

A PUBLIC ASSET MANAGEMENT FRAMEWORK FOR INDONESIAN LOCAL GOVERNMENTS

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Abstract

The decentralisation reform in Indonesia has mandated the Central Government to transfer some functions and responsibilities to local governments including the transfer of human resources, assets and budgets. Local governments became giant asset holders almost overnight and most were ill prepared to handle these transformations. Assets were transferred without analysing local government need, ability or capability to manage the assets and no local government was provided with an asset management framework. Therefore, the aim of this research is to develop a Public Asset Management Framework for provincial governments in Indonesia, especially for infrastructure and real property assets. This framework will enable provincial governments to develop integrated asset management procedures throughout asset's lifecycle. Achieving the research aim means answering the following three research questions;

- 1) How do provincial governments in Indonesia currently manage their public assets?
- 2) What factors influence the provincial governments in managing these public assets?
- 3) How is a Public Asset Management Framework developed that is specific for the Indonesian provincial governments' situation?

This research applied case studies approach after a literature review; document retrieval, interviews and observations were collated. Data was collected in June 2009 (preliminary data collection) and January to July 2010 in the major eastern Indonesian provinces. Once the public asset management framework was developed, a focus group was used to verify the framework.

Results are threefold and indicate that Indonesian provincial governments need to improve the effectiveness and efficiency of current practice of public asset management in order to improve public service quality. The second result shows that the 5 major concerns that influence the local government public asset management processes are asset identification and inventory systems, public asset holding, asset guidance and legal arrangements, asset management efficiency and effectiveness, and, human resources and their organisational arrangements.

The framework was then applied to assets already transferred to local governments and so included a system of asset identification and a needs analysis to classify the importance of these assets to local governments, their functions and responsibilities in delivering public services. Assets that support local government functions and responsibilities will then be managed using suitable asset lifecycle processes. Those categorised as surplus assets should be disposed. Additionally functions and responsibilities that do not need an asset solution should be performed directly by local governments. These processes must be measured using performance measurement indicators. All these stages should be guided and regulated with sufficient laws and regulations. Constant improvements to the quality and quantity of human resources hold an important role in successful public asset management processes.

This research focuses on developing countries, and contributes toward the knowledge of a Public Asset Management Framework at local government level, particularly Indonesia.

The framework provides local governments a foundation to improve their effectiveness and efficiency in managing public assets, which could lead to improved public service quality. This framework will ensure that the best decisions are made throughout asset decision ownership and provide a better asset life cycle process, leading to selection of the most appropriate asset, improve its acquisition and delivery process, optimise asset performance, and provide an appropriate disposal program.

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List of Abbreviations

ANAO	:	Australian National Audit Office
APBD	:	<i>Anggaran Pendapatan dan Belanja Daerah</i> (Local Governments Budgeting Statements)
BSI	:	British Standards Institution
CAQDAS	:	Computerised Assisted Qualitative Data Analysis Software
CEE	:	Central and Eastern Europe
DAS	:	Department of Administrative Services
EFNMS	:	European Federation for National Maintenance Societies
FASB	:	Financial Accounting Standard Boards
GAAP	:	Generally Accepted Accounting Practices
GFMAM	:	Global Forum for Maintenance and Asset Management
IAM	:	Institute of Asset Management
IEC	:	International Electrotechnical Commission
ISO	:	International Standardisation Organisation
KPI	:	Key Performance Indicator
MoF	:	Ministry of Finance
NAMS	:	National Asset Management Strategy Organisation
PAM	:	Public Asset Management
PAS	:	Publicly Available Specifications
RICS	:	Royal Institute of Chartered Surveyors
SAMF	:	Strategic Asset Management Framework
SKPD	:	<i>Satuan Kerja Perangkat Daerah</i> (Local Government Working Unit)
SOA	:	Special Operating Agency
USSR	:	Union of Soviet Socialist Republic

Statement of Original Authorship

The work contained in this thesis has not been previously submitted to meet requirements for an award at this or any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.

Signature: QUT Verified Signature

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Chapter 1: Introduction

This chapter introduces the topic of public asset management in Indonesian local governments as the area of the research. It also states the objectives of the research, includes definitions of the key concepts and variables, and gives a brief outline of the background and research approach. The aim of this chapter is to contextualise the proposed research.

To achieve its aim, this chapter starts by outlining the research background and problem in Section 1.1, aim of the research in Section 1.2, and its context and scope in Section 1.3. Section 1.4 shows an outline of the remaining chapters of the thesis.

1.1 RESEARCH BACKGROUND AND RESEARCH PROBLEM

There is a widespread recognition of the need to better manage municipal property in most cities in the world. Structural problems across regional, state and territorial governments that have legal powers to own and maintain real property (land and buildings) are similar, regardless of the level of development of each country starting from a very basic level such as property inventory records.

The need for better management of local government owned property is the result of widespread decentralisation initiatives that often have devolved huge public asset portfolios from central to local governments almost instantaneously. At the same time, the local governments were, and continue to be, unprepared to deal with multiple issues related to the asset owner and manager roles (Kaganova, McKellar & Peterson, 2006b).

In Indonesia, the decentralisation government reform started in 2004. This reform mandated the Central Government to transfer some functions and responsibilities to the Local Governments including the transfer of human resources, assets and budgets. As a result, local governments became giant asset holders in 2004. Unfortunately, most local governments were ill prepared to handle these transformations. Many asset related problems have been occurring since the enforcement of the decentralised law. Assets were transferred without analysing local governments needs to deliver public services nor, their ability and capability to

manage the assets. Many, if not all, local governments in Indonesia do not have a public asset management framework to guide them in managing their assets.

Globally, there are two groups of public asset management countries. The first group is a small number of national governments such as Australia, New Zealand, the United Kingdom (UK) and Canada that have designed and implemented significant reforms in the management of public assets under their jurisdiction. The other group involves a global surge of interest in property asset management reforms among countries that are not yet advanced with the reform process. This last group of countries is significantly larger than the first group (Kaganova et al., 2006b).

Indonesia is categorised as belonging to the second group who are just starting to develop their public asset management systems. At the Central Government level, the awareness of improved public asset management only started in 2006 with the implementation of the Government Regulation Number 6/2006 (2006), which was followed by the Presidential Decree Number 66/2006 on Organisation and Duties for Echelon I in Indonesian Ministries to form the Directorate General of Asset Management under the Ministry of Finance Indonesia (Presidential Decree, 2006). However, at the provincial level this awareness is not yet recognised, whereas at district or city level the situation is even worse. Indonesian local governments are currently focused on improving the democratic conditions of their territory by direct election of governors or mayors and have put aside the asset management agenda.

In the literature, debates and discussions on the topic of public asset management, especially from an international perspective, is not as intense as private asset management topics. Asset management in the private sector has become increasingly important to the success of private entities in business (Kaganova et al., 2006b). Kaganova et al. (2006b) stated that public asset management has not attracted sufficient attention of scholars and researchers despite the importance of deploying the full range of government real property assets in both mature and emerging economies, to achieve strategic public policy objectives. Kaganova and Nayyar-Stone (2000, p. 311) also pointed out that there is little literature about the goals of public real property asset management.

The recent decentralisation government policy trend and the lack of discussion of public asset management create a need to better understand the topic of public asset management. The problem addressed in this research is the absence of a proper

public asset management framework at the provincial level, which could lead to inefficient and ineffective public asset management and poor public service quality.

1.2 RESEARCH AIM

The aim of this research is to develop a Public Asset Management Framework for provincial governments in Indonesia particularly for infrastructure and real property assets at the provincial level. This framework is developed to provide the basis for provincial governments to develop integrated asset management procedures. The framework is equipped with strategies and tools to guide local governments to increase their effectiveness and efficiency and at the same time increase public service quality to meet the requirements and context of local governments. The application of the framework will ensure that the best decisions are made throughout the asset's life, such as selection of the most appropriate asset, improving asset lifecycles (including its acquisition and delivery process, optimising performance, and providing a proper disposal program) with minimum costs and high quality public services.

In order to develop the framework, existing practices should first be examined and followed by the factors that surround these practices. Analysis of these two areas of research supports the development of the proposed framework and also softens its acceptance and application in provincial government organisations. Therefore, three main research questions need to be answered in this study:

1. How do provincial governments in Indonesia currently manage their public assets?
2. What factors influence the provincial governments in managing these public assets?
3. How is a Public Asset Management Framework developed that is specific for the Indonesian provincial governments' situation?

Based on the above research questions, the objectives of this study are to:

1. Identify and analyse current practices of the provincial governments in Indonesia in managing their municipal assets;
2. Identify and analyse the factors that hinder and support provincial governments when managing public assets; and
3. Develop a suitable Public Asset Management Framework for provincial governments in Indonesia.

The strategy used to achieve the objective of this research is case studies. For the first objective there are three approaches, namely document analysis, interviews and observations of current asset management processes and practices at the provincial government level. The analysis of the documents shows the assets owned by provincial governments, the law and order that regulate the assets and procedures in the asset management lifecycle, whereas observations and interviews are designed to cover issues and practices not revealed by document retrieval and also to validate the document retrieval. This first objective is designed to analyse and propose improvements to current practices in provincial governments' public asset management. The second objective is achieved by in-depth interviews of Indonesian public asset officials at provincial government level. This second objective is designed to identify factors that hinder the existing processes and practices, then analyse them and propose probable solutions to solve public asset management issues experienced by provincial governments. The third objective is achieved by a combination of the first and the second objectives with the literature from advanced countries and best practices of public asset management. This third objective provides a Public Asset Management Framework suitable for Indonesian provincial governments.

