastern border of the Gold Coast whereas the regional centres are located further up north in the LGA. The principal reason behind the significantly longer traveling time to Gold Coast Airport by public transport is the current absence of heavy rail and light rail connection to the airport. Gold Coast Airport’s southerly location on the Gold Coast, in conjunction with the highly linear structure of the city’s development pattern, reduces the airport’s accessibility

⁹⁴ Figure 6.3 is created and labelled by the author using source imagery published by Salt (2015).

and connectivity to the rest of the city. In contrast, on the Tweed Shire side, Gold Coast Airport is located in the most densely populated part of Tweed Shire, as illustrated in Figure 6.4 below.

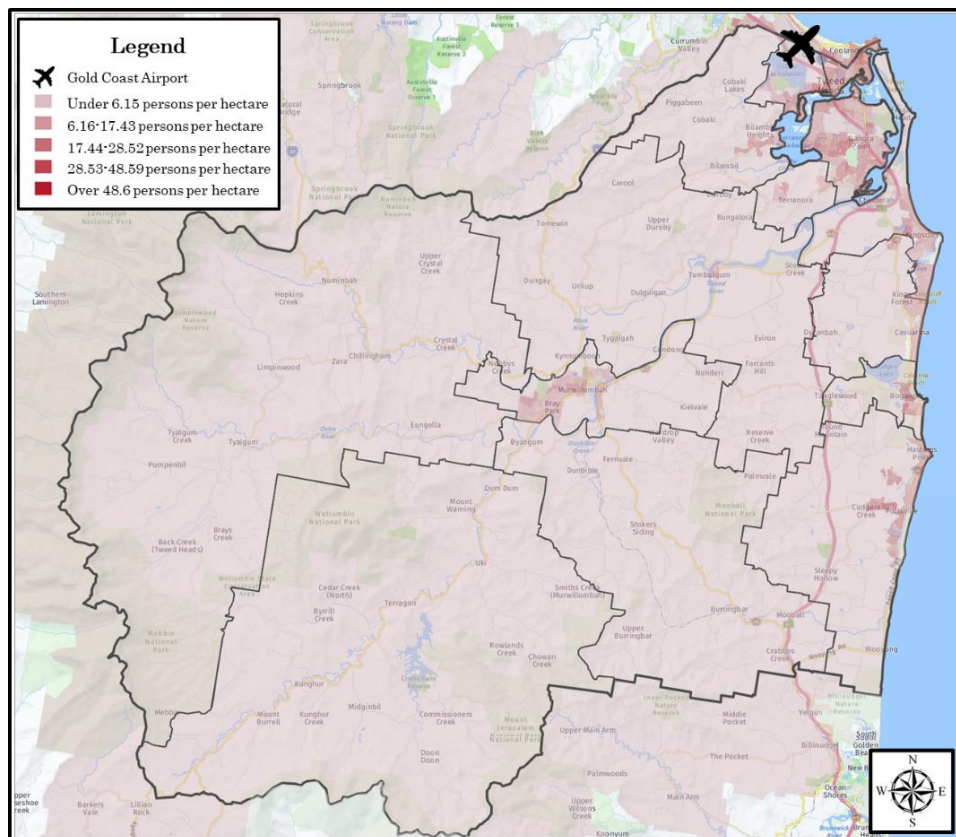


Figure 6.4: Population Density throughout Tweed Shire as at 2016⁹⁵

Although there is high population density in proximity to Gold Coast Airport on the Tweed Shire side due to Tweed Heads’ function as the CBD of the LGA, the majority of students at the SCU campus currently live on the Gold Coast according to the marketing officer. The interviewee states that many students “choose to live further north [around] the northern and central Gold Coast areas where there are probably more employment opportunities.” Thus, Gold Coast Airport’s low transport accessibility to more densely populated suburbs and regional centres of the Gold Coast is the main contributing factor to SCU’s substantial demand for parking spaces as the majority of students rely on car as their mode of commute to and from the campus.

⁹⁵ Figure 6.4 is created and labelled by the author using source satellite imagery from .id (2016). The imagery was compiled and presented by .id, the population experts. www.id.com.au. This material is a derivative of ABS Data that can be accessed from the website of the Australian Bureau of Statistics at www.abs.gov.au, and which data can be licensed on terms published on the ABS website. The replicated Map Data in the imagery from .id belongs to HERE (2016).

There is low public transport connectivity to the SCU campus. There is currently only one bus stop at Gold Coast Airport, which is located front of the Terminal 1 building and is approximately eight minutes (600 metres) away from the SCU campus by foot.⁹⁶ The lack of a bus stop at the “front door” of the SCU campus is indicated by senior manager #1 as another reason for the widespread reliance on car amongst staff and students at the university. Moreover, there is currently no heavy rail or light rail connection to the airport, which is another contributing factor to the car dependency amongst SCU staff and students. The heavy dependency on cars, in conjunction with the increasing number of students at the SCU campus in recent years, has also led to a significant traffic congestion issue for SCU, which is further examined in Section 6.3.2.

In addition to the limited parking space, the second problem associated with car parking is related to the financial risk and burden associated with the facility, which primarily stems from the fact that SCU does not own any land in Gold Coast Airport due to the legal framework of Airports Act, which is previously investigated in Section 5.2.3.1. In relation to the car parking issue, 500 of the parking spaces that SCU owns are provided with the carpark facility included in the recently completed Building C. However, the land the carpark is situated on is still under the Federal Government ownership, which implies that the university was required to lease the land in order to develop the carpark. According to senior manager #1, Gold Coast Airport will ultimately acquire the carpark facility if one of the following situations transpire in the future:

- ✈ SCU chooses to relocate its Gold Coast campus elsewhere; or
- ✈ SCU decides not to renew the lease for the carpark site upon the conclusion of the lease period.

In addition to having to lease a land parcel for the carpark building, the university also leases 800 car parking spaces from GCAPL's long-term parking facility adjoining the university campus.⁹⁷ Given this number of leased car parking spaces and the legal arrangement for the carpark building outlined above, SCU's car parking facilities, according to the interviewee, present a significant level of financial risk and burden for SCU. In this regard, senior manager #1 notes that the university has “to be very careful with the money that the government [provides to the university, which should] be for the provision of education, not the provision of a carpark [facility].” However, to date, SCU has had to dedicate a “huge sprawl of real estate just for parking” by leasing considerable amount of land

⁹⁶ This walking distance figure is based on Google Maps data as at June 2020 (Google, 2020b).

⁹⁷ Refer to Figure 4.30 for a land use map of Gold Coast Airport which illustrates the specific locations of the SCU campus and GCAPL's long-term parking zone.

from GCAPL, some of which could be used for other campus facilities for the direct purpose of providing tertiary education.

6.2.3 LIMITED SPATIAL EXPANSION PROSPECT FOR GOLD COAST AIRPORT

As previously discussed in Section 4.4.3.2, to the north and east, Gold Coast Airport is immediately surrounded by low-density residential uses, which primarily comprise detached dwellings. These existing residential uses, along with protected nature reserves and the Pacific Highway to the south and west of the airport, imply that the airport has a drastically limited amount of physical space it can utilise for spatial expansion of the airport in the future. Similarly, urban planner #3 remarks that Gold Coast Airport is “effectively landlocked,” resulting in the airport’s “limited scope for growth.”

The urban planner suggests the existence of residential dwellings around the airport as a major limitation to the airport’s economic development contribution in two primary ways. Firstly, the airport has limited ability to expand its footprint in the future due to the existence of occupied dwellings around the airport. The urban planner indicates that the airport will eventually require more land spaces in order to accommodate its forecasted growth in passenger volume. Secondly, the dwellings are under the low-density residential land use zone, which does not permit businesses, which are complementary to activities at Gold Coast Airport, to be situated in co-locate with the airport or be situated in proximity to the airport.

There is, however, a significant development opportunity on the land of Gold Coast Airport given that the airport “is home to one of the last remaining development land banks” on the Gold Coast and Tweed Shire regions (Walker & Stevens, 2008, p. 15). GCAPL has also purchased land parcels near the airport in both the QLD and NSW sides with the intention to develop them over the next decade.

6.2.4 OPPORTUNITIES FOR GOLD COAST AIRPORT-COMPATIBLE DEVELOPMENT

Based on land use analysis and interviews with stakeholders conducted in this research, land use opportunities to develop the following uses, which can capitalise on their proximity to Gold Coast Airport for the purpose of promoting the airport’s economic development contribution, emerge:

- ✈ An integrated business park on the Border Park site;
- ✈ An intermodal freight hub on Boyd Street; and
- ✈ An integrated medical precinct around Gold Coast Airport.

These opportunities are further examined in this section.

6.2.4.1 Integrated Business Park on the Border Park Site

As briefly mentioned previously in Section 4.4.2.2, there is an opportunity to develop an integrated business park on the Tweed Shire side of the border with close links to Gold Coast Airport at Border Park, a vacant land parcel directly adjacent to the airport across the Gold Coast Highway which was previously used for greyhound racing. Border Park is situated to the immediate north of an existing business precinct as shown in Figure 6.5 below.



Figure 6.5: Location of Border Park, Its Adjacent Business Precinct and Gold Coast Airport⁹⁸

⁹⁸ Figure 6.5 is created and labelled by the author with satellite imagery from Google Earth (Google, 2020a, 2020b).

As shown in Figure 6.5 above, the business park adjacent to the Border Park site is centred around Ourimbah Road. The precinct currently comprises a variety of businesses, including airport parking, car repairs, taxi services, retail outlets and storage services. According to local community representative #1, a catering business, which provides services to airlines at Gold Coast Airport, is also located in this business precinct. Given their contiguous locations, there is an opportunity to combine both the Border Park site and the existing business precinct into a large-scale, integrated business park. As Gold Coast Airport is immediately adjacent to Border Park and the business precinct, the newly formed business park could also be closely linked to Gold Coast Airport's operations by comprising such businesses as those that provide catering services for airlines or freight distribution services (e.g. FedEx and DHL).

Throughout the interview with urban planner #1, the prospect of creating a business park around Gold Coast Airport is continually emphasised by the interviewee as a major local economic development opportunity associated with the airport. This opportunity could also help to address a major, ongoing economic issue Tweed Shire has been experiencing. The following quote further illustrates this economic development prospect:

There are issues within Tweed [Shire] that [could be addressed with] benefits that can flow from the airport. This includes employment-generating activities because **Tweed [Shire] really does need more employment-generating activities to sustain a large residential population which currently leaves the shire every day to find work in Queensland.** – urban planner #1 (emphasis added)

The quote above shows that the business park, as a local employment hub, can be a major solution to the issue, previously discussed in Section 4.3.4.1, where nearly one-third of Tweed Shire workers are leaving the LGA across the border for employment on the Gold Coast on a daily basis. The urban planner also remarks that there is an opportunity for the employment-generating activities in the business park to span across several fields, including “education, knowledge-based, aviation-based, healthcare, science and research.”

6.2.4.2 Intermodal Freight Hub on Boyd Street

As previously discussed in Section 4.4.2, Tugun Quarry Reserve is located along Boyd Street adjacent to Gold Coast Airport as shown in Figure 6.6 below.



Figure 6.6: Location of Tugun Quarry Reserve⁹⁹

⁹⁹ Figure 6.6 is created and labelled by the author using satellite imagery from Google Earth (Google, 2020a).

Previously a quarry, the site currently functions as a depot for the CoGC's equipment and vehicles and is not accessible to the general public as shown in Figure 6.7 below.



Figure 6.7: Front View of Tugun Quarry Reserve (Source: Author (2020))

The location of the quarry reserve in proximity to Gold Coast Airport indicates a major opportunity to develop a freight hub to support freight activities at the airport, thus deriving greater economic benefits from the airport. The site's proximity to the Pacific Highway further increases its suitability as a freight hub where freight from aircraft at Gold Coast Airport is transferred to a local truck for intercity or interstate transport, and vice versa. Additionally, there are plans from the QLD Government to extend the intercity heavy rail system to Gold Coast Airport, a prospect to be further examined in Section 6.3.3, which implies that the freight facility could eventually function as an intermodal hub with its intermodal access to air, road and rail transport modes. The light rail corridor, based on the state government's current intention, will be prioritised over the heavy rail for extension to Gold Coast Airport. The opportunity to develop an intermodal freight hub in proximity to Gold Coast Airport is a major economic development argument for prioritising the connection of the heavy rail to the airport over the light rail, which is further elaborated in Section 6.3.3.

6.2.4.3 Integrated Medical Precinct around Gold Coast Airport

As previously discussed in Section 4.4.3.4, a number of healthcare uses already exist in proximity to Gold Coast Airport. These include two major hospitals, namely John Flynn Private Hospital on the Gold Coast side and the Tweed Hospital on the Tweed Shire side. In addition to these hospitals, several specialist medical services, clinics and medical centres are located around Gold Coast Airport. The availability of these healthcare facilities implies that there is a major opportunity to create a large-scale, integrated health precinct centred around Gold Coast Airport. This precinct can be created through establishing a network between these healthcare facilities to ensure that a comprehensive range of healthcare services are available to all patients. As Gold Coast Airport is an international

and domestic gateway, the airport can be capitalised on by the health precinct for the purpose of attracting medical tourists. In this regard, the health precinct could be promoted to medical tourists by Gold Coast Airport, which can create seamless transport to, from and between the appropriate healthcare facilities through transport arrangements.

Having examined land use patterns in and around Gold Coast Airport, the next section of this chapter discusses how the existing and future transport infrastructure shapes the airport's economic development contribution.

6.3 TRANSPORT INFRASTRUCTURE

Three aspects of transport infrastructure, all of which are examined in this section, are discovered as having major influences on the Gold Coast Airport's economic development contribution:

- ✈ Existing and future traffic pressure on Boyd Street;
- ✈ Traffic congestion at the SCU campus; and
- ✈ Planned extension of light rail and heavy rail corridors to Gold Coast Airport.

6.3.1 EXISTING AND FUTURE TRAFFIC PRESSURE ON BOYD STREET

Based on the author's field observation, it is found that Boyd Street is currently subject to a significant amount of vehicular traffic pressure due to two principal factors. Firstly, John Flynn Private Hospital is a major source of traffic volume on Boyd Street given that the road functions as the only entry and exit route for the hospital. In this regard, John Flynn Private Hospital only has one entrance accessible via Inland Drive, which is linked to Boyd Street as shown in Figure 6.8. As the population around the airport continues to grow, so will the hospital-generated traffic, resulting in additional pressure on Boyd Street. Secondly, Betty Diamond Sports Complex, introduced previously in Section 4.4.2 as a multipurpose community open space located on Boyd Street, is discovered as a highly popular public facility, and thus, another major generator of traffic volume on the road. Specifically, the skate park is found as the most used component of the facility, and the on-site parking is fully occupied during the author's field observation.

In addition to the traffic pressure discussed above, urban planner #5 reveals that a proposal has been put forward to establish an interchange between Boyd Street and Pacific Highway, the location of which is displayed in Figure 6.8 on the following page.

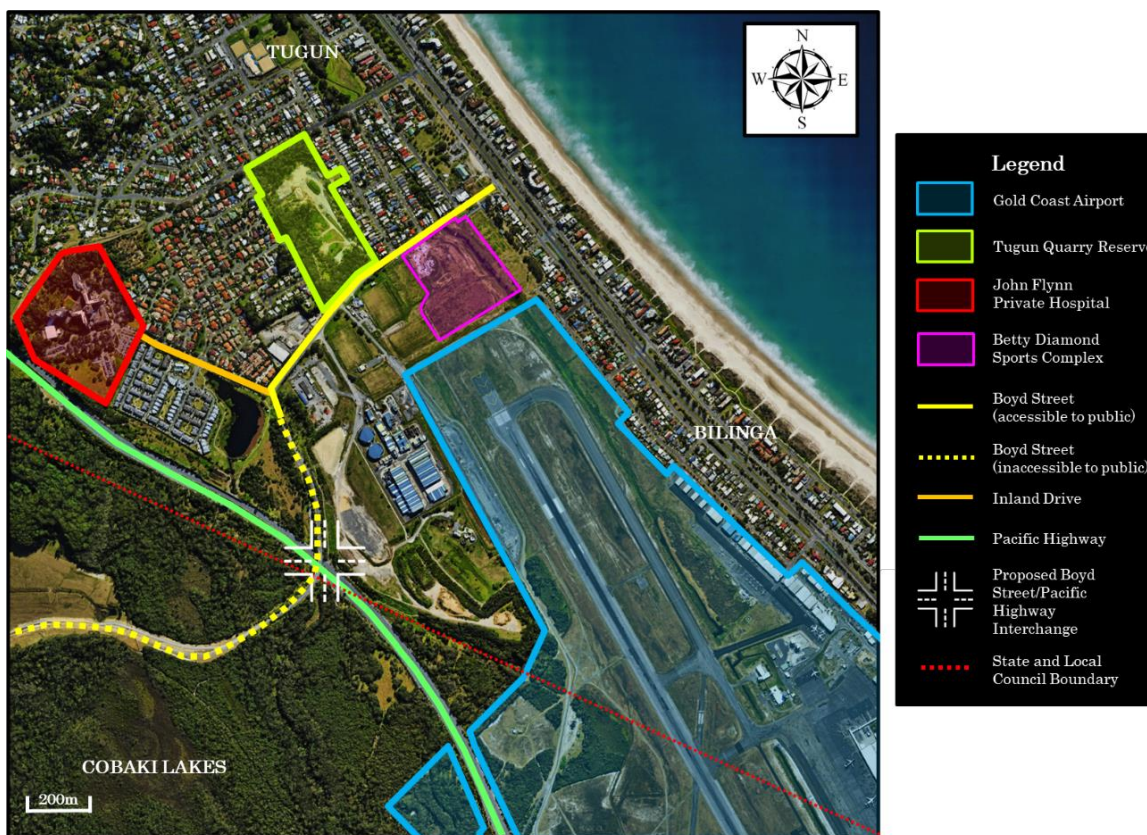


Figure 6.8: Location of Proposed Boyd Street/Pacific Highway Interchange¹⁰⁰

As shown in Figure 6.8 above, although Boyd Street extends past the Pacific Highway and the state border into Cobaki Lakes, the publicly accessible part of the road currently terminates shortly after its intersection with Inland Drive. The road then crosses over the highway as an overpass. As such, there is no interchange between the Pacific Highway and Boyd Street. However, according to urban planner #5, the interchange is required due to two reasons. The first, primary reason is that although Cobaki Lakes is still currently largely vacant, the area will eventually accommodate a population of 10,000 to 12,000 when it is fully developed. Cobaki Lakes will expectedly generate a significant quantity of traffic for the Boyd Street given it is the only road that leads to the Gold Coast and QLD side of the border, the principal place of employment for Tweed Shire residents. Secondly, as a secondary reason behind the need for the interchange, the facility will enable greater access between the Pacific Highway and Gold Coast Airport for the purpose of freight transport to and from the Tugun Quarry Reserve once it is used as a freight hub in the future. These two prospects, in conjunction with the existing traffic pressure Boyd Street is already subject to, imply a strong need

¹⁰⁰ Figure 6.8 is created by the author using source satellite imagery from Google Earth (Google, 2020a) and an interchange icon from Swifticons (2018).

for the interchange to be established between the road and the Pacific Highway, a point which is reiterated by urban planner #3 as illustrated in the quote below:

There is a real need to have that interchange at Boyd Street because **that is going to actually open up opportunities on that land on the north side of the airport. [The interchange would] also facilitate residential and business movements and things like that ...** That would unlock a lot of [economic development] opportunities [associated with Gold Coast Airport]. – urban planner #3 (emphasis added)

Greater connectivity between the highway and the airport enabled by the proposed interchange could be highly beneficial to the economy of the Gold Coast-Tweed Shire region given the existing opportunity to establish a freight hub in proximity to the airport. The Tugun Quarry Reserve site, located on Boyd Street as shown in Figure 6.8, is a potential site for a freight hub to capitalise on both its proximity to Gold Coast Airport and the Pacific Highway, as discussed previously in Section 6.2.4.2. Once operational, the freight hub, similarly to Cobaki Lakes, will introduce a substantial amount of additional traffic to both Boyd Street and the Pacific Highway, thus signalling a need for an interchange with the highway. However, to date, the interchange project has not been initiated due to a cross-border funding disagreement, which is further examined in Section 7.3.1.

6.3.2 TRAFFIC CONGESTION AT SOUTHERN CROSS UNIVERSITY CAMPUS

The reliance on car as the primary mode of transport to the SCU campus amongst the university staff and students at SCU, previously discussed in Section 6.2.1, has led to a traffic congestion issue for the campus as further illustrated in the following quote:

[Due to] the volume of students [the university is] getting now ... [there are] often blockages in and out of the airport through [its] students coming [to] and [leaving the campus]. So at 5:00pm when the lecture finishes, those 200 students all pile out of here and into their cars and they are on that little bit of road that goes out [of the airport] ... It can take you 15 or 20 minutes to get out of [the airport]. – senior manager #1

Figure 6.9 on the following page displays the flow of vehicular traffic generated by the SCU campus throughout the existing road network within Gold Coast Airport.

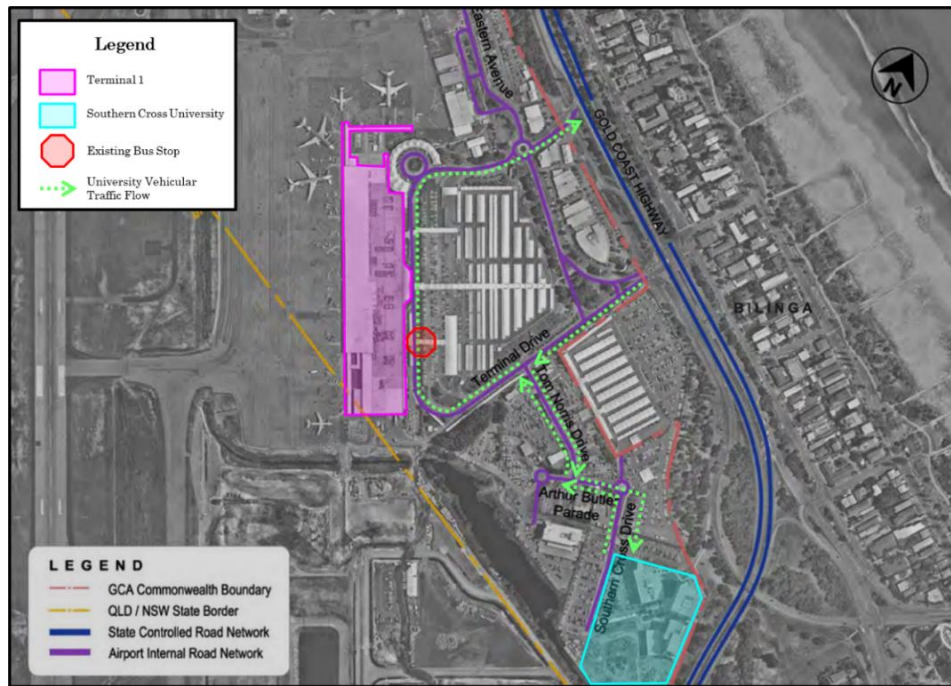


Figure 6.9: Southern Cross University's Vehicular Traffic Flow in Gold Coast Airport¹⁰¹

As shown in Figure 6.9 above, the SCU campus building is accessible via only one road, namely Tom Norris Drive, which also effectively functions as the only exit route for staff and students at the university. As per the quote above, the congestion is caused by a significant amount of peak-hour vehicular traffic leaving from the university campus. Specifically, senior manager #1 notes that “there is a complete block [at the intersection between Terminal Drive and Tom Norris Drive] and one car goes at a time because of all the traffic coming into the airport [on Terminal Drive]. The interviewee further notes that the existing internal road infrastructure inside the airport “is quite small, so ... there is not a lot of capacity [to accommodate both the airport traffic and the university traffic].”

Therefore, although staff and students can quickly access the university campus by car as the entrance into Tom Norris Drive is located near the airport's main entrance at Terminal Drive, leaving the campus is, in contrast, significantly more time-consuming. According to the interviewee, the peak hours in which a significant amount of vehicular traffic leaves the campus are between 4pm and 6pm when most lectures conclude. The traffic congestion drastically exacerbates on the days with several flights scheduled for take-offs or landing during the peak-hour time frame. If left unaddressed, the traffic congestion issue that the SCU campus is experiencing could adversely affect future student enrolment figures at the campus.

¹⁰¹ Figure 6.9 is created and labelled by the author using source imagery from GCAPL (2017c), which retains its full copyright.

6.3.3 PLANNED EXTENSION OF LIGHT RAIL AND HEAVY RAIL CORRIDORS TO GOLD COAST AIRPORT – WHICH TO PRIORITISE FOR GOLD COAST AIRPORT?

The Gold Coast is currently serviced by a combination of light rail and heavy rail infrastructure. The heavy rail corridor is part of the broader inter-city rail network and currently terminates in Varsity Lakes. The light rail service, meanwhile, currently runs from Helensvale to Broadbeach and has undergone two development phases to date, with the third phase, titled ‘Stage 3A’ set to commence construction and operation in 2021 and 2023, respectively. Figure 6.10 below outlines the existing heavy and light rail corridors and the proposed extension of the light rail infrastructure.



Figure 6.10: Existing and Planned Heavy Rail and Light Rail Corridors for the Gold Coast¹⁰²

Upon its completion, Stage 3A, as shown in Figure 6.10, will extend the light rail corridor from Broadbeach to Burleigh Heads. The QLD Government has an intention to ultimately extend the light rail corridor along the coastline to Gold Coast Airport and Coolangatta for Stage 3B, citing this project as being “important for a 2032 Olympics bid” for the Gold Coast (QLD Government, 2020c). The state government also plans to eventually expand the heavy rail corridor to Gold Coast Airport.

¹⁰² Figure 6.10 is created and labelled by the author with source imagery from the QLD Government (2020b). The imagery is used under the CC BY 3.0 AU license (Creative Commons, undated-a; QLD Government, 2018).

However, a specific time frame for the expansion has not been provided as the state's current focus is on the delivery of the Cross Driver Rail project, which involves an upgrade of the heavy rail infrastructure in the neighbouring Brisbane (QLD Government, 2019). Stage 3B development of the light rail is planned to be completed by 2023 whereas the heavy rail extension to the airport is currently seen by the CoGC (2018, p. 24) as an opportunity "in the longer-term." Thus, based on these time frames and the state government's intentions, while both the light rail and heavy rail networks will ultimately be expanded to Gold Coast Airport, the most likely outcome is that the light rail will be connected to the airport before the heavy rail.

In light of the forthcoming light rail connection in the future, the Gold Coast Airport master plan makes significant recognition of the opportunities presented by the transport infrastructure, mentioning 'light rail' a total of 23 times. The strategic directions in the document have also considered "the future introduction of heavy and light rail facilities," which is perceived by GCAPL (2017c, p. 2) as "a medium to long term prospect." In this regard, GCAPL has specifically preserved parts of the airport land around Terminal 1 building for the potential establishment of light rail stations in the future. Additionally, the 20-year development plan outlined in the document specifies the light rail as being a critical element of a new 'Transit Plaza', which, as "a new heart" of the airport, will function as a memorable, "architecturally iconic" public space (GCAPL, 2017c, pp. 143-144). Figure 6.11 illustrates an artist impression of the Transit Plaza.¹⁰³



Figure 6.11: Transit Plaza at Gold Coast Airport
(Source: GCAPL (2017c))

Urban planner #6 suggests that the light rail infrastructure, once connected to Gold Coast Airport, will generate significant benefits for the airport, as shown in the following quote:

[Gold Coast Airport is] in a bit of an awkward place because people that fly into Brisbane [Airport] can still [come] to the Gold Coast [by catching] a bus or [driving] a car – it is only one-hour drive. So it is [important to make Gold Coast Airport] a little bit more important and a bit more convenient for people to go. **That is why [the airport] would love to have [the] light rail, [which would enable] people [to] fly in ... catch a train and go straight into the Gold Coast.**
– urban planner #6 (emphasis added)

¹⁰³ The source imagery for Figure 6.11 is used with permission from GCAPL, which retains its full copyright.

The quote illustrates that the light rail is seen by Gold Coast Airport as a major transport solution to increase the accessibility of Gold Coast Airport, which would enable the airport to better compete with Brisbane Airport. In this regard, given that Brisbane Airport is located approximately one hour away, Gold Coast Airport has lost some potential passengers, who instead fly into Brisbane Airport although their intended destination is the Gold Coast.

Urban planner #3, when asked about key issues associated with Gold Coast Airport’s economic development contribution, notes:

Primarily just connectivity [to and from Gold Coast Airport] is a big issue. **But you really need to get that light rail connection. I think it is a no brainer – it just has to happen. Obviously, it is expensive, but I think the benefits – the long-term benefits – will absolutely outweigh the cost.** So that is actually vital [for promoting economic contributions of Gold Coast Airport] – urban planner #3 (emphasis added)

The urban planner quoted above reiterates the problem of the airport’s limited connectivity, previously identified and discussed in Section 6.2.2. The planner perceives the planned light rail extension as not only a major solution to the issue but also a significant driver of the airport’s economic development contribution.

Nevertheless, local destination marketing organisation representative #3 remarks that the heavy rail should be prioritised over the light rail for extension to Gold Coast Airport. The interviewee perceives the heavy rail as the more economically beneficial transport connection to link to Gold Coast Airport than the light rail due to two principal reasons. Firstly, the current light rail system on the Gold Coast is a significantly slower transport mode than the inter-city heavy rail system as shown in Table 6.1 below, which compares the light rail with the heavy rail infrastructure on the Gold Coast in terms of their number of stops, track length and commute time.

Table 6.1: Comparison of the Existing Light Rail and Heavy Rail Infrastructure on the Gold Coast¹⁰⁴

Infrastructure Type	Stops	Track Length (Kilometres)	Total Commute Time (Minutes)
Light Rail	19	20	45 ¹⁰⁵
Heavy Rail	3	17 ¹⁰⁶	15 ¹⁰⁷

¹⁰⁴ To increase the comparability of the two rail systems, Table 6.1 compares the entire light rail corridor from Helensvale Station to Broadbeach South Station with part of the heavy rail network from the same Helensvale Station to Varsity Lakes Station, both covering similar distances.

¹⁰⁵ The total commute time of the light rail is based on the timetable published by TransLink (2020a) as at June 2020.

¹⁰⁶ This figure is an approximated length of the heavy rail track between Helensvale Station and Varsity Lakes station, manually calculated by the author using the measurement tool on Nearmap (2020).

¹⁰⁷ The total commute time of the heavy rail between Helensvale Station and Varsity Lakes station is based on the timetable published by TransLink (2020b) as at June 2020.

As shown in Table 6.1, the heavy rail's commute time is three times shorter than the light rail's over comparable track lengths. Local destination marketing organisation representative #3 notes that the light rail is required to stop frequently due to the short distances between stations and the need to comply with road traffic lights.