1.3 RESEARCH CONTEXT AND SCOPE

There are three levels of government in Indonesia, namely the Central Government, the provincial governments and the city/district governments. This research concerns the improvement of public asset management practices at the Indonesian provincial government level. The research is limited only to study provincial assets i.e. assets owned by provincial governments and not those assets within the Central Government or city/district's jurisdiction. The term "provincial government" used in this research is the government of a local area that is the governing authority of a particular jurisdiction at state or provincial level.

Typically, Indonesian provincial governments have a wide range of public asset types from tangible to intangible assets, real and intellectual properties, land and buildings to mineral resources. This study focuses only on real property and infrastructure assets due to the significance of these assets to provincial governments.

The term “public infrastructure” is defined as the basic physical structures needed for the delivery of public services or other government functions. Those services and facilities are necessary for an economy to function. In other words, public infrastructure refers, but not limited, to the technical structures that support a society such as roads, bridges, water supply, sewers, power grids, airports, seaport, etc. (Amekudzi & McNeil, 2008; Cagle, 2003; Howard, 2001). However, this study only focuses on road and bridge infrastructure.

“Public real property” is defined as immoveable property such as land, buildings or objects that, though at one time were chattels (moveable items of property which are neither land nor permanently attached to land or a building, either directly or vicariously through attachment to real property), have become permanently affixed to land or a building owned by local government for the purpose of supporting government functions and responsibilities (Chambers, 2008).

1.4 THESIS ORGANISATION

To achieve the aim of this research, the thesis starts with a literature investigation of Indonesian public asset management in Chapter 2. This chapter examines background condition in Indonesian local governments after the decentralisation reform, points out the importance of public asset management for local governments in Indonesia from public services demand and public asset supply perspective, and outlines Indonesian local governments’ systems and capabilities in managing public assets. The thesis then examines the concepts of public asset management in Chapter 3. In detail, this chapter examines the asset management theory, examines the practices of public asset management in advanced asset management countries and then discusses hindrance factors that potentially affect the application of the Public Asset Management Framework. Based on Chapters 2 and 3, the thesis formulates the research problem and the three research questions. The thesis then outlines the research method used to investigate the research questions in Chapter 4. In order to answer the research questions, the practical research method and research respondent design to collect research data is outlined. The reports of the data collection processes and its result are analysed in Chapters 5 and 6. The first research question is investigated and analysed in Chapter 5, whereas the second research question is answered in Chapter 6. Discussion on the data collection results

in relation to the theories is organised in Chapter 7. This chapter proposes practices that should be improved and how to implement a better Public Asset Management Framework as proposed by this research. This chapter also reports on the verification process for the proposed framework and closes with some discussion on opportunities for provincial governments if they adopted the framework. Finally the thesis is concluded in Chapter 8.

Chapter 2: Public Asset Management in Indonesia

2.1 INTRODUCTION

State and local governments have significant amounts of public assets, physical and intangible assets, both in terms of quantity and quality. Recent decentralisation reform in many developing countries has impacted the environments and circumstances of public assets in these emerging countries. Indonesia is also experiencing similar conditions due to the enforcement of decentralisation reform in 2004, particularly at the local government level. Typically, management of public assets is highly divided, falling within different jurisdictions, with different bureaucratic policies and procedures. Over the last decade however, a new strategy has been introduced to manage public assets that aims to apply standards of economic efficiency and effective organisational management. This strategy is asset management and in government organisations the term used is “public asset management”.

While the public asset management discipline is developing fast at central and local government levels, there are, however, some issues arising in the emerging management of public assets including in Indonesian local governments. These issues are surprisingly similar in many different countries despite their territorial and regional differences and institutional contexts, as well as the attempted policy solutions to solve the public property issue differences (Kaganova et al., 2006b). Those issues pertaining to public asset management need to be addressed and examined further to formulate possible solutions.

The aim of this chapter therefore is to address the issues related to local government public asset management in developing countries, particularly in an Indonesian local government context. These issues need to be identified and addressed to develop possible solutions. To achieve this aim, the chapter is divided into three main sections: Section 2.2 discusses government reform and its impact on public assets as background information; Section 2.3 describes current conditions of

public asset supply and public services demand; Section 2.4 examines local government systems and capabilities in managing public assets.

2.2 GOVERNMENT REFORM AND ITS IMPACT ON PUBLIC ASSET MANAGEMENT

The interest in public asset management improvement appears to be rising worldwide. In January 2003, the General Accounting Office in the United States (US) declared that management of federal property was a crucial area in overall government management due to persistent difficulties in implementing modern public asset management standards. Since the 1990s, Russia has started to raise the same issue on their reform agenda. France began to codify and organise public asset management reform starting in 2001.

Whereas China, Morocco, Chile, Kuwait, several states of the former Union of Soviet Socialist Republics (USSR) and some Asian countries such as Indonesia and Malaysia have been requesting international technical assistance since 1999. As previously mentioned, the Indonesia decentralisation government organisation policy that led to the transfer of public assets to local government started in 2004. All these international efforts are an attempt to identify problems in managing public assets and formulate proper public asset management for the relevant conditions (Kaganova et al., 2006b; Yeh & Ng, 2000; Zailan, 2001).

On a global scale, there are two camps in asset management practice in public organisations. The first is those countries that have already designed and implemented advanced reform public asset management including Australia, New Zealand and Canada (Akiko & Gloria, 2005; Allen & John, 2008; Conway, 2006; Dow, Gilles, Nichols & Polen, 2006; Hentschel & Kaganova, 2007; Jolicoeur & Barrett, 2004; Kaganova & Nayyar-Stone, 2000; Lloyd, 2010; Nick, 2005; Warren, 2006). In the other camp are those countries just starting to develop a system of public asset management. A significantly larger number of countries are gathered in the second camp, the majority of them being developing countries.

Based on studies of developing countries such as ex-socialist countries in Central and Eastern Europe (CEE) and former centrally organised countries including Indonesia, it has been argued that these countries suffer an increasing demand for property asset management improvement at the local government level

(Kaganova et al., 2006b). This increasing demand is due to the fact that these countries have been rapidly transferring their public assets and decentralising their organisations; that is, transferring properties from central to local governments, and undertaking property privatisation and property restitution. Consequently, many local governments have become the largest asset owners in the urban area of many countries.

Unfortunately, many of those developing countries do not have the institutional, financial, policy, regulation and knowledge base required for performing their roles as caretakers and managers of public assets, particularly municipal real property and infrastructure assets. Additionally, World Bank studies claim that transfer and privatisation issues are complicated by the fact that most of these countries are highly urbanised, possibly even over urbanised (Kaganova, McKellar & Peterson, 2006a). Therefore a very substantial, though relatively unknown part of all physical public assets in those countries are located in cities, concentrated in real estate and owned by government. For this reason, municipal property asset management is not only obvious and necessary but has strong public sector and service delivery implications, as well as macroeconomic significance.

Despite the strong public sector and service delivery significance, the issues of public asset management processes are surprisingly similar in many different countries regardless of their territorial and regional differences, institutional contexts and policy strategy differences (Kaganova et al., 2006b). These issues need to be identified and addressed before solutions can be developed.

2.2.1 INITIATION OF DECENTRALISATION REFORM

The public organisation reform trend in the world from centralised to decentralised government means that the Central Government is mandated to transfer some of its functions and responsibilities to the lower level governments. In the Indonesian context, the transfer is from the Central Government to provincial governments (as the middle level of governments) and to city/district governments (as the lowest level of government).

In Indonesia, the decentralised policy started in 2004 with the enforcement of *the Decentralised Government Act* Number 32/2004 (Indonesian Act, 2004). The Act encompasses the framework of the regional administration in accordance with

the mandate of the Constitution of the Republic of Indonesia Year 1945, which granted the local governments the mandate to administer and manage their own affairs according to the principles of autonomy and duty of assistance namely decentralised government reform. This reform aimed to accelerate the realisation of public welfare through the improved community participation, increased public services quality, and improved community empowerment, as well as increased competitiveness of the regions with the principles of democracy, equity and justice distribution under the consideration of privilege and the specific character of a region within the system of the Republic of Indonesia (Ministry of Internal Affairs Indonesia, 2004).

The Decentralised Act aimed to improve the efficiency and effectiveness of local governance with more attention to aspects of the relationship between government structure and intergovernmental organisations, local government potential and regional diversity, opportunities and challenges of global competition by providing the broadest powers to regions, accompanied by the granting of rights and obligations of holding regional autonomy within the unity of the state administration system (Ministry of Internal Affairs Indonesia, 2004).

In terms of public assets, the *Decentralised Act* regulates the Central Government to transfer its authorities of managing public assets to local governments. This means local governments become responsible for managing their municipal assets. Although some important and strategic assets are still under the control of the Central Government (such as major airports and seaports, and military defence equipment, etc.), the majority of assets were transferred to the local government (such as land and buildings, infrastructures, natural resources, etc.) (Imbaruddin, 2003; Ministry of Internal Affairs Indonesia, 2004). As result, local governments became giant asset holders almost overnight.

2.2.2 LOCAL GOVERNMENTS AS GIANT PROPERTY HOLDER

Governments at all levels collectively control more property than many of the nation's largest corporations. Recent widespread government reform trends in the world, from centralised to decentralised government has created public asset related problems for local government. The decentralised process involves the transfer of public assets from central government to local governments causing local governments to be giant property holders, resulting in government property

accounting for a significant amount of public wealth (Hentschel & Kaganova, 2007, p. 24).

Most local governments, however, are not ready to handle the transfer of vast amounts of assets that used to be under the control of the Central Government. Some of the common obstacles are a lack of asset manager experts, absence of a system for managing the asset, constraints in the budget for managing those assets—that is, the increase budget needed to manage the assets is not aligned with the actual available budget (Amekudzi & McNeil, 2008; Walter & Sisli, 2007).

In general, the major problem is that local governments do not have a framework to guide them in managing these large amounts of public assets. The framework needs to be developed, based on and to satisfying the Indonesian local governments conditions. Many attempted solutions have been implemented by the Indonesian Government (both Central and local government) such as direct adoption of public asset management practices from other countries and seeking international assistance; however, an asset management policy and regulation based on an in-depth study and detailed research analysis is still needed to overcome the issues and improve the current condition. In addition, besides this major issue, there are other problems suffered by the local governments in managing public assets. Those issues are discussed below.

2.2.3 PROBLEMS IN PUBLIC ASSET MANAGEMENT

In order to outline the importance of a better Public Asset Management Framework and develop the framework, circumstances related local government organisations, particularly in the area of public asset management, must be mapped. Structural and non-structural problems are equally crucial to be recognised. The circumstances across regional, state and territorial governments that have legal powers to own and maintain public assets are surprisingly similar, regardless of the level of development in each country.

There are some common circumstances shared among local governments throughout the world in relation to municipal assets. The first issue is related to the asset transfer process from the Central Government to the local governments, the second issue is alignment between asset holdings and the local governments' functions and responsibilities. Applying a proper Public Asset Management

Framework can solve these conditions suffered by local governments. Although there might be other non-asset solutions to soften the problems, the application of proper public asset management will significantly answer the challenges (Churchill, 1992; Gerald & Alan, 2005; Hansen, 2009; Iles, 2005; Kim, Brian & Prasada, 2003; Rutledge, 2004; Stephen, 1998; XiaoHu, 2002). In more detail, those common circumstances are discussed below.

2.2.3.1 ASSET TRANSFER PROBLEMS

The obstacles faced in transferring public assets from Central Government to local government levels are similar between those developing countries such as Indonesia and former USSR countries. The first obstacle is that public asset are often not properly recorded or documented clearly. Around 25-30% of municipal assets in these countries have not yet been recognised—even on paper. This is either because local governments do not exist (although the administration is already formed), or because the municipal asset is used locally for public functions and is still owned by the Central Government, with some partial management rights delegated to local authorities. The second obstacle is these countries impose restrictions of various degrees—legal or regulatory—on public assets that limit a local government’s ability to utilise its rights as property owners. Thirdly, the asset transfer process is still evolving and brings new waves of problems to the property transfer issue. This is because some countries initiated local government reform, property devolution and public administration reforms in the early 1990s which have been ongoing process until recently. An example given by Kaganova et al. (2006a) was in Slovakia (where the second reform started in 2001, whereas in Russia it started in 2003 and in Indonesia was started in 2004) where municipal governments have continued to accept housing and social infrastructure assets as their resources formerly owned by State/Central Government.

In addition, although in Indonesia and in other transitional and post-transitional countries municipal assets have been regulated by laws, there are still often typical obstacles that make property transfer incomplete. One typical obstacle related to property transfer in these countries is an insufficient regulation framework. Completing the process of property transfer requires by law to issue and implement government regulations that establish particular procedures for practical transfer. The implementation of these regulations are unfortunately often far behind the laws

themselves, sometimes even by years. This is especially the case for urban land. Despite the fact that conceptually the land transfer was defined in most of these countries by a simple principle that all land within settlement borders becomes municipal property. An exception to this principle is those land privately owned and utilised for Central Government buildings, and land retained in Central Government ownership. For example in Armenia, even though special governmental decree on free land transfer to local governments was introduced in early 2002, urban land has yet to be transferred. In Russia, there is no law that defines a deadline for land transfer, while the government scheduled its completion by 2008. In Ukraine, land separation and registration laws were introduced in 2004, but implementation started only in 2006 (Kaganova et al., 2006a). In Indonesia, although the *Decentralised Act* was enforced starting in 2004, in many cases the Central Government is still reluctant to transfer the assets to local governments and still holds assets' ownership and other legal documents.

Similarly according to Kaganova et al. (2006a), in a number of countries—particularly in former communist countries—the transfer of unimproved land progresses more slowly than does the transfer of improved land. This is due to confusion and uncertainty in separating state and municipal public assets in the former USSR countries. The source of confusion and uncertainty stems from several fundamental facts from the past: (1) after the total land nationalisation by communist governments, land and improvements were treated separately and governed by different laws; (2) land was not legally lotted in any meaningful way, because most land was state owned; and (3) operation and maintenance responsibilities regarding improvements (buildings and infrastructure) were delegated to various entities by placing these improvements on the balance sheets of these entities. This legacy of separating land and improvements and a prevailing “in the past” bookkeeping view on property have made transferring property especially difficult. Additionally, the lists of transferred properties are often formulated in non-real estate terms.

Another substantial obstacle is that in most developing countries where municipal property has been introduced or restored by law, each property must be registered in the cadastre/registration system. Without such registration, the municipal ownership is not recognised as legally established, and the local government cannot utilise or dispose of the property (Kaganova et al., 2006a). In

many countries, the registration of municipal properties has been associated with delays and complications. In addition to the large volume of work associated with this process, the two most common reasons for delayed registration have been: 1) lack of preparedness of the registration/cadastre systems to handle this type of property registration appropriately—this is especially experienced in countries where registration systems were created from scratch, mainly through international organisation loans and technical assistance (in these countries, initial efforts focused on registering private real estate instead of public asset); and 2) perception on the part of local governments that they cannot afford the cost of the registration process. To some extent, this perception is related to the inertia of fiscal dependence on upper levels of government, rather than financial inability to pay for registration (especially when the registration expense could be offset by the sale or lease of marketable properties). However, it is true that by the standards of developed real estate markets, the cost of registration in these countries can be high when compared with the property sale prices.

2.2.3.2 ALIGNMENT BETWEEN MUNICIPAL ASSETS AND LOCAL GOVERNMENTS' FUNCTIONS AND RESPONSIBILITIES

Property transfer in a number of countries started with special laws or decrees and without a direct connection to the functions local governments assumed in their new roles (Beauchamp, 2009; Kaganova et al., 2006a). Russia for example transferred federally owned rural real properties into municipalities based on the former USSR bookkeeping pattern; that is, if a property was listed on the books of a “state importance” classification in the USSR, it became the federal property of Russia. However, if it was listed as a “local importance”, it became a municipal property. A similar principle was employed in Hungary, Poland, and Kyrgyzstan where local governments inherited and managed dissolved socialist councils and their organisations or local branches of central administration. In Poland, local governments were free, especially in the first half of 1990s, to decide and justify which properties located in their territories they wished to own, in addition to properties assigned to them by law. It appears that the absolute majority of local government requests for obtaining properties in municipal ownership were satisfied despite their actual needs to deliver public services. In Kyrgyzstan, property was transferred to local governments while their legal functions and responsibilities remained vague, with significant overlap with various state entities (Kaganova et al.,

2006a). In Indonesia, the assets were transferred based on decentralised functions and responsibilities of the Central Government to the local governments and the assets' physical location.

In most transitional countries including Indonesia, local government functions and responsibilities are unclear. This is because local government often disputes whether, and to what extent, they can and should be involved in various entrepreneurial activities, even under the reason of local economic development or revenue generation. An example occurred in South Sulawesi province in Indonesia; the local government spent public funds to purchase private company shares in hospitality areas such as hotels and the recreational sector which is not necessary to deliver public services in South Sulawesi province (Kufung, 2009). The other reason is that even when a country's laws are clear about local governments' functions and responsibilities exclusively, as well as those shared with upper levels of government, the laws are silent on the quantity of support by local governments. This silence is implicitly makes this issue a matter of local policy. Therefore, local governments have to decide how many supporting assets they are able to maintain and operate. These decisions are strongly related to the issue of local governments' role in supporting the institutions to deliver public services. These types of local policy decisions could be complicated even further when the laws about local functions or property transfer that operate with broad categories are left without detailed explanation about the term. As a result, there is a remarkable uncertainty or even confusion about further use of many municipal properties (Buck, 2009; McCawley, Tilse, Wilson, Rosenman & Setterlund, 2006; Walter & Sisli, 2007).

2.3 PUBLIC ASSET SUPPLY AND PUBLIC SERVICES DEMAND

Besides those obstacles mentioned above, there are other obstacles related to the management of public assets, particularly in Indonesia. These are outlined below.

The gap between public service demand and public asset availability

The demand for public services is increasing over time—especially in the area of infrastructure—and the availability of infrastructure is out of balance with community needs. For example, almost in every big city, high traffic congestion can be seen every day at some busy time (e.g. during work hours). Particularly in

Indonesia, major delays from traffic congestions are almost undeniably suffered by workers when travelling to or from the home and office (Ayuningtiyas, 2008).

This problem can be seen every day in cities such as Jakarta, Surabaya, South Sulawesi and many other major cities in Indonesia. At peak times such as in the morning and in the evening, workers' travel time from their home to their office and vice versa in Jakarta consumes almost six hours for relatively close distance travel (approximately 60—100 km) (Warta Kota/Ded, 2008). Other cities such as Surabaya (East Java province), Makassar (South Sulawesi province), Medan (West Sumatra province) are beginning to suffer the same conditions that desperately needs infrastructure asset management, particularly for public transport and road infrastructure. Although road traffic management also contribute to this issue.

Similarly, long queues for public administrative related services can easily be seen. It has been argued that such circumstances are due to an imbalance between the numbers of available resources (staff, budget, facilities, and most importantly office buildings) and the workload experienced by local government staff in many Indonesian local governments. In other words, building facilities and other supporting infrastructure are failing to satisfy the need and demand for public services.

The role of a municipal management department should be align with a client's or organisation's needs with the most appropriate building or property solution (Jolicoeur & Barrett, 2004, pp. 41-42). It is understood that asset management is an integral part of service delivery in the public sector and has been a standard practice for successful government. The success of delivering local government administrative functions and services rests highly on the condition of its supporting real property and infrastructure assets, such as office buildings and facilities. Unfortunately, these municipal building offices and infrastructure—besides its imbalances to public services demand—also depreciate daily.