Secondly, light rail carriages have significantly lower carrying capacity than heavy rail vehicles, making the light rail less efficient than the heavy rail in relation to passenger capacity. These two factors associated with the light rail make it a significantly less effective transport mode than the heavy rail in terms of transport time and capacity, both of which are critical factors for transporting passengers to and from an airport efficiently. The interviewee also indicates that a heavy rail connection with Gold Coast Airport can potentially underpin the airport's freight activities as illustrated in the following quote:

The other argument for heavy rail against light rail [connection for Gold Coast Airport is that] if you have got heavy rail, you can lift freight. If you have got light rail, you cannot do it. You are not going to carry any parcels on the tram. But you can on heavy rail. You can have a freight component – **bring product in and fly [product] out.** – local destination marketing organisation representative #3 (emphases added)

As shown in the quote above, the heavy rail, in contrast to the light rail, could potentially help increase the volume of freight being processed at Gold Coast Airport due to its ability to carry cargo in addition to passengers. As examined earlier in Section 6.2.4.2, there is an opportunity to establish a freight hub on the Tugun Quarry Reserve site adjacent to Gold Coast Airport. Given the prospect of heavy rail extension, there is an opportunity to link the heavy rail infrastructure to the freight hub, thus creating an intermodal hub with access to the following modes of freight transport:

- ✈ Rail, enabled by the Gold Coast heavy rail system;
- ✈ Road, via Boyd Street, and the Pacific Highway if the interchange between the two transport routes is established in the future;
- ✈ Air, enabled by the neighbouring Gold Coast Airport.

The intermodal freight hub could provide a significant boost to the airport's currently limited freight activities, which is further discussed in Section 6.4.1.1. This prospect is a significant economic development opportunity associated with Gold Coast Airport considering that currently “there are no major freight movements to or from the airport” (GCAPL, 2017c, p. 147). As such, although both the heavy rail and the light rail will ultimately be linked to Gold Coast Airport, the opportunity to create an intermodal hub with the heavy rail provides a strong argument, from the economic development perspective, for prioritising the extension of heavy rail over the light rail to the airport.

Therefore, based on this analysis, although both the heavy rail and light rail will ultimately be connected to Gold Coast Airport, the heavy rail, from the economic development perspective, may be the more appropriate transport option than the light rail to link to the airport first.

Having examined how the existing and future transport infrastructure, the next section of this chapter investigates the key issues and opportunities for Gold Coast Airport’s contribution to the advancement of different industry sectors.

6.4 ADVANCEMENT OF INDUSTRY SECTORS

This section investigates the key issues and opportunities for Gold Coast Airport’s contribution to the advancement of different industry sectors. Three industry sectors, including freight, tourism and business, are examined in relation to Gold Coast Airport’s role.

6.4.1 FREIGHT INDUSTRY

According to several interviewees, there is a major opportunity for Gold Coast Airport to boost the freight industry of the Gold Coast-Tweed Shire region. Urban planner #5 remarks that the airport has significant potential as an “economic gateway for freight logistics.” The research discovers three constraints and three opportunities in relation to Gold Coast Airport’s contribution to the advancement of the local freight industry, which are outlined in Table 6.2 below.

Table 6.2: Constraints and Opportunities for Gold Coast Airport’s Contribution to the Advancement of the Freight Industry

Constraints	Opportunities
<ul style="list-style-type: none"> ✈ Limited, declining freight activities at Gold Coast Airport; ✈ Lack of cold storage facilities in and around Gold Coast Airport; and ✈ Gold Coast Airport curfew 	<ul style="list-style-type: none"> ✈ Increasing volume of Tweed Shire’s exported produce; ✈ Gold Coast Airport’s strategic location and existing freight facilities; and ✈ Clear strategic direction for Gold Coast Airport’s future freight infrastructure and activities

The issues and opportunities outlined in Table 6.2 above are further elaborated in this section.

6.4.1.1 Limited, Declining Freight Activities at Gold Coast Airport

Table 6.3 below compares the 2011-12 volume of international passengers, domestic passengers and international air freight at Gold Coast Airport with other major Australian airports and the Australia-wide figures.

Table 6.3: Passenger and International Freight Volume at Gold Coast Airport, Other Major Australian Airports and All Australian Airports and Their Local Population in 2011-12¹⁰⁸

	Gold Coast	Brisbane	Perth	Melbourne	Sydney	Australia
International Passengers (millions)	0.7	4.5	3.5	6.7	12	28.9
Domestic Passengers (millions)	4.6	16.4	8.5	21.3	24	108.4
Total Passengers (millions)	5.3	20.9	12	28	36	137.3
International Freight ('000 tonnes)	5	104.2	72.2	233.2	417.9	856.8
Total Population ¹⁰⁹	592,747	2,065,996	1,728,867	3,999,982	4,391,674	21,507,717
Ratio of International Freight ('000 tonnes) to Total Passengers (millions)	0.94:1	4.99:1	6.02:1	8.33:1	11.61:1	6.24
Ratio of International Freight ('000 tonnes) Volume to Population (millions)	8.44:1	50.44:1	41.76:1	58.30:1	95.16:1	39.84:1

As illustrated in Table 6.3, the relative proportion of international freight to both passengers and local population at Gold Coast Airport in 2011-12 was significantly lower than the other major Australian airports. The ratio of international freight to total passengers is close to parity at 940 tonnes of international freight per one million passengers. Meanwhile, other major airports' figures are substantially higher, with Sydney Airport's figure being the highest at 11,161 tonnes of international freight for every one million passengers. Similarly, in relation to the local population figures of the airports' host regions, Gold Coast Airport's international freight volume was also the lowest with 8,440 tonnes of international freight per one million population. This ratio is 394.79 per cent lower

¹⁰⁸ The passenger and freight volume statistics in Table 6.3 are obtained from the Australian Government (2013) whereas the ratio figures are calculated by the author.

¹⁰⁹ The population figures are acquired from the 2011 Census data published by the ABS (2020). The figure for Gold Coast Airport is based on the combined Census data for both the Gold Coast and Tweed Shire LGAs given the airport's location across the two regions. Meanwhile, Brisbane, Melbourne, Sydney and Perth figures are taken from the Greater Capital City Statistical Area category of the 2011 Census data.

than the second lowest ratio of 41,760 tonnes of international freight per one million population recorded at Perth Airport. These figures evidently show that although Gold Coast Airport is the sixth busiest airports in Australia in terms of passenger volume as previously discussed in Section 4.5.3.4, its international freight activities are relatively lower than other selected major Australian airports' by a significant margin.

Gold Coast Airport's international freight volume was 3,764 tonnes in 2015, which accounted for 0.4 per cent of all international freight movements in Australia (GCAPL, 2017c). Considering the figure in Table 6.3, there was a reduction of 1,236 tonnes, or 24.72 per cent, of international freight volume at Gold Coast Airport from 2011-12 to 2015. Therefore, the airport has evidently experienced a sharp drop in its processed freight volume in recent years.

The statistics outlined and discussed above demonstrate that freight activities at Gold Coast Airport have been not only limited but also on a decline. Urban planner #3 comments that currently "there is limited scope for growth of goods freight [at] the airport" as most of the local freight volume is transported by road. In this regard, the main freight route is the Pacific Highway, located on the western end of the airport, which functions the main intercity and interstate route. Additionally, several freight companies are already located in industrial precincts along the highway. Consequently, most freight in the Gold Coast-Tweed Shire region is predominantly processed by the Port of Brisbane and Brisbane Airport according to the urban planner.

Two factors are discovered as key contributing factors to the low volume of freight being processed at Gold Coast Airport. These include the lack of dedicated freight facilities on or around the airport and the airport's curfew, both of which are examined in further detail below.

6.4.1.2 Lack of Cold Storage Facilities in and around Gold Coast Airport

As discovered previously in the literature review, cold storage facilities in and around an airport are particularly important for exporters of perishables, which, along with low-density, high-value goods such as small electronic devices, are most commonly carried by air. As such, the existence of such facilities in or around an airport is essential for promoting the airport's freight activities. However, there is currently no cold storage facility in or around Gold Coast Airport according to local destination marketing organisation representative #3, who views such a facility as a critical component for a Gold Coast Airport-driven freight industry as shown in the quote on the following page:

[Having a cold storage facility provides] you [with] opportunities to unload [local freight], store it, and then ship it [out with an aircraft], and in reverse ...bring it in [from an aircraft], store it [and then post it] out. So potentially again for [Gold Coast Airport] ... It could be beef. It could be flowers, seafood ... You could have seafood on a plate within 24 hours in an Asian destination [with a cold storage facility in or around Gold Coast Airport]. – local destination marketing organisation representative #3

The lack of cold storage facility is also identified by the local chamber of commerce representative as an issue, as highlighted by the following quote:

One of the issues that we have is getting [agricultural] produce to the airport in time by having storage. Cold storage allows you to bulk it up and be more consistent [with the quality of produce]. So there [are] opportunities [in terms of] supporting agricultural industry [by having cold storage facility in or around Gold Coast Airport]. – local chamber of commerce representative

The quotes above illustrate that a cold storage facility would benefit freight activities at Gold Coast Airport by enabling both of the activities outlined in Figure 6.12 below.



Figure 6.12: Freight Activities Facilitated by Cold Storage Facilities in or around Gold Coast Airport

As Tweed Shire is home to several exported perishables, an opportunity to be discussed in more detail below, the absence of cold storage facilities in and around Gold Coast Airport implies a significant barrier to having these goods exported by the airport via due to their time-sensitive nature. Additionally, the airport's curfew, further examined below, is another major restriction on the airport's ability to process perishables.

6.4.1.3 Curfew Imposed on Gold Coast Airport

Under the Air Navigation (Coolangatta Airport Curfew) Regulations 1999 imposed by the Federal Government, Gold Coast Airport has a daily curfew from 11pm to 6am (QLD time). Whilst some

aircraft, including freight carriers, can legally operate during the curfew hours,¹¹⁰ only four jet freight movements associated with specific aircraft types¹¹¹ are allowed per week under the curfew restrictions (GCAPL, 2017c). GCAPL currently has no intention to propose revisions to the curfew times and operational restrictions (GCAPL, 2017b). As discovered in the literature review, curfews are a major barrier to attracting freight operators to an airport. This literature review finding evidently applies to Gold Coast Airport as illustrated by the following quote:

[The curfew] limits [Gold Coast Airport's] freight opportunities. It limits [its] ability to [ship] certain things like cut flowers ... There are certain things that you might want to move out of [the airport] overnight to [arrive at] somewhere else in the morning ... like spoilable products and things like that. – urban planner #5

The quote above illustrates that the curfew imposed on Gold Coast Airport effectively results in the airport's inability to process perishables at night. Thus, the curfew, in conjunction with the lack of cold storage facilities around the airport, makes Gold Coast Airport a significantly less ideal airport through which businesses export or import their perishables, which is the principal reason behind the airport's low volume of freight activities previously discussed in this section.

Nevertheless, despite the three issues examined above, freight opportunities associated with Gold Coast Airport are continually iterated by several interviewees. In this regard, urban planner #5 specifically mentions 'freight' a total of 12 times throughout the interview. Thus, there is still a strong prospect for Gold Coast Airport to be established as a principal freight hub for the Gold Coast, Tweed Shire and the broader SEQ and FNC Regions. Three key opportunities for promoting Gold Coast Airport's contribution to the freight industry are further examined below.

6.4.1.4 Increasing Volume of Tweed Shire's Exported Produce

According to urban planner #2, local produce from Tweed Shire has been increasingly exported to the overseas market in recent years. The urban planner indicates that several of these products have no domestic demand in Australia but are highly demanded internationally. In this regard, the international market is noted by the urban planner to be "where the money is," thus allowing providing local producers with an opportunity to "make more money." For instance, Australian Bay Lobster Producers has been exporting their locally bred Moreton Bay Bugs to several countries

¹¹⁰ Aircraft that are allowed to operate during Gold Coast Airport's curfew hours include "emergency aircraft, some small jets, propeller-driven aircraft, freight aircraft and a limited number of domestic jets" (GCAPL, 2017c, p. 14).

¹¹¹ Jet aircraft types that can operate during the curfew include "BAe 146, or aircraft of a similar weight and noise levels to the BAe 146" (GCAPL, 2017c, p. 14).

including Japan, Hong Kong, China, Taiwan and the United States (Australian Bay Lobster Producers Limited, undated). Finger limes are another local produce which has been increasingly exported in recent years. Meanwhile, Hulk Distillers has recently created Ink Gin, “Australia's first organic, colour-changing gin” (Rylko, 2015) which is now exported to more than ten countries (Darling, 2019). Figure 6.14 and Figure 6.13 below display finger limes and Ink Gin product range, respectively.



Figure 6.14: Tweed Shire's Native Fruit – Australian Finger Lime (Source: Honan (2019))



Figure 6.13: Ink Gin Product Range (Source: Hulk Distillers (2019))

Nevertheless, urban planner #2 expresses a concern, noting that “it has been a very slow process [to promote the exportation of local produce from the Tweed Shire region even though] there has been a lot of talk about it for a long time.” In this regard, the interviewee indicates that there is “not a great deal of collaboration amongst the [local] producers” in terms of exporting their products. Thus, there is a significant opportunity to form a collaborative network not only amongst the producers but also between the producers and Gold Coast Airport to streamline and promote the exportation of Tweed Shire's local produce.

6.4.1.5 Gold Coast Airport's Strategic Location and Existing Freight Facilities

Given Gold Coast Airport's strategic location spanning two states and two LGAs, there is a major economic opportunity to establish the airport as the principal freight hub for not only both the Gold Coast and Tweed Shire LGAs but also the SEQ and FNC regions. Doing so can lead to significant cost and time savings, which are beneficial to local businesses and consumers, as there will be less road distance associated with freight transport. This opportunity is already recognised by GCAPL (2017c, p. 31), which notes that Gold Coast Airport “has the strategic advantage of servicing the northern New South Wales and Gold Coast region.” As discussed previously in Section 4.6.3, the

airport is already equipped with freight handling facilities located to the north of the Terminal 1 building, thus implying that a significant investment in freight facilities to enable Gold Coast Airport to process freight, is not required.

6.4.1.6 Clear Strategic Direction for Airport’s Future Freight Infrastructure and Activities

The 240-page Gold Coast Airport 2017 Master Plan mentions ‘freight’ 48 times in total. The document highlights the expected growth of freight activities at the airport in line with the projected future increase in aircraft movements and airlines “seeking to enhance their commercial returns by using spare hold capacity for freight” (GCAPL, 2017c, p. 101). To capitalise on this future increase in freight volume, the plan outlines the following potential future airport developments for on-site freight facilities:

- ✈ An inclusion of freight facilities on the Western Enterprise Precinct;
- ✈ An upgrade and expansion of existing freight facilities, including a multipurpose use which can respond to a variety of market requirements;
- ✈ An expansion of the existing apron areas to provide additional space for freight aircraft; and
- ✈ Conversion of existing airport buildings to create multipurpose facilities for freight and other aviation support activities.

The discussion above clearly illustrates GCAPL’s strategic intent to further develop Gold Coast Airport freight infrastructure and activities in the future, which can lead to additional freight volume being processed by the airport and position it as a major freight hub for the Gold Coast and Tweed Shire.

6.4.2 TOURISM INDUSTRY

The advancement of the local tourism industry through Gold Coast Airport is influenced by the constraints and opportunities outlined in Table 6.2 below.

Table 6.4: Constraints and Opportunities for Gold Coast Airport’s Contribution to the Advancement of the Tourism Industry

Constraints	Opportunities
<ul style="list-style-type: none"> ✈ Tweed Shire’s underperforming tourism industry; and ✈ Lack of visitations to Gold Coast Airport’s vicinity by airport passengers 	<ul style="list-style-type: none"> ✈ Existing green reputation of Tweed Shire; ✈ Establishment of eco-friendly accommodation in Gold Coast Airport’s vicinity; and ✈ Creation of a unique brand for Tweed Shire with its green reputation.

The constraints and opportunities outlined in Table 6.2 above are further discussed in this section.

6.4.2.1 Tweed Shire's Underperforming Tourism Industry

Tweed Shire Council (2019c) notes that “tourism is a significant driver of the Tweed Shire's economy, contributing an estimated \$278 million to Gross Regional Product.” Meanwhile, Tweed Shire's total Gross Regional Product is 3.746 billion in 2019 (.id, 2019q). Thus, tourism only contributes 7.42 per cent of the LGA's total Gross Regional Product. However, Tweed Shire is home to several tourist attractions including heritage-listed sites and award-winning tourist facilities, making the region highly attractive as a tourist destination. Considering Tweed Shire's significant tourism potential and actual economic contribution from tourism, the region's tourism industry has been evidently underperforming, which is attributable to two principal reasons examined further below.

Firstly, Tweed Shire's share of tourists from Gold Coast Airport has been significantly lower than the Gold Coast's share. In this regard, according to urban planner #2, currently only ten to 15 per cent of passengers that arrive at Gold Coast Airport directly turn right upon leaving the airport in order to visit Tweed Shire as the region's tourists. As previously discussed in Section 4.3.4, some of the domestic and international visitors that the Gold Coast receives only visit Tweed Shire as day-trip tourists rather than overnight tourists, which limit the amount of their spending on Tweed Shire's economy.

Secondly, Tweed Shire's location between the Gold Coast and Byron Bay, both highly popular destinations amongst domestic and international visitors alike, implies that the region is essentially competing against the two destinations for tourists from Gold Coast Airport. The quote below from the Tweed Shire Economic Development Strategy further illustrates this issue and a potential solution (Ruzzene, 2014, p. 24):

Tweed Shire's tourism industry has had difficulty finding its place. The Tweed Shire is on the doorstep of two well recognised tourism brands: Gold Coast and Byron Bay. Part of the issue is that Tweed Heads is acknowledged as part of the Gold Coast City Region; however the remainder of the Shire is vastly different in its product essence than the Gold Coast. **The development of a well-defined Tweed brand which highlights Tweed Shire's natural assets is a way to define the Shire amongst the book ends of Byron Bay and Gold Coast.** (emphases added)

Tweed Shire's rich natural settings, which contribute to the LGA's green reputation discussed further below, are highlighted in the quote above as being critical to the creation of a 'Tweed brand', which can help distinguish the region apart from the Gold Coast and Byron Bay. This destination branding strategy is further examined in Section 6.4.2.5.

6.4.2.2 Lack of Visitations to Gold Coast Airport's Vicinity by Airport Passengers

According to local community representative #2 and local destination marketing organisation representative #3, the majority of Gold Coast Airport passengers, do not spend any amount of their trip time in the vicinity of the airport, namely the Coolangatta-Tweed Heads area. Once they arrive at the airport, most passengers immediately travel to the northern end of the Gold Coast. The interviewees indicate the existence of several hotels with a variety of star ratings on the northern part of the Gold Coast as the primary reason behind this trend. This is particularly the case for the adjacent suburbs of Surfers Paradise and Broadbeach where several high-rise residential towers and internationally recognised hotels are concentrated. Figure 6.15 below illustrates the dominance of high-rise residential towers in Surfers Paradise, which has become a popular visual icon commonly associated with the Gold Coast in the media.



Figure 6.15: Dominance of High-Rise Towers in Surfers Paradise (Source: Mantra Group (2020))

However, in stark contrast to the northern Gold Coast region, the Coolangatta-Tweed Heads area, which has several apartment accommodations, currently only has one hotel as previously discussed in Section 4.4.2.2. Consequently, according to local destination marketing organisation representative #3, the organisation that he/she represents “has been crying out for quite some years” for hotels with at least a four-star rating to be established in the Coolangatta-Tweed Heads area. Doing so would help attract airport passengers to stay and spend time in the area, thus contributing to its local economy. Local community representative #2 shares a similar opinion, highlighting the absence of hotel spaces as a missed economic development opportunity for the Coolangatta-Tweed Heads area given that it hosts Gold Coast Airport. The local community representative perceives hotel accommodations as an essential element for attracting international tourists as shown in the following quote:

Say you get a group of international tourists that are coming in for one week. They will usually stay in a hotel accommodation because they want the experience of eating out. They do not want [a] self-contained [apartment]. It is more your domestic visitors that would like the apartment where they drive and they would bring their families [along]. – local community representative #2

Thus, although apartments are suitable for domestic visitors, hotels are the preferred choice of accommodation for international tourists who normally value the convenience associated with hotel accommodation. By staying in a hotel, international tourists can spend more time on leisurely tourist activities such as sightseeing, and less time on such chores as cooking and cleaning.

The lack of hotels has led to a long-term problem in which the Southern Gold Coast is “very much a domestic product” according to the local destination marketing organisation representative #3. In this regard, there has been a lack of international tourists in the Southern Gold Coast despite the airport’s location within the region. The interviewee reveals that more than “99 per cent of all international visitations [in] Gold Coast” occur in Surfers Paradise and Broadbeach. Thus, an introduction of hotels, particularly those with a strong international reputation, could lead to “the start of a renaissance” for the economy of the Southern Gold Coast according to the interviewee.

An ancillary benefit of having high-quality hotel accommodation is related to its suitability for business travellers through its provision of conference and meeting spaces. These facilities can be used for conference events and business meetings, which can help promote the business industry for the Gold Coast and Tweed Shire. Section 6.4.3.1 discusses this opportunity further.

A recent global tourism trend driven by the rapid advancement in mobile technologies is ‘sharing accommodation’ where private housing is rent through smartphone apps such as Airbnb (Australian Hotels Association (Western Australia), 2019). displays Australia-wide statistics on share of nights in commercial accommodation in 2016–17.

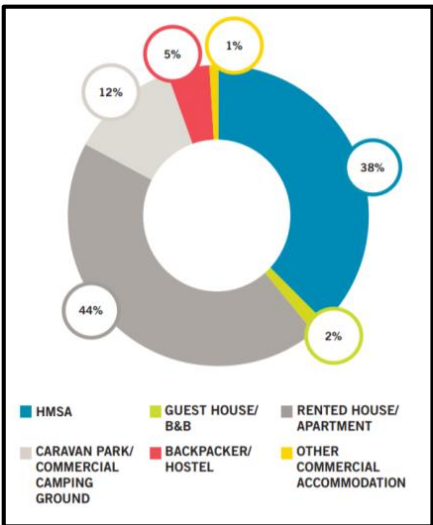


Figure 6.16: Share of Nights in Commercial Accommodation in Australia in 2016–17 (Source: Tourism Research Australia (2018))

As shown in Figure 6.16 above, in 2016–17, in comparison with all other types of accommodation, the proportion of nights that visitors spent in rented homes and apartments, which are “often let through online platforms” (Australian Hotels Association (Western Australia), 2019, p. 10), was the largest at 44 per cent. Traditionally dominant tourist accommodations in the forms of hotels, motels

and serviced apartments (HMSA), meanwhile, accounted for the second highest proportion of visitors' nights at 38 per cent.

This recent tourism trend indicates that traditional hotels, while still an important form of accommodation for tourists, are not as prevalent amongst tourists as they once were. Therefore, in addition to introducing hotels in the Coolangatta-Tweed Heads area, other strategies should also be considered to draw tourists to the area. One such strategy is the introduction of eco-friendly accommodation options, which is further discussed in Section 6.4.2.4.

6.4.2.3 Existing Green Reputation of Tweed Shire

Green reputation commonly associated with Tweed Shire emerges as a recurrent theme throughout the interviews conducted in this research as illustrated by the following selected quotes:

I have been to China a few times on tourism trade missions. **What they value [about] Tweed [Shire] is the [region's] clean, green environment.** – local chamber of commerce representative (emphasis added)

Tweed is becoming renowned for its green credentials, its natural environment and so forth. – senior manager #2

For certain reasons, Tweed [Shire] has a green environmental reputation. The [NSW North Coast] region has a lot of businesses here that [care about environmental issues] ... A lot of these companies now are starting to leverage [Tweed Shire's green reputation]. – urban planner #2 (emphasis added)

Tweed Shire's "clean, green credentials" are a culmination of the following attributes of the region (Planning Institute of Australia, 2019):

- ✈ Location in Australia's Green Cauldron, one of Australia's National Landscapes spanning FNC and SEQ;
- ✈ 300 days of sunshine annually;
- ✈ Fertile agricultural fields supported by rich rainfall volume;
- ✈ Widespread availability of several rainforests, including three World Heritage listed national parks;
- ✈ Undisturbed coastline; and
- ✈ Clean air.

In addition to the attributes listed above, Tweed Shire has also recently established "a niche market for ... good food, safe food" according to urban planner #1. In this regard, several food-related events have been regularly organised in Tweed Shire to celebrate the LGA's food culture and locally grown produce. An example of such events is the Taste Tweed Food Festival, a ten-day annual event where attendees can taste local cuisine at various locations throughout Tweed Shire. Additionally, in 2016,

Tweed Shire Council organised the Food for Thought Forum, a two-day event where several keynote speakers from the food industry shared their success stories and lessons.

Tweed Shire's green reputation, as a distinguishing feature and a key competitive advantage of the LGA, presents a major opportunity to create a unique brand for the LGA, which distinguishes Tweed Shire as a different tourist destination from the nearby Gold Coast and Byron Bay. Section 6.4.2.5 outlines a strategy for establishing such a brand for Tweed Shire.

6.4.2.4 Establishment of Eco-Friendly Accommodation in Gold Coast Airport's Vicinity

Driven by the increasingly widespread awareness of environmental impacts, accommodation preferences amongst tourists, particularly those in a younger demographic group, are shifting toward more eco-friendly options. This tourism trend has led to a significant amount of investment in eco-friendly accommodation in recent years, "with first movers experiencing significant [financial] success" (Tourism Research Australia, 2020, p. 8). As such, this emerging development could be capitalised on as part of the planning strategy to attract tourists from Gold Coast Airport to stay in the Coolangatta-Tweed Heads area.

Given the widespread availability of apartments in the area, instead of developing new eco-friendly accommodation buildings, a more cost-effective solution would be to retrofit the existing apartment buildings with sustainability features. These apartments should then be advertised through a variety of channels by both councils and local destination marketing organisations to attract tourists to the Coolangatta-Tweed Heads area. As discussed above, the Tweed Shire region is already well-recognised for its green reputation. Such a reputation is highly complementary to the establishment of eco-friendly accommodations. In this regard, there is a major economic opportunity to utilise the green reputation of Tweed Shire to further promote eco-friendly accommodation in future marketing initiatives for the Coolangatta-Tweed Heads area. Additionally, eco-friendly accommodation could not only increase the number of visitors in the Coolangatta-Tweed Heads area, but also attract additional overnight visitors to Tweed Shire. Thus, it can potentially help address the issue of limited length of tourists stay in the LGA discussed previously in Section 6.4.2.1.

6.4.2.5 Creation of a Unique Brand for Tweed Shire with Its Green Reputation

Tweed Shire's strong green reputation could be further leveraged into creating a unique, recognisable brand for Tweed Shire. This brand can then be used as part of future marketing initiatives by Tweed Shire Council and other stakeholders, including Gold Coast Airport, to promote Tweed Shire as a destination for both tourists and investors alike. Tweed Shire Council currently recognises the

existence of the region's green reputation in its economic development strategy. The council also specifically mentions in the plan that the creation of a brand based on the region's natural assets is a key strategy to differentiate Tweed Shire from Gold Coast and Byron Bay.

In addition to using the green reputation for creating the Tweed Shire brand, there is also an opportunity to incorporate powerful keywords related to the region's green credentials into an easily recognisable title for the region. An example of how this has been successfully done is Tweed Shire's neighbouring Gold Coast, which has often been associated with the 'Famous for Fun' title. These marketing keywords describe the entertainment associated with the Gold Coast's abundance of amusement and theme parks, which totalled 33 in all as at June 2020 (Destination Gold Coast, 2020a).

6.4.3 BUSINESS INDUSTRY

The advancement of the business tourism industry through Gold Coast Airport can be promoted by capitalising on the following two opportunities, all of which are further examined in this section:

- ✈ Promotion of the corporate meeting industry in the Coolangatta-Tweed Heads area; and
- ✈ Promotion of an environment-oriented conferencing industry in Tweed Shire.

6.4.3.1 Promotion of Corporate Meeting Industry in the Coolangatta-Tweed Heads Area

According to the local chamber of commerce representative, there is a significant opportunity to promote the corporate meeting industry in and around Gold Coast Airport. Urban planner #5 shares a similar opinion, noting that "there are opportunities for growth of businesses accommodating [corporate] travellers near the airport or at the airport." In this regard, in addition to its domestic market catchment, the Gold Coast-Tweed Shire region is strategically located approximately ten hours from the major Southeast Asia and East Asia markets. In this regard, corporate workers from Australia and Asia could fly in, attend meetings and fly out within a short period of time. The convenience and time efficiency of this arrangement could help promote the local corporate meeting industry. The local chamber of commerce representative indicates that the corporate meeting industry will be a "very important" economic driver particularly for the region of Southern Gold Coast and northern Tweed Shire. This is due to the airport's strategic location and function as "the key access point" for corporate workers.

Nevertheless, the chamber of commerce representative above suggests that the areas around Gold Coast Airport currently "seriously lack meeting spaces" due to the absence of hotel accommodation, a constraint previously examined in Section 6.4.2.1. This constraint has limited not only the number of business travellers who spend time locally in the vicinity of Gold Coast Airport, but also the overall

number of corporate workers who travel to the Gold Coast and Tweed Shire. As previously discussed in Section 4.5.3.5, the Rydges hotel development project at Gold Coast Airport, which is currently under construction as at September 2020, will include corporate and meeting facilities upon its completion. However, there is also an opportunity to provide such facilities around the airport to offer more venue options to business travellers. An ancillary benefit of having hotels with conference and meeting spaces around the airport, according urban planner #5, is the greater potential for the area to attract additional overnight business travellers.

6.4.3.2 Promotion of an Environment-Oriented Conferencing Industry in Tweed Shire

Urban planner #2 suggests that the conferencing industry in Tweed Shire has been rapidly growing in recent years. The urban planner indicates Gold Coast Airport as a critical driver of the region's conferencing industry as it effectively allows Tweed Shire to expand its market catchment of conference attendees both domestically and internationally. Additionally, according to the urban planner, the adjacent Gold Coast region serves as a complementary attractor of conference attendees for Tweed Shire. In this regard, conference attendees regularly arrive with their family, and once the conference they attend concludes, they then visit Gold Coast on the same weekend with their accompanying family members.

Kingscliff, a coastal suburb where several hotels and conference venues are located, is noted by the interviewed planner above as a key hotspot for conferences. In particular, Peppers Salt Resort & Spa has successfully hosted numerous conferences in recent years with its purpose-built conferencing facilities and event management services, which are described by urban planner #2 as being "very professional [and] very well-done."

Given the recent growth in Tweed Shire's conference industry, it is strongly suggested that the industry be further promoted as an area of high priority focus in the future. There is a prospect to also distinguish Tweed Shire from other conferencing locations by promoting the region as a hosting destination specifically for planning and environmental conferences due to two reasons. Firstly, whilst past conferences held in Kingscliff vary in scope and topics, several of them focus on a theme related to planning and environment as illustrated in Table 6.5 on the following page.

Table 6.5: Recent and Future Conferences in Kingscliff with a Planning and Environment Theme

Date	Conference Name	Theme
17 to 19 November 2021	The 29 th NSW Coastal Conference	Coastal management
18 to October 2018	Local Government Property Professionals Conference	Local governance
10 to 11 July 2014	The 7th Making Cities Liveable Conference	Town planning

The table above suggests that the Kingscliff area has recently hosted and will continue to accommodate several conferences in the planning and environment theme. This trend could be attributed to the coastal, scenic setting of Kingscliff shown in Figure 6.17.



Figure 6.17: Coastal, Scenic Setting of Kingscliff
(Source: Tweed Holiday Parks (2020))

Secondly, Tweed Shire already possesses a strong green reputation, making the region highly suitable as a hosting destination for planning and environmental conferences. The region’s green reputation, in addition to Kingscliff’s coastal setting and available conferencing facilities, position Kingscliff as a highly attractive destination for hosting planning and environment conferences and events. Additionally, continually hosting these conferences could eventually help further strengthen Tweed Shire’s green reputation, which can potentially attract more tourists to the region. Thus, promoting green conferences is a major Gold Coast Airport-driven economic development opportunity for Tweed Shire, which could become a significant driver for Tweed Shire’s economy in the future.