Public asset depreciations

Assets experience depreciation namely physical, functional and economical depreciation, which may act together or separately. Physical depreciation of the asset means the depreciation suffered by the structure due to its function, the quality of materials utilised in its construction, the action of physical or chemical agents and

even due to the absence of adequate maintenance (Adair, 1996, p. 210; Anthony & Michael, 2004). Depending on the maintenance of the assets, physical depreciation could occur slowly but also could occur faster than the asset's normal life span. Assets usability is also considered as a physical asset depreciation source; usage that exceeds an asset's normal use will cause faster depreciation (Anthony & Michael, 2006).

Ineffective management of, and poor information relating to, assets could also lead to other asset depreciation; that is functional and economical depreciation of the asset. Functional depreciation depends on physical obsolescence, but often the cause rests in aesthetics and social change, new customs or fashions, or in the advent of new productive processes unsuitable for the type of construction and to which it cannot be adapted. Connected with this process is something termed the "building's useful life", meaning the period from the beginning till the end of a property's operational usefulness. Economic depreciation concerns the real or probable profitability of the property, either let or in owner-occupation. There is a consensus that physical and functional depreciation should be considered together with economic obsolescence (Adair, 1996).

Kaganova and Nayyar-Stone (2000) noted that there is no systematic data about operating expenses on municipal real property. However, there is evidence that local governments in many developing countries, including Indonesia, have been substantially under investing in property maintenance which means that portfolios of public property have experienced a high degree of physical depreciation. For example in Indonesia, a school in Bandung, West Java, 38 years old and falling apart, its roof finally gave in to its dilapidating conditions and collapsed. Calls to renovate the school buildings were not the priority of this particular local government (Nadia, 2008). This is the condition of schools nationwide in Indonesia; many are falling apart and students have to resort to be housed in temporary buildings with no walls, dirt floors, and bamboo poles supporting the roof—hardly a conducive environment to educate students.

Because of the relatively long expected service lives (characteristically measured in decades), the operational and financial management of infra structure assets are viewed primarily in the long term. Deferral of needed maintenance and of funding to sustain these assets are common occurrences, especially under the duress

of tight budgets and political pressure for spending on more visible, short term achievement of objectives (Cagle, 2003, p. 1). Because of deferred maintenance and rehabilitation, which is primarily driven by financial considerations, infrastructure assets have physically deteriorated due to poor conditions (McCusker, 2006). This type of deterioration requires incurring an extra budget to maintain targeted assets conditions.

Deferred maintenance and repair of public assets is the norm and not the exception across both developed and emerging economies. Part of this problem is attributable to accounting practices and the lack of recognition of real depreciation on the balance sheet, although many other factors encourage postponement of maintenance costs (McCusker, 2006). In Indonesia, public funds allocated annually for maintenance of real property and infrastructure assets are estimated between 9—10% of the total Central Government expenditure (Ministry of Finance Indonesia, 2010, pp. III 15-16; 2011, pp. IV-11). Compared to other line ministries in Indonesia such as the Ministry of Defence, the Ministry of Religious Affair and the Indonesian National Police, the Ministry of Public Works which is responsible for public assets maintenance places less prioritise on its budget allocation. In most cases, the amount of deferred maintenance and repair is not known, even at the level of estimates, though the severity of maintenance backlog is manifests from the poor planning and design of the properties.

Surplus properties owned by local governments are obsolete properties with negative residual land value

Many local governments hold assets, which are unattractive for the property market. The cost of renovating these properties for their current use and under current market conditions can be higher than the properties' market value after renovation. Therefore, private investors and developers are not willing to undertake redevelopment without subsidies from the government, even if they attain these properties without any financial burdens.

Managing unattractive assets requires local governments to: 1) determine whether liberalisation of property use according to market demand can change a property value from negative to positive; 2) if liberalisation is still unattractive for private-sector buyers, local governments can stimulate redevelopment with subsidies

as cities in developed countries often do; and 3) if these two strategies are unsuccessful, then local governments can sell everything that is sellable such as fixtures, doors and the whole building as a source of secondary construction materials, if such demand exists. It can then withdraw the municipal resources from further maintenance and wait until market conditions improve and the land site becomes marketable (FitzRoy & Hulbert, 2005; Gerald & Alan, 2005; Kooymans & Abbott, 2006; Lemer, 1999; Nick, 2005; Priest, 2006).

Managing public assets is further problematic when many local governments under-invest in asset maintenance as mentioned before. There is no systematic data about operating and capitalising expenses on municipal assets. As a rule, policies regarding investment in asset maintenance and repair vary by city, even within countries; however, there is extensive anecdotal and visual evidence that local governments have substantially under-invested in property maintenance, especially in low-income countries. Leaking roofs in kindergartens in Armenia and Indonesia or insufficient heating of schools in Kyrgyzstan are common. Due to primarily limited local government funds, heavily funded maintenance is a lower priority (Allen & John, 2008; Heather & Bridgeman, 2007). While in good municipal asset management the maintenance of public assets should be prioritised, it explains that in local governments, public asset management processes—particularly in maintenance—are missing or simply not yet developed.

The above circumstances raise the importance of an improved Public Asset Management Framework. The need for asset management reform at Indonesia's local government level is urgently needed. The reforms start from a very basic level such as property inventory records to more complicated stages such as asset utilisation and disposal. The need to improve the Public Asset Management Framework has been highlighted on a global scale by the widespread reform agenda. The agenda starts with introducing government decentralisation initiatives that are followed by the transfer of some Central Government functions and responsibilities, including its assets.

Unfortunately, although experts, practitioners and other asset stakeholders' already appreciate the importance of public asset management application, the asset management framework is still missing or not developed in the public sector, especially at local government level. Many factors contribute to undeveloped public

asset management in Indonesia's local governments. There are some contributing factors hindering the application of the Public Asset Management Framework in local government organisations (discussed in Chapter 3). In addition, local government also requires a supporting system and capabilities in managing assets.

2.4 LOCAL GOVERNMENTS' SYSTEMS AND CAPABILITIES IN MANAGING PUBLIC ASSETS

Local governments also face an imbalance between their abilities and capabilities on the one hand and the public assets they own and should maintain on the other. These systems and capabilities are described in detail as follows.

Budget limitation in local government

The transfer of assets from central to local governments also means the transfer of financial responsibility to local governments. Therefore, increased budgets are needed at local government level to maintain the life of these assets. Property holding costs are mainly from maintenance, upgrading and replacement of overhauling infrastructure assets as the largest component (Too, 2007, p. 326). The cost of maintaining assets to function as designed and maximise their useful life in many cases exceeds their development costs, especially for infrastructure and real property which can last for several decades.

For this reason, it is expected that local governments may suffer an increasing financial burden to sustain the ownership and/or management of public assets (Banner & Gagne, 1995; Berry-Stolzle, 2008; Bloomberg, 2007; Bovaird & Loffler, 2008a; Buchanan & Musgrave, 1999). To overcome this challenge, many infrastructure organisations have reviewed their current asset management approaches to improve the performance of their assets (Too, 2007).

At the same time, local governments suffer budget constraints and limited funds to support the ownership of those assets. The budget constraints may result from lower overall public-sector revenue (sometimes induced by the deliberate choice to reduce tax) or from the devolution of service responsibilities from Central Government to lower levels of government without commensurate transfer of revenues (**Kaganova et al., 2006b, p. 7**). In addition to that, in many countries, including Indonesia, the budget constraint may result from the fact that local authorities have very limited (or no) flexibility to raise local tax rates or to impose

new local taxes as this authority falls under the Ministry of Finance of the Indonesian Central Government with approval from the House of Representative. Local government's primary options for raising revenue may involve charging for the use of public property or selling it, necessitating a high priority to property management.

In many countries particularly in less developed and developing countries, public infrastructure and real property assets are left behind without any care to maintain their useful life; this happens similarly in Indonesia. Local governments in Indonesia are willing to spend public budgets for short term programs which directly measure its success for the next campaign period, such as a stimulus program that allocates fresh money to the community without any further sustainable program planning in place. This program consumes so much public funds that it results in the postponement of public asset maintenance (Irham, 2009). On the other hand, local governments are reluctant to allocate public funds to maintain public assets.

Jolicoeur and Barret (2004, p. 41) also indicate that the application of strategic asset management in the municipal sector is of growing concern and importance. As owners, operators and maintainers of building assets, local governments assume, through their management departments, significant responsibility in ensuring the successful performance of infrastructure and real property assets. Municipalities are faced with shrinking budget facilities while, at the same time, having to provide the most suitable properties in support of core service delivery requirements (Bovaird & Loffler, 2008b; Brown & Potoski, 2004). The limited budget is worsening with the increasing demand for the availability of high performance and quality public services.

Weak enforcement of the rule of law and poor accountability mechanisms

Any policy improvements reflected in law will face the challenge of widespread disregard for the law and poor mechanisms to enforce it. This is a systemic problem for which rapid progress cannot be expected. Coupled with this problem are the generally poor, corrupt and selective controls government agencies exert over local governments' property management. Many countries manifest examples of rent-seeking behaviour on the part of state auditors and prosecutors reviewing local government actions (Age, Pentti, Lasse & Jarmo, 2001; Ammons, 1995; Heaton, Savage & Welch, 1993; John, 2005).

Citizens' expectations of local governments are quite low and there remains little popular control over the actions of local government; certain reformations are needed to improve these expectations. There are three methods useful in the reformation; that is promoting better property management, legal improvements, government enforcement entities, and popular control. These methods appear to be the most effective and time efficient solutions (Callahan, 2007; Kaganova, 2008; Lindblad, 2004; Peteri, 2008).

In the second semester of 2011, the Indonesian Audit Board examined 151 audits of Local Government Financial Reports (*LKPD*s) for the year 2009 and two *LKPD*s for the year 2008. The results are that one local government receive “an unqualified opinion”, 71 local governments received “qualified opinions”, 18 local governments received “adverse opinions”, and 61 local governments entities received “disclaimer opinions”, while the two *LKPD* for the year of 2008 the Audit Board provide “adverse opinion” (The Audit Board of The Republic of Indonesia, 2011). The data shows that the local governments' financial report are still suffering poor accountability—only one local government received “an unqualified opinion or clean opinion” which means that the financial statements give a true and fair view in accordance with the financial reporting framework used for the preparation and presentation of the Financial Statements. An Unqualified Opinion indicates: (1) the Financial Statements have been prepared using the Generally Accepted Accounting Principles which have been consistently applied; (2) the Financial Statements comply with relevant statutory requirements and regulations; (3) there is adequate disclosure of all material matters relevant to the proper presentation of the financial information subject to statutory requirements, where applicable; (4) any changes in the accounting principles or in the method of their application and the effects thereof have been properly determined and disclosed in the Financial Statements (Hoque, 2008; Howard, 2001; Landsman, 2007; Pinnuck & Potter, 2009; Samuelson, 1996).

Multiple inefficiency of current public asset management practices

Traditionally, organisations have two management options in relation to their assets: 1) direct management by their staff or departments, and 2) external management by a child company. Particularly for local governments, the options are: 1) managed directly by municipal staff or departments, 2) externally managed by fully or partly owned local government enterprises. Unfortunately, studies show that

both approaches have been associated with typical inefficiencies in both private and public organisations (Dawne, 2005; Kaganova et al., 2006a; Vincent, 2005; Warren, 2006). This is the major motivation attracting private companies to outsource their asset management on a competitive and contractual basis.

Governmental management of surplus assets has been associated with a fundamental inability to recognise and utilise these assets based on an assets' potential value and revenue-producing ability. Literature discusses reasoning behind this inability such as most cities lack: 1) a strategic view and explicit policy regarding their property holdings, and 2) proactive management of property portfolios (Kaganova et al., 2006a; Zailan, 2001). Such questions as, "Do local governments need this property?" "Why do local governments need it?" and "Which properties could be local government 'cash cows'?" along with other requirements for a rational approach to managing portfolios are not investigated in a comprehensive way. As a result, properties servicing social needs (such as support of non-government organisations (NGOs) or small businesses) are not separated from surplus properties, which can actually be disposed of or utilised as investment sources. In many cases, local governments try to use their public assets to support their activities and generate revenues at the same time, which in turn leads to a mass practice of property-use limitations and inefficiencies (Zailan, 2001).

The other reason for the occurrence of surplus assets in local government is due to market values of municipal properties. When they are sold or rented to the private sector, properties are often unnecessarily limited by excessive restrictions on their use. This is a very common tendency for former socialist countries. This practice systematically reduces both immediate municipal revenues and overall local wealth in these countries (Kaganova et al., 2006a).

Another source of inefficiency from surplus property in a number of countries is associated with non-competitive leasing and privatisation of municipal property. In most CEE (Central and Eastern Europe) countries, laws require that municipal non-residential premises be leased out through competition. However, countries of the former USSR, such as Armenia, Moldova, Russia and Ukraine, do not operate under such legislation, and the issue is left to the discretion of local governments. As a result, common practice is non-competitive and non-transparent leasing of municipal properties at prices below market value.

Lack of professional knowledge, competitive pressure and incentives for municipal staff to manage rental portfolios have resulted in numerous flaws in managing rental portfolios and properties. The conditions are worsened by the absence of working incentives to improve public asset management practices. Typical outcomes of such conditions are low collection rates, high vacancies, and deteriorating properties (Ammons & Rivenbark, 2008; Anastasia, Yakobus & Susilawati, 2001; Chareonsuk & Chansa-ngavej, 2008; Deller & Maher, 2009; Kaganova et al., 2006a).

At the same time, a recurrent source of inefficiency comes from the fact that local governments invest in properties with no consideration for public interest. This is most typically practiced by upper and middle-income countries. The central problem for this practice is that local governments tend to invest public resources in projects that could be carried out by the private sector alone if the regulatory environment (such as land-use regulations) was set up to respond reasonably well to the market demand (Kaganova et al., 2006a).

Undeveloped public asset management in local governments

Principles of good municipal asset management are either not known or not used in many local governments, except in cases when they receive technical assistance sponsored by international donors. These local governments lack even basic elements to build sound management practices, such as property inventory records and accounting procedures to deal with incomes and expenses on each property basis—not to mention other comprehensive elements, such as articulated and approved strategies for property asset management, financial performance analysis, proactive management of properties and property portfolios. There are also factors in relation to the lack of public asset management knowledge and skills in local governments (Bowo, 2009; Kaganova et al., 2006a; Samson & Daft, 2009; Yeh & Ng, 2000).

The first factor is that the management of asset incomes and expenditures usually organised by different departments which makes financial performance analysis challenging. According to Kaganova et al (2006a), is not only are properties scattered among line departments (education, health, culture, sport, etc.), but the bundle of functions associated with asset and property management is usually split

among several agencies with a lack of coordination that makes efficient asset management structurally difficult.

The second factor is that local government staff members usually lack of professional real estate expertise for improving better public asset management. This condition is worsened by the reluctance of government officials to hire outside experts to help them manage these public assets. Municipal staff and officials hardly have even a basic understanding of how the real estate market operates, though this should be a prerequisite for dealing with any type of real estate especially government-owned property (Imbaruddin, 2003).

The third factor is that local governments suffer limited public fund resources for the development of a public asset management system such as developing or acquiring a computerised property management and accounting system. At the same time, local governments often overlook gradual approaches, where improvements can be initiated with small-scale projects that can be expanded later. All these actions are usually executed without appropriate planning and guidance (Irham, 2009).

The fourth factor is that formal accounting and financial reporting systems in local governments and municipal enterprises are still in very transitional and unorganised stages. For example, in Kyrgyzstan, local governments still use pre-reform accounting standards and are not required in producing consolidated financial reports (some cities prepare some form of consolidated reports by their own initiative). This has been worsened by the weak enforcement of the rule of law and poor accountability mechanisms. In Indonesia, such practices were recently applied by the Central Government's asset manager, the Ministry of Finance Indonesia to its line ministries as asset users.

2.5 CONCLUSION

The application of strategic asset management in the municipal sector is of growing interest and importance in developing countries' local governments, including Indonesia. It is understood that asset management is an integral part of service delivery in the public sector and has been a standard practice for successful government. Local governments are now aware of the significance of public property in fiscal responsibility as giant property holders. That challenge has

resulted in a requirement to improve public property asset management to demonstrate a uniformly high level of performance across all sectors in the integration of financial and mission-performance objectives. Local government leaders would be well advised to strengthen their understanding of public asset management. By examining public service and mission requirements, creating auditable cost and investment management strategies, and optimizing facilities and infrastructure portfolios, any local government can achieve sustainable success in public asset management and align asset decision making with community and organisational needs.

Unfortunately, the abilities and resources to manage public assets are absent in many local governments in developing countries, including Indonesian local governments. Local governments are not ready to handle the handover of public assets from the Central Government. The lack of a systematic and comprehensive framework is an obvious drawback of the public asset management reform. In other words, the legal and institutional framework for local government asset management is not sufficiently developed. Particularly in Indonesia, the absence of a Public Asset Management Framework can be identified by the current practice of public asset management in local government institutions, a lack of asset needs analysis towards the demand and delivery of public services, and no integrated asset management guidance during the asset's lifecycle. Indonesian local governments suffer most from the impact where the need for reform in asset management systems is even more severe than for the Central Government.

All and all, the major problem related to asset management at the local government level is the absence of a Public Asset Management Framework which should covers all those issues and problems above in order to guide local governments to manage the overnight transfer of public assets. Guidance on how to collect public asset data, how to align public assets and local government needs based on its functions and responsibilities, the whole asset lifecycle process, and performance measurement elements in the framework should be developed in a comprehensive asset management framework. The framework can only be developed with the support of theories and concepts related to public asset management in an Indonesian local government context. The theories will help this study to find solutions regarding current issues in public asset management

processes. It aims to soften all hindrance factors in the application of the developed framework. All these theories are discussed in the next chapter.

Chapter 3: Public Asset Management Concepts

3.1 INTRODUCTION

The previous chapter analysed the current conditions, illustrating the obstacles local governments face in developing countries, particularly in Indonesia, with regard to their public assets. These conditions and problems were then reinforced the importance of public asset management in developing countries, particularly at local governments level. The problems and hindrances can be softened by applying a Public Asset Management Framework; however, the previous chapter also identified the main problems facing local governments in managing public assets—the lack of an asset management framework. Therefore there is a need to develop a personalised Public Asset Management Framework based on a strong theoretical and practical background. The first step in developing the framework is to review the current researches and theories in this area.

The aim of this chapter is to analyse theories of asset management, examine the characteristics of public organisations in regard to their function and responsibilities, and discuss public asset management best practices and elements. Therefore, an in-depth exploration of asset management, public organisation and public asset management literature is needed for this study. These theories, together with an analysis of hindering factors identified in previous studies by other scholars, establish a strong theoretical foundation to develop and apply public asset management for developing countries—especially for an Indonesian local governments context. Experiences from advanced public asset management practitioner countries also provide important lessons to be acknowledged in developing the framework.

In detail, Section 3.2 discusses asset management theories from both private and public organisation perspectives. Section 3.3 points out the practices of public asset management in advanced public asset management practitioner countries and then formulates improvements that need to be identified in public asset management

practices based on the literature. Section 3.4 discusses the hindrance factors of public asset management application in developing countries.