This strategy is also in line with the strategic intent of the recently implemented Destination Management Plan 2018-2030 document for Tweed Shire. The plan highlight “business and regional events ... [including] conferencing with a difference ... that focus on wellness and connection with the environment” as an economic opportunity for promoting Tweed Shire as a visitation destination (The Tweed Tourism Company, 2019, p. 27).

Having examined constraints and opportunities for Gold Coast Airport’s contribution to the advancement of the local freight, tourism and business industries, the next section of this chapter investigates location names in terms of how they can be used to promote Gold Coast Airport’s economic development contribution.

6.5 LOCATION NAMES

Location names is a theme that has emerged in this research as a major factor that can potentially influence the economic development contribution of Gold Coast Airport by promoting awareness of Tweed Shire amongst future airport passengers.

6.5.1 THE IMPORTANCE OF LOCATION NAMES FOR BUSINESS VIABILITY

Location names have significant implications on business viability. These are evident from the fact that the name of the Gold Coast city has been utilised by both Gold Coast Airport and SCU for their business benefits. As noted earlier in Section 4.5.3.1, the name of Gold Coast Airport was changed from 'Coolangatta Airport' to 'Gold Coast Airport' shortly after the airport was privatised. This was a highly strategic move, according to several interviewees, to leverage the reputation of the 'Gold Coast' name into attracting more passengers to the airport. The quote below illustrates the benefits of incorporating the Gold Coast into the airport name:

From a marketing point of view, in the international and domestic environments, **everyone knows the Gold Coast, so it is an easy locator.** [When someone] flies to Gold Coast Airport, the Gold Coast is [immediately] next door. – local chamber of commerce representative (emphasis added)

However, the exclusion of Tweed Shire in the airport name has been detrimental to the LGA as illustrated in the quote below:

[The airport] is 'Gold Coast Airport', not 'the Tweed Airport'. Therefore, most people would come here for holiday on the Gold Coast, **and as a secondary outcome, they spend a bit of time in [Tweed Shire].** – urban planner #1 (emphasis added)

The quote above specifically attributes the airport name to the uneven distribution of airport visitors across the Gold Coast and Tweed Shire. As previously discussed in Section 4.7.1.6, such an unbalanced dispersal of airport passengers across the two LGAs is the principal reason for the uneven cross-border economic development contributions from the airport.

On the other hand, SCU (2019) extensively utilises the Gold Coast's name and location to promote its Gold Coast Airport campus in its current marketing video. The video immediately begins with a bird's-eye view of Coolangatta, a Gold Coast suburb adjacent to the airport, displaying the beaches and nature reserves within the area, which are natural assets that the Gold Coast is well-known for. The video then highlights "Gold Coast, Queensland [as] home to one of the fastest growing university campuses in Australia." In the "active life" section of the video, famous Gold Coast outdoor activities including surfing, beach volleyball and stand-up paddle boarding are shown. Moreover, SCU

(undated-b) describes its Gold Coast campus as being “unique in Australia and is in a stunning location, just metres from the Pacific Ocean.”

In addition to Gold Coast Airport, the name of which was changed to leverage the Gold Coast name, two nearby case studies illustrate the economic importance of location names for airports. Ballina Byron Gateway Airport, located approximately one hour away from Gold Coast Airport by car, is owned, operated and managed by the Ballina Shire Council. The airport was previously named ‘Ballina Airport’ but was recently renamed to “capture that Byron [Bay] market” of tourists, particularly from Sydney according to urban planner #2. As previously discussed in Section 4.2.3, Byron Bay is a popular tourist destination, which receives 2.24 million visitors annually and is located 36.5 kilometres from Ballina Byron Gateway Airport.

Toowoomba Wellcamp Airport (Figure 6.18) is another example illustrating the significance of location names for airports. Built and operated privately by Wagners, a major Australian provider of construction materials and services, Toowoomba Wellcamp Airport is “the first greenfield ... public airport to be built in Australia in almost half a century” (Sebag-Montefiore, 2018). As Toowoomba Wellcamp Airport is situated about 130 kilometres west of Brisbane, the airport was initially named ‘Brisbane West Wellcamp Airport’. According to Wagner (2016), a co-founder of Wagners, this name was chosen to strategically capitalise on the reputation of Brisbane as a destination in order to attract more visitors and RPT flights to the airport. In 2017, the airport name was changed to ‘Toowoomba Wellcamp Airport’ concurrently with the ‘From Toowoomba to the World’ marketing campaign of the airport. The airport name was changed to recognise “the [local] region [of Toowoomba] which has contributed so much to its success” (Hales, 2017).



Figure 6.18: Toowoomba Wellcamp Airport
(Source: Southward (2019))

Location names, based on the discussion above, evidently have major implications for influencing the economic viability of airports. As such, there is an opportunity to utilise airport names to also promote public awareness of the Tweed Shire region. Similarly, urban planner #2 suggests that there is a prospect to use location names to achieve a reverse outcome where a location derives economic benefits from having its name embedded in a major business entity, which, in this case, is Gold Coast Airport. The local chamber of commerce representative shares the same opinion, noting that “it would be nice to have something more inclusive” of Tweed Shire in the name of Gold Coast Airport.

6.6 CONCLUSION

Figure 6.19 below summarises the key findings on the influence of land use, transport and industries on Gold Coast Airport's economic development contribution, in relation to research question #3, "How do land use, transport and industry sectors shape Gold Coast Airport's contribution to economic development?" and its associated sub-questions.

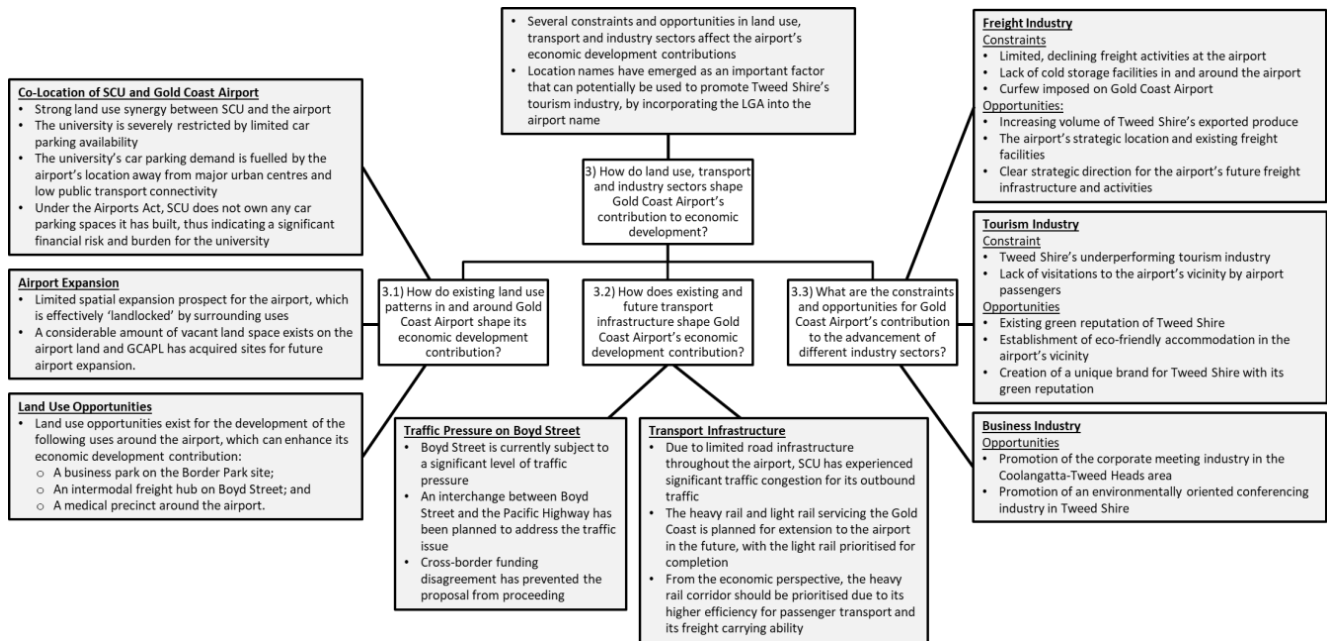


Figure 6.19: Summary of Findings on the Influence of Land Use, Transport and Industries on Gold Coast Airport's Economic Development Contribution

In relation to research sub-question #3.1, "How do existing land use patterns in and around Gold Coast Airport shape its economic development contribution?" the research discovers four key land use opportunities that can potentially shape the airport's economic development contribution. Firstly, there is strong land use synergy between the SCU campus and Gold Coast Airport. This synergy has led to three key benefits for SCU, including:

- ✈ The ability for the university to attract FIFO students given the availability of domestic and international flights at Gold Coast Airport and the proximity of the university campus to the airport terminal building;
- ✈ The opportunity for SCU to provide airport management courses tailored for Chinese students, which is in line with China's greater demand for airport workers in recent years; and
- ✈ The visibility of Gold Coast Airport's daily operation creates an 'exciting' atmosphere for SCU staff and students, thus providing them with psychological benefits which can enhance their work or study productivity.

Secondly, the SCU campus is severely restricted by limited car parking availability. This is a major issue for the university as there is substantial car parking demand amongst its staff and students,

fuelled by the location of the airport away from the existing urban centres of the Gold Coast where the majority of the university students live. There is also low public transport connectivity to the campus due to the lack of heavy rail or light rail connection and the absence of a bus stop directly at the campus. Due to the influence of the Airports Act, SCU does not own any of the land its campus is situated on. As a result, the university does not legally own any parking facilities the university has built, thus indicating there is significant financial risk and burden associated with its car parking facilities.

Thirdly, there is limited spatial expansion prospect for Gold Coast Airport, which is effectively 'landlocked' by low-density residential uses to the north and east, and protected nature reserves to the south. Nevertheless, there is considerable amount of vacant land space inside Gold Coast Airport and GCAPL has purchased a number of land parcels on both sides of the border for the purpose of future airport expansion.

The fourth land use pattern discovered is related to opportunities to create developments in proximity to Gold Coast Airport, which, due to their land use compatibility with the airport, can enhance the airport's economic development contribution. There are opportunities to develop three specific uses, including a business park on the Border Park site, an intermodal freight hub on Boyd Street and a medical precinct around the airport.

Research sub-question #3.2 is **“How does existing and future transport infrastructure shape Gold Coast Airport's economic development contribution?”** In response to this research sub-question, the research discovers there is a significant level of traffic volume on Boyd Street located to the north of Gold Coast Airport. This traffic volume will continue to increase in the future due to the planned residential development of the nearby Cobaki Lakes, located on the NSW side, and the potential development of a freight hub on the quarry site discussed above. An interchange between Boyd Street and the adjoining Pacific Highway has been proposed to alleviate the current and future traffic pressure, but cross-border funding disagreement has prevented the proposal from proceeding. Meanwhile, inside the airport, the limited road infrastructure has led to a major traffic congestion issue for SCU, particularly for outbound traffic from the campus, which can adversely affect future student enrolment figures at the campus. Lastly, the heavy rail and light rail corridors servicing the Gold Coast are planned to be extended to Gold Coast Airport, with the light rail being prioritised for completion by 2023 and the heavy rail being a long-term prospect. The rail corridors will significantly boost the accessibility of Gold Coast Airport, which has lost some of its potential customers to Brisbane Airport from its low accessibility. However, from the economic development perspective,

the heavy rail should be prioritised as the first rail corridor to be extended to Gold Coast Airport based on two reasons: its relatively higher efficiency in transporting more passengers in a shorter amount of time than the light rail and its ability to carry freight and support the airport's freight activities in the future.

Research sub-question 3.3, **“What are the constraints and opportunities for Gold Coast Airport's contribution to the advancement of different industry sectors?”** involves an analysis of Gold Coast Airport's contribution to three industries, including freight, tourism and business. Gold Coast Airport's contribution to the local freight industry is constrained by three factors, including: 1) the airport's limited, declining freight activity, 2) lack of cold storage facilities in and around the airport, and 3) the curfew imposed on the airport. Nevertheless, three opportunities can be capitalised on to potentially enhance Gold Coast Airport's role in the local freight industry: 1) increasing volume of Tweed Shire's exported produce, 2) Gold Coast Airport's strategic location and existing freight facilities, and 3) clear strategic direction for Gold Coast Airport's future freight infrastructure and activities, which has been outlined in the Gold Coast Airport 2017 master plan.

Meanwhile, Gold Coast Airport's promotion of the local tourism industry is constrained by two key factors, including the underperforming tourism industry of Tweed Shire and the lack of visitations to the vicinity of the airport by its passengers, the majority of whom immediately travel to the northern part of the Gold Coast upon their arrival at the airport. However, three major opportunities exist for potentially promoting the airport's contribution to the tourism industry. These include the existing green reputation of Tweed Shire, the establishment of eco-friendly accommodation in the vicinity of the airport and the creation of a unique brand for Tweed Shire with its green reputation.

The local business industry of the Gold Coast and Tweed Shire can potentially be promoted through Gold Coast Airport by capitalising on two opportunities identified in this research. Firstly, the local corporate meeting industry in the airport's vicinity can be promoted through the provision of conference venues and corporate meeting spaces, which can be provided as part of hotel facilities. Secondly, given the green reputation that Tweed Shire has, along with the availability of conference venues in the LGA, there is an opportunity to promote an environment oriented conferencing industry in Tweed Shire.

Based on the findings above, in relation to the third research question, **“How do land use, transport and industry sectors shape Gold Coast Airport's contribution to economic development?”** the research discovers that although a range of constraints are limiting the airport's economic

development contribution, several opportunities can also be capitalised on to promote the economic benefits from the airport in the future. Even though Gold Coast Airport is significantly restricted in terms of spatial expansion prospect, several land use opportunities, driven by the availability of vacant sites in proximity and the land use synergy created by the co-location of a SCU campus and Gold Coast Airport. On the transport side, there is existing traffic congestion inside and outside the airport, but the proposed extension of heavy rail and light rail corridors will not only alleviate this issue, but also significantly increase the accessibility of the airport. Meanwhile, Gold Coast Airport currently plays a minor role in the local freight and business industries and Tweed Shire's tourism industry. Nevertheless, there are several opportunities for enhancing the airport's role in these industries.

Lastly, location names have emerged in this research as an important factor that can be used to improve business viability. In this regard, location names have been used by several airports to strategically attract more passenger traffic, including Gold Coast Airport, Ballina Byron Gateway Airport and Toowoomba Wellcamp Airport (then 'Brisbane West Wellcamp Airport'). As such, there is an opportunity to incorporate the Tweed Shire into the name of Gold Coast Airport to increase the awareness of the LGA amongst future airport passengers, thus potentially increasing the number of visitors to the region.

This chapter has addressed the third research question and its associated sub-questions. The thesis answers the fourth and final research question and its sub-questions in the next chapter, Chapter 7, which investigates the impact of stakeholder relationships on Gold Coast Airport's economic development contribution.

**CHAPTER 7: THE IMPACT OF STAKEHOLDER
RELATIONSHIPS ON GOLD COAST AIRPORT'S
ECONOMIC DEVELOPMENT CONTRIBUTION**

7.1 INTRODUCTION

Chapter 7 focuses on the central theme of stakeholder relationships in terms of how they influence economic development contribution from Gold Coast Airport. The chapter answers the fourth and final research question of this thesis. Figure 7.1 below outlines the research question and its associated sub-questions.

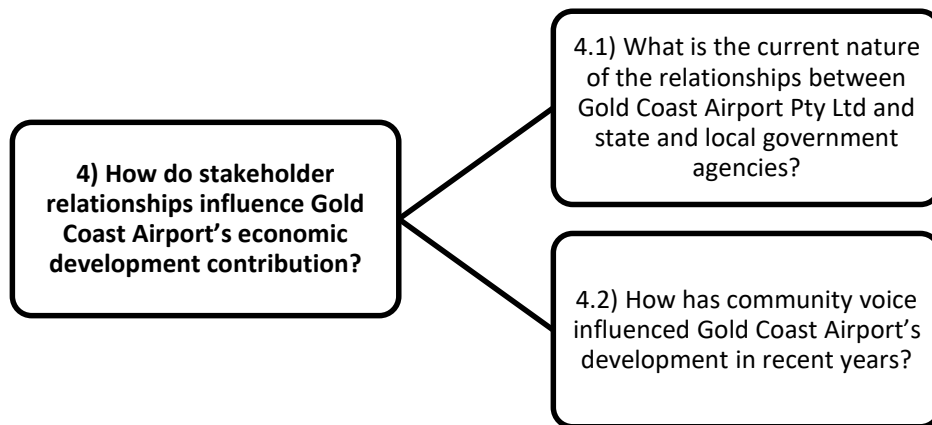


Figure 7.1: Research Question #4 and Its Associated Sub-Questions

To address research question #4 and its associated sub-questions outlined in Figure 7.1, the chapter is organised into three major sections. Firstly, Section 7.2, answers research sub-question #4.1 by investigating the current governance arrangements in place on both the QLD and NSW sides of the state border. Specifically, it examines how the existing funding support from the state governments influences Gold Coast Airport's economic development contribution. Secondly, Section 7.3 also addresses research sub-question #4.1 through reviewing the existing relationships between GCAPL and local stakeholders, including councils and local destination marketing agencies. Additionally, it examines the cross-border relationship between government agencies at both the state and local levels in the context of Gold Coast Airport's contribution to economic development. Thirdly, Section 7.4 responds to research sub-question #4.2 by examining how community voice from both the Gold Coast and Tweed Shire sides of the border has influenced recent development at Gold Coast Airport.

7.2 GOVERNANCE ARRANGEMENTS

The following aspects of governance arrangements, which are discussed in this section, are relevant to Gold Coast Airport’s economic development contribution:

- ✈ Lack of NSW state government funding support for economic development in Tweed Shire; and
- ✈ Extensive QLD state government funding support for Gold Coast Airport.

7.2.1 LACK OF NSW STATE GOVERNMENT FUNDING SUPPORT FOR ECONOMIC DEVELOPMENT IN TWEED SHIRE

According to senior manager #2, “the City of Gold Coast’s budget dwarfs [Tweed Shire Council’s budget].” Table 7.1 below illustrates the significant differences in budget, rates revenue and fees and charges of the two local councils in the latest Financial Year of 2019 to 2020.

Table 7.1: Comparison of City of Gold Coast and Tweed Shire Council’s 2019/20 Budget (Sources: CoGC (2019a) and Tweed Shire Council (2019a))

Funding Source	City of Gold Coast (\$ million)	Tweed Shire Council (\$ million)	Difference (%)
Total Budget	1,729.8	231.62	646.83
Rates Revenue	649.1	61.17	961.14
Fees and Charges	138.3	52.23	164.79

As shown in Table 7.1 above, the CoGC’s budget is nearly 650 per cent greater than Tweed Shire Council’s budget. Thus, there is a significant gap in financial resources between the two councils. Such a gap is attributable to the substantial difference in the LGAs’ population size, which primarily affects the amount of rates revenue, fees and charges the councils receive. These incomes are “the major recurrent sources of finance available to [local] councils” (Queensland Audit Office, 2018, p. 1). The Estimated Resident Population figures of the Gold Coast and Tweed Shire as of 30th June 2018 are 606,774 and 96,108, respectively (.id, 2018b, 2019p). The difference of 531.35 per cent in population size implies that Tweed Shire has significantly fewer ratepayers to contribute to the council’s budget. The following two quotes further illustrate the difference in economic capacity between the Gold Coast and Tweed Shire:

A lot of people compare Tweed [Shire] with what the Gold Coast is doing. **It is like trying to compare New Zealand with Australia.** Yes, they are neighbours, but the economic ability of New Zealand is very different than the economic ability of Australia ... New Zealand cannot afford an air force, [but] Australia does have one. **So, it is not that New Zealand is not as good as Australia, it is just that they do not have the economic capacity nor the population to be able to do the same thing that Australia does.** – senior manager #2 (emphases added)

It is a difficult thing [for Tweed Shire Council to invest in tourism-related initiatives] **because the [City of] Gold Coast has an enormous budget.** [Destination Gold Coast] have, I think, special rights on their tourism operators ... attract a couple of million dollars a year [in budget], and [run a] really slick operation – very, very professional **and ... they [receive] a lot of support from the Queensland Government ... [Tweed Shire Council is] left with [itself and its] own budget ... because the state government only really see Byron as a [Far North Coast] tourism attraction.** – urban planner #2 (emphases added)

The second quote above illustrates that Destination Gold Coast,¹¹² similarly to the CoGC, also has access to significant financial resources, which enable the organisation to market the Gold Coast as a tourism destination through several initiatives. In contrast, however, due to the limited council budget, an interviewee reveals that Tweed Shire Council and Destination Tweed “always need more funding [support]” from the state and federal governments for promoting economic development. Government funding support for economic development, meanwhile, is not as essential on the Gold Coast side as the CoGC has access to significantly larger budget and resources than Tweed Shire Council does.

To date, there has been a lack of state government support on both the financial and policy fronts for economic development in the Tweed Shire region according to the chamber of commerce representative. This is due to fact that the NSW Government, in its economic development initiatives, has been primarily focused on Sydney as shown in the quote below:

[There has been limited state government support for economic development in Tweed Shire] **because New South Wales is very Sydney-centric in its view,** and [Tweed Shire is] a regional area. When you are sitting in Sydney and you look at the Tweed ... [it is] far away [from Sydney] and a regional area. – local chamber of commerce representative (emphasis added)

Senior manager #2 and local destination marketing organisation representative #1 also share similar opinions to the chamber of commerce representative quoted above, with the latter revealing that “Destination New South Wales¹¹³ is just more worried about Sydney” in its economic development initiatives. The state government’s emphasis on Sydney is due to the city’s status as the capital city, and therefore the central economic hub, of the state of NSW. Although the majority of Gold Coast Airport’s land is located in Tweed Shire, the NSW Government does not currently view the airport as a gateway to the state, an issue to be further examined in Section 7.3.1.1. Consequently, the NSW

¹¹² First established by the city’s tourism industry in 1975, Destination Gold Coast, “as a membership-based destination marketing organisation representing the sector and generating increased visitor demand, visitor arrivals, and visitor expenditure for the benefit of the [Gold Coast],” is the official marketing organisation for the Gold Coast (Destination Gold Coast, 2020b).

¹¹³ Destination New South Wales is a state government agency established in 2011 to promote the tourism and events industry for the NSW state.

Government has not been providing financial support for economic development initiatives in Tweed Shire, including those related to Gold Coast Airport. This issue is one of the primary causes of the non-cooperative stakeholder relationships across the state/council border, which is discussed further in Section 7.3.1.

7.2.2 EXTENSIVE QLD STATE GOVERNMENT FUNDING SUPPORT FOR GOLD COAST AIRPORT

In stark contrast to the Tweed Shire side of the border, the QLD Government has provided significant funding support for Gold Coast Airport. For example, according to local destination marketing organisation representative #1, when direct flights from Gold Coast Airport to Wuhan, China were proposed by GCAPL, a joint funding arrangement was established between the QLD Government, the CoGC and Destination Gold Coast. In this arrangement, the QLD Government committed “millions of dollars ... to help secure those flights.”

The state of QLD, according to the interviewee above, has “international, somewhat heavyweight airports” including Brisbane Airport, Cairns Airport and Gold Coast Airport, all of which concurrently aspire to be “international gateways” for tourists. The interviewee reveals that QLD is the only state to have three international airports, which “have definite aspirations of being international hubs” whereas the other states only encompass one major international airport located in their respective capital city (e.g. NSW's Sydney Airport and Victoria's Melbourne Airport). Nevertheless, despite having to spend a significant amount of resources “trying to cater all the three airports,” the QLD Government has been consistently supporting the airports through financial assistance.

The next section of the chapter investigates the existing stakeholder relations between Gold Coast Airport and state and local government agencies in terms of how they affect Gold Coast Airport's economic development contribution. These relationships are also examined across the state/local council border.

7.3 STAKEHOLDER RELATIONSHIPS

Several interview respondents indicate that stakeholder relationships are critical for promoting economic development contributions of Gold Coast Airport. The following collaborative relationships, or the lack thereof, between various stakeholders in relation to economic development associated with Gold Coast Airport, are examined in this section:

- ✈ Non-cooperative cross-border relationships between stakeholders;
- ✈ Limited engagement from GCAPL with Tweed Shire stakeholders;
- ✈ Active collaboration between GCAPL and Gold Coast stakeholders; and
- ✈ Increasingly collaborative relationship between GCAPL and SCU.

7.3.1 NON-COOPERATIVE CROSS-BORDER RELATIONSHIPS BETWEEN STAKEHOLDERS

Across several interviews conducted in this research, non-cooperative relationships between stakeholders across the state/council border emerge as a common issue which has significantly impeded Gold Coast Airport's economic development contribution. The non-cooperative relationships are examined below from the perspectives of both sides of the border, namely the Gold Coast/QLD and Tweed Shire/NSW.

7.3.1.1 Gold Coast/QLD Side

GCAPL does not receive any assistance from the NSW Government when a new airline route is being established by Gold Coast Airport according to local destination marketing organisation representative #1, whose quote below further illustrates the issue:

The amount of people that leave Gold Coast Airport and turn right [towards Tweed Shire and the New South Wales state] is significant, but we never [receive] any major financial stimulus from the New South Wales Government even though [the airport] sits on the border ... **I think that is a little bit unfair.** I do not know what the solution is, but **they [the New South Wales Government] certainly are reaping the benefits [from the airport].** – local destination marketing organisation representative #1 (emphases added)

The interviewee also provides a recent example to illustrate the issue above, which is further elaborated in the quote below:

[Gold Coast Airport] had these direct flights from Wuhan [in China], and there was literally millions of dollars by the Queensland Government and lots of money by the City of Gold Coast and Destination Gold Coast to help secure those flights. But, a lot of the people that came in actually went and stayed at [Peppers Salt Resort & Spa] over the border [in Tweed Shire, New South Wales] and that was part of their itinerary. So we pretended that we did not know that that was going on because it is not an ideal situation. **[There was] zero financial support to help secure those flights with them from anyone in New South Wales.** – local destination marketing organisation representative #1 (emphasis added)

The quotes above reveal that there is a perceived sense of unfairness amongst stakeholders on the QLD and Gold Coast side of the border. This perception stems from the fact that whilst a significant amount of investment has been made by several stakeholders in QLD to support Gold Coast Airport, no financial assistance towards the airport has been provided from any stakeholder in NSW. Yet, Tweed Shire and the NSW state have received economic benefits from Gold Coast Airport passenger

traffic that visits the Tweed Shire LGA, some of which would not have been generated without the financial contribution of QLD stakeholders.

The lack of funding support from the NSW side of the border is not limited to Gold Coast Airport-related initiatives. As previously discussed in Section 6.3.1, there is a need for establishment of an interchange between Boyd Street and Pacific Highway. However, according to urban planner #5, “the politics [has made] things more difficult” to initiate the interchange establishment project. In this regard, although the urban planner views joint funding from both the QLD and NSW governments as an optimal outcome to initiate the project in a timely manner, neither government agencies have agreed to fund the project. The QLD Government views the interchange upgrade as “New South Wales infrastructure” given that Cobaki Lakes, the main source of future increase in traffic on Boyd Street, is located in NSW. Consequently, the QLD Government argues that the NSW Government should entirely fund the interchange upgrade. On the other hand, the NSW Government views the project as QLD infrastructure given that the interchange is located on the QLD side of the border as shown previously in Figure 6.8. The following quote from urban planner #3 reiterates the importance of joint funding by both state governments for the interchange project:

The [state] boundary runs straight through where [the Boyd Street/Pacific Highway] interchange would go as well so it really requires a joint commitment by both New South Wales and Queensland governments to actually get that interchange built. And ... the Cobaki Lakes development is also needing that interchange. – urban planner #3

There are two principal reasons behind the lack of funding support from the NSW Government for Gold Coast Airport's flight route establishment and the Boyd Street/Pacific Highway interchange upgrade. The first reason is the existence of the state border as illustrated in the following quote:

[Gold Coast Airport] has not been as large an economic driver as what it could be or should be. Part of the issue is the state borderline. Now, Queensland Government expenditure is to be expended within Queensland. New South Wales Government expenditure in New South Wales. **So, [funding] opportunities where there [are] crossover [benefits across the state border] sometimes does not get [state government support].** – local chamber of commerce representative (emphases added)

The quote above highlights that the state border has prevented state government funding from crossing the state boundary. Consequently, Gold Coast Airport's flight route establishment and the Boyd Street interchange project, which are initiatives on the QLD side of the border with cross-border economic development benefits for NSW, have not received any financial support from the NSW Government.

The second reason behind the NSW Government's lack of funding support across the border is the state government's primary focus on Sydney for its economic development initiatives, as discussed

previously in Section 7.2. The quote below further illustrates the issue caused by such an economic development approach:

The New South Wales [Government] does not view Gold Coast [Airport] as a gateway to the state ... If you talk to Destination New South Wales, which is the equivalent of Tourism [and Events] Queensland, you know, **their attitude is that "What is Gold Coast Airport?" Well, in fact ... it is the key gateway to the north [of New South Wales].** So, the mindset in New South Wales, from the government point of view, to an extent, is that it is a ‘Gold Coast’ Airport. **So, opportunities for investment around infrastructure or businesses or events or activity, at the top end of the state that flows over or crosses over into Queensland, does not necessarily get the proper review or support that it might happen if it was an hour further south into New South Wales.** – local chamber of commerce representative (emphases added)

The renaming of the airport from ‘Coolangatta Airport’ to ‘Gold Coast Airport’ in 1999 can also be attributed as a major factor which has historically influenced the NSW Government’s perception of the airport, resulting in the agency’s disregarding of the airport’s importance to NSW. Consequently, although Gold Coast Airport is located across the state border in both QLD and NSW, the NSW Government does not consider Gold Coast Airport as an economic asset for NSW. This has led to lack of investment from the NSW government for any Gold Coast Airport-related initiatives. In this regard, the state government instead considers Ballina Byron Gateway Airport as the most northern airport of the state. However, such a perspective is associated with a significant loss of economic opportunity for the FNC region due to the significantly different passenger volume and characteristics at Gold Coast Airport and Ballina Byron Gateway Airport. Figure 7.2 below compares the domestic and international passenger volume at both airports in 2019.

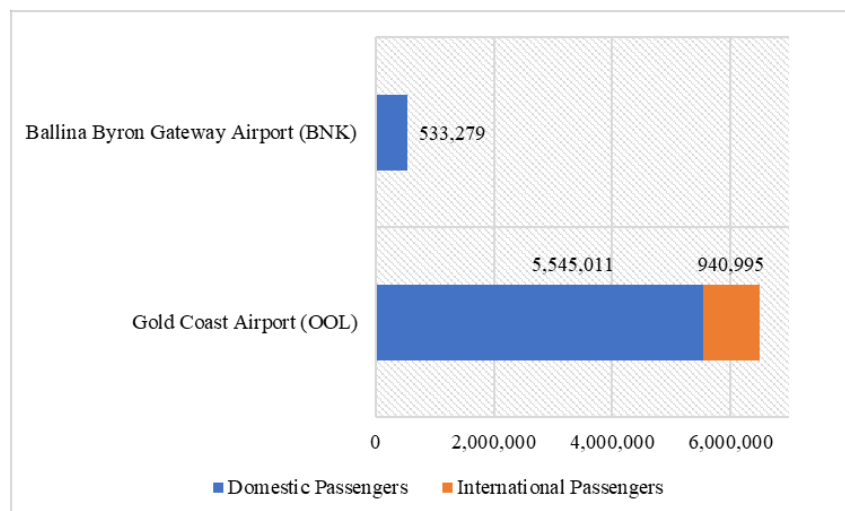


Figure 7.2: Annual Passenger Volume in 2019 at Gold Coast Airport and Ballina Byron Gateway Airport¹¹⁴

¹¹⁴ Figure 7.2 is created by the author using source data published by BITRE (2021).