3.2 PUBLIC ASSET MANAGEMENT THEORY

This subsection outlines asset management definitions from several resources such as best practices, government documents and experts in the subject. After that this section then analyses various asset management conceptual models and best practices that could fit the Indonesian provincial government context.

3.2.1 ASSET MANAGEMENT DEFINITION

The discussion on this chapter focuses on the real property and infrastructure assets as the main focus of this research. Hastings (2010) defines asset as physical items such as buildings, plant, machinery, vehicles, pipes and wires, and associated information and technical control and systems that are used to serve a business or organisational function. Given that asset management links closely with financial management, Hasting argues that it is important to recognise the accounting definition of assets and, in particular, the split between fixed and current assets.

The Financial Accounting Standards Board (FASB) based in the US defines assets as “probable future economic benefits obtained or controlled by a particular entity as a result of past transactions or events” (Sarah, 2003). The FASB lists three essential characteristics of an asset: 1) it embodies a probable future benefit that involves a capacity, singly or in combination with other assets, to contribute directly or indirectly to future net cash inflows; 2) a particular entity can obtain the benefit and control others' access to it; and 3) the transaction or other event giving rise to the entity's right to or control of the benefit has already occurred (Schuetze, 1993a, 1993b).

In relation to legal rights, property law defines assets as the relationship between an individual and an object or resource. This definition does not refer to the object itself. The property relationship confers a legally enforceable right that is a bundle of rights entitling the holder to control an object or resource. Once it is understood that property describes the relational interplay between individual and object rather than the object itself, the characteristic of property rights is easier to appreciate (Hepburn, 2001). Almost any usable object, corporeal or incorporeal, is capable being owned; although restrictions upon what is capable of being owned

may be legally introduced by common law development or express statutory provisions, or through changing social values, where ownership is considered to offend the prevailing moral milieu ("Kitab Undang-Undang Hukum Perdata/Burgerlijk Wetboek voor Indonesia," 1847).

Particularly in public organisations, Chambers (2008), expresses that property commonly refer to the things that people own. Chamber defines that public property can either be common or collective property. Common property is the rights of everyone in society (or a sufficiently large segment of society) to make use of a thing. It corresponds to the general duty of others not to use the thing in a way which interferes with the common use. Collective property, on the other hand, exists when decisions regarding the use of a thing are taken on behalf of society by public institutions such as government agencies and departments and government owned corporations. Chambers further argues that the distinction between common and collective property is not always easy to see. The collective may decide to use something, such as a freeway, museum, or zoo, in a manner which gives people relatively free access to that thing. However, decisions about the use of that thing are made by, or on behalf of, the government. Public access to it is granted by the decision-maker and does not exist independently as a common right.

From several definitions above, the term 'asset' can be used to describe many different types of assets, for example financial assets, infrastructure assets, plant and machinery, equipment, land and buildings. For the purpose of this thesis the term 'asset' is used to refer to land, buildings and infrastructure. Because the management of public assets is closely related to public accounting, legal and technical property definitions, the definition used in this thesis is a definition that covers the fields of accounting, law and built environment. In this thesis, asset is not only seen as a physical asset but also includes the rights attached to the assets and the economic value of the asset.

Pursuing above definitions further, this thesis then focuses on real property and infrastructure. Real property can be defined as land and any structures on, firmly attached and integrated to the land (such as light fixtures or a well pump); anything that grows on the land; and all interests and rights in the property which may be the right of future ownership (remainder), the right to occupy for a period of time (tenancy or life estate), the right to drill for oil, the right to get the property back (a

reversion) if it is no longer used for its current purpose (such as use for a hospital, school or city hall), use of airspace (condominium) or an easement across another's property, excluding anything that may be severed without injury to the land (Butt & Hamer, 2011; Garner & Black, 2009). Real property should be considered as a group of rights like a bunch of flowers that can be separated. It is distinguished from other type of property and personal property, which is made up of movable items such as equipment, furniture and fixtures (Adair, 1996; Anthony & Michael, 2006; Hepburn, 2001; Labranche & Schrader, 2008; Moore, 2005).

Infrastructure is also categorised as one typical asset in this thesis. It covers man-made facilities that ensure any economy can operate and includes transportation (railways, roads, and airports), utilities (energy generation and distribution, water, and waste processing, and telecommunications), and social infrastructure (schools, hospitals, and state housing). Investments in infrastructure target basic facilities that meet the needs of society and the economy (Grigg, 2010).

Technical infrastructure, often referred to as economic infrastructure, comprises the long-lived networks and capital-intensive and engineered structures directly supporting economic production. It normally includes public utilities (water supply, energy, etc.), public works (roads, dams, etc.), transport (railways, ports, etc.), and sanitation systems (sewerage, solid waste collection, etc.). The provision of environmental infrastructure and services includes the service for water supply, sanitation, drainage, and solid waste disposal. These infrastructure and services are the basic components, especially for urban areas, that are needed for economic growth and development. However, this thesis only focuses on building assets and transportation infrastructures.

It is recognised that infrastructure displays the following characteristics (Economic and Social Commission for Asia and The Pacific, 2007):

- a) capacity can only be adjusted in large, “lumpy” increments, b) high initial fixed costs and low marginal costs of supply, c) high sunk costs and the risk of stranded assets as conditions change, d) multiple users of the services spanning production and final consumption, e) externalities not reflected in service charges that have attracted regulation, and f) scale and regulatory hurdles create long lead times for installing new capacity.

Definition of assets, real properties and infrastructure have been discussed, the next term to be discussed is asset management. The approach to the term “asset

management” when it refers to public property or public management, varies substantially in the literature, depending on the country, institutional and professional viewpoint of the author. One approach for analysing public real property asset management is to compare it with private sector real estate asset management (at non-real estate corporations). The reason for this is that since the early 1980s, the private sector experiences have been seen as being good sources of ideas and techniques for building a public property asset management framework (Kaganova & Nayyar-Stone, 2000, p. 311).

In the private sector, according to Kaganova (2000), corporate real property asset management is the decision-making process for acquiring, holding and disposing of real property, which may be held for a company’s use or as an investment. In many cases, asset management is included in core corporate business activities, these are supported by rapidly developing methodologies and advanced financial techniques. The goals of real property asset management in the private sector are well articulated. Thus, when a company owns and uses real estate for its non real estate business, the goal is to maximise corporate value (or profits). When real estate is used as an investment, the goal is to optimise returns on investment by considering various combinations of risks, return and liquidity (Brown et al., 1993; Edwards & Ellison, 2003; Haynes & Nunnington, 2010).

According to Davis (2007), asset management is a continuous process-improvement strategy for improving the availability, safety, reliability, and longevity of assets, that is systems, facilities, equipment, and processes. The Asset Management Council of Australia defines public asset management as the lifecycle management of physical assets to achieve the stated outputs of the enterprise. Similarly, according to Hastings (2010), as stated on the Publicly Available Specification (PAS 55) on Asset Management published by the British Standards Institute, Asset Management is defined as: “... systematic and coordinated activities and practices through which an organisation optimally and sustainably manages its assets and asset systems, their associated performance, risks and expenditures over their lifecycles for the purpose of achieving its organisational strategic plan”. The European Federation for National Maintenance Societies (EFNMS) has agreed on a definition of Asset Management as follows: “Asset Management is the optimal lifecycle management of physical assets to sustainably achieve the stated business

objectives” (Asset Management Council Inc and The Institute of Asset Management, 2010). This definition was derived from the definition used by the Asset Management Council of Australia and discussions are ongoing about proposals for a global definition

The RICS (Royal Institution of Chartered Surveyors., 2008) which specifically focuses in the area of land and buildings, defines asset management as an activity that ensures that the land and buildings asset base of an organisation is optimally owned and managed in the best corporate interest of the organisation objectives and aims. It should be aligned between the asset possession and the organisation’s corporate concerns. It requires business skills as well as property skills to maximise the ownership of the asset in regards to corporate concerns. However, property input within the overall process is an important requirement. It does not seek to respond solely to the requirements of any specific operating necessity of the organisation. It seeks to take all requirements into consideration and to deliver the optimal solution in terms of the organisation’s overall operational and financial goals and objectives. It has a consultancy and executive orientation. It is a corporate activity and in many cases led and/or coordinated by a property, construction or facilities expert.

This thesis extracts and combines all definitions above and defines asset management as:

A systematic, coordinated and continual improvement process to optimally and sustainably manage the lifecycle of physical assets and its systems in achieving organisational objectives and strategic plans through asset availability, safety, reliability, and longevity of the assets with the control of performance measurements.

The primary purpose of an asset management and its accompanying components (programs, tasks, or activities) is to help the asset manager and/or owner to (Cagle, 2003; Davis, 2007):

- know exactly what assets are owned (i.e., those you are responsible for operating, monitoring, and/or maintaining),
- know precisely where the assets are located,
- know the condition of the assets at any given time,

- understand the design criteria of the assets and their operational procedure and conditions,
- develop an asset care (maintenance) program that ensures that each asset performs reliably when it is needed
- perform all of these activities to optimise the costs of operating the assets and extend their useful life to what was called for by the initial design and installation (if not beyond).

Further, Cagle (2003) states that asset management refers to a set of processes or activities addressing the proactive management of capital assets and/or infrastructure as follows:

- Maintaining a systematic record of individual assets (an inventory) with regard to acquisition cost, original and remaining useful life, physical condition, and cost history for repair and maintenance.
- Having a defined program for sustaining the aggregate body of assets through planned maintenance, repair, and/or replacement.
- Implementing and managing information systems in support of these elements.

Obviously these processes are complex stages and transcend several jurisdictions and disciplines such as finance, engineering and operations. They are also interrelated and in some instances interdependent. John and Elisa (2007) try to simplify the asset management process by stating it is best to follow the same common sense processes most people use to get the greatest value and satisfaction from their cars. The car analogy can help simplify asset management and break up the mental logjams that may result from competing theories. It is also useful in that a common language can help explain what needs to be accomplished in a way that is readily understandable amongst staff in all areas of the utility—from the field to the boardroom.

Many people adopt intervention strategies to manage the economic life of their cars and slow the wear-out process to get as much value and satisfaction as possible out of them. The methods used are the same as those used in asset management:

- moderate the level/type of use

- apply preventive maintenance
- rehabilitate or replace key components
- develop strategies to reduce the cost of breakdowns.

Continuing this idea, John and Elisa (2007) add that asset management is inherently a risk management process, and this has important implications for the quality of information required to support it. Many organisations have hesitated to implement asset management because they view their data systems as inadequate to the task. However, it is neither necessary nor desirable to have a perfect database in order to begin asset management processes. It is advisable to start with what exists and improve moving forward.

Once an entity starts applying the principles of asset management, asset failure risks are being managed; until asset management begins, those risks aren't being managed. Moreover, the risk management character of the asset management process will show what details are important to understand and help prioritise information system improvements accordingly. The concept of asset management is discussed in more detail in the next section.

3.2.2 ASSET MANAGEMENT CONCEPTUAL MODELS AND BEST PRACTICES

The concept of asset management has developed rapidly over the last decade. There are a number of guidelines, best practices, models and strategies that have been introduced in various countries for both private and public organisations. Organisations have been continually updating their asset management framework and aligning their approaches with their organisational objectives and aims. The practice of asset management in private and public organisations is becoming integrated and interrelated and is continually assisting both to improve their framework and approaches.

The asset management function is needed to provide asset knowledge and the capacity for related management and decision support activities within the context of an organisation's core business (Hastings, 2010). In the area of capital planning and budgeting which involves:

- asset (and associated capability) development planning and implementation

- asset continuity planning and implementation
- logistic support facilities' development and management.

In the area of operating budget which involves:

- procurement planning and management e.g. for consumables and spares
- organisation wide, asset related systems and procedures e.g. computer systems applications in asset management and maintenance, shutdown/turnaround planning
- development and management of maintenance outsourcing
- awareness and management of regulatory compliance.

The main function of asset management is to provide the organisation with information and knowledge that supports the asset lifecycle decision process, from planning to disposal, as required by the asset owner and/or manager. A comprehensive asset management strategy will be needed at all organisational levels, from delivering data for asset planning, providing information to decision makers before making acquisitions and developments, and providing the systems and data needed to support assets decision throughout asset's lifecycle. An Asset management process is separated from daily organisational operations, and does not usually involve the direct design or building of the assets themselves. It is also usually separated from maintenance or facilities management, but the technical services process that support maintenance of the assets are a part of the asset management process. The terms and definitions may vary from organisation to organisation (Hastings, 2010).

The Asset Management Council, a Technical Society of Engineers in Australia, developed a conceptual asset management framework titled the Capabilities Assurance Model. It describes the philosophy and principles which lie behind the asset management discipline. The Council has also developed a Process Model that identifies disciplines, elements and standards which describes the scope of asset management (Asset Management Council Inc and The Institute of Asset

Management, 2010). These two models are being applied by the Asset Management Council to (2010, p. 4):

- identify current practices in asset management
- identify requirements for new standards in asset management practices
- develop and align competency sets for the purpose of the assessment and accreditation of individuals working in the asset management profession
- formulate course material in the fundamentals of asset management discipline
- define the framework and range of practices for annual Asset Management Awards presented to participating organisations.

The Asset Management Council in Australia and the Institute of Asset Management in the UK have also been developing various concepts on asset management. The common interest to develop a unified framework for asset management has lead two these two organisations working closely together. This cooperation, on behalf of the Global Forum for Maintenance and Asset Management (GFMAM) is aimed to develop and recommend an asset management concept that is acceptable on a global scale. At the same time, there has been an increased international effort to try to align concepts and guidance on asset management framework and practices thereby avoiding every country in the world developing duplicate and potentially contradictory guidance (Asset Management Council Inc and The Institute of Asset Management, 2010; Frank, 2007; Rebecca & Richard, 2006; Walter & Sisli, 2007).

In an effort to develop internationally accepted standards, the Institute of Asset Management has been supporting BSI¹ in proposing to the International Standards Organisation the development of an ISO standard on asset management practice

¹ BSI (British Standards Institution) is the National Standards Body of the UK, with a globally recognised reputation for independence, integrity and innovation in the production of standards that promote best practice. It develops and sells standards and standardisation solutions to meet the needs of business and society.

using PAS55² as a key input document. This is an excellent opportunity to achieve international consensus on the settings and requirements for an asset management framework.

International asset management practitioners throughout the world are also desperately searching for guidelines on how to improve their asset management capabilities, to satisfy if not surpass PAS55 or the ISO conformance requirements in order to equalise the increasing challenges from customers and regulators. PAS55 and the proposed ISO define a set of requirements for a good asset management framework. It guides asset management practitioners to develop their asset management capabilities. Asset management practitioners now need to position themselves by either aligning their practices with the proposed standards or improving their management capabilities beyond the conformance of the standards to achieve higher levels of asset management maturity (Asset Management Council Inc and The Institute of Asset Management, 2010).

Almost all organisations are in a race and push their organisations to the limit in order to improve their efficiency and effectiveness, this includes asset management practices as one of their organisational tools. Compliance with international standards such as PAS55 and the proposed ISO in asset management is a good starting point for these businesses as it provides the framework for identifying and improving organisations' asset management processes. However, alignment to the standard alone is unlikely to be sufficient (Asset Management Council Inc and The Institute of Asset Management, 2010). Good asset management is not simply about compliance with the international standards but is also about improving asset management skills and capabilities in order to deliver the required level of organisational objectives and aims with the available resources. The effort is also about understanding when to stop and to recognise that asset management skills and capabilities are sufficient to reach the objectives. If guidance on this concept is to be

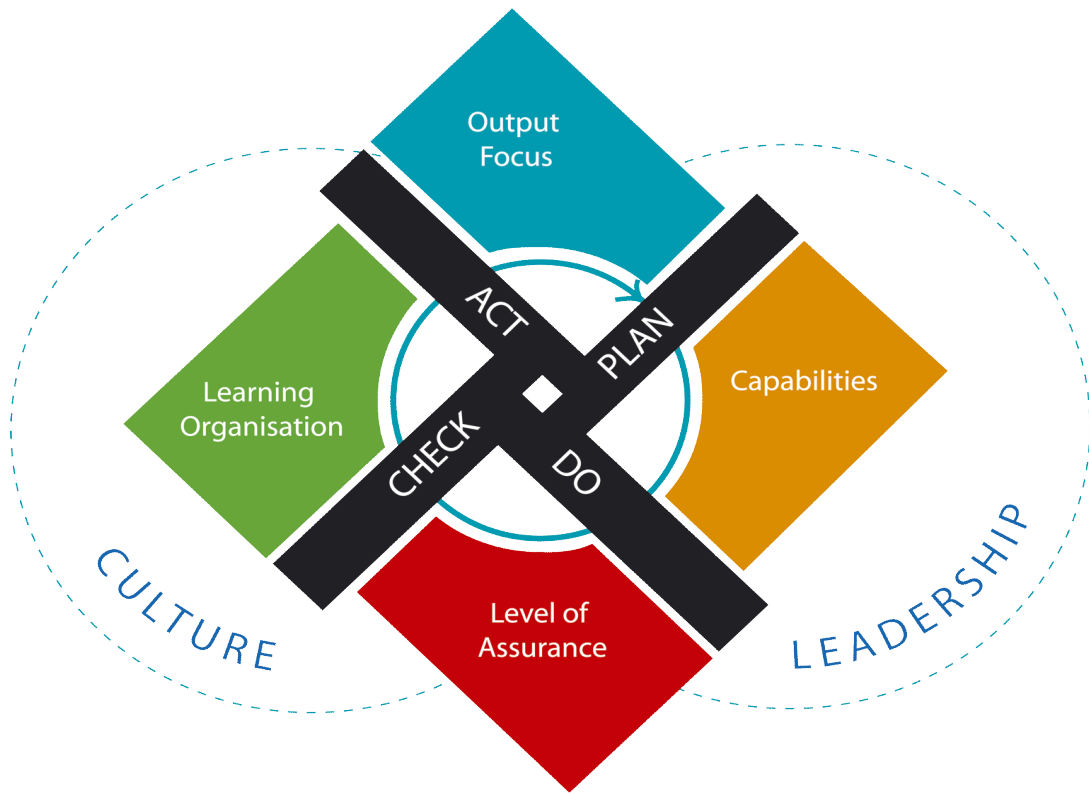
² PAS (Publicly Available Specification) is applicable to any organisation where physical assets are a key or critical factor in achieving its business goals. BSI publishes PAS 55 in response to demand from industry for a standard for asset management.

developed, it needs to be adjusted and designed in accordance with an overall decision-making framework that considers the range of likely good practices and international standards. It also needs to acknowledge that this guidance may vary for different organisations, different sectors and different asset management processes.

In terms of internationally accepted guidance, the Asset Management Council Inc. and the Institute of Asset Management (2010) proposed a Best Practice Framework to achieve a unified overview of asset management and has the following key components:

1. A conceptual model that describes, at the highest level, the key aspects of asset management and how these interact with each other, and how they link to the overall corporate objectives and business plan.
2. A list of Asset Management Subjects that can be organised around the Conceptual Model and used to describe the scope of Best Practice Asset Management.
3. An Asset Management Matrix that provides the framework for capturing different examples of best practices for each subject and the operating context in which these best practices may be applicable.
4. An Asset Management Maturity Scale that describes levels of maturity beyond PAS55 alignment and guidance on how to assess how well a particular organisation has applied best practices in the context of its own business drivers and priorities.