As shown in Figure 7.2, Gold Coast Airport services a significantly larger volume of passengers than Ballina Byron Gateway Airport does, with the former's visitor number being 12.16 times higher than the latter in 2019. While Ballina Byron Gateway Airport only accommodates domestic passengers, Gold Coast Airport brings in a substantial number of international passengers, with 16.97 per cent of its total passenger volume being international. Gold Coast Airport's high volume of passengers and accommodation for international passengers imply that the airport is a major gateway to, and thus economic driver for, the FNC region. However, due to the NSW Government's lack of financial investment, Gold Coast Airport has not been fully capitalised on as a major economic driver for the FNC region.

In addition to the lack of financial investment, the NSW Government has not implemented any policy to fully leverage Gold Coast Airport as shown in the following quote:

Gold Coast Airport is [perceived by the New South Wales Government as] a Queensland airport [and not a New South Wales airport]. There will be [mentions] of acknowledgement [in policy documents]. There will be platitudes of "Oh yes, it is a great benefit to the northern end of New South Wales – Gold Coast Airport!" **But until we see ... investment and we see activity that directly relates to leveraging that airport, then it is just words.** –local chamber of commerce representative (emphasis added)

The quote above illustrates that whilst there are recognitions of Gold Coast Airport's economic significance to the FNC region in policy documents,¹¹⁵ there has, in fact, been no investment or initiative by the state government to leverage Gold Coast Airport. The lack of strategic directions in the policy directions could, in addition to the state border, be a contributing factor to the NSW Government's limited funding and initiatives for Gold Coast Airport-related initiatives. Nonetheless, the perception of unfairness in the realm of cross-border cooperation also exists on the Tweed Shire side of the border but due to a different reason as discussed further below.

7.3.1.2 Tweed Shire/NSW Side

Tweed Shire Council, according to local community representative #1, has experienced significant difficulties with collaborating with the CoGC in its economic development initiatives, including those that aim to capitalise on Gold Coast Airport. One recent initiative proposed by Tweed Shire Council is an installation of road signage in front of the airport, which reads "turn right for Tweed Shire" and could increase the number of visitors to the region from Gold Coast Airport. However, the interviewee

¹¹⁵ An analysis of the North Coast Regional Plan 2036 in terms of how the NSW Government intends to leverage Gold Coast Airport for the development of the region, can be found in Section 5.3.3.2.

mentions that “the [City of] Gold Coast [was] not real keen on allowing us to do that [since they] regard the Gold Coast Airport as their [economic asset].” This quote illustrates that the CoGC believes all arrival passengers at Gold Coast Airport, as an economic development asset of the Gold Coast, should only turn left and visit the Gold Coast, thus contributing to its local economy, and not Tweed Shire's economy.

The interviewee also reveals another example illustrating challenges in garnering collaboration from the CoGC in the economic development process of Tweed Shire. In 2017, prior to the commencement of the 2018 Commonwealth Games on the Gold Coast, Tweed Shire Council perceived an opportunity to leverage the event into promoting the Tweed Shire LGA to the global stage. The quote below illustrates the outcome of the council's attempt to engage and collaborate with the CoGC:

[Tweed Shire Council has] had some engagement with the [City of] Gold Coast at an officer level and [the City of Gold Coast was] not that interested in assisting [Tweed Shire Council] with that at all. Well, [the City of Gold Coast] have their own [sports] venues in Queensland, [which are] part of the Gold Coast city, and **they want to, I suppose, maximise the benefits for them. They see [Tweed Shire] as competitors for the market for sure.** – local community representative #1 (emphasis added)

As shown in the quote above, the CoGC has demonstrated limited collaboration with Tweed Shire Council in promoting Tweed Shire as part of the Commonwealth Games event. The quote reveals two primary reasons for such limited collaboration from the CoGC. Firstly, the event would utilise sports venues in the Gold Coast city, which are part of the City of Gold Coast and Queensland's infrastructure assets. Thus, the council was intent on containing economic benefits within the council border of the CoGC and the state border of QLD. Secondly, the CoGC perceived Tweed Shire Council as a competitor, which could take away some of the potential economic outcomes that the Gold Coast could otherwise gain from the event. The interviewee also attributes the sense of competition as another reason behind the CoGC's hesitation to let Tweed Shire signage be installed at Gold Coast Airport. Thus, one of the principal barriers to collaboration between the two councils is the CoGC's sense of competition for reaping economic development contributions from Gold Coast Airport. According to the interviewee, the sense of competition is further exacerbated by the fact that the two LGAs are situated in two different states.

The lack of collaboration from the CoGC side in the economic development front is further evident from the absence of any reference to Tweed Shire Council or NSW in the CoGC's Economic Development Strategy 2013–2023 document (CoGC, 2013). In stark contrast, the Gold Coast and QLD are mentioned a total of 29 times and four times, respectively, in the Tweed Shire Economic Development Strategy document (Tweed Shire Council & Destination Tweed, 2014).

Nevertheless, senior manager #2 suggests that the sense of competition for economic benefits of Gold Coast Airport does, in reality, exist across both councils, and not just on the CoGC side, as illustrated by the following quote from the interviewee:

In reality, [the City of Gold Coast] would want the airport-driven industries on their side of the border because they derive the rates. [Tweed Shire Council] probably want them on [Tweed Shire's] side of the border because [the region] derives the rates, so there is still a little bit of competition there [between the two local councils]. – senior manager #2

As shown in the quote above, the sense of competition between the two councils for capitalising on the economic development benefits of Gold Coast Airport primarily stems from the fact that council rates derived from industries driven by the airport are not shared across the state/council border. The border is evidently a major barrier to cross-border cooperation between the two councils for economic development planning initiatives centred on Gold Coast Airport.

Nevertheless, there has been some degree of cross-border cooperation between government agencies in recent years. For instance, in 2011, the CoGC (then Gold Coast City Council), Tweed Shire Council, QLD Department of Transport and Main Roads and NSW Roads and Maritime Services (then Roads and Traffic Authority) commissioned the development of a cross-border traffic master plan. The purpose of the master plan is to identify road infrastructure upgrades required for the cross-border region around Gold Coast Airport between 2011 and 2031. The Boyd Street/Pacific Highway interchange establishment discussed earlier in Section 6.3.1 is one of the key recommendations in the cross-border transport master plan (Bitzios Consulting, 2011). The document is an outcome of a cross-border cooperation exercise at both the local and state government levels.

Another recent example illustrating cross-border collaboration between government agencies is the funding agreement of \$12 million between GCAPL and the QLD and NSW governments for a new Gold Coast Airport entrance to be established adjacent to the SCU campus. The project, announced in August 2020, is expected to not only facilitate the integration of light rail and heavy rail corridors in the future but also alleviate the existing traffic congestion issue in the area (Potts, 2020).

7.3.2 LIMITED ENGAGEMENT FROM GCAPL WITH TWEED SHIRE STAKEHOLDERS

GCAPL has recently demonstrated limited engagement with Tweed Shire stakeholders. This fact is particularly evident from the following three aspects of the relationships between the stakeholders, which are elaborated in this section:

- ✈ Uneven collaboration with stakeholders across the state/council border;
- ✈ Limited destination marketing for Tweed Shire; and
- ✈ Late collaboration with Tweed Shire stakeholders in the airport master planning process.

7.3.2.1 Uneven Collaboration with Stakeholders across the State/Council Border

According to several interviewees, there has been limited external engagement from Gold Coast Airport with stakeholders in Tweed Shire in relation to promoting the airport's economic development contributions towards the LGA. In this regard, the local chamber of commerce representative remarks that "it is a shame" that GCAPL has not been collaborating with Tweed Shire stakeholders to the same extent that it has with Destination Gold Coast and the CoGC. Gold Coast Airport's limited stakeholder engagement in Tweed Shire is also evident from the fact that the airport not only no longer has no representative as part of Destination Tweed's¹¹⁶ board of directors, but also is no longer a member of the organisation.¹¹⁷ This sharply contrasts with the airport's significant involvement with Destination Gold Coast, which is evident from the fact that the organisation's board of directors has been chaired since 2007 by Paul Donovan, who also had leading roles at both GCAPL and its parent company, QAL, for the majority of his time to date as the organisation's chairman. Section 7.3.3.4 explores further implications of Donovan's involvement with Destination Gold Coast as its chairman and examines how Gold Coast Airport has collaborated with the organisation to date.

7.3.2.2 Limited Destination Marketing for Tweed Shire

The majority of GCAPL's marketing campaigns to date have been implemented to only promote the Gold Coast, largely excluding Tweed Shire in the process according to the local chamber of commerce representative. This issue is also evident from the fact that there is currently no physical

¹¹⁶ Destination Tweed is the official marketing organisation for Tweed Shire, comprising representatives from several local tourism-based and produce businesses. As Destination Gold Coast's counterpart for the Tweed Shire LGA, the organisation works with Tweed Shire Council and local businesses to promote Tweed Shire as a tourism and investment destination.

¹¹⁷ GCAPL previously had a representative on Destination Tweed's board of directors according to two interviewees. Section 7.3.3.4 further elaborates on this point.

or digital advertisement for Tweed Shire at Gold Coast Airport in contrast to the extensive marketing for the Gold Coast through the following methods:

- ✈ A visitor information and booking centre operated by Destination Gold Coast, which links airport passengers with Gold Coast-based accommodations, attractions and tourism activities (the visitor information centre is further examined in Section 7.3.3.4);
- ✈ Brochures and pamphlets, which promote several tourism attractions and activities throughout the Gold Coast and can be found both at the visitor information centre above and throughout the airport's terminal;
- ✈ Digital screens, billboards and signage, which advertise local tourism attractions and activities and, similarly to brochures and pamphlets, are located throughout the airport terminal.

The interviewee above reveals that “marketing at the airport is very expensive, very expensive ... [and] the billboard, the TV screens – it is really expensive.” In this regard, the issue of limited Tweed Shire Council budget and resources previously discussed in Section 7.2.1, implies that the council and Destination Tweed have not been able to afford the significant costs associated with on-site advertisements at Gold Coast Airport.

As previously discussed in Section 4.5.3.1, the branding, logo and name of Gold Coast Airport are entirely based on the Gold Coast, a strategic initiative by GCAPL to leverage the reputation of the LGA. However, Tweed Shire is entirely excluded in this process. As location names play a significant factor in influencing consumers' decision as examined in Section 6.5, the current branding strategy for Gold Coast Airport does not promote Tweed Shire as a tourism destination. This implies a major loss in potential economic development contribution of the airport to Tweed Shire.

7.3.2.3 Late Collaboration with Tweed Shire Stakeholders in the Airport Masterplanning Process

According to the local chamber of commerce representative, who is “involved with the airport on a number of different things,” there has been a lack of early collaboration between GCAPL and stakeholders in Tweed Shire in the airport masterplanning process. The organisation, according to the representative, has been engaging stakeholders in the region, but only in the community consultation phase of the master plan development once the master plan has been drafted. In this process, “the airport has got an idea in mind, [and] it is about seeing what they can get to justify and to support their own development plan.” The quote on the following page illustrates the extent of the airport's engagement with Tweed Shire Council in the past:

In terms of consultation with the council, [the representatives from Gold Coast Airport] are pretty good ... [For] the ILS proposal and their [last] master plan ... they came and saw the council, gave [the council] thorough presentations down in the council chamber of what their plans were, [and then they] took questions from [the council]. [They] were willing to take on board any issues that we might raise for them to consider. So, they are good with respect to keeping the council informed. – local community representative #1

Thus, in its masterplanning process, Gold Coast Airport develops its own vision and strategies prior to consulting with external stakeholders. With the feedback received, the airport then adjusts its master plan as necessary. The chamber of commerce representative and local community representative #1 both perceive GCAPL's consultations once master plans or major development proposals are drafted to be insufficient in terms of maximising economic benefits from the airport. Instead of consultations in a late stage of a planning process for the airport's master plan or major development, early collaborations between the airport and other stakeholders would allow the economic potential of the airport to be captured to a greater extent. Doing so would allow external stakeholders to "be part of a discussion to identify and recognise opportunity" for other industries in addition to tourism according to the chamber of commerce representative.

GCAPL's limited stakeholder collaboration on the Tweed Shire side is in stark contrast with the organisation's active collaboration with stakeholders on the Gold Coast, which is the further investigated below.

7.3.3 ACTIVE COLLABORATION BETWEEN GCAPL AND GOLD COAST STAKEHOLDERS

GCAPL has been actively collaborating and engaging with stakeholders on the Gold Coast in the community, business and local government sectors, all of which are further discussed in this section.

7.3.3.1 Involvement in the Community Sector

GCAPL has been highly active in the community sector of the Gold Coast as shown in the quote below:

[Gold Coast Airport is] a big stakeholder in the area and I think that to be good community citizens is very important in business [practices] today. And I think they identify that. They also, I think, would like the community to buy in to the airport because it is a growing airport and they will have extensions if they are already going through an upgrade ... **They have really got themselves right really in tune with what is happening all over the Gold Coast.** – local community representative #2 (emphasis added)

The quote above reveals a principal reason behind the GCAPL's active involvement in the community sector: acquiring the community's support for airport development and activities. The interviewee

above further reveals that GCAPL has recently been sponsoring and promoting several ongoing events on the Gold Coast, some of which are outlined in Table 7.2 below.

Table 7.2: Recent Events Sponsored and Promoted by GCAPL

Event	Description
Gold Coast Marathon	The Gold Coast Marathon is an annual event, which attracts many domestic and overseas attendees and is well-known for “its famous flat, fast and scenic course ... plus ideal winter running conditions” (Gold Coast Marathon, 2020). Gold Coast Airport has been one of the major sponsors for the event since 2003 (QLD Government, 2008).
Cooly Rocks On	As “Australia’s largest nostalgia festival,” this annual event connects attendees to the music, cars and culture from 1950s to 1970s throughout the streets in Coolangatta, a short distance from Gold Coast Airport, over five days (Connecting Southern Gold Coast, 2020). Gold Coast Airport first sponsored the event in 2013, citing the event’s “location, along with its ability to drive interstate visitors through our terminal” as a major driving factor behind their sponsorship decision (Mortimer, 2013)

Similarly, local destination marketing organisation representative #2 notes that Gold Coast Airport is “from a community point of view ... very active” and that the airport “would be in the top five” of the most active companies in involvement with local communities. Meanwhile, local community representative #2 perceives GCAPL’s active involvement in the community sector as a strategic move to be a “good community citizen.” Doing so would encourage the “the [local] community to buy into the airport,” which is critical to Gold Coast Airport given its future expansions required to accommodate the growing number of passengers. Some of the airport development projects in the future may be significant in scale and community impacts, and, without adequate community buy-in, could attract significant community opposition, thus resulting in delays for future airport expansions. Thus, Gold Coast Airport’s active community involvement is effectively a strategy implemented by the airport to proactively minimise public conflicts associated with the airport’s future expansions. A 2018 community survey by Gold Coast Bulletin, a Gold Coast-based newspaper, reveals that 83 per cent of respondents support further expansions of Gold Coast Airport (Keen, 2018). This statistic highlights the success of Gold Coast Airport’s involvement in the community sector.

7.3.3.2 Involvement in the Business Sector

According to local community representative #2, GCAPL has been highly involved in the business sector of the Gold Coast through its involvement in “local chamber of commerce activities, [including] networking.” This contrasts with the organisation’s limited involvement in local chamber of commerce activities on the Tweed Shire side of the border, which is previously examined in Section 7.3.2.1. The local chamber of commerce representative also reveals that there is a close relationship between Gold Coast Airport and Destination Gold Coast as demonstrated by the following quote:

The people [at Gold Coast Airport] are more centred towards working with Destination Gold Coast because that is where their friends are. That is [where the people] who take them out to dinner [work at]. It is human nature. – local chamber of commerce representative

However, the chamber of commerce representative above attributes the strong interpersonal relationship between GCAPL and Destination Gold Coast as the major reason behind the limited collaboration from the airport with Tweed Shire stakeholders. This point illustrates that interpersonal relationships between stakeholders can function as both a driver and an impediment for formal collaboration between organisations.

7.3.3.3 Early Engagement with the City of Gold Coast in the Airport Masterplanning Process

According to urban planner #5, GCAPL has been actively collaborating with the CoGC as part of the airport master planning process. The quote below from the urban planner provides an overview of how the airport has collaborated with the council in its master planning process in the past:

[GCAPL] met with [the City of Gold Coast] several months ago, letting [the council] know they are putting the master plan together and [giving the council] an overview of some of the issues that they are dealing with ... **So they did involve [the council] early** and [the two stakeholders] have had some meetings ... and they will involve [the council] again before they submit the master plan [to the Federal Government for approval] ... [The council] will take [their information] into consideration [and] give them some formal feedback. – urban planner #5 (emphasis added)

The quote above illustrates that GCAPL engages the council at an early stage of its masterplanning process. In this regard, the urban planner above reveals that the airport pitches early development ideas to the council in this early engagement process to “test the water” and acquire council feedback. The quote below illustrates further the benefit of doing so:

If they were proposing something dramatic [in the master plan] in terms of retail type activity ... that is a good time to raise it early, so [the council] knows about it. So it is just that early communication to understand whether there is going to be any big changes that the council may have an issue with ... **That early engagement is letting us know what they are doing, what their early thoughts are and whether they can proceed with that.** – urban planner #5 (emphasis added)

Thus, the airport has utilised early engagement with the council to minimise conflicts with the council's strategic and statutory planning intent which may arise from the airport's development proposals. Urban planner #5 reveals that such a conflict has previously occurred at Brisbane Airport where a major development of a Direct Factory Outlet shopping precinct was proposed without Brisbane City Council's prior knowledge. In this case, “all sorts of fights” were caused by the proposal, including “a bitter legal dispute” between Brisbane City Council, Westfield and Brisbane Airport Corporation (Thomson, 2004).

The urban planner also indicates that some of the land GCAPL owns is outside the jurisdiction of the Airports Act and is subject to the statutory influence of the City Plan, the CoGC's planning scheme. The early engagement between Gold Coast Airport and the City of Gold Coast prior to preparing an airport master plan is an opportunity for the council to amend the City Plan to accommodate the airport's land use vision. In this process, the airport is suggested by the council to submit detailed land use plans for the land under council jurisdiction. The council then reviews the plans, and if they are "good for the city," the council would then make the necessary adjustments to the City Plan legislation for Gold Coast Airport to "get the growth opportunities that they [the airport] want."

As a result of GCAPL's active involvement in the community and business sectors and early engagement with the CoGC, residents in the Southern Gold Coast region, the Mayor's office and other stakeholders on the Gold Coast "all have a good relationship with the airport" according to local community representative #2.

7.3.3.4 Involvement with Destination Gold Coast and Destination Tweed

Gold Coast Airport has demonstrated extensive involvement with Destination Gold Coast in three ways. Firstly, the board of director of Destination Gold Coast, as briefly mentioned previously in Section 7.3.2, is chaired by Paul Donovan, whose current and past professional roles include the following (Destination Gold Coast, 2020c):

- ✈ Chairman of Events Management Queensland¹¹⁸ since 2019;
- ✈ Board Director at Tourism and Events Queensland¹¹⁹ from 2015 to 2018;
- ✈ Executive General Manager (Business Development and Marketing) at QAL¹²⁰ from 2014 to 2018; and
- ✈ Chief Operation Officer at GCAPL, from 2005 to 2014.

Donovan's current and past roles listed above illustrate his active involvement in promoting the tourism industry for both the Gold Coast and the broader state of QLD. In 2019, he was named 'Gold Coast Citizen of the Year' by the CoGC (2020) for the following achievements:

¹¹⁸ Events Management Queensland is a QLD Government-owned event management company, which manages two major sporting events on the Gold Coast, including the annual Gold Coast Marathon and the Pan Pacific Masters Games. In addition, the organisation provides event services to other companies (Events Management Queensland, 2020).

¹¹⁹ Tourism and Events Queensland is a statutory organisation of the QLD Government which functions as the agency's "lead marketing, destination and experience development and major events agency" for QLD (Tourism and Events Queensland, undated).

¹²⁰ As previously discussed in Section 4.5.1, QAL is the parent corporation of GCAPL, Gold Coast Airport's current lessee.

Paul Donovan has played a unique role in helping to make the Gold Coast a global tourism destination. As chair of Destination Gold Coast for more than a decade, and until recently a director of Tourism and Events Queensland, **he has guided the city's image and reputation in its most successful era of visitor growth.** (emphases added)

Two of Donovan's past roles are senior management positions at QAL and GCAPL. Senior manager #2 highlights Donovan's dual senior management roles at Destination Gold Coast and GCAPL as being highly beneficial for both organisations. Specifically, according to the interviewee, Donovan has been spearheading extensive destination marketing campaigns for the Gold Coast through Gold Coast Airport. In this regard, additional tourists and business workers that visit the Gold Coast are perceived as not only bringing further revenue to Gold Coast Airport, but also promoting the tourism industry and local economy of the Gold Coast, thus contributing mutual benefits to both GCAPL and Destination Gold Coast. The quote below from a Destination Gold Coast representative reveals how Gold Coast Airport has been promoting the Gold Coast as a destination:

[Gold Coast Airports Pty Ltd] is [marketing the Gold Coast], significantly. They run an airport, but they are also a destination marketing organisation because they have to compel an airline to invest in a destination. So, when they [approach an airline] ... **they are not just talking about tourism, but they also talk about the prospects around investment and education. They go in with all this ammunition in their head, so they are pretty forward thinking in that way.** – local destination marketing organisation representative #1 (emphasis added)

The second way GCAPL is collaborating with Destination Gold Coast is the fact that the former hosts one of the two 'visitor information and booking centres' being operated by the latter. The information centre is located directly in the airport's terminal building as shown in Figure 7.3. The economic development implication of having such a visitor information centre in the airport terminal is the higher possibility that airport passengers spend more of their time and money on the local economy of the Gold Coast. More specifically, the information centre can increase the number of bookings for the various tourism attractions and experiences that it advertises.



Figure 7.3: Destination Gold Coast's Visitor Information and Booking Centre Located in Gold Coast Airport (Source: Author (2020))

The third aspect of collaboration between GCAPL and Destination Gold Coast is evident through GCAPL's involvement with Destination Gold Coast as an official industry partner. Destination Gold

Coast currently has a total of nine industry partners, including the CoGC, three local chambers of commerce and local tourism authorities at the state and local levels.

On the Tweed Shire side, according to urban planner #2, an operations manager from GCAPL used to be part of Destination Tweed's board of directors. The interviewee mentions that such a collaborative arrangement "worked really well because he gave [Destination Tweed] that connection [to GCAPL] and [allowed Destination Tweed to] keep in touch with what is going on [at the airport]." Local community representative #1, who was also a member of the same board of directors, shares a similar opinion, revealing that having the GCAPL representative in the board "was a good connection to have." However, the airport no longer has any representative in the organisation's board of directors and is not a current member of the organisation. Nevertheless, the discussion on Gold Coast Airport's current and past involvements with Destination Gold Coast and Destination Tweed, respectively, illustrates the economic importance of including representatives from the airport in the organisations.

7.3.4 INCREASINGLY COLLABORATIVE RELATIONSHIP BETWEEN SOUTHERN CROSS UNIVERSITY AND GCAPL

The relationship between SCU and GCAPL has become increasingly collaborative in recent times, a change driven by the appointment of a new SCU Vice Chancellor in 2016. This evolving stakeholder relationship has major implications for economic development opportunities presented by the university campus' unique location on the airport land. The quote below from senior manager #1 explains the past relationship between the two entities:

[The] previous Vice Chancellor considered [Southern Cross University] a tenant [on airport land] and that the airport were very restrictive on [the university] ... [The] previous [Vice Chancellor] and [the airport's] leader did not get [along]. There were not many synergies [being] explored. **There was an antagonistic sort of relationship.** – senior manager #1 (emphases added)

On the contrary, however, the university's current Vice Chancellor has shown a strong interest in leveraging the university's location on the airport land into benefits for SCU as illustrated in the following quote:

[The] new Vice Chancellor is looking for more mutual benefits of the airport for [Southern Cross University] ... [He] is looking to grow more business opportunities with the airport. So that is going to be a far more beneficial relationship for [Southern Cross University] ... You would be silly not to leverage local businesses as a university to do that ... New leader, and now things are being talked about more. And [the] Vice Chancellor is so excited about the opportunities just from that one entity [Gold Coast Airport]. – senior manager #1 (emphasis added)

The quote above evidently demonstrates the importance of stakeholder relationships in enabling SCU to take advantage of the potential economic benefits of the university's location within Gold Coast Airport's boundary. Under the current SCU Vice Chancellor's leadership, the relationship between SCU and GCAPL has become significantly more collaborative in recent years. This fact is also reaffirmed by local community representative #2, who reveals that there is currently a "close relationship" between the two entities, which contributes to the local education sector.

Senior manager #1 reveals that the Vice Chancellor has been spearheading the development of "new and different courses" for SCU, which will provide SCU with "that differentiation that [SCU] need in order to grow." Collaboration with GCAPL has been a major part of this initiative according to the interviewee. Consequently, SCU now offers a Bachelor of Business degree with a major in Aviation Management at its Gold Coast Airport Campus. This degree aims to "develop a student's robust understanding of the aviation industry; and the cultural and management skills that will set them up for an ongoing career in the global aviation industry" (SCU, undated-a). In early 2020, SCU, in partnership with Air Gold Coast and Airways Aviation which are both also located in Gold Coast Airport, incorporates an option for student to undertake a fully accredited Commercial Pilot's License as part of this bachelor's degree (SCU, 2020).

SCU's unique aviation management degree is the only aviation-related tertiary course in the Gold Coast-Tweed Shire region. As such, it can potentially further promote the education industry for the region by attracting more domestic and international students to the region. As a key outcome of the SCU Vice Chancellor's cooperation with both Gold Coast Airport and other businesses located on the airport land, the degree evidently illustrates the importance of collaborative relationships from an economic development perspective.

7.4 COMMUNITY VOICE

Throughout several interviews conducted, community voice emerges as a recurring theme which has imposed significant limitations on Gold Coast Airport's economic development contribution in recent years. This fact is particularly illustrated by the following three instances, all of which are further examined in this section:

- ✈ Ongoing community opposition to Gold Coast Airport in Tweed Shire;
- ✈ Opposition from Gold Coast residents to the implementation of an Instrument Landing System (ILS) at Gold Coast Airport; and
- ✈ Ongoing community opposition to high-density development and light rail corridor around Gold Coast Airport.

7.4.1 ONGOING COMMUNITY OPPOSITION TO GOLD COAST AIRPORT IN TWEED SHIRE

Community voice is indicated by local community representative #1 as a major, ongoing limitation to economic development contribution from Gold Coast Airport on the Tweed Shire side of the border. In this regard, the 'vocal minority' have, on several occasions, opposed major development projects and proposed flight paths at Gold Coast Airport, which could potentially lead to additional visitors for the region. Opinions of these community members, however, have not been always reflective the voice of 'the silent majority' group of community members who have no opposition to any new proposals associated with Gold Coast Airport. The quote below illustrates this issue further:

There are people out there that, it seems to me, will use **any means to try and prevent development at the Gold Coast Airport**. I do not agree that these impacts are as [these people] say they are because I talk to the airport people as well. – local community representative #1 (emphasis added)

As shown in the quote above, this vocal minority group of community members has attempted to impede development at Gold Coast Airport through several means. According to the interviewee, a small group of residents of Fingal Head, a Tweed Shire town located approximately 15 minutes away from Gold Coast Airport, have been highly active in preserving the town's "fishing village feel [and] maintaining everything with no change to anything [in the town]." Following the implementation of the Gold Coast Airport 2012 Master Plan and as per the proposed flight paths in the document, several departing aircraft started flying over Fingal Head, which prompted these residents to 'orchestrate' a movement to change the new flight paths. This was done by repetitively lodging a complaint to Airservices Australia via a phone call every instance an aircraft flew over the suburb. Ultimately, over 30,000 complaints, equivalent to about one-third of Tweed Shire's current population, were received over a six-month period. The high number of complaints led one of the local councillors,

“who has some particular connection with some Fingal [Head] residents,” to submit a Notice of Motion at a Tweed Shire Council meeting to “completely ban” international flights at Gold Coast Airport.

The community representative above also revealed that “when you ... went and talked to the people in Fingal – some of the real people – they were embarrassed by it” as they do not support the ‘ridiculous’ campaign run by the residents discussed above. Local community representative #2 reveals a similar sentiment, stating “it is only a very small group in Tweed Shire that are objecting” to proposals and developments at Gold Coast Airport. In addition, Airservices Australia did not process the complaints received as “they could see it was just vexatious and frivolous.” The Notice of Motion to prohibit international flights, described by the councillor as a ‘laughable’ proposal given the significant economic contribution of such flights to Tweed Shire, was dismissed in the council meeting.

Another ongoing issue revealed local community representative #1 is related to a resident who has continually opposed projects and operations at Gold Coast Airport. The resident has recently opposed the proposed ILS at the airport, which is now operational and further discussed in Section 7.4.2. In several public forums prior to council meetings, the resident made complaints about “how outdated the ILS is, [how] there are all these [other] systems that are much better than [the ILS], and [how] no one is using the ILS anymore.”

According to the interviewee, the community opposition incidents discussed above illustrate the classic community engagement issue in which the voice of the ‘vocal minority’ group of community members overshadows the opinion of ‘silent majority’ residents. Although these complaints were ultimately disregarded by the council, a significant amount of public resources from Tweed Shire Council were spent to address the community members’ voices in the process. Moreover, the implementation of the ILS was delayed due to the need for Gold Coast Airport to manage all negative responses from the public, including the community member’s concern above. All of these are factors that impede the airport’s development, thus limiting its contributions to local economic development.

7.4.2 OPPOSITION TO INSTRUMENT LANDING SYSTEM FROM GOLD COAST RESIDENTS

Gold Coast Airport has been consistently engaging with local residents on the Gold Coast. As a result, there has generally been strong community support throughout the Gold Coast for Gold Coast Airport’s development according to local community representative #2. However, this was not the case for the ILS, which has been operational at Gold Coast Airport since February 2019. Prior to the

implementation of the ILS, the proposal for the system, which underwent a public consultation in 2015, became a highly controversial topic which 'divided' the northern and southern ends of the Gold Coast according to the community representative. While Southern Gold Coast residents were generally supportive of the proposal, several community members in the northern parts of the city strongly opposed the proposal. The ILS flight path, to be utilised only in poor weather conditions with low pilot visibility, would navigate across several previously unaffected northern suburbs under the orange shade in Figure 7.4 below.

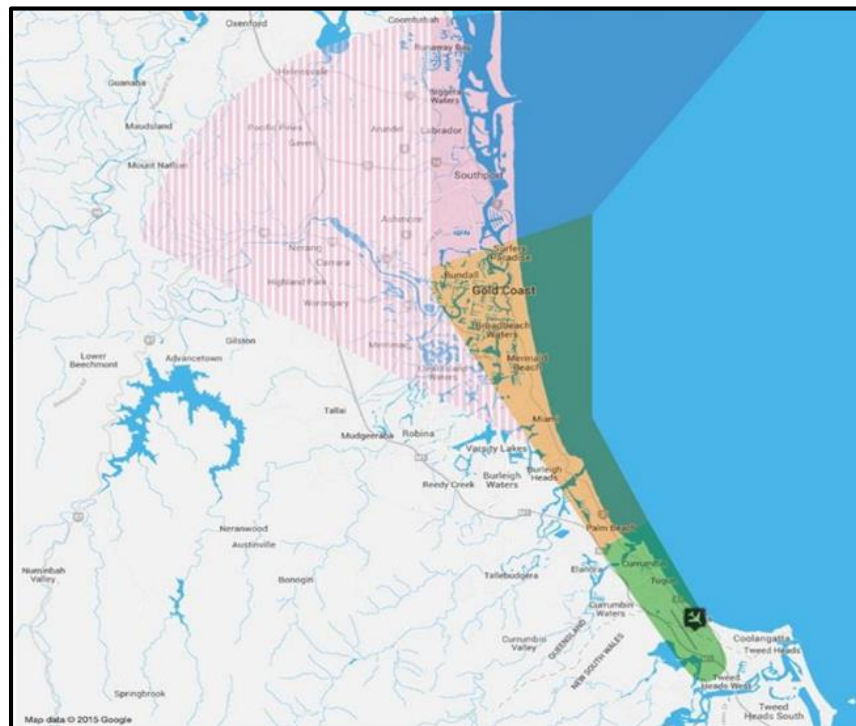


Figure 7.4: Northern Suburbs Affected by Higher Aircraft Highlighted in Orange (Source: Airservices Australia (2019))

According to Airservices Australia (2019, p. 3), residents of the northern suburbs are expected to “experience noticeable increases in aircraft noise,” with the new noise level being “similar to the sound levels emitted from a truck and experienced from inside a residence.” Consequently, noise concerns arose amongst northern Gold Coast residents, leading to the establishment of the ‘Stop the ILS Flight Path’ community group to oppose the ILS proposal.

The community representative above reveals that he/she is a strong proponent of community consultations for any major development project within the community due to the importance of community feedback and support for such a project. However, he/she reiterates throughout the interview that the ILS “should not have gone through public consultation” prior to its implementation

based on two reasons, namely aircraft operational safety and economic development benefits that the system can provide. The following quote provides an overview of these justifications:

You just have to work out, “Do you want an international airport in the city?” And I think the overwhelming majority of people [on the Gold Coast] do, so [the airport] is going to grow. **You need to put in the technology that makes it safe, reliable. And it is just a plus to attract more airlines to fly in here, which can only help the Gold Coast's economy.** – local community representative #2 (emphasis added)

On the safety side, the interviewee mentions, “the safety issue should have outweighed everything.” In this regard, the safe landing of aircraft on Gold Coast Airport, enabled by the ILS in poor weather conditions, is perceived by the interviewee as the major reason that “we should have had ILS installed a long time ago at this airport.” A similar sentiment is expressed by senior manager #2, who views the ILS “as a safety thing and it just should happen” despite the controversial nature of the system.

The economic development justification of the ILS is related to its significant contribution to the local economy. Prior to the implementation of the ILS, approximately 50 flights, equivalent to around 10,000 passengers, were diverted to other airports annually (Cooper, 2016; Robbmond, 2017). This led to less time that visitors would spend in the Gold Coast-Tweed Shire region as part of their trip, which equated to losses in local economic development contribution from Gold Coast Airport. The ILS would solve this issue by resulting in fewer aircraft being diverted from Gold Coast Airport for their landing. Each time an aircraft had its landing diverted from Gold Coast Airport due to poor weather conditions and the absence of the ILS, this cost the airline approximately \$50,000 (Cooper, 2016). The ILS would eliminate the need for such landing diversions, hence positioning the Gold Coast Airport as a more attractive landing destination for airlines in the future (Airservices Australia, 2015). Therefore, the ILS could attract additional aircraft to Gold Coast Airport, thus bringing in more visitors, and consequently more economic benefits, to the Gold Coast and Tweed Shire.

The public consultation of the ILS could be viewed as an unnecessary procedure due to four key reasons. Firstly, independent research revealed that 74 per cent of the surveyed residents had actually been in favour of the ILS (Weston & Potts, 2016a). Thus, the community opposition against the proposed ILS could, similarly to the case of Tweed Shire's community opposition discussed previously, be reflective of the voice of ‘the vocal minority’ group of community members. Secondly, the consultation cost public resources to be spent on administratively dealing with negative feedback. Thirdly, the consultation led to a delay in the implementation of the ILS, thus reducing the total economic benefits that the system could bring to the Gold Coast and Tweed Shire. Fourthly, the noise impact of aircraft is becoming progressively lower, thus implying that the impact of the ILS will become lower over time. In this regard, several interviewees iterate that aircraft noise is becoming

increasingly lower due to technological advancements in recent years as illustrated in the quotes compiled below:

Many people see the increased trips and visitor numbers and so forth as a big threat and a concern for noise. **But the fact of the matter is the planes are getting quieter.** – senior manager #2 (emphasis added)

The noise of aircraft, contrary to what some of the objectors might say, actually is becoming lower. **The larger aircraft now are much quieter than the [Boeing] 727 ...** The benefits that we get from the airport far outweigh any negative impacts – far outweigh. – local community representative #1 (emphasis added)

The people who actually live under the flight path at Southern Gold Coast ... actually get used to [the aircraft noise]. They do not mind it. **Aircraft [are] getting quieter these days as well.** – local community representative #2 (emphasis added)

Further to the quotes above, according to Astley (2014), several technological advancements in aircraft and engine manufacturing have significantly reduced the noise generated by aircraft at take-off and landing. In this regard, since an aircraft noise certification was first introduced by the US FAA in 1969, there has been a reduction of over 20 effective perceived noise in decibels (EPNdB) per aircraft operation. In other words, one first-generation turbojet aircraft, such as a Boeing 707 used in the 1960s, is equivalent to at least 30 of current aircraft taking off at the same time. As an example of the Boeing 707, Figure 7.5 shows Qantas' first commercial aircraft, which landed at Sydney Airport on 16 December 2016 to mark the company's 60th anniversary.



Figure 7.5: Qantas' First Aircraft – Boeing 707-138B 'City of Canberra' (Source: Watson (2019))

7.4.3 ONGOING OPPOSITION TO HIGH-DENSITY DEVELOPMENT AND LIGHT RAIL CORRIDOR AROUND GOLD COAST AIRPORT

According to urban planner #4, there has long been a strong community sentiment against any high-density development in the Southern Gold Coast region in which Gold Coast Airport is located. The primary reason behind such a sentiment in the Southern Gold Coast community is the predominantly low-rise, low-density nature of development in the area, previously discussed in Section 4.4.2 and illustrated in Figure 4.17 and Figure 4.18. The following quote from the urban planner further elaborates this community sentiment:

[Local residents] like the Southern Gold Coast to be quiet [given that the area] definitely has its own village character and feel ... There is ... not a huge amount of appetite from the local [residents] to ... see ... [urban] transformation in those southern [Gold Coast] communities. – urban planner #4 (emphasis added)

As the main tourism hub of the Gold Coast located further north, Surfers Paradise, commonly referred to as the 'Glitter Strip' of the Gold Coast, comprises a large cluster of high-rise residential towers as previously discussed in Section 6.4.2.1. Therefore, there is a stark contrast between the atmospheres of Surfers Paradise and the Southern Gold Coast, which is well-known as the more 'quiet', 'sleepy' part of the LGA according to urban planner #4. Due to such a difference, Surfers Paradise is often referenced by the Southern Gold Coast community as the undesirable outcome that the Southern Gold Coast could become if any high-density development was introduced in the area. According to the urban planner above, the community preference to maintain the area's atmosphere is the principal cause of the ongoing community opposition to the extension of the Gold Coast light rail corridor further south into the southern region and Gold Coast Airport. In this regard, Southern Gold Coast residents are primarily concerned with the potential introduction of high-density development along the light rail corridor, particularly in proximity to light rail stations.

An example illustrating strong community opposition to high-density development in the Southern Gold Coast is the 'Komune' project, in which a 27-storey building with 100 five-star hotel rooms and 94 apartment units was proposed for a site in Coolangatta. Although the proposal was initially approved by CoGC in April 2017, several residents opposed the project due to the building's potential impacts on local amenities and traffic. This eventually led to a successful appeal in 2018 at the state Planning and Environment Court, which overruled the council's approval "on public interest grounds" (Kinsella, 2018).

On the Tweed Shire side of the border, a similar sentiment to maintain a local, quiet atmosphere also exists amongst community members living in proximity to the airport. In this regard, there is a general attitude that opposes high-density development, particularly high-rise towers, based on the ground that Tweed Shire should not become 'another Gold Coast'. The sentiments to maintain the traditional atmosphere on both sides of the border present a major challenge to promoting the economic development contribution of Gold Coast Airport. Specifically, these sentiments conflict with future infrastructure establishment (e.g. a rail corridor extension) and land uses (e.g. a freight hub development), which can promote the economic development contributions of Gold Coast Airport.

The chapter has examined governance arrangements, the existing stakeholder relationships and the impact of community voice in relation to how they influence Gold Coast Airport's economic development contribution. The next section concludes the chapter by providing a summary of key findings in relation to the fourth research question.

7.5 CONCLUSION

Figure 7.6 below summarises the key findings on the impacts of stakeholder relationships on Gold Coast Airport's economic development contribution, in relation to research question #4, "How do stakeholder relationships influence Gold Coast Airport's economic development contribution?" and its associated sub-questions.

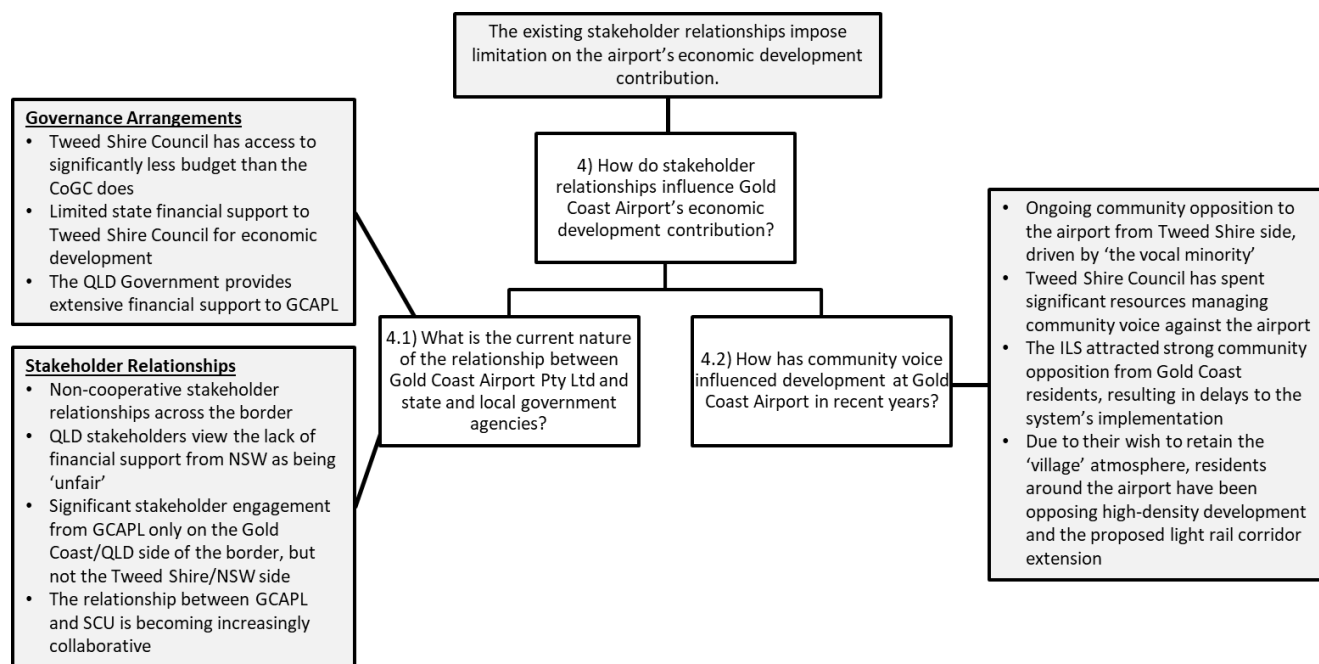


Figure 7.6: Summary of Findings on the Impacts of Stakeholder Relationships on Gold Coast Airport's Economic Development Contribution

In response to research sub-question #4.1, "What is the current nature of the relationship between Gold Coast Airport Pty Ltd and state and local government agencies?" the research uncovers a major difference in the financial resources of the CoGC and Tweed Shire Council with the former having significantly more budget due to the larger population base that it services. As such, Tweed Shire requires substantial funding support from the NSW Government for promoting local economic development. However, given that the NSW Government is primarily focused on Sydney in its economic development approach and does not perceive Gold Coast Airport as a major gateway airport for NSW, there has been limited state financial assistance for Tweed Shire, thus limiting the ability of Tweed Shire Council and Destination Tweed to invest in economic development initiatives related to Gold Coast airport. On the Gold Coast side of the border, the QLD Government has been financially supporting Gold Coast Airport as the airport functions as one of the three major international gateways to the state. Thus, the existing governance arrangements are found to impose

limitations on Gold Coast Airport's economic development contribution potential for the Tweed Shire LGA and FNC region.

There are currently non-cooperative stakeholder relationships across the state/council border. Stakeholders on the Gold Coast/QLD side view the lack of funding support from the NSW Government for Gold Coast Airport-related economic development initiatives as being 'unfair' as Tweed Shire and the broader FNC region are benefiting from the flow of passengers that the airport facilitates. Conversely, stakeholders on the Tweed Shire/NSW side perceive that there has been limited interest from stakeholders from the other side of the border for collaboration in promoting Gold Coast Airport's economic development contribution for both sides of the border. One of the success criteria for cross-border planning is ongoing cross-border government collaboration at both the local and state levels.¹²¹ However, such an arrangement does not exist for the Gold Coast Airport region – there is currently not only a sense of distrust and competition but also limited collaboration between government agencies at both the local and state levels.

Meanwhile, GCAPL has displayed proactive stakeholder collaboration only on the Gold Coast/QLD side of the border whereas the organisation's stakeholder engagement is significantly lower on the other side of the border. Within the land of Gold Coast Airport, the relationship between GCAPL and SCU has become increasingly collaborative, driven by the recent appointment of a new Vice Chancellor for the university. This evolving relationship has led to the creation of an aviation management degree in which students can also acquire a Pilot License.

Sub-research question #4.3, "How has community voice influenced Gold Coast Airport's development in recent years?" involves an investigation into the impact of community voice from both the Gold Coast and Tweed Shire sides of the border, on Gold Coast Airport's economic development contribution. It is found that from the Tweed Shire side, there has been ongoing community opposition to Gold Coast Airport. However, this community voice is primarily driven by 'the vocal minority' and may not accurately represent the silent majority's opinion. Tweed Shire Council has spent a significant amount of resources, which could have otherwise been allocated towards economic development initiatives, managing such community voice. On the Gold Coast side, the ILS installation at Gold Coast Airport was a highly controversial project amongst community members during its proposal phase, thus creating delays to its implementation. However, the system

¹²¹ This criterion is part of the four success criteria for cross-border planning, developed in Section 2.6.

contains significant economic development and safety benefits. The ILS will have limited impact on community members due to the need to only use the new flight path in adverse weather conditions and the fact that aircraft have been and will continue to be becoming quieter. Locally, meanwhile, residents located in proximity to the airport have been opposing new developments and the extension of the light rail corridor due to their desire to preserve the village atmosphere of the area. This public sentiment is a major barrier for promoting Gold Coast Airport's economic development contribution in the future. Based on these observations, community voice has evidently been negatively delaying Gold Coast Airport's development and is therefore not conducive for promoting economic benefits of the airport. There is clearly a need for skilful engagement with the community voice regarding the potential local and regional economic development benefits of Gold Coast Airport to the community, which may reduce the extent of community opposition to the airport in the future.

Based on the findings for the two research sub-questions above, in response to research question #4, "How do stakeholder relationships influence Gold Coast Airport's economic development contribution?" the research discovers that the existing stakeholder relationships impose limitation on Gold Coast Airport's economic development contribution. The stakeholder relationships are highly conducive to promoting economic development contribution of Gold Coast Airport to only one side of the border, namely the Gold Coast. This is due primarily to the existing pattern of GCAPL's stakeholder engagement in which the organisation evidently proactively collaborates only with stakeholders on the Gold Coast. Conversely, the organisation's engagement with Tweed Shire stakeholders only occurs on a needs basis as necessitated by the existing statutory framework of the Airports Act. Community voice has also negatively influenced the airport's economic development contribution by imposing unnecessary delays and costs on the planning process.

Chapter 7 has addressed the fourth research question and its associated sub-research questions. The next chapter of the thesis, Chapter 8, draws a conclusion and key lessons from this research, which have practical relevance to other airports and cross-border regions.

CHAPTER 8: CONCLUSION AND KEY LESSONS

8.1 INTRODUCTION

Chapter 8 serves as a conclusion for this thesis by summarising key findings and drawing key lessons that are applicable to other airports and airport-hosting regions. To this end, the chapter comprises three main sections, including a summary of key findings, key lessons and, lastly, contribution of research and areas for further research.

8.2 SUMMARY OF KEY FINDINGS

Figure 8.1 below outlines the research objectives, questions, sub-questions and outcome which have underpinned this research.

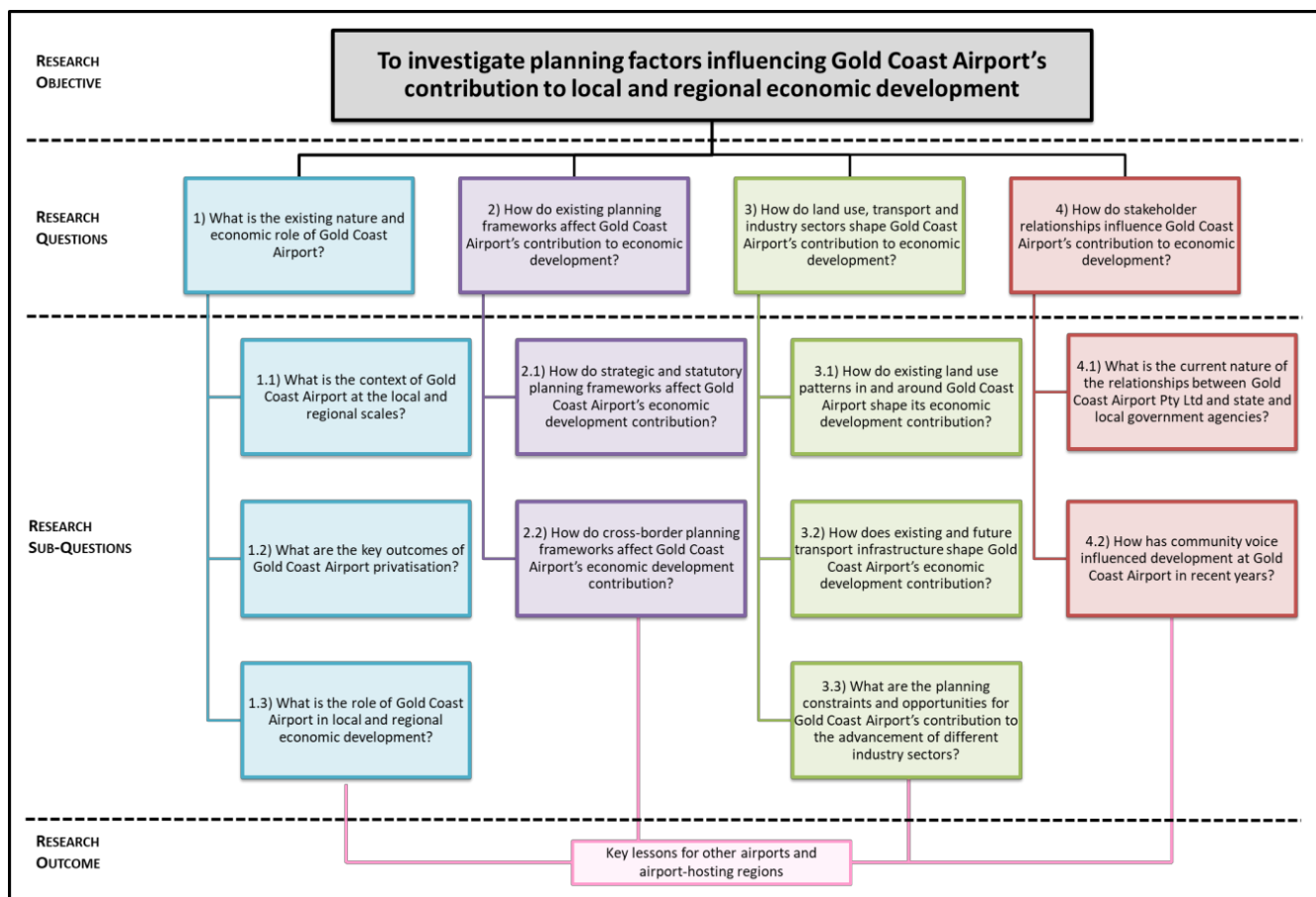


Figure 8.1: Research Objectives, Questions, Sub-Questions and Outcome

In pursuing the four research questions (RQs) outlined in Figure 8.1 above, the research has covered four broad themes and their associated sub-themes as illustrated in Figure 8.2 on the following page.

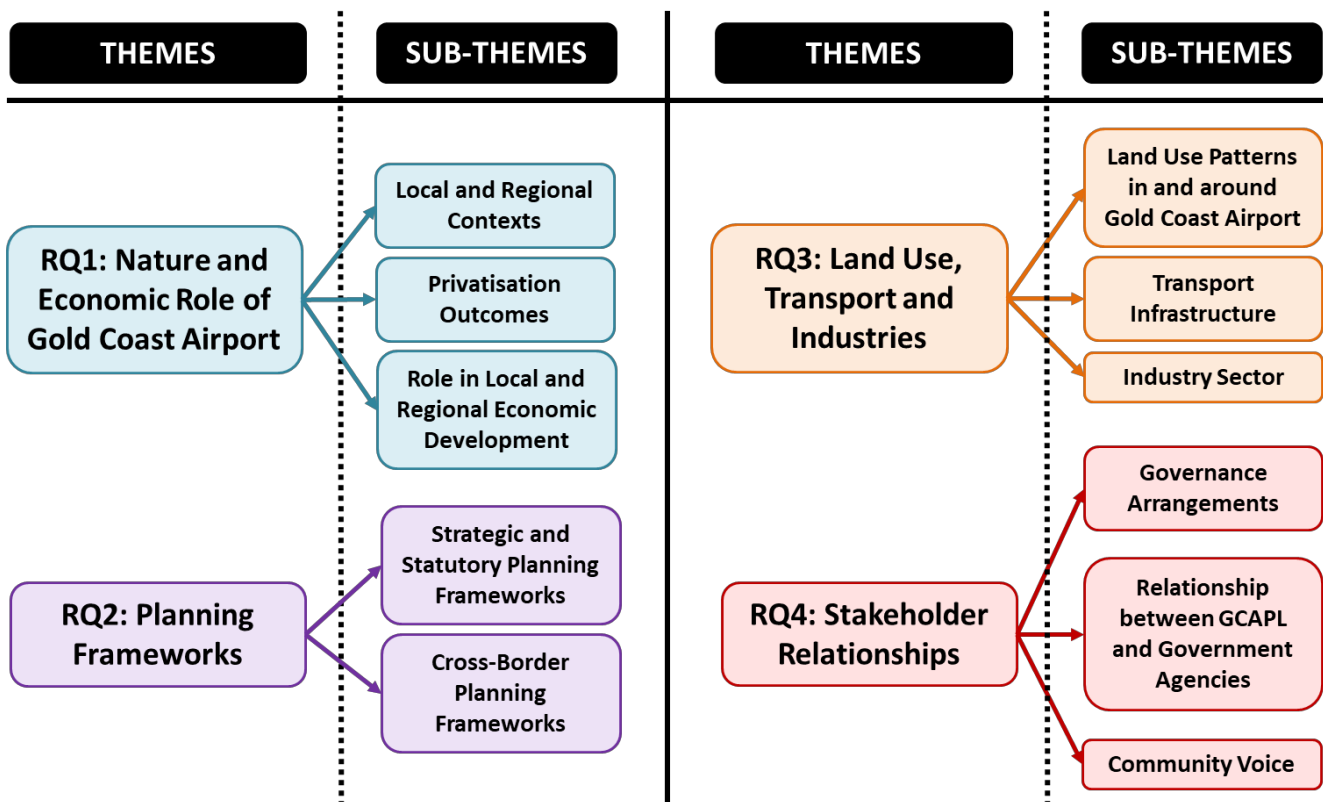


Figure 8.2: Themes and Sub-Themes Covered by the Research Questions

The key findings of this research, organised according to the four key themes and their sub-themes above, are outlined in this section.

8.2.1 RESEARCH QUESTION 1: THE NATURE AND ECONOMIC ROLE OF GOLD COAST AIRPORT

In relation to the nature and economic role of Gold Coast Airport, the research has investigated three sub-themes, including local and regional contexts, privatisation outcomes and the airport’s role in local and regional economic development.

8.2.1.1 Local and Regional Contexts

In relation to the local and regional contexts, Gold Coast Airport, which has some competition with nearby airports, particularly Brisbane Airport, is situated across two states of QLD and NSW and two LGAs of the Gold Coast and Tweed Shire. The two states and LGAs are intrinsically linked and connected by the Pacific Highway. Strong economic links currently exist between Tweed Shire and the Gold Coast, with the former benefiting from the latter’s tourism industry by attracting daytrip visitations from the Gold Coast’s tourists. There is also a significant level of cross-border employment, with nearly one-third of Tweed Shire’s workers being employed on the Gold Coast, which results in economic loss for the LGA. The airport is surrounded by a variety of land uses,

primarily consisting of low- and medium-density residential dwellings, and limited vacant, developable land, thus implying limited spatial expansion prospect for the airport. The existing land uses inside Gold Coast Airport comprise a range of aviation and non-aviation uses, the most notable of which is a university campus of SCU. The diversification of land uses inside the airport supports the finding of Freestone and Baker (2010) that privatised airports typically encompass a high degree of land use diversification, which is attributable to the inclusion of a range of non-aviation uses.

8.2.1.2 Privatisation Outcomes

Similarly to other privatised airports around the world, Gold Coast Airport has been significantly influenced by the privatisation under the Airports Act, through which the management and operational rights of the airport were transferred from the Federal Government to GCAPL. The privatisation of Gold Coast Airport has led to five key outcomes for the airport. Firstly, the airport name was strategically changed from ‘Coolangatta Airport’ to ‘Gold Coast Airport’ to leverage the reputation associated with the Gold Coast into additional passenger volume for the airport. Similarly, the corporate branding of the airport has recently been undergoing an overhaul to better reflect the Gold Coast’s ‘fun’ atmosphere. Secondly, the airport, previously comprising domestic flights only, has transitioned into an international airport with direct flights to several major cities throughout the Asia-Pacific region. Thirdly, GCAPL redeveloped Gold Coast Airport into a specialised LCC hub, which, in conjunction with the introduction of international flights, has led to the fourth privatisation outcome of rapid airport passenger growth. As a result of such growth, Gold Coast Airport is now the sixth busiest airport in Australia, surpassing three of the eight First-Tier Airports located in a capital city, in terms of passenger volume. The rapid growth in the airport’s passenger volume resulted in the fifth privatisation outcome for the airport, in which a range of redevelopment projects have been undertaken to accommodate the increasing level of passengers. The finding on the evolution of Gold Coast Airport through the five privatisation outcomes is consistent with the literature, which highlights that privatisation has substantially transformed the nature, function and characteristics of airports, particularly their stronger focus on generating profits (Baker & Freestone, 2008; Gerber, 2002; Stevens, 2012).

8.2.1.3 Role in Local and Regional Economic Development

Based on the location, nature and characteristics of Gold Coast Airport, the airport can be categorised as a Second-Tier Airport using the author’s conceptual classification for Australian airports developed in Section 4.6.2. Although Gold Coast Airport is a Second-Tier Airport, its role in economic development is significant based on two principal reasons: its high volume of passengers

and its cross-border location. The airport's primary economic development contribution is the facilitation of tourism, a finding which is consistent with the literature review findings which suggest this outcome as the principal economic benefit of airports due to their provision of access. However, the majority of Gold Coast Airport's economic development contribution has only gone to the Gold Coast as most airport passengers only visit the Gold Coast although the majority of the airport land is located on the Tweed Shire side of the border. Nevertheless, the airport is a major employer for both LGAs, employing nearby residents on both sides of the border. The significance of Gold Coast Airport as a major employer supports the literature review findings that highlight employment generation as a major economic development contribution of airports (Air Transport Action Group, 2005; Chalabi, 2002; Kramer, 2004).

8.2.2 RESEARCH QUESTION 2: PLANNING FRAMEWORKS

The research has explored strategic, statutory and cross-border planning frameworks implemented by both the private sector and government agencies at the local, state and Federal level, in terms of how they affect the economic development contribution of Gold Coast Airport.

8.2.2.1 Strategic and Statutory Planning Frameworks

Across strategic and statutory planning frameworks, there is widespread recognition of Gold Coast Airport's economic development role. However, most of these frameworks are inhibiting the airport's economic development contribution. Whilst the majority of strategic frameworks have not outlined specific planning strategies to promote the economic development contribution of Gold Coast Airport, statutory frameworks are constraining the opportunity to capitalise on the airport as an economic driver in three ways. Firstly, a complex, intertwining layer of both strategic and statutory government planning frameworks is currently in place for both Gold Coast Airport and its surroundings, creating a 'minefield of complexity'. In such an operational environment, implementing an economic development initiative related to Gold Coast Airport becomes significantly delayed due to the need to carefully consider strategic and statutory influence from several different frameworks.

Secondly, the Airports Act, which governs the planning and development processes for Gold Coast Airport, makes limited recognition of the airport's economic development role. This implies a lost opportunity for GCAPL to promote economic benefits for its host region through its master plan under the legislative requirement of the Airports Act. The legislation's requirement for MDPs to be submitted for major development projects on the airport land effectively creates delays for such

projects. Additionally, the statutory framework imposes several operational and planning restrictions on the SCU campus, which increases the level of risk for the university.

Thirdly, the local land use planning frameworks, including the CoGC's City Plan and the relevant LEPs for Tweed Shire, have not made special regulatory land use provisions for the surroundings of Gold Coast Airport. Instead, generic land use zones are applied to the airport's environs on both sides of the border. As such, there is a loss in opportunities for the development of uses which are economically compatible with Gold Coast Airport and can therefore amplify the airport's economic development contribution.

8.2.2.2 Cross-Border Planning Frameworks

The research has discovered that there are currently uneven state government commitments to cross-border planning despite the existence of a MoU for cross-border collaboration between the QLD and NSW governments. The NSW Government has demonstrated significantly higher commitments to cross-border planning than the QLD Government, as evident from the comprehensive integration of cross-border considerations into the regional plan for North Coast NSW, in which part of Gold Coast Airport is situated. In contrast, the QLD Government has incorporated limited cross-border planning awareness into the regional plan for SEQ. The NSW Government has also appointed a Cross-Border Commissioner to address cross-border issues whereas a similar role has not been established by the QLD Government. Such unevenness in cross-border commitment is similar to the unequal cross-border considerations of state government evident in the regional plans for Albury (NSW) and Wodonga (VIC), which is observed by O'Hare (2019).

A similar trend can be observed at the local government level, with Tweed Shire Council illustrating significantly more cross-border recognition in its strategic planning frameworks than the CoGC. Nevertheless, there is currently a cross-border separation of land use planning frameworks for the airport's surroundings, which further contributes to the previously discussed issue of a complex layer of planning frameworks in place for the airport's surroundings.

8.2.3 RESEARCH QUESTION 3: LAND USE, TRANSPORT AND INDUSTRIES

The theme of land use, transport and industries involves an investigation into three sub-themes, namely land use patterns in and around Gold Coast Airport, existing and future transport infrastructure and industry sectors.

8.2.3.1 Land Use in and around Gold Coast Airport

A strong synergy currently exists between Gold Coast Airport and the SCU campus in their co-location, which provides the latter with three key benefits, including: the attraction of FIFO students, the opportunity to provide airport management courses aimed at overseas students, and psychological benefits of the airport location for SCU occupants. The university campus, however, is severely restricted by limited car parking availability due to the high parking demand amongst staff and students fuelled by the lack of public transport connectivity to the campus. Gold Coast Airport has limited spatial expansion prospect as the airport is effectively ‘landlocked’ by existing residential uses on the Gold Coast side of the border and protected nature reserves on the Tweed Shire side. Nevertheless, GCAPL has purchased a number of land parcels on both sides of the border for the future expansion of the airport. The research has also discovered three key land use opportunities for the development of the following uses in proximity to the airport, which can enhance its role in local and regional economic development in the future:

- ✈ A business park on the Border Park site, with close links to the airport’s operations;
- ✈ An intermodal freight hub on Boyd Street, to enhance the airport’s freight processing capacity and role in the local freight industry; and
- ✈ A medical precinct around the airport, taking advantage of the existence of two major hospitals and several healthcare services already located in the airport’s vicinity.

8.2.3.2 Transport Infrastructure

There is existing vehicular traffic pressure both inside and around the airport. Inside the airport, traffic congestion is a major issue for SCU staff and students given that the existing road infrastructure throughout the airport, through which the university traffic flows, is currently limited. Outside the airport, the adjacent Boyd Street is currently subject to a high level of traffic due to the reliance on the road by the nearby John Flynn Hospital and the locally popular Betty Diamonds Sports Complex. Given that a quarry reserve located on Boyd Street presents a major opportunity for the development of an intermodal freight hub and a significant level of traffic will be introduced for the road once Cobaki Lakes is fully developed, an interchange between Boyd Street and the adjacent Pacific Highway has been proposed. However, a cross-border disagreement over government funding for the interchange has stalled the project from proceeding.

The heavy rail and light rail corridors servicing the Gold Coast are planned for extension to Gold Coast Airport, with the latter being prioritised over the former for completion. Whilst both the heavy rail and light rail corridors will significantly improve the accessibility of Gold Coast Airport, which will alleviate the traffic issue discussed above, the heavy rail corridor extension to the airport is the

more economically beneficial option. This is due to the heavy rail's higher efficiency in transporting passengers and ability to carry freight, which will potentially enhance the airport's role in the local freight industry. The heavy rail will also enable the development of an intermodal freight facility on the quarry site along Boyd Street.

8.2.3.3 Industry Sectors

The research has examined constraints and opportunities related to Gold Coast Airport's contribution to three specific industry sectors of the Gold Coast and Tweed Shire, including freight, tourism and business industries. The airport has played a minor role in the local freight industry. This is attributable to the lack of cold storage facilities and the daily curfew imposed on the airport, both of which substantially limit the airport's ability to process inbound and outbound perishables. This finding is consistent with the literature review finding that cold storage facilities and daily curfew have negative impact on the attractiveness of an airport as a freight facility to couriers. Nevertheless, the following three opportunities exist for increasing Gold Coast Airport's contribution to the freight industry, including:

- ✈ Tweed Shire's increasing volume of exported produce;
- ✈ The airport's strategic location across the border and existing freight facilities onsite; and
- ✈ GCAPL's clear strategic direction for the airport's future freight infrastructure activities, outlined in the 2017 Gold Coast Airport master plan.

Gold Coast Airport, as mentioned previously in Section 8.2.1.3, plays a significant role in facilitating the local tourism industry. However, the majority of the airport's passengers have visited only the Gold Coast, thus implying that the airport's tourism contribution has been highly uneven across the border. Consequently, the tourism industry of Tweed Shire, which has received approximately one-tenth of all airport passengers, has been relatively underperforming particularly considering the domestic and international access that Gold Coast Airport provides to the region. This trend could be reversed through the use of the existing green reputation that Tweed Shire possesses to create a unique 'brand' for the region, which can be used to market the region to domestic and international passengers.

There have been limited visitations to the vicinity of Gold Coast Airport by the airport passengers, the majority of whom immediately travel to the northern end of the Gold Coast upon their arrival at the airport. This constraint could be addressed through an introduction of eco-friendly accommodation in this area to capitalise on the increasing popularity of such accommodation in

recent years. Hotels with international reputation could be established in the area to attract more international visitors to the area, which is currently dominated by serviced apartments.

In relation to business sector, there are opportunities to promote the corporate meeting industry both within and in the vicinity of the airport. To do so, meeting venues could be provided as part of future hotel development. Additionally, Tweed Shire's green reputation and availability of conference facilities imply that promoting a green conferencing industry in the LGA should be a planning priority for the region in the future.

8.2.4 RESEARCH QUESTION 4: STAKEHOLDER RELATIONSHIPS

Stakeholder relationships have been examined in terms of how they influence Gold Coast Airport's economic development contribution. Three sub-themes are investigated, including governance arrangements, the relationship between GCAPL and government agencies and community voice.

8.2.4.1 Governance Arrangements

There is a significant disparity across the border in terms of local government resources, with Tweed Shire having substantially less budget than the CoGC. Additionally, the council receives limited financial assistance from the NSW Government for economic development due to the state government's 'Sydney-centric' focus in its economic development approach and the resultant view that Gold Coast Airport is not an important gateway airport for the state. Consequently, Tweed Shire Council has been restricted in terms of its economic development planning around Gold Coast Airport. In contrast, the QLD Government provides significant financial support to not only Brisbane Airport, the First-Tier Airport of QLD, but also Gold Coast Airport and Cairns Airport, both of which are Second-Tier Airports that aspire to become major international gateways for the state. As such, there is a stark contrast in how the two state governments provide financial support for airport-related economic development initiatives. The lack of funding support from the NSW Government is a contributing factor to the relatively lower economic development contribution of Gold Coast Airport to the Tweed Shire region.

8.2.4.2 Relationship between GCAPL and Government Agencies

The research has investigated the relationship between GCAPL and stakeholders from both sides of the border. GCAPL has demonstrated an uneven level of stakeholder collaboration across the border, with stakeholders based on the Gold Coast receiving significantly more engagement from the agency. Extensive, proactive collaboration exists between GCAPL and the CoGC, both of which inform each

other of their future strategic intentions early in their respective planning processes to ensure compatibility in their land use visions. GCAPL has also been highly active in both the community sector of the Gold Coast, sponsoring a number of events on an ongoing basis, and the LGA's business sector, by participating in chamber of commerce activities. As such, a positive, collaborative stakeholder relationship exists between GCAPL and stakeholders on the Gold Coast.

On the other hand, on the Tweed Shire side, GCAPL only engages Tweed Shire Council and local chambers of commerce on a needs basis as required by the Airports Act. For instance, in its development of the 2017 airport master plan, GCAPL engaged the council to provide information on the draft master plan, which had been largely finalised and thus allowed limited input by the council. In contrast, the agency engaged the CoGC at an early stage of the master planning process to 'test the water' and verify whether their initial airport development ideas were compatible with the council's planning vision for the airport's surroundings.

The relationship between GCAPL and SCU has become increasingly collaborative in recent years, which is attributable to the recently appointed Vice Chancellor at the university. The positive relationship between the two stakeholders has led to the creation of an aviation management degree being offered at the Gold Coast campus of SCU. Students in this program can acquire Commercial Pilot's License through undertaking pilot training offered by pilot schools located on the airport. However, according to senior manager #1, an "antagonistic sort of relationship" existed between the previous Vice Chancellor of SCU and a senior manager at GCAPL, which prevented 'synergies' between the SCU campus and the airport from being 'explored'

In relation to initiatives related to promoting economic development contributions of Gold Coast Airport, a non-cooperative, cross-border relationship currently exists between government agencies at the local and state levels. From the perspective of QLD stakeholders, the lack of financial support from the NSW Government for Gold Coast Airport-related economic development initiatives is 'unfair' as the NSW is economically benefiting from the additional passenger volume brought by these initiatives. However, as discovered in the governance findings above, the NSW Government does not view Gold Coast Airport as a gateway to NSW due to the existence of the state border. This perspective is the primary reason behind the state government's limited financial support for Gold Coast Airport and economic development initiatives related to the airport. On the other side of the border, there are perceptions amongst stakeholders that the CoGC's sense of competition is the principal reason behind the limited cross-border collaboration from the council in economic development initiatives based on Gold Coast Airport. Thus, there are differences in terms of

stakeholders' perspectives and understanding, which should be addressed to create a more collaborative cross-border relationship for economic development planning around Gold Coast Airport. Cooperation between government agencies at both the local and state levels is essential for successful cross-border planning, which is currently exemplified by the cross-border arrangements in place for Canberra (ACT) and surrounding shires of NSW (O'Hare, 2019).

Across the findings above, the research has discovered that the dynamics of power at both the political and interpersonal realms play a significant role in the economic development planning process centred around Gold Coast Airport. This finding has potential relevance for not only other airports, but also any major piece of public infrastructure with significant economic development implications.

8.2.4.3 Community Voice

Community voice has been discovered as a major constraint, rather than driver, of Gold Coast Airport's economic development contribution due to three principal reasons. Firstly, on the Tweed Shire side of the border, there has been ongoing community opposition to the airport in terms of its activities and proposed development. After spending a significant amount of resources to manage and address the community voice, Tweed Shire Council discovered that the opposition had been driven by the 'vocal minority' group of community members. As such, the community opposition is not reflective of the opinion of the 'silent majority' group of people, thus implying a significant loss in council resources, which could have been allocated towards other initiatives, including economic development programs associated with Gold Coast Airport.

On the Gold Coast side, although there is generally strong community support for Gold Coast Airport, which is attributable to GCAPL's active involvement in the community sector of the Gold Coast, the ILS was a highly controversial topic amongst community members. A significant amount of community opposition to the ILS proposal was evident, resulting in delays to the implementation of the system. However, the safety and economic benefits associated with the ILS are substantial, and aircraft have been becoming progressively quieter in recent years. As such, the ILS, which would introduce flights over some of the currently unaffected suburbs on the northern end of Gold Coast only in the event of poor weather conditions, implies minimal noise impact on residents. Such overreaction by the public is an example of an uninformed community, thus signalling a need to proactively create a more informed community, a lesson which is further examined in Section 0.

There is a general public sentiment to preserve the relatively quiet, low-rise environment and the 'village' atmosphere in Gold Coast Airport's vicinity. As such, residents located around the airport

have been opposing high-density development and the planned light-rail corridor extension to the airport. This community preference presents a major challenge to promoting economic development contribution from Gold Coast Airport, particularly given the importance of increasing the airport's accessibility by the rail corridor extension from the economic perspective.

Figure 8.3 on the following page summarises the key research findings discussed above.

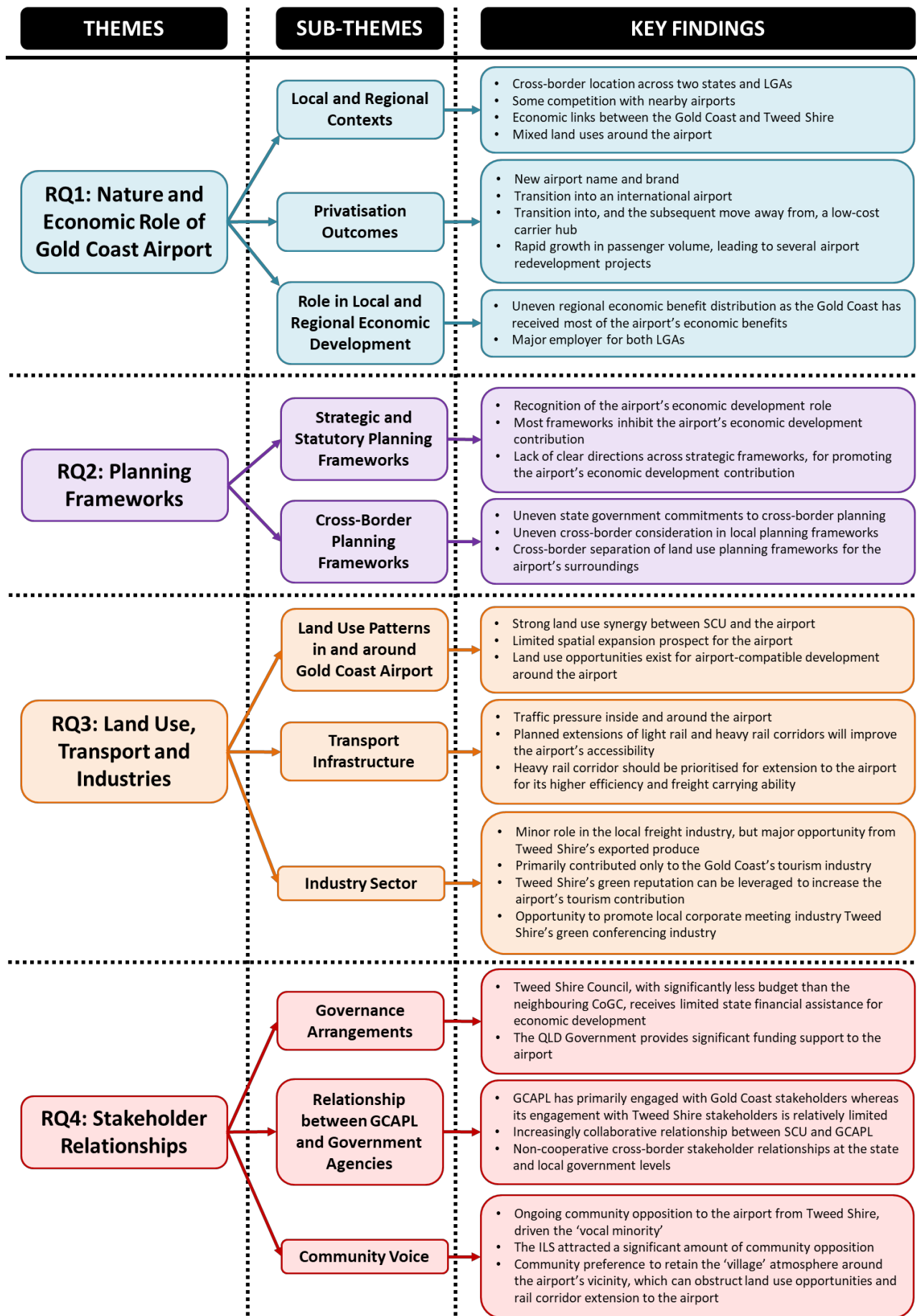


Figure 8.3: Summary of Key Research Findings (Source: Author (2021))

8.3 CONTRIBUTION TO KNOWLEDGE

This research has made the following three major contributions to the literature, all of which are elaborated in this section:

- ✈ A conceptual framework of planning for local and regional economic development around an airport;
- ✈ Key lessons for other airports and relevant stakeholders in economic development planning around an airport; and
- ✈ Conceptual classification for Australian airports.

8.3.1 CONCEPTUAL FRAMEWORK OF PLANNING FOR LOCAL AND REGIONAL ECONOMIC DEVELOPMENT AROUND AN AIRPORT

Through synthesising the key findings from this research, which are outlined in the previous section, the author has developed a conceptual framework of planning for local and regional economic development around an airport, illustrated in Figure 8.4 below.

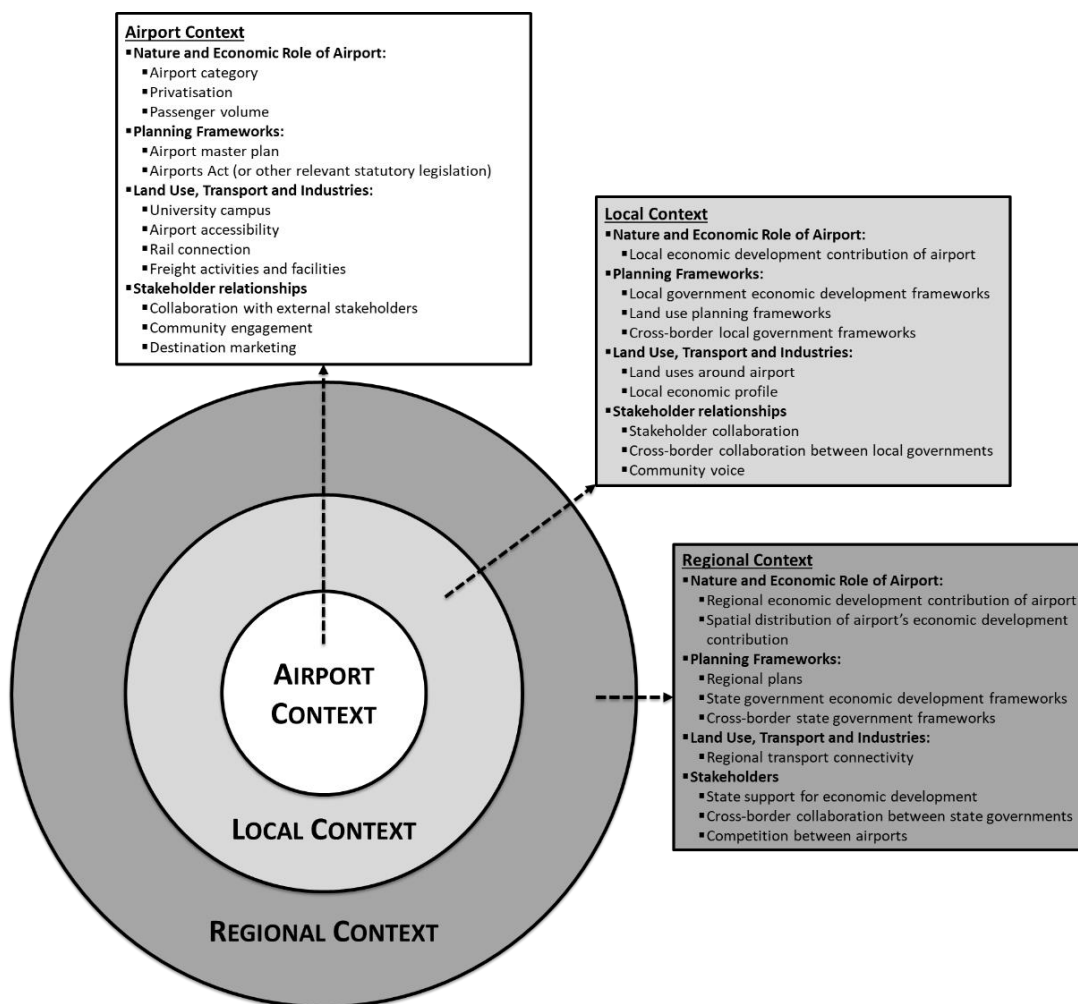


Figure 8.4: Conceptual Framework of Planning for Local and Regional Economic Development around an Airport (Source: Author (2021))

The conceptual framework shown in Figure 8.4 above articulates the key planning factors that influence an airport's economic development contribution. The framework encapsulates three different contexts, including the airport, its local context and its regional context. The planning factors can either be constraints or opportunities for promoting an airport's contribution to local and regional economic development. These factors are grouped into one of the following four themes associated with the four research questions: 1) nature and economic role of airport, 2) planning frameworks, 3) land use, transport and industries and 4) stakeholder relationships. Table 8.1 below describes the planning factors associated with the airport context.

Table 8.1: Planning Factors Influencing Economic Developments Contribution of Airports (Airport Context)

Planning Factor	Description
Nature and Economic Role of Airport	
Airport Category	Airport category refers to the applicable category to the airport, which is based on the relevant airport classification and most appropriately reflects its characteristics, location and function. The author has developed a conceptual classification for Australian airports based on a tier system.
Privatisation	Airport privatisation has significant impact on the airport's operational, planning and management focus. Profit maximisation through non-aviation activities is a common strategy amongst operators of privatised airports.
Passenger Volume	The volume of passengers positively correlates to the economic development contribution of the airport.
Planning Frameworks	
Airport Master Plan	As a strategic document, airport master plan establishes future development directions for the airport. With an appropriate outline of strategic actions, the master plan can significantly enhance the airport's economic development contribution.
Airports Act (or other Equivalent Legislation)	The Airports Act, a Federal statutory framework regulates the planning and development within a privatised airport, thus having direct influence on the economic development contribution of the airport. The legislation is currently not conducive to promoting economic development contribution of privatised airports. For non-privatised airports and non-Australian airports, other relevant legislation may impact their economic development contribution.
Land Use, Transport and Industries	
University Campus	A university campus can significantly benefit from being located inside an airport, which can benefit the university through attracting FIFO students and the improvement of productivity for staff and students at the university through its 'exciting' atmosphere.
Airport Accessibility	The accessibility of the airport, particularly from the main tourist destinations, can significantly influence the volume of passengers the airport receives, thus having direct implication on the airport's economic development contribution.
Rail Connection	As rail connection significantly affects the accessibility of the airport, it is a major driver of its economic development contribution.
Freight Activities and Facilities	The availability of freight activities and the level of freight activities at the airport influence the airport's contribution to the local and regional freight industry.

Planning Factor	Description
Stakeholder Relationships	
Collaboration with External Stakeholders	The airport operator's collaboration with all external stakeholders from all sides of the state/local government border early in its planning process is important for ensuring compatibility in land use vision. Doing so can also minimise stakeholder conflicts, which may lead to delays for airport projects, thus adversely affecting the airport's economic development contribution.
Community Engagement	Ongoing, proactive engagement with local community members can minimise community opposition, which can lead to delays in the airport planning process.
Destination Marketing	Marketing the locations in proximity to the airport can significantly influence the intended destinations of passengers the airport services.

The planning factors associated with the local context of an airport are outlined in Table 8.2 below.

Table 8.2: Planning Factors Influencing Economic Development Contributions of Airports (Local Context)

Planning Factor	Description
Nature and Economic Role of Airport	
Local Economic Development Contribution of Airport	This factor is related to the extent and nature of the airport's economic development contribution at the local level.
Planning Frameworks	
Local Government Economic Development Frameworks	These frameworks outline a local council's economic development strategy. Adequate inclusion of the airport in the strategy can enhance the airport's economic development contribution to the LGA.
Land Use Planning Frameworks	Land use planning frameworks (local council planning schemes in QLD and LEPs in NSW) can enhance the airport's economic development contribution through facilitating the development of airport-compatible land uses around the airport.
Cross-Border Local Government Frameworks	The extent of cross-border considerations in the two planning frameworks above can affect the spatial distribution of the airport's economic development contribution.
Land Use, Transport and Industries	
Land Uses around Airport	The existing land use patterns around the airport can significantly alter the airport's economic development contribution. The existence of airport-compatible uses (e.g. freight processing facilities and business parks) in proximity to the airport can enhance the airport's economic benefits.
Local Economic Profile	The local economic profile can affect the extent of the airport's economic contribution. A tourism-based economy, in particular, can significantly benefit from the domestic and international aviation access provided by the airport.
Stakeholder Relationships	

Planning Factor	Description
Stakeholder Collaboration	The collaboration between local stakeholders, including the airport, local councils, local destination marketing organisations and chambers of commerce, can significantly enhance the airport's local economic development contribution. Through the sharing of their interests, ideas and land use planning intent, there will also be less stakeholder conflicts caused by the airport's future development.
Cross-Border Collaboration between Local Governments	Collaboration between different local governments, which have jurisdictions over areas within the airport's catchment, can boost the airport's economic development contribution through such projects as cross-border transport infrastructure.
Community Voice	Community perception of the airport and its activities can lead to either oppositions to or support for future airport projects, the former of which will create delays for airport developments, thus negatively impacting the airport's economic development contribution.

Table 8.3 below outlines the planning factors associated with the regional context of an airport.

Table 8.3: Planning Factors Influencing Economic Development Contributions of Airports (Regional Context)

Planning Factor	Description
Nature and Economic Role of Airport	
Regional Economic Development Contribution of Airport	The extent and nature of the airport's economic development contribution at the regional level
Spatial Distribution of Airport's Economic Development Contribution	As illustrated by the case study of Gold Coast Airport, an airport's economic development contribution can be distributed unevenly at a regional scale. As such, this factor is related the pattern of spatial distribution of the airport's economic benefits.
Planning Frameworks	
Regional Plans	Regional plans establish overall strategic directions that local councils are required to follow in their respective local planning frameworks. The inclusion of airports into these strategic directions can help guide local councils in capitalising on economic development contribution of airports.
State Government Economic Development Frameworks	By incorporating airports into the outlined strategic directions, state government economic development frameworks can lead to state financial assistance for airport-related economic development initiatives.
Cross-Border State Government Frameworks	The inclusion of cross-border considerations into the two planning frameworks above can lead to greater collaboration between state governments, which is further examined below in this table.
Land Use, Transport and Industries	
Regional Transport Connectivity	Regional transport connectivity enabled by such transport as rail corridors (e.g. TransLink's heavy rail infrastructure throughout SEQ) and highways (e.g. the interstate Pacific Highway) can increase the connectivity of airports throughout the region. This can further increase the airports' economic development contribution through more efficient movement of passengers and freight.
Stakeholder Relationships	

Planning Factor	Description
State Support for Economic Development	Financial and policy support for local economic development initiatives centred around airports is critical, particularly for local councils with limited budget. State support for airports in the event of establishing new flight routes is also important.
Cross-Border Collaboration between State Governments	Similarly to the local context, collaboration between state governments of adjacent states is important to ensure that cross-border projects with implications on the airport's operation are initiated and funded. Lack of cross-border collaboration, in contrast, can delay such projects.
Competition between Airports	The level of competition between airports located in proximity to each other can affect their passenger volume, and in turn, their local and regional economic development contribution.

The conceptual framework outlined above has relevance to several stakeholders involved in planning processes for economic development around an airport. Examples of such stakeholders include local, state and Federal government agencies, operators of privatised or public airports, chambers of commerce and transport planning agencies.

8.3.2 KEY LESSONS FOR OTHER AIRPORTS AND RELEVANT STAKEHOLDERS IN ECONOMIC DEVELOPMENT PLANNING AROUND AN AIRPORT

The second key contribution of the research is associated with the lessons that have been drawn from the case study of Gold Coast Airport. These lessons are aimed at promoting economic development contribution of airports through planning processes. The following lessons, all of which are further discussed below in relation to Gold Coast Airport and their relevance to other airports, are applicable to not only other airports and airport-hosting regions, but also several stakeholders involved in the economic development planning process centred around an airport:

- ✈ The need to develop a cross-border airport city region;
- ✈ The need to engage stakeholders in the economic development planning processes;
- ✈ The need to implement strategic intention outlined in planning frameworks;
- ✈ The synergy between an airport and a university campus; and
- ✈ Other lessons, including the importance of direct rail connection to airports and an alternative, conflict-free source of airport revenue.

8.3.2.1 The Need to Develop a Cross-Border Airport City Region

The state and local council border has resulted in an uneven cross-border economic development contribution of Gold Coast Airport, which has primarily only gone to the Gold Coast side of the border. Therefore, there is a need to develop a cross-border airport city region around the airport, which capitalises on the economic development opportunities associated with the cross-border location of the airport. The primary purpose of the cross-border airport city region is to equally spread the airport's economic development impacts not only equally across the border, but also at a regional

level, which encompasses not only the Gold Coast and Tweed Shire, but also the surrounding LGAs on both sides of the border. Prior to discussing how the cross-border airport city region can be developed, the negative impact of the state and local council border on Gold Coast Airport is firstly examined below.

i) The Negative Impact of the State Border on Gold Coast Airport's Economic Development Contributions

A highly notable feature of Gold Coast Airport, as one of the principal reasons for the selection of the airport as a case study for this research, is the airport's location across a border, which functions as both a state boundary between QLD and NSW and a local government boundary between the Gold Coast and Tweed Shire. However, the border has been discovered as a major limitation to, rather than a driver of, local and regional economic development around Gold Coast Airport. Although there is an opportunity to distribute economic contribution of Gold Coast Airport to both sides of the border, the majority of past economic development contribution from the airport has been largely distributed to the north side of the border. Two planning factors, which are further discussed below, have contributed to the uneven cross-border distribution of Gold Coast Airport's economic benefits.

The first factor is the uneven level of cross-border stakeholder engagement from GCAPL. Specifically, GCAPL's collaboration and engagement with local stakeholders has been primarily focused on the Gold Coast side of the border. An extensive level of communication and collaboration currently exists between GCAPL and the CoGC in their respective planning processes. For instance, there was engagement between both stakeholders in the early stage of the Gold Coast Airport 2017 Master Plan preparation. Prior to the development of the airport master plan, GCAPL checked their initial airport planning and development ideas with the CoGC to ensure compatibility with the council's planning vision for Gold Coast Airport's surrounding area. By doing so, GCAPL was effectively "testing the water" according to urban planner #5. GCAPL has also been highly involved in both the community sector on the Gold Coast by sponsoring several ongoing events in the city in recent years such as the annual Gold Coast Marathon event and the annual Cooly Rocks On event. The active involvement of GCAPL in the event sector of the Gold Coast, which is one of the key economic sectors of the LGA given its status as a "city of events," (Bajracharya et al., 2014, p. 122) has, according to local community representative #2, led to a significant amount of community buy-in for the airport's further development and expansion. Moreover, GCAPL has been significantly active in the business sector of the Gold Coast given its active involvement with local chambers of commerce. Specifically, there has been extensive collaboration between GCAPL and Destination

Gold Coast, which can be primarily attributed to Paul Donovan, Chairman of the latter organisation who has also held senior management roles at both QAL and GCAPL.

In contrast to its proactive stakeholder engagement on the northern side of the border, GCAPL's stakeholder engagement on the Tweed Shire side has been relatively limited. The research has discovered that GCAPL has been engaging local stakeholders in Tweed Shire only on a needs basis as required by the Airports Act. In this regard, the organisation only consulted the stakeholders once the draft of the 2017 airport master plan had been prepared. As such, in its airport master planning process, GCAPL initiates stakeholder engagement on the southern side of the border significantly later in comparison to the airport's early stakeholder engagement on the Gold Coast. Such a delayed stakeholder engagement process implies limited opportunities for the Tweed Shire stakeholders to shape the airport master plan. The limited stakeholder engagement in Tweed Shire could also be seen as one of the key reasons behind the local community members' ongoing opposition to Gold Coast Airport's development in recent years, which has effectively impeded the airport's economic development contribution by delaying its projects.

Another reason which could contribute to GCAPL's extensive collaboration with stakeholders on the Gold Coast rather than those in Tweed Shire, is the significantly larger tourism market of the Gold Coast. From 2015 to 2018, the Gold Coast received an annual average of 11,423,000 international and domestic visitors in comparison to Tweed Shire's substantially smaller figure of 1,903,000 (Tourism Research Australia, 2019) – a sixfold difference. Moreover, the Gold Coast is home to a much larger population of 620,518 in 2018/19 in comparison to Tweed Shire's population of 97,001 in the same year. The significantly larger tourism market and population of the Gold Coast implies that the LGA can bring greater benefits than Tweed Shire to GCAPL in terms of passenger volume and aviation revenue.

The second factor contributing to the uneven cross-border economic development contribution of Gold Coast Airport is the CoGC's limited collaboration with Tweed Shire Council in past cross-border economic development planning initiatives centred around Gold Coast Airport. In this regard, Tweed Shire Council, aware of the economic opportunities to leverage Tweed Shire's proximity to both Gold Coast and Gold Coast Airport into economic benefits for the LGA, has made several attempts in the past to involve the CoGC in several economic development initiatives based on Gold Coast Airport. However, to date, the CoGC has illustrated limited collaboration with Tweed Shire Council.

The principal reason behind the CoGC's limited collaboration with Tweed Shire Council, according to local community representative #1, is fact that the council "regard[s] Gold Coast Airport as their [economic asset]." This perspective has led to the council's preference to contain the economic benefits of the airport to the Gold Coast side of the border. The second reason is the state/council border, which restricts council rates from industries and other activities associated with Gold Coast Airport from being distributed across the border. In this regard, both the CoGC and Tweed Shire Council, according to senior manager #2, are driven to stimulate industries and development associated with the airport on their own side of the border in order to increase council revenue. As such, there is a sense of competition across the two councils in terms of promoting economic development benefits from the airport, which has contributed to the CoGC's limited collaboration with Tweed Shire Council.

Another reason for the lack of cross-border collaboration between the two councils and the two state governments is the fact that revenue for each government agency is collected from ratepayers or taxpayers from only one side of the border. The quote below further illustrates the nature of this issue, which is caused by the existence of the state and local government border:

The more people we can get to start to think about the absence of that border ... the better. But **unfortunately, people like... [me] are paid by someone that only wants to find what happens on this side of the border because that is where [people] who pay their bills [are located].** – local destination marketing organisation representative #1 (emphasis added)

There are six strategies through which the cross-border airport city region could be developed around Gold Coast Airport, all of which are further elaborated below:

- ✈ Capitalising on the existing planning frameworks: PDA or City Deal?;
- ✈ Adopting a more 'regional' perspective for economic development planning processes;
- ✈ Establishing a cross-border committee;
- ✈ Adopting a more regional perspective in airport marketing campaigns;
- ✈ Maximising regional economic contribution of airport projects through local employment; and
- ✈ Inclusion of Tweed Shire in Gold Coast Airport name.

ii) **Capitalising on the Existing Planning Frameworks: PDA or City Deal?**

Two planning frameworks can be capitalised on for the creation of a cross-border airport city region around Gold Coast Airport, namely the PDA arrangement under the Economic Development Act 2012 and the City/Regional Deals. As previously discussed in Section 5.2.4.1, the PDA arrangement under the QLD Government's Economic Development Act 2012, since its implementation, has significantly driven development in Southport and Parklands. Although there is currently no PDA

around or in proximity to Gold Coast Airport, the legislation can be capitalised on to create a PDA surrounding the airport. Doing so could lead to an outcome similar to what has been achieved in Southport and Parklands PDAs in which new development is fast-tracked. Specifically, creating the PDA around Gold Coast Airport could be used to achieve the following two land use opportunities around the airport, which have been previously discussed in Section 6.4:

- ✈ A large-scale, integrated medical tourism hub around John Flynn Hospital
- ✈ An intermodal freight hub on Boyd Street, and

However, the PDA, as a state framework of the QLD Government, could further exacerbate the cross-border discord due to possible conflicts with the existing local and state planning frameworks and legislation on the NSW side of the border. Therefore, an alternative and potentially more appropriate planning framework for the creation of a cross-border airport city region is the City Deals. As a Federal Government-driven initiative, City Deals facilitate partnerships between all levels of government for achieving “a shared vision for productive and liveable cities” through the alignment of “the planning, investment and governance necessary to accelerate growth and job creation, stimulate urban renewal and drive economic reforms” (Australian Government, 2020c). The mechanism, given its nature, can potentially not only promote the economic development contribution of Gold Coast Airport, but also promote greater cross-border collaboration across the border between both state and local governments.

To date, eight City Deals have been implemented, with SEQ as latest recipient of the latest City Deal. However, as previously discussed in Section 5.3.2, the proposed SEQ City Deal partnership is currently limited in terms of cross-border recognition, which is attributable to the exclusion of the CoGC and Tweed Shire Council in COMSEQ when the proposal was put forward. The SEQ City Deal State of Intent between the Federal Government, the QLD Government and COMSEQ states the following six priority areas for action (Australian Government, 2019b):

- 1) Connecting infrastructure;
- 2) Jobs and skills;
- 3) Liveability and sustainability;
- 4) Housing and planning;
- 5) Digital; and
- 6) Governance and leadership.

As at October 2020, negotiations are currently underway for the SEQ City Deal, implying that there is an opportunity to include the creation of a cross-border airport city region around Gold Coast Airport as the seventh priority area for action in the mechanism. Tweed Shire Council and the NSW

Government could also be included as additional City Deal partners to ensure that both Tweed Shire and the broader FNC region are appropriately included in the City Deal consideration.

One of the City Deals demonstrating the applicability of the scheme for promoting economic development contributions of airports is the Western Sydney City Deal, signed in March 2018. This agreement between the Federal Government, the NSW Government and several local government agencies encapsulates 38 total commitments, with the creation of an Aerotropolis around Western Sydney Airport and the delivery of a rail link between the airport and Sydney Metro as two of the core goals (Australian Government, 2020e).

Another planning framework that could be considered for the cross-border city region around Gold Coast Airport is the Regional Deals, a mechanism based on the City Deals model. Each Regional Deal is specifically “tailored to each region’s comparative advantages, assets and challenges and reflect the unique needs of regional Australia” (Australian Government, 2020b). As at October 2020, there are three Regional Deals, one of which is for the Albury-Wodonga region. As previously discovered in Section 2.6.3, strong cross-border collaboration and planning efforts are evident for the Albury-Wodonga region at the local government level. Meanwhile, at the state level, there are currently uneven cross-border considerations from the VIC and NSW governments. Similarly to City Deals, the Albury Wodonga Regional Deal, which is “Australia’s first cross-border pilot Regional Deal,” involves a partnership between all levels of government, including the Federal Government, the VIC and NSW governments, Albury City Council and Wodonga City Council (Australian Government, 2020d). For the creation of the cross-border city region around Gold Coast Airport, a Regional Deal partnership could be established between the Federal Government, QLD and NSW governments, the CoGC and Tweed Shire Council.

The establishment of a cross-border city region around Gold Coast Airport either in the proposed SEQ City Deal or in a new City Deal or Regional Deal should seek to achieve some of the envisioned benefits of the Western Sydney City Deal and the Albury Wodonga Regional Deal. Specifically, the following outcomes of the two mechanisms should be considered for the Gold Coast Airport cross-border city region:

- ✈ Economic development and transport infrastructure outcomes as associated with Western Sydney Airport and its surrounding Aerotropolis; and
- ✈ Addressing cross-border challenges, including the harmonisation of cross-border regulatory barriers, as in the Albury-Wodonga region.

iii) Adopting a More Regional Perspective for Economic Development Planning Processes

Due to the border, there is currently a segregation of economic development planning processes associated with Gold Coast Airport. The CoGC, perceiving Gold Coast Airport as an economic development asset of the Gold Coast, has been extensively collaborating and engaging with GCAPL and has illustrated the intent to maximise economic development benefits from the airport only for the Gold Coast side of the border, and not across the border into Tweed Shire. As such, there has been limited stakeholder engagement and collaboration from the CoGC with Tweed Shire stakeholders. Similarly, GCAPL has primarily been engaging with stakeholders only on the Gold Coast side of the border due to its larger population size and tourism market in comparison to Tweed Shire.

These existing collaborative relationships between stakeholders effectively imply that the majority of the airport's economic development contribution has largely been and will continue to be limited to the northern side of the border if the collaborative relationship between stakeholders remain unchanged. As such, there has been a loss of a major economic opportunity, which could have been achieved by including not only the Gold Coast, but also Tweed Shire Council in the economic development planning processes of the GCAPL and the CoGC. The local chamber of commerce representative, who views this loss of opportunity as “a shame,” suggests that including Tweed Shire in economic development planning is the best strategy to fully encapsulate the economic development opportunities associated with Gold Coast Airport by considering the “broader value of a region, including [both] the Gold Coast and Tweed [Shire].”

Therefore, there is a need to instigate a paradigm shift for all economic development planning activities associated with Gold Coast Airport, from a local approach, which is currently in place and primarily encompasses only the Gold Coast – the north side of the border – to a more regional approach, encapsulating both the LGAs across the border. Such a perspective shift should be reflected not only planning frameworks but also stakeholder collaboration. This approach is perceived by several interviewed stakeholders in Tweed Shire as the most optimal economic development strategy which fully capitalises on the economic development contribution opportunities associated with Gold Coast Airport.

In addition to Tweed Shire, there is an opportunity to include Byron Shire, which comprises Byron Bay, an increasingly popular destination amongst both domestic and international tourists, in the economic development planning processes associated with Gold Coast Airport. Although Ballina

Byron Gateway Airport is located considerably closer to Byron Bay than Gold Coast Airport is,¹²² the former only services domestic flights whereas the latter currently functions as both a domestic and international gateway. Byron Bay is mentioned seven times in the 2017 Gold Coast Airport Master Plan, thus illustrating GCAPL's recognition of the airport's role as a gateway to the destination. Moreover, the Pacific Highway, which functions as an important interstate and intrastate transport corridor by linking several LGAs, effectively provides transport connectivity between the Gold Coast, Tweed Shire, Byron Bay and Gold Coast Airport. This economic development planning approach leverages both the proximity between the LGAs and the role of Gold Coast Airport as their major transport node. Moreover, it is more regional in perspective and scale than the highly localised approach in place, which primarily focuses on promoting the airport's economic development contribution to only the Gold Coast.

iv) Establishing a Cross-Border Committee, Led by the Federal Government

The establishment of a Cross-Border Committee, which encompasses the stakeholders relevant to the economic development planning process associated with Gold Coast Airport, can lead to a more collaborative stakeholder relationship for the cross-border airport city region. The Committee's principal goal should be to ensure an open platform where all the stakeholders' needs are communicated, so that they can be integrated into the appropriate economic development planning frameworks related to Gold Coast Airport. The Committee can also hold regular stakeholder meetings to identify and address any planning issues and opportunities for promoting economic development contribution of Gold Coast Airport.

Local destination marketing organisation representative #1 notes that an effective arrangement for a cross-border committee should have "some private entities involved" and that "it could not be just government [agencies]" in the committee. The state border has been a detriment to the financial viability of local businesses located in the cross-border region due to such factors as separate time zones and different state and local government regulations. Involving these businesses in a cross-border committee can help them advocate for a business environment which is more conducive to their needs.

¹²² As at August 2020, the driving distance between Byron Bay and Ballina Byron Gateway Airport is 35.7 kilometres (or 30 minutes) whereas the distance between Byron Bay and Gold Coast Airport is 68 kilometres (or 50 minutes) (Google, 2020b).

The committee should be led by the Federal Government, due to four key reasons. Firstly, although Gold Coast Airport is privatised, the airport and the land it is situated on remain legally under the ownership of the Federal Government. This indicates that the Federal Government “have a vested interest in Gold Coast Airport” according to local destination marketing organisation representative #1. Secondly, given that an effective Cross-Border Committee arrangement could eventually lead to increased economic contribution of Gold Coast Airport, the Australian Government would have an interest in leading the Committee as Australia’s GDP level would be positively influenced by the airport’s additional economic benefits.

Thirdly, as discovered in this research, the state border has, to date, been a major inhibitor of Gold Coast Airport’s economic development contribution. The interviewee above indicates that the state border would not matter to the Australian Government as “they do not care if the money goes into New South Wales or Queensland.” Fourthly, the interviewee notes that a fragmented, antagonistic relationship currently exists between the two state governments of QLD and NSW and between the two local councils of CoGC and Tweed Shire in the realm of economic development. Considering this issue, he suggests that having a representative from one of these agencies lead the cross-border committee could significantly disrupt the working relationship between representatives within the committee. The quote below further illustrates this potential problem:

No one from Tweed [Shire] would want [stakeholders from the Gold Coast] to tell them how to suck eggs and vice versa. You would have trouble getting people on [the Queensland] side of the border to be led by someone that is going to be one-eyed about benefits for New South Wales. – local destination marketing organisation representative #1

The potential issue that can be caused by appointing a stakeholder from one side of the border as a leader of the Cross-Border Committee, implies that the Federal Government is an appropriate leader for the Committee. In this regard, the Federal Government can effectively act as an impartial third party to lead, oversee and operate the Committee. With its authority as the highest-tiered government agency in Australia, the Federal Government can help mitigate the dynamics of power between stakeholders where there is currently a strong sense of distrust and competition, rather than collaboration, across the border.

v) Adopting a More Regional Perspective in Airport Marketing Campaigns

To date, GCAPL has not been actively promoting Tweed Shire in its destination marketing campaigns for Gold Coast Airport. As such, including Tweed Shire in the future airport marketing initiatives is an important component of the endeavour to create a cross-border airport city region. Doing so will potentially help address the issue of the lack of council budget and limited financial and policy support

from the NSW Government for economic development of Tweed Shire centred around Gold Coast Airport. Specifically, considering this resource limitation, the local chamber of commerce representative suggests that Tweed Shire could economically benefit from GCAPL's marketing activities if the organisation included the region as a visitation destination in addition to the Gold Coast. The following quote from the interviewee highlights the importance of Gold Coast Airport-driven marketing for Tweed Shire:

I would like to see more opportunity from a marketing point of view or from when [Gold Coast Airport] goes to new destinations to pitch, "Come to the Gold Coast – look what we have got." It should [instead] be, 'Come to our region [of the Gold Coast and Tweed Shire] – look what we have'. **So that is [a] more regional approach.** – local chamber of commerce representative (emphasis added)

Thus, the addition of Tweed Shire in the airport's marketing campaign is a more regional approach, which is inclusive of both the Gold Coast and Tweed Shire. Gold Coast Airport's current approach in promoting only the Gold Coast could be perceived as a more local approach. Such an approach has been limiting the airport's economic contribution at the regional level as the majority of past economic benefits from the airport have been limited to only one side of the border. Local community representative #1 believes that "there is a kind of shared interest" between Gold Coast Airport and Tweed Shire from having GCAPL promote the LGA to its potential passengers. In this regard, there are mutual benefits to both the airport and Tweed Shire as additional tourists visiting Tweed Shire would not only contribute to the LGA's economy, but also bring additional revenue to the airport.

Considering the robust transport connectivity enabled by the Pacific Highway, there is a major opportunity for Gold Coast Airport's marketing campaign to be even broader in its regional perspective by including not only Tweed Shire as suggested above but also Byron Bay in its destination marketing campaigns in the future. Byron Bay is a population tourism destination for both domestic and international visitors located 48 minutes away from Gold Coast Airport. Although Ballina Byron Gateway Airport is already within a 29-minute driving distance from Byron Bay,¹²³ it currently services domestic passengers only. As such, Gold Coast Airport is the closest international airport to Byron Bay, which is currently the 11th most visited destination in Australia amongst international tourists (.id, 2018a). Byron Bay's popularity to international tourists and proximity to Gold Coast Airport imply a major economic opportunity for the airport to promote the destination in its international marketing campaigns. Doing so can lead to a higher number of international tourists

¹²³ This time figure is based on Google Maps as at 6 June 2020 (Google, 2020b)

that visit Byron Bay through Gold Coast Airport, thus simultaneously bringing benefits to both the airport and the Byron Shire's economy. In addition to Byron Bay, other regional towns in SEQ and FNC with tourist attractions could also be included in the airport marketing campaigns.

vi) Maximising Regional Economic Contribution of Airport Projects through Local Employment

The rapid growth of Gold Coast Airport's passenger volume has led to two key airport redevelopment projects over the past decade. These include the 2010 renovation of the airport terminal into a purpose-built low-cost carrier terminal, and the Project LIFT, which is currently underway as at May 2020 and encompasses a major terminal redevelopment. These high-value projects,¹²⁴ along with future redevelopment initiatives for the airport, represent major economic development opportunities for the Gold Coast-Tweed Shire region given the significant economic contribution they can provide to both LGAs.

For instance, Project LIFT is projected to contribute "\$35 million into the local economy" in terms of contracts through engaging ten local businesses in Queensland as subcontractors for the project (Infrastructure Magazine, 2020). A key economic benefit of the project is 230 full-time employment during the construction phase of the project (GCAPL, 2016). These statistics highlight the significant economic development contributions of Project LIFT, particularly in relation to the employment contribution of the project. As such, there is a major opportunity to maximise economic contribution of Project LIFT and any future airport redevelopment project through ensuring that the majority of jobs created by these projects employ local workforce in the cross-border airport-city region.

To maximise the potential economic benefits of future airport redevelopment initiatives, the majority of contractors and subcontractors employed for these projects should be locally based in the Gold Coast-Tweed Shire region. This area is where a collaborative cross-border relationship between the CoGC and Tweed Shire Council, local chambers of commerce and GCAPL could be established to connect local businesses and workforce with GCAPL for any redevelopment projects it undertakes for Gold Coast Airport in the future. This potential strategy is in line with GCAPL's view that "Gold Coast Airport is a major economic driver on the Gold Coast and Northern New South Wales, and [the airport is] committed to supporting the region as it grows" through employing local businesses and workforce (Infrastructure Magazine, 2020). This perspective was evident in Project LIFT where

¹²⁴ As previously mentioned in Section 4.5.3.5, the two redevelopment projects have a combined value of \$520 million.

Lendlease, the principal contractor of the project, has developed a Local Industry Capability Plan in conjunction with GCAPL to “ensure that wherever possible, the project spend is directed into the local economy” by ensuring that “where possible, local contractors are employed” (Infrastructure Magazine, 2020).

vii) Inclusion of Tweed Shire in Gold Coast Airport Name

Location names have been discovered as an important factor for attracting passengers to an airport. This is evident from the use of location names by the following airports:

- ✈ The inclusion of the Gold Coast in the name of Gold Coast Airport, which was one of the first major changes to the airport shortly after the airport was privatised;
- ✈ The inclusion of Brisbane in the initial name of Toowoomba Wellcamp Airport (then ‘Brisbane West Wellcamp Airport’); and
- ✈ The inclusion of Byron Bay in the name of Ballina Byron Gateway Airport (then ‘Ballina Airport’).

As location names have successfully been used to attract passengers to the airports above, there is a prospect to use location names to influence the intended destination of airport passengers. As a marketing strategy, the ‘Tweed Shire’ name could be incorporated into the name of Gold Coast Airport to promote the Tweed Shire region as a tourist destination to both domestic and international visitors. Doing so, according to urban planner #2, could significantly promote the tourism industry in the Tweed Shire region given the high annual volume of passengers the airport normally receives. Three possible options for the new airport name, which are inclusive of both the Gold Coast and Tweed Shire, are as follows:

- ✈ Gold Coast-Tweed Shire Airport;
- ✈ Gold Coast Tweed Gateway Airport, a name inspired by the neighbouring Ballina Byron Gateway Airport; and
- ✈ Green Cauldron Airport, a name suggested by the chamber of commerce representative, which acknowledges the name of a World-Heritage Listed Landscape spanning the Gold Coast and Tweed Shire.

Including Tweed Shire in the name of Gold Coast Airport can potentially assist in spreading the airport’s economic contribution in the form of passenger volume more evenly across the border. Further, it allows the airport to reflect its cross-border location across the two LGAs of the Gold Coast and Tweed Shire, thus assisting in the development of a cross-border airport city region identity. Incorporation of multiple locations in an airport name has also been implemented for other airports. For example, Dallas/Fort Worth International Airport was strategically established to service both the Dallas and Fort Worth counties.

viii) Application to Other Airports

Table 8.4 below outlines how the six strategies for creating a cross-border city region around Gold Coast Airport can be applied to other airports.

Table 8.4: Application of Cross-Border City Region Strategies to Other Airports

Strategy	Application to Other Airports
Capitalising the existing planning frameworks: PDA or City Deal?	Incorporate the relevant planning frameworks from a higher-tiered government agency, which can promote cross-border stakeholder collaboration and economic development contributions of airports, for the creation of a cross-border city region around the airport
Adopting a more 'regional' perspective for economic development planning processes	Consider the airport's location and the catchment area it services, which could be 'regional' rather than 'local' in scale, and the existing ground transport linkages from the airport and ensure that all economic development planning activities associated with the airport appropriately reflect the regional scale that the airport economically contributes to
Establishing a cross-border committee	Establish a cross-border committee, which comprises representatives of the relevant stakeholders from the public, private and community sectors from both sides of the jurisdictional borders that the airport services
Adopting a more regional perspective in airport marketing campaigns	Ensure that the airport's marketing campaigns includes all the locations that the airport services in its catchment area
Maximising regional economic contribution of airport projects through local employment	Through a collaborative cross-border stakeholder relationship, connect local workforce from the airport's catchment area with redevelopment projects undertaken at the airport
Inclusion of Tweed Shire in Gold Coast Airport name	Incorporate the location names of all the cities or regions that the airport services in its catchment area, into the name of the airport

8.3.2.2 The Need to Engage Stakeholders in the Economic Development Planning Processes

Stakeholder engagement has emerged as a major factor which has significantly influenced Gold Coast Airport's economic development contribution. The following three key lessons on stakeholder engagement in the economic development planning process centred around Gold Coast Airport, which are further discussed below, have emerged from this research:

- ✈ The benefits of ongoing stakeholder engagement for Gold Coast Airport;
- ✈ The need to strengthen interpersonal relationships between stakeholders; and
- ✈ The need to manage community voice in the planning process.

i) The Benefits of Ongoing Stakeholder Engagement for Gold Coast Airport

GCAPL has demonstrated extensive engagement with different local stakeholders on the Gold Coast side of the border as outlined in Table 8.5 below.

Table 8.5: GCAPL's Extensive Engagement with Different Stakeholder Groups on the Gold Coast

Stakeholder Group	GCAPL's Engagement
Local Government (City of Gold Coast)	✈️ Early engagement with the council in the airport masterplanning process to ensure compatibility between the two stakeholders' land use vision
Local Businesses	✈️ Active participation in local chamber of commerce activities, including networking events
Community Members	✈️ Sponsorship of several major events on a regular basis (e.g. the Gold Coast Marathon and Cooly Rocks On)
Destination Gold Coast	✈️ Hosting a visitor information centre operated by Destination Gold Coast, in the airport terminal building ✈️ Collaboration with Destination Gold Coast as an official industry partner

Through ongoing engagement with the stakeholders as outlined in Table 8.5 above, GCAPL has established a positive relationship with the stakeholders on the Gold Coast side of the border, thus leading to their strong, ongoing support for Gold Coast Airport. As discovered previously in the literature review, early engagement with stakeholders in the airport master planning process is noted by Schalk and Ward (2011) as a potential strategy for generating their support for airports and their associated projects and activities. GCAPL's positive stakeholder relationship on the Gold Coast illustrates that extensive, ongoing stakeholder engagement is also another strategy which can be implemented by airport operators to generate local stakeholder support for their airports.

ii) The Need to Strengthen Interpersonal Relationships between Stakeholders

Interpersonal relationships between representatives of stakeholders have emerged as an important factor for influencing the economic development contribution of Gold Coast Airport. This is evident from the following two findings, which are further described below: the evolving relationship between the leaders of GCAPL and SCU and GCAPL's extensive collaboration with Destination Gold Coast.

Firstly, in relation to the evolving relationship between the leaders of GCAPL and SCU, the research discovers a range of planning, development and operational restrictions on the SCU campus due to the statutory influence of the Airports Act. As such, the previous Vice Chancellor perceived the SCU campus primarily as a lessor on the Gold Coast Airport land and being significantly constrained by the restrictions. It can be observed that the location of the SCU campus inside Gold Coast Airport

was seen by the previous Vice Chancellor as a constraint, rather than an opportunity, for the university. Consequently, an ‘antagonistic’ relationship previously existed between senior managers of GCAPL and the Vice Chancellor.

Meanwhile, the new Vice Chancellor, who was appointed in 2016, has an opposite perspective on the campus location. According to key informants interviewed in this research, the Vice Chancellor views the airport and other aviation businesses located on the airport land as major opportunities to establish new tertiary programs that provide SCU with a competitive advantage over other universities. As a result, the Vice Chancellor has developed a close interpersonal relationship with senior managers of GCAP. The close relationship between the stakeholders is a factor which has contributed to the development of a new aviation-related degree, namely the Bachelor of Business and Enterprise (Aviation Management), in which students undertake commercial pilot training programs delivered by pilot training centres located in Gold Coast Airport. This outcome resulting from the evolving relationship between the SCU Vice Chancellor and the GCAPL senior managers illustrates the significance of developing positive relationships between representatives of stakeholders at the interpersonal level. Doing so can promote collaboration between the stakeholders, thus potentially leading to positive economic development outcomes.

Secondly, there has been extensive collaboration between GCAPL and Destination Gold Coast, which is attributable to two factors, namely the link between the organisations provided by Paul Donovan, who held senior management roles at both organisations, and the close interpersonal relationships between employees of the organisations. According to the local chamber of commerce representative, “[Destination Gold Coast] is where [GCAPL employees’] friends are.” The interviewee perceives the ‘human nature’ of friendships between employees from Destination Gold Coast and GCAPL as a major facilitator of extensive collaboration between the two organisations. However, at the same time, according to the interviewee, the lack of similar interpersonal relationships between employees of GCAPL and Destination Tweed, has effectively been a major barrier to formal collaboration between the two organisations.

The two findings outlined above illustrate the importance of strengthening interpersonal relationships between employees of the relevant organisations, for facilitating formal and informal collaboration between stakeholders. Closer interpersonal relationships can lead to increased collaboration between stakeholders in their respective planning processes and initiatives related to Gold Coast Airport, which can lead to enhanced economic development contribution of the airport.

A possible method to facilitate closer interpersonal relationships between stakeholders involves events such as networking functions operated by organisations or industry bodies. The Federal Government can also assist in strengthening stakeholder relationships through enacting strategic or statutory planning frameworks. These frameworks can be used to encourage or stipulate closer and more proactive collaboration and communication between GCAPL and other stakeholders at an early stage in their respective planning processes.

iii) The Need to Manage Community Voice in the Planning Process

Gold Coast Airport has been subject to community oppositions from both the Gold Coast and Tweed Shire sides of the border, to several proposed airport projects including new developments, altered flight paths and the ILS implementation. These oppositions have not only delayed these airport projects, which reduced the total economic development benefits that could otherwise be reaped from the projects, but also caused more resources to be spent by GCAPL and the local councils in managing these community complaints. These resources could otherwise be spent on other initiatives, including those that promote economic development contribution of Gold Coast Airport. Additionally, managing these community complaints has added unnecessary delays to the planning processes for both Gold Coast Airport and its surrounding area.

From the perspective of promoting the economic development contribution of Gold Coast Airport, there is a need to manage community voice in the planning process. Specifically, the following two strategies, which are further elaborated below, can assist in this process: proactively creating a more informed local community and accurately gauging public opinion on proposed airport projects.

Proactively Creating a More Informed Local Community

The issue of community opposition in both the Gold Coast and Tweed Shire could be prevented through creating a more informed local community. This could be achieved through implementing a more proactive, ongoing community engagement platform to equally inform all residents of the airport's proposed development and activities and, more importantly, the justifications behind such proposals.

Some Tweed Shire residents, who are located in Fingal Head directly under the recently implemented flight path of departing aircraft from Gold Coast Airport, have been expressing concerns over the increasing number of flights departing from the airport's southern runway end due to the higher noise level. However, for operational safety, aircraft are legally required by Airservices Australia to take off in the southerly direction due to the natural prevailing wind direction at Gold Coast Airport

(Gilmore, 2012). Proactively informing these residents early of the necessity of the increasing flight paths in such a direction prior to proposing a new flight path in the 2012 Gold Coast Airport Master Plan could have potentially limited the number of complaints about the proposed flight path.

On the Gold Coast side, the community opposition towards the proposed ILS could have been mitigated if the aircraft safety and economic development benefits of the system had been clearly communicated to the public prior to and during the community consultation phase of the MDP associated with the ILS. According to urban planner #5, community opposition to any major proposal related or unrelated to any airport, which has implications for or impacts on local communities, “is just inevitable.” However, the urban planner suggests that “engaging with [local residents] early in the [planning] process” could help to create a more informed community, thus reducing the extent of community opposition to an airport-related project or development.

As indicated throughout the interviews conducted in this research, several of the past community oppositions have been fuelled by the public misconception that aircraft still generate a significant amount of noise, which is no longer the case due to advancement in aviation technologies. As such, in addition to proactively creating a more informed community as suggested above, greater public awareness of the progressively lower noise level from aircraft should also be created on both the Gold Coast and Tweed Shire sides of the border. Doing so can potentially reduce community complaints associated with aircraft activities at Gold Coast Airport, thus ensuring that any airport-related development proposals are not significantly delayed by community voice.

Accurately Gauging Public Opinion on Proposed Airport Projects

The community opposition campaigns, illustrated in Chapter 7, are clear examples of when the voice of the ‘vocal minority’ overshadows the voice of the ‘silent majority’. In this regard, the voice of some community members, which is not accurately representative of the overall public opinion, has been continuously amplified by the residents’ efforts. To address this issue, the voice of the vocal minority should be prevented from overshadowing the sentiment of the general public. To do so, there is a need for the two local councils to employ community engagement tools which accurately and efficiently gauge the community’s overall opinions whenever community complaints arise in response to a development proposal related to Gold Coast Airport.

Doing so could ensure that the complaint is reflective of the public opinion, and not just the ‘vocal minority’. In this regard, the advancement in information and communication technologies in recent years (Bajracharya et al., 2014; Bajracharya et al., 2013), implies that smartphone apps and online

platforms such as the CoGC’s ‘GC have your say’ website, which allows local community members to provide feedback on council’s projects, ideas and priorities, can be used to assess the overall public sentiment in terms of how closely it aligns with the community complaints initially received. If the public sentiment is found to closely align with the complaints, the councils can then manage and address these complaints further according to their nature. Conversely, if the complaints are found to be reflective of just the ‘vocal minority’ and not the general public, then the councils could specifically communicate with the residents who submitted the complaints, thus minimising the level of resources spent on managing these complaints. This recommendation is also applicable to all other types of community complaints unrelated to Gold Coast Airport that the councils have to manage.

iv) Application to Other Airports

Table 8.6 below outlines how the five stakeholder engagement lessons from Gold Coast Airport can be applied to other airports.

Table 8.6: Application of Stakeholder Engagement Lessons from Gold Coast Airport to Other Airports

Lesson	Application to Other Airports
The benefits of ongoing stakeholder engagement for Gold Coast Airport	Other airports should establish ongoing engagement with all relevant local stakeholders across the public, private and community sectors. Doing so can assist the airports in generating strong stakeholder support for their operation and future development projects.
The need to establish interpersonal relationships between stakeholders	Through events or planning frameworks, close interpersonal relationships between the relevant stakeholders across different sectors should be established. Closer interpersonal relationships between stakeholders can foster ongoing collaboration between the stakeholders in the economic development planning process centred around an airport.
The need to manage community voice in the planning process	By proactively creating a more informed local community through an effective communication platform, other airports can potentially benefit from less community opposition to their operation and proposed development projects. Meanwhile, accurately gauging public opinion on proposed airport projects can help ensure that the voice of the ‘vocal minority’ group of community members does not overshadow the voice of those in the ‘silent majority’ group.

8.3.2.3 The Need to Implement the Strategic Intention Outlined in Planning Frameworks

The research has uncovered that there has been limited implementation of strategic intentions outlined in the NSW Government’s North Coast Regional Plan 2036. In the planning framework, the NSW Government not only extensively recognises the economic development role of Gold Coast Airport for both the FNC sub-region and the broader North Coast region, but also outlines two specific actions aimed at promoting the airport’s economic development contribution. However, in reality, the state government has demonstrated limited policy and financial support for economic development initiatives related to Gold Coast Airport due to two key reasons.

Firstly, the existence of the state border has restricted state government expenditure in both states from crossing over into the other state. As such, the expenditure of each state government is limited to projects located within the state of its jurisdiction. The local chamber of commerce representative notes that this has effectively created an environment in which “opportunities where there [are] crossover [benefits for both states] sometimes does not get the [funding support]” from the state government of the other state. This state funding approach also applies to Gold Coast Airport, which is currently perceived by the NSW Government as a QLD asset although the majority of the airport land is located in the NSW state. A major reason behind such a perception could be the name of Gold Coast Airport, which is currently only reflective of the Gold Coast, a LGA of the QLD state. As such, changing the airport name into one that is more inclusive of Tweed Shire may assist in garnering financial support from the NSW Government in the future.

Secondly, the NSW Government, in its economic development approach, is focused primarily on Sydney, the capital city of the state of NSW. As such, the majority of state policy and funding support for economic development has been allocated to Sydney, thus leaving limited aid to Tweed Shire and other regional LGAs outside the Sydney metropolitan area. Consequently, economic development initiatives and opportunities associated with Gold Coast Airport, located in Tweed Shire, have received limited financial assistance as the LGA is low on the priority of the state government’s economic development planning. However, this implies a major economic loss for the state as Gold Coast Airport is not only the second busiest airport in NSW, but also the only international airport located between Sydney and Brisbane, thus illustrating its significance to the state as a domestic and international gateway.

This finding indicates that strategic directions and recognitions outlined in planning frameworks do not necessarily translate to financial or policy support in reality. For the purpose of promoting economic development contribution from Gold Coast Airport, there is a need to ensure that strategic intentions outlined in planning frameworks are implemented. One mechanism which could facilitate this process is a Federal legislation stipulating that all strategic directions outlined in local and state planning frameworks be implemented and funded appropriately. This lesson is also highly applicable to other airports as strategic directions outlined in the relevant planning frameworks with potential influence on the airports’ economic development contribution may lack implementation and funding support from their relevant government agencies or stakeholders.

8.3.2.4 The Synergy between an Airport and a University Campus

Gold Coast Airport, as the only airport in Australia to encompass a university campus onsite (QAL, 2018), is a useful example that other airports in Australia and around the world can learn from in relation to the co-location of an airport and a university campus. The research has discovered strong synergy between the airport and the SCU campus, which has resulted in three key benefits for the university. Firstly, the university has been able to attract FIFO students due to the aviation access provided by the airport and the availability of serviced apartments in proximity. This benefit is one of the contributing factors to the university's rapid growth in student numbers in recent years. Secondly, the university has an opportunity to establish airport management courses specifically aimed at overseas students from China given the country's increasing number of airports and the flight connection to China that Gold Coast Airport provides. Thirdly, staff and students at the SCU campus have psychologically benefited from the 'exciting' atmosphere that the airport's location and activities provide, which leads to higher productivity for them. These three benefits created by the synergy between Gold Coast Airport and the SCU campus imply that locating a university campus in an airport can significantly benefit the university through the aviation access and the atmosphere provided by the airport.

Nevertheless, the traffic congestion issue that the SCU campus has experienced due to the limited road infrastructure inside Gold Coast Airport implies that careful planning of transport infrastructure for the airport is necessary as university campuses typically generate a significant amount of vehicular traffic. SCU has also been negatively affected by the statutory influence of the Airports Act, which imposes a range of operational, planning and development restrictions on the university campus. As such, future on-airport university campuses should be located in an airport without the influence of the Airports Act, i.e. a non-privatised airport in Australia or an airport outside Australia. Alternatively, the Airports Act could make special provisions to ensure minimal restrictions on the operation and planning of university campuses located inside a privatised Australian airport.

To maximise the potential synergy between an airport and a university campus, other airports seeking to establish a university campus on their land should ensure that the following outcomes are achieved:

- ✈ Provision of student housing in proximity to the university campus on the airport land or outside the airport;
- ✈ Maximising the visibility of the airport operation to the university campus (e.g. through locating the campus in proximity to an airport runway end, thus allowing university occupants to view aircraft during their takeoffs or landings);
- ✈ Provision of sufficient road infrastructure throughout the airport to accommodate traffic generated by both the airport and the university campus; and

- ✈ Ensuring minimal statutory restrictions on the university's operations, planning and development.

8.3.2.5 Other Lessons

i) The Importance of Direct Rail Connection to Airports

Given that the majority of Gold Coast Airport's passengers travel to the northern parts of the Gold Coast, the airport's lack of rail connectivity has been identified as a major restriction for the airport. Due to the lack of direct rail connection at the airport, Gold Coast Airport has lost some of its potential passengers to Brisbane Airport. In this regard, passengers, whose intended destination is the Gold Coast, have an option to travel to either Gold Coast Airport or Brisbane Airport. Gold Coast Airport's location on the southern end of the LGA, in conjunction with the lack of a rail connection at the airport, implies that it takes approximately one hour by public transport for the passengers to reach Surfers Paradise, a popular tourist destination on the Gold Coast, from the airport. On the other hand, the same passengers can reach Surfers Paradise within approximately two hours from Brisbane Airport due to the availability of rail connection at the airport. Thus, the absence of a direct rail connection at Gold Coast Airport has resulted in an insignificant travelling time difference of one hour between Gold Coast Airport and Brisbane Airport. This trend illustrates the importance of having a direct rail connection at airports for attracting more passengers, thus enhancing their local economic development. Moreover, this finding is consistent with the study conducted by APTA (2013), which highlights the importance of a direct rail connection at an airport for facilitating tourism. Therefore, for the purpose of promoting economic development contributions of airports, creating a direct rail connection to these airports should be prioritised in the planning process.

ii) An Alternative, Conflict-Free Source of Airport Revenue

Commercial development on Gold Coast Airport is not a key focus of GCAPL (2017c, p. 141), which states that "opportunities for commercial development [at Gold Coast Airport] are limited compared with many other airports." GCAPL also states its intent to limit potential conflict between commercial activities within the airport and other facilities in proximity to the airport, which has been a major issue for many privatised airports in Australia (Baker & Freestone, 2008). It can be observed that in its pursuit of profitability, which is a common commercial objective of privatised airport operators (Stevens et al., 2010), GCAPL has chosen not to maximise its revenue from non-aviation uses, a strategy which can result in conflicts with other stakeholders. Instead, the organisation has focused on increasing its volume of passengers through both servicing international flights and developing the airport into a LCC hub, a successful effort which has now positioned the airport as the sixth busiest

airport in Australia. This outcome provides a useful lesson for other operators of privatised airports both in Australia and around the world, that profit maximisation can still be achieved, with no stakeholder conflicts, through concentrating primarily on aviation uses.

8.3.3 A CONCEPTUAL CLASSIFICATION FOR AUSTRALIAN AIRPORTS

The third major contribution of this research is the development of a conceptual classification for Australian airports, for which no comprehensive, official categories currently exist. The classification, conceptualised through a synthesis of the criteria employed for airport classification in the United States and the United Kingdom as well as the unofficial categories currently in place for Australian airport, is illustrated in Figure 8.5 below.

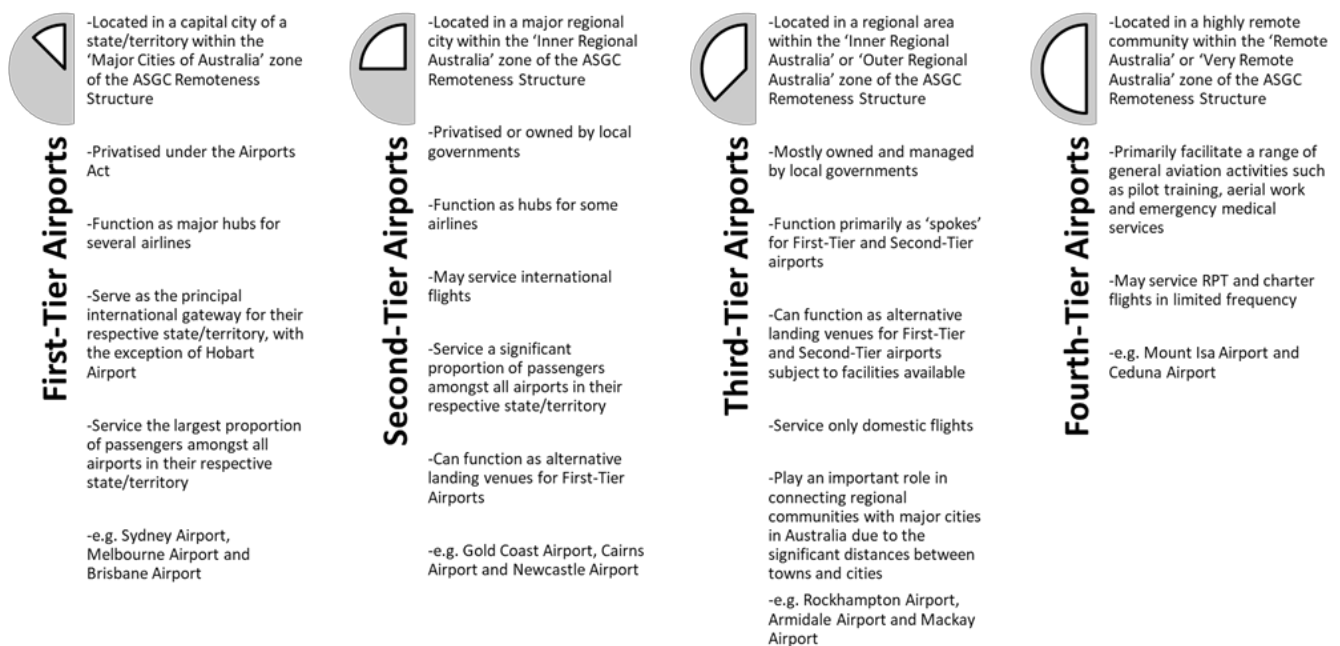


Figure 8.5: Conceptual Classification of Airports in Australia (Source: Author (2021))

In Chapter 4, the Australian airport classification outlined in Figure 8.5 above has been conceptualised and applied to categorise Gold Coast Airport in order to develop a better understanding of the airport's role, function, nature and characteristics. It is then discovered that Gold Coast Airport is a Second-Tier Airport and as such, the lessons drawn from this research are applicable to other Second-Tier Airports both in Australia and around the world. These lessons are useful contributions of this research given that the majority of past academic publications related to airports have primarily focused on First-Tier Airports. Nevertheless, many of the lessons provided in this research are also applicable to other types of airports.

Having highlighted the three key contributions of this research, the final section of this chapter outlines areas for further research on planning for local and regional economic development around an airport.

8.4 AREAS FOR FURTHER RESEARCH

There are three potential areas for further research on planning for local and regional economic development around an airport. Firstly, prior to the completion of this research, the global COVID-19 pandemic occurred and has severely affected the operation of all airports around the world. The epidemic has resulted in significantly restricted air travel both domestically and internationally. It is estimated that for the full year of 2020, the pandemic will result in a reduction of approximately half of the passenger seats offered by airlines, equating to nearly three billion passengers (ICAO, 2020). Therefore, the pandemic has substantially impeded the economic development contribution of airports around the world. In light of this trend, one important area for further research in relation to economic development around airports could investigate alternative planning strategies to ensure airports can contribute economically to their host region even with limited aircraft traffic. The development of such strategies will have practical relevance for assuring that airports can still function as an important economic development driver for their respective host region in the event of COVID-19 or any pandemics restricting air transport in the future.

Secondly, due to the time and resource limitations, this research has investigated a single case study of Gold Coast Airport. Therefore, future research on economic development planning around an airport could focus on comparative case studies by investigating several airports, particularly those that are under a different category from Gold Coast Airport, i.e. First-Tier, Third-Tier or Fourth-Tier. Planning for local and regional economic development around airports under different categories may be influenced by other factors that have not been discovered in this research, which has specifically examined a Second-Tier Airport.

Lastly, given the high level of land use synergy between the SCU campus and Gold Coast Airport discovered in this research, future studies could explore this synergy further and develop a conceptual framework to guide the development of university campuses in airport land both in Australia and around the world. Additionally, future research could investigate the contribution of university campuses located within an airport, to the knowledge economy of the airport's host region.

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APPENDICES

APPENDIX 1: DATA SOURCES FOR THE EMPLOYED RESEARCH METHODS

Table A.1 outlines the different data sources for the five research methods employed in this research. Each method in the table is colour-coded according to the colours applied to the different methods in Figure 3.2.

Table A.1: Data Sources for Research Methods

Method	Data Source(s)
1) What is the existing nature and economic role of Gold Coast Airport?	
Spatial Analysis	<ul style="list-style-type: none"> ➔ Aerial maps acquired from the following sources: <ul style="list-style-type: none"> ○ Satellite imagery from Google Earth (Google, 2020a) ○ Land use maps of Gold Coast Airport and its immediate surroundings, taken from the Gold Coast Airport 2017 Master Plan document ○ Land use map of Gold Coast Airport’s vicinity from the Gold Coast City Plan, the CoGC’s planning scheme ○ Land use maps of Gold Coast Airport’s vicinity from the following planning instruments of Tweed Shire Council: <ul style="list-style-type: none"> ○ Tweed Local Environmental Plan 2000 ○ Tweed City Centre Local Environmental Plan 2012 ○ Tweed Local Environmental Plan 2014 ➔ Site visits to Gold Coast Airport and its surrounding area ➔ Photos of Gold Coast Airport and its surrounding area, taken by the author
Field Observation	<ul style="list-style-type: none"> ➔ Site visits to Gold Coast Airport and its surrounding area ➔ Photos of Gold Coast Airport and its surrounding area, taken by the author
Semi-Structured Interviews	16 key informants from both the public and private sectors
Policy Analysis	<ul style="list-style-type: none"> ➔ The following regional plan documents: <ul style="list-style-type: none"> ○ ShapingSEQ: South East Queensland Regional Plan 2017 ○ North Coast Regional Plan 2036 ➔ The following economic development plan documents: <ul style="list-style-type: none"> ○ Gold Coast Economic Development Strategy 2013–2023 (Version 2.0 October 2013) ○ Tweed Shire Economic Development Strategy ➔ Gold Coast Airport 2017 Master Plan

Appendices

Method	Data Source(s)
Literature Review	Various academic literature sources, including the following where applicable: <ul style="list-style-type: none"> ➤ Journal articles ➤ Conference proceedings ➤ Books and book chapters ➤ Industry and government publications
2) How do existing planning frameworks affect Gold Coast Airport’s contribution to economic development?	
Semi-Structured Interviews	16 key informants from both the public and private sectors
Policy Analysis	The following regional plan documents: <ul style="list-style-type: none"> ➤ ShapingSEQ: South East Queensland Regional Plan 2017 ➤ North Coast Regional Plan 2036 ➤ The following economic development plan documents: <ul style="list-style-type: none"> ○ Gold Coast Economic Development Strategy 2013–2023 (Version 2.0 October 2013) ○ Gold Coast Economic Development International Plan (Version 2.0 June 2015) ➤ Tweed Shire Economic Development Strategy ➤ The following land use planning frameworks: <ul style="list-style-type: none"> ○ Gold Coast City Plan ○ Tweed Local Environmental Plan 2000 ○ Tweed City Centre Local Environmental Plan 2012 ○ Tweed Local Environmental Plan 2014 ➤ The following strategic plan documents for Gold Coast Airport: <ul style="list-style-type: none"> ○ Gold Coast Airport 2017 Master Plan ○ Gold Coast Airport 2017 Master Plan: Summary Supplementary Report
Literature Review	Various academic literature sources, including the following where applicable: <ul style="list-style-type: none"> ➤ Journal articles ➤ Conference proceedings ➤ Books and book chapters ➤ Industry and government publications
3) How do land use, transport and industry sectors shape Gold Coast Airport’s contribution to economic development?	

Appendices

Method	Data Source(s)
Spatial Analysis	<p>Aerial maps acquired from the following sources:</p> <ul style="list-style-type: none"> ➤ Satellite imagery from Google Earth (Google, 2020a) ➤ Land use maps of Gold Coast Airport and its immediate surroundings, taken from the Gold Coast Airport 2017 Master Plan document ➤ Land use map of Gold Coast Airport’s vicinity from the City Plan, the planning scheme implemented by the CoGC ➤ Land use maps of Gold Coast Airport’s vicinity from the following planning instruments of Tweed Shire Council: <ul style="list-style-type: none"> ○ Tweed Local Environmental Plan 2000 ○ Tweed City Centre Local Environmental Plan 2012 ○ Tweed Local Environmental Plan 2014 ➤ Site visits to Gold Coast Airport and its surrounding area ➤ Photos of Gold Coast Airport and its surrounding area, taken by the author
Field Observation	<ul style="list-style-type: none"> ➤ Site visits to Gold Coast Airport and its surrounding area ➤ Photos of Gold Coast Airport and its surrounding area, taken by the author
Semi-Structured Interviews	<p>16 key informants from both the public and private sectors</p>
Policy Analysis	<ul style="list-style-type: none"> ➤ The following land use planning frameworks: <ul style="list-style-type: none"> ○ Gold Coast City Plan ○ Tweed Local Environmental Plan 2000 ○ Tweed City Centre Local Environmental Plan 2012 ○ Tweed Local Environmental Plan 2014 ➤ Gold Coast City Transport Strategy 2031 ➤ The following economic development plan documents: <ul style="list-style-type: none"> ○ Gold Coast Economic Development Strategy 2013–2023 (Version 2.0 October 2013) ○ Gold Coast Economic Development International Plan (Version 2.0 June 2015) ➤ Tweed Shire Economic Development Strategy
Literature Review	<p>Various academic literature sources, including the following where applicable:</p> <ul style="list-style-type: none"> ➤ Journal articles ➤ Conference proceedings ➤ Books and book chapters ➤ Industry and government publications

Appendices

Method	Data Source(s)
4) How do stakeholder relationships influence Gold Coast Airport's contribution to economic development?	
Semi-Structured Interviews	16 key informants from both the public and private sectors
Policy Analysis	The following strategic plan documents for Gold Coast Airport: → Gold Coast Airport 2017 Master Plan → Gold Coast Airport 2017 Master Plan: Summary Supplementary Report
Literature Review	Various academic literature sources, including the following where applicable: → Journal articles → Conference proceedings → Books and book chapters → Industry and government publications

APPENDIX 2: EXPLANATORY STATEMENT LETTER

Dear *Participant's Name*,¹²⁵

I am conducting a Doctor of Philosophy research on the role of Gold Coast Airport in local and regional economic development for the Gold Coast and Tweed Shire regions.

Given that you are professionally involved in *a process relevant to the research scope*, I would like to invite you to participate in a one-on-one interview, which will take approximately one hour of your time. Your responses will be highly invaluable in providing me with insights on the airport's present and future economic contributions and how various stakeholders could collaborate more effectively in the process of planning for local economic development.

Participation in this study is completely voluntary, and you may withdraw at any time without risking any negative consequences. If you choose to withdraw your participation in this study, the information you have provided will be immediately destroyed. All the data collected in this study will be treated with complete confidentiality and not made accessible to any person outside of the group of researchers involved in this project. The information we obtain from you will be dealt with in a manner that ensures you remain anonymous. Data will be stored in a secured location at Bond University for a period of five years in accordance with the guidelines set out by the Bond University Human Research Ethics Committee. The data will be subsequently disposed of securely.

Should you have any complaint concerning the manner in which this research is being conducted, please contact Bond University's Research Ethics Committee using the following details:

Bond University Office of Research Services.
Bond University, Gold Coast, 4229
T: +61 7 5595 5039
E: buhrec@bond.edu.au

I would like to thank you in advance for taking the time to assist me in this research.

Yours Sincerely,

Isara Khanjanasthiti
PhD Candidate
Bond University

¹²⁵ The letter has been de-identified to protect the confidentiality of the participants. The explanatory statements sent to the potential participants specifically identify the participants by their *name* and *professional role*.

APPENDIX 3: INTERVIEW PARTICIPANT CONSENT FORM

Dear Research Participant,

This letter is a Participant Consent Form which I would like you to sign to show your consent to participate in this research project as an interview respondent.

Could you please sign the form below that acknowledges that:

- You have read the explanatory statement;
- You understand the nature of the study being conducted and the risks and likely benefits of participation in this study; and
- You give permission for the research to be conducted using your interview responses.

I, _____(name), _____(position) of _____(organisation), are fully informed as to the nature of the research to be conducted in the PhD research titled “*Planning for Economic Development around a Second-Tier Airport: A Case Study of Gold Coast Airport.*” I agree to participating in this research. I reserve the right to withdraw this permission at any time.

I agree to the following form of interview record (please tick):

Electronic recorder

Written transcript

Signature: _____ Date: _____

Yours Sincerely,

Isara Khanjanasthiti
PhD Candidate
Bond University

APPENDIX 4: PLANNING DOCUMENTS REVIEWED IN POLICY ANALYSIS

Table A.2 below outlines the strategic and statutory planning documents reviewed in the policy analysis conducted in this research. The table highlights the analysis purpose for each document and the research question(s) that the analytical findings contribute to.

Table A.2: Strategic and Statutory Planning Documents Included in Policy Analysis

Policy Document	Policy Document Description	Policy Analysis Purpose	Research Question(s)
Gold Coast Airport Pty Ltd			
Gold Coast Airport 2017 Master Plan	The airport master plan, as a strategic planning document, outlines how the airport is going to develop from 2017 to 2037. The master plan for the Gold Coast Airport is updated every five years as per the requirements from the Federal Government under the Airports Act. The 2017 edition of the master plan is the current version.	The research analyses GCAPL’s land use and development intent outlined in the airport master plan. Economic contribution of the airport is identified from the master plan document. The airport’s recognition of, and collaboration with, its surrounding region’s local councils is also investigated.	1, 2 and 3
Destination Gold Coast			
Gold Coast Destination Tourism Management Plan 2014-2020	The official tourism management plan for the Gold Coast is jointly prepared by the QLD Government, Destination Gold Coast and the CoGC. This strategic document outlines key visions, strategy areas, actions and key performance indicators for promoting Gold Coast as a tourism destination.	Based on the document’s outlined strategies, the research identifies the airport’s tourism contribution to the Gold Coast. The research examines the extent to which Gold Coast Airport has been incorporated into the Gold Coast’s tourism management plan. Doing so reveals whether the strategic planning framework for the Gold Coast is currently enabling or impeding Gold Coast Airport’s potential ability to contribute to the city’s tourism industry.	2 and 3
City of Gold Coast			
City Plan	The City Plan, as the planning scheme for the Gold Coast, outlines the CoGC’s strategic intent and land use policies in place across the city.	The research reviews the City Plan’s land use around Gold Coast Airport to examine the local land use context of the airport on the Gold Coast side. Additionally, planning issues and opportunities for promoting economic development through Gold Coast Airport are identified based on the existing local context and land use regulations.	1 and 3

Appendices

Policy Document	Policy Document Description	Policy Analysis Purpose	Research Question(s)
Economic Development Strategy 2013–2023	The CoGC’s Economic Development Strategy outlines the council’s strategic vision and outcomes for economic development and activities on the Gold Coast.	The research examines how the CoGC has incorporated Gold Coast Airport into its economic development initiatives. It analyses the extent to which the CoGC has embedded cross-border planning principles into its economic development approach by examining the inclusion of Tweed Shire in this document.	2 and 3
Queensland Government			
Queensland Economic Development Act 2012	Adopted in 2012 and revised in 2017, Economic Development Act 2012 outlines the QLD Government’s legislation pertaining to economic development in Queensland.	The research examines the extent to which airports are embedded in the legislation, which has implications for economic contribution of airports in QLD.	3
State Planning Policy	Queensland Government’s single State Planning Policy is a guideline for local councils when amending local planning instruments. As part of the broader state planning reforms, the document superseded multiple state planning policies in December 2013. “Strategic airports and aviation facilities” are part of the state interests articulated in this policy under the infrastructure theme.	The research identifies how the QLD Government views airports as economic assets for the state. It analyses how the state government guides local councils in maximising economic contribution from airports.	3
ShapingSEQ: South East Queensland Regional Plan 2017	ShapingSEQ is the official regional plan in place for the South East Queensland region where the Gold Coast and part of Gold Coast Airport are located. It establishes strategic planning directions for the region and has a direct influence on local council planning schemes, including the CoGC’s City Plan.	The research reviews the state government’s recognition of Gold Coast Airport and its economic significance in the regional plan. Additionally, it analyses how the airport’s economic contribution is promoted through planning strategies outlined in the document.	1 and 3
The Tweed Tourism Company			
Destination Management Plan 2018-2030	The document, as the official strategic plan for promoting Tweed Shire as a destination for local and external visitors, is prepared by the Tweed Tourism Company, an external agency recently contracted by Tweed Shire Council to promote the tourism industry of Tweed Shire.	The research explores how the airport has contributed to the tourism industry of Tweed Shire from the context analysis and statistics outlined in this document. Additionally, it reviews how the strategic plan has leveraged Gold Coast Airport into promoting Tweed Shire as a tourism destination. This effectively identifies whether the strategic plan provides a planning framework which is conducive to economic development for Tweed Shire through Gold Coast Airport.	2 and 3

Appendices

Policy Document	Policy Document Description	Policy Analysis Purpose	Research Question(s)
Tweed Shire Council			
Local Environmental Plans (LEPs)	Land use in Tweed Shire is governed by three different LEPS, including the Tweed City Centre LEP 2012, the Tweed LEP 2014 and the Tweed LEP 2000. All three LEPS, which function in a similar manner to the CoGC's City Plan as a planning scheme, apply to Gold Coast Airport's surroundings on the Tweed Shire side of the border.	By reviewing the three LEPS, the research explores current local context and land use characteristics and regulations around Gold Coast Airport on the Tweed Shire side. Land use planning issues and opportunities for economic development through Gold Coast Airport are also identified based on the local context and land uses.	1 and 3
Tweed Shire Economic Development Strategy	Tweed Shire Council adopted an Economic Development Strategy in April 2014. The document identifies key actions for promoting economic development in Tweed Shire.	The research reviews the degree to which Tweed Shire Council capitalises on Gold Coast Airport in its economic development strategy. The research also examines cross-border planning considerations in the economic development strategy by analysing the extent to which the Gold Coast is considered in this document.	2 and 3
New South Wales Government			
Economic Development Strategy for Regional NSW	In January 2015, the NSW Government adopted a new Economic Development Strategy for Regional NSW, which applies specifically to regional NSW, including the Far North Coast region that Gold Coast Airport is partly located in. The policy outlines five key goals for promoting	The research analyses the NSW Government's recognition of airports as economic assets for the regional parts of the state. It also reviews how the NSW Government promotes economic development through airports in regional communities.	3
North Coast Regional Plan 2036	This regional plan outlines the NSW Government's planning strategies for the NSW North Coast region. Tweed Shire and part of Gold Coast Airport are located in the FNC region, which is part of the broader NSW North Coast region.	The research identifies the extent to which the NSW Government includes Gold Coast Airport in the regional planning framework and strategy for the FNC region. Moreover, how the state government promotes economic contribution of the airport through the regional plan is examined in detail.	1 and 3
Australian Government			
Airports Act 1996	The Airports Act, as a Federal legislation governing all privatised airports in Australia, stipulates a requirement for GCAPL to prepare a master plan for Gold Coast Airport every five years and a major development plan for any construction project costing more than \$20 million.	The research identifies whether the legislation fosters or impedes economic contribution of privatised airports in Australia. To do so, it analyses the legislation's key requirements for airport master plans and major development plans.	3

APPENDIX 5: EVOLUTION OF AIRLINE NETWORKS DUE TO AIRLINE DEREGULATION

Prior to the airline deregulation, airline networks were primarily controlled and regulated by government authorities. As a result, most airports were connected by direct flights. An arrangement where two airports are connected by a direct flight is referred to as a 'point-to-point' operation. Prior to the airline deregulation, airline services operated on a direct point-to-point service from one airport to another. Figure 4.43 shows the typical networks of two airlines, with represented by the different line colours, prior to airline deregulation. In this figure, the two airlines service several cities primarily via direct flights. However, in this instance, several direct flights, particularly those servicing smaller cities with less passenger traffic, may not be as profitable as flights between major destinations. To keep flights on the less profitable routes operational, airlines were forced to reduce flight frequency on these routes, increase airfares for passengers and/or rely on government subsidy (Rodrigue, 2016).

Although several cities were serviced with direct flights prior to the airline deregulation, some cities were only accessible to other cities via connecting flights at other cities. Therefore, in this arrangement, several cities evidently already functioned as hubs for connecting flights prior to airline deregulation. In Figure 4.43, City A and City B are examples of hubs where several flights were connected together. However, transferring between flights at either city was likely to be inconvenient for passengers with long waiting periods due to the fact that flights on less profitable routes were infrequent and/or expensive (Rodrigue, 2016).

Following the airline deregulation and the consequent formation of global airline alliances, airlines began to consolidate their flights into 'hub-and-spoke' networks (Jantachalobon & Vanichkobchinda, 2013). In these networks, airlines concentrate their flights into major 'hubs'. These hubs, shown as City A and City B in Figure 4.43, are connected to several cities or 'spokes'. For passengers traveling from one spoke to another, they would need to transfer their flight at a hub.

Hub-and-spoke operations lead to three key benefits for airlines. Firstly, as airlines no longer need to service unfeasible routes with direct flights, operational costs are significantly reduced. Secondly, there are likely to be higher plane loads per flight, resulting in increased profitability for airlines. Thirdly, airlines can achieve dominance over a regional market of a hub and its associated network of spokes as shown in Figure 4.43. In this example, City A and its spokes network is dominated by one airline whereas another airline dominates City B and its spokes network. In hub-and-spoke operations, competition between airlines is likely to occur only at routes between major hubs and routes to specific spokes with sufficient passenger demand. As an airline assumes dominance over a

hub and its spokes network, it may reach oligopolistic or monopoly control of the market, and may eventually increase airfares for specific flight segments (Rodrigue, 2016).

Passengers can also benefit from hub-and-spoke operations. There is likely to be better connectivity from one city to another. However, the concentration of flight traffic at hubs can lead to a decrease in flight services at airports that service cities designated as spokes. The interconnected nature of flights in the hub-and-spoke network implies that a minor flight delay on one end can lead to a domino effect in delays. In such a circumstance, a connecting flight at a hub airport, which carries passengers from various spokes, could be delayed as it waits for passengers to arrive from a particular spoke (Graham et al., 2008).

Table A.3 below summarises the key advantages and disadvantages of point-point operations and hub-and-spoke operations of airlines.

Table A.3: Advantages and Disadvantages of Point-to-Point and Hub-and-Spoke Operations

Advantages	Disadvantages
Point-to-Point Operations	
<ul style="list-style-type: none"> ✈ Direct connections between several airports (and the cities they operate in) are available to passengers 	<ul style="list-style-type: none"> ✈ Airfares for less profitable routes may be high ✈ The frequency of flights on less profitable routes may be low ✈ Long waiting periods may exist for transfer flights due to their infrequency
Hub-and-Spoke Operations	
<ul style="list-style-type: none"> ✈ The consolidation of routes may lead to higher profitability to airlines ✈ Higher profitability may lead to increased flight frequency and/or lower airfares for passengers ✈ Higher connectivity between cities could be promoted 	<ul style="list-style-type: none"> ✈ Hub airports and their regional network of spokes could be dominated by one airline, which could lead to increased airfares in a long term ✈ The concentration of flights into and out of hub airports could limit services at smaller airports ✈ A delayed flight could trigger a domino effect of delays for its connecting flights