The first component of the framework is a conceptual model. The concept of asset management describes its essential philosophies and principles. Conceptual models are valuable for communicating and agreeing foundation concepts in asset management. The Capability Assurance Model from the Asset Management Council, shown in **Figure 3.1** provides an example of a conceptual model for asset management.



Adopted from the Asset Management Council (2010, p. 6).

Note from the Council: You may display, print and/or copy this model for your personal use or for non-commercial use within your organisation. You must not copy, adapt, publish, distribute or commercialise any material contained on this site without acknowledging the source.

Figure 3.1 Capability Assurance Model

The Capability Assurance Model describes effective asset management as a combination of principles, quality processes and people. The emphasis of this model is on the comprehension and assurance of the capability of assets. The four principles of Asset Management—Output Focus, Capabilities, Assurance and Learning Organisations—describe the fundamental assumptions of a capability assurance approach to asset management. The Plan-Do-Check-Act feature acknowledges the need to continuously improve asset management capabilities. The feature of Culture and Leadership emphasises the key contribution of people to the delivery of quality processes (Asset Management Council Inc and The Institute of Asset Management, 2010).

To accommodate and appreciate the nature of the asset management structure, the Institute of Asset Management (2010) has introduced a centralistic conceptual model for asset management. This concept has already been adopted worldwide and tested with different organisations. This is shown in **Figure 3.2** and again emphasises the importance of organisations and people in enabling asset management processes.

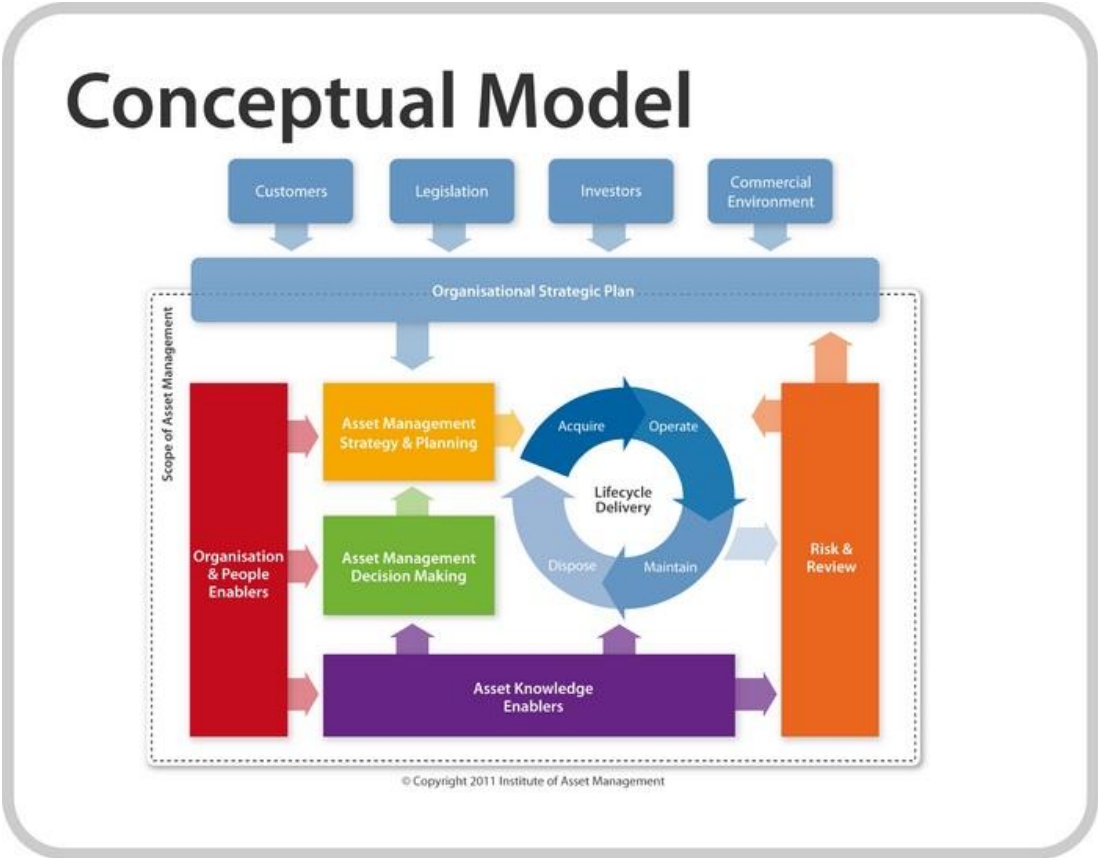


Figure 3.2 Asset Management Conceptual Model

Note: The IAM asserts and retains copyright of this diagram. You may reproduce and use this image as you wish but please do not alter it in any way and please also acknowledge the source.

It has been acknowledged that every organisation practicing asset management worldwide is likely to have a different culture and socio-economic environment. This difference must be recognised in the development of a global concept to asset management. For example, many members of the GFMAM, including the Asset Management Council in Australia, were incorporated as maintenance focused

organisations, whereas others are focusing on the development of the assets. As a global approach to asset management is developed and implemented by the GFMAM, that heritage must be both acknowledged and built upon if the approach is to be successful.

The starting point to understand and then adopt asset management practices is different in terms of organisational cultures, languages and objectives. The proposed global approach needs to be able to acknowledge all of those differences. Conceptual models other than the ones shown above may therefore be helpful to present asset management in a way that reflects more closely the background and current position of any GFMAM member organisation, whilst still maintaining a common method and practice.

The second component is Asset Management Subjects. The Asset Management Council Inc. and the Institute of Asset Management (2010) have identified and listed the Asset Management Subjects from international acknowledgement of an extensive list of asset management models and assessment methodologies. These subjects that together describe the scope of asset management are listed in

Table 3.1:

Table 3.1 Asset Management Subjects

Subject Group	Asset Management Subject
Asset Management Strategy and Planning	<ul style="list-style-type: none"> • Asset Management Policy • Asset Management Strategy • Demand Analysis • Strategic Planning • Asset Management Plans
Asset Management Decision-Making	<ul style="list-style-type: none"> • Capital Investment Decision-Making • Operations and Maintenance Decision-Making • Lifecycle Cost and Value Optimisation • Resourcing Strategy and Optimisation • Shutdowns and Outage Strategy and Optimisation

Subject Group	Asset Management Subject
	<ul style="list-style-type: none"> • Aging Assets Strategy

Table 3.1 Asset Management Subjects (Continued)

Lifecycle Delivery Activities	<ul style="list-style-type: none"> • Technical Standards and Legislation • Asset Creation and Acquisition • Systems Engineering • Configuration Management • Maintenance Management • Reliability Engineering • Asset Operations • Resource Management • Shutdown/Outage Management • Incident Response • Asset Rationalisation and Disposal
Asset Knowledge Enablers	<ul style="list-style-type: none"> • Asset Information Strategy • Asset Knowledge Standards • Asset Information Systems • Asset Data and Knowledge
Organisation and People Enablers	<ul style="list-style-type: none"> • Contract and Supplier Management • Asset Management Leadership • Organisational Structure, Culture, Roles and Responsibilities • Competence and Behaviour
Risk Management	<ul style="list-style-type: none"> • Criticality, Risk Assessment and Management • Contingency Planning and Resilience Analysis • Sustainable Development

	<ul style="list-style-type: none"> • Weather and Climate Change
Review and Continual Improvement	<ul style="list-style-type: none"> • Assets and Systems Performance and Health Monitoring • Assets and Systems Change Management • Management Review, Audit and Assurance • Accounting Practices • Stakeholder Relations

Adapted from (Asset Management Council Inc and The Institute of Asset Management, 2010)

The third component is the Asset Management Matrix. It is important that the complexity of the asset management approach and an organisation's maturity in asset management are not mixed up. The Asset Management Matrix provides examples of best practices for different operating environments that reflect these different levels of complexity. It also provides guidance on which of these best practices are appropriate for different sectors or operating contexts, taking into account existing levels of maturity.

For some subjects it is not necessary to develop multiple levels of complexity of approach. For example, best practice guidance on the development of an Asset Management Policy is unlikely to vary significantly for assets or asset systems of varying complexity. By contrast, for a subject such as Asset Information Systems, best practice is likely to vary significantly depending on the complexity of the asset portfolio and the criticality of the decisions being made as a result of the asset information.

Although the Asset Management Matrix provides guidance on appropriate levels of sophistication for different operating contexts, each individual organisation will ultimately need to decide for itself what level of complexity or sophistication is appropriate based on a range of factors that may be particular to that enterprise (Asset Management Council Inc and The Institute of Asset Management, 2010).

The last component is Maturity Scale and Guidance on Assessing Maturity. This component aims to provide greater clarity on the difference between complexity and maturity in asset management processes and to stress that a simple approach can

be assessed as a high level of maturity particularly for the purpose of simple assets. For example, ISO/IEC 15504 on Software Process Improvement and Capability Determination provides a simple and useful approach to define and assess the maturity process. This approach needs to be adapted for asset management to develop a simple and straightforward method of defining and assessing an organisation's maturity in asset management.

Specifically for public organisations, the Royal Institution of Chartered Surveyors (2008), published the Asset Management Guidelines for the public sector. In light of the increasing focus on the way assets are managed in the public sector, RICS felt it was necessary to produce these guidelines on strategic asset management for land and buildings for its members and for others who are involved with the practice of strategic asset management. The guidelines seek to cover the whole subject of public sector strategic asset management, by setting out a structured approach to the subject, with references on where to find more information. Rather than being just a guide it seeks to help managers practice good strategic asset management by explaining the key steps and techniques to be used. The detail of the guidelines can be seen in **Figure 3.3**.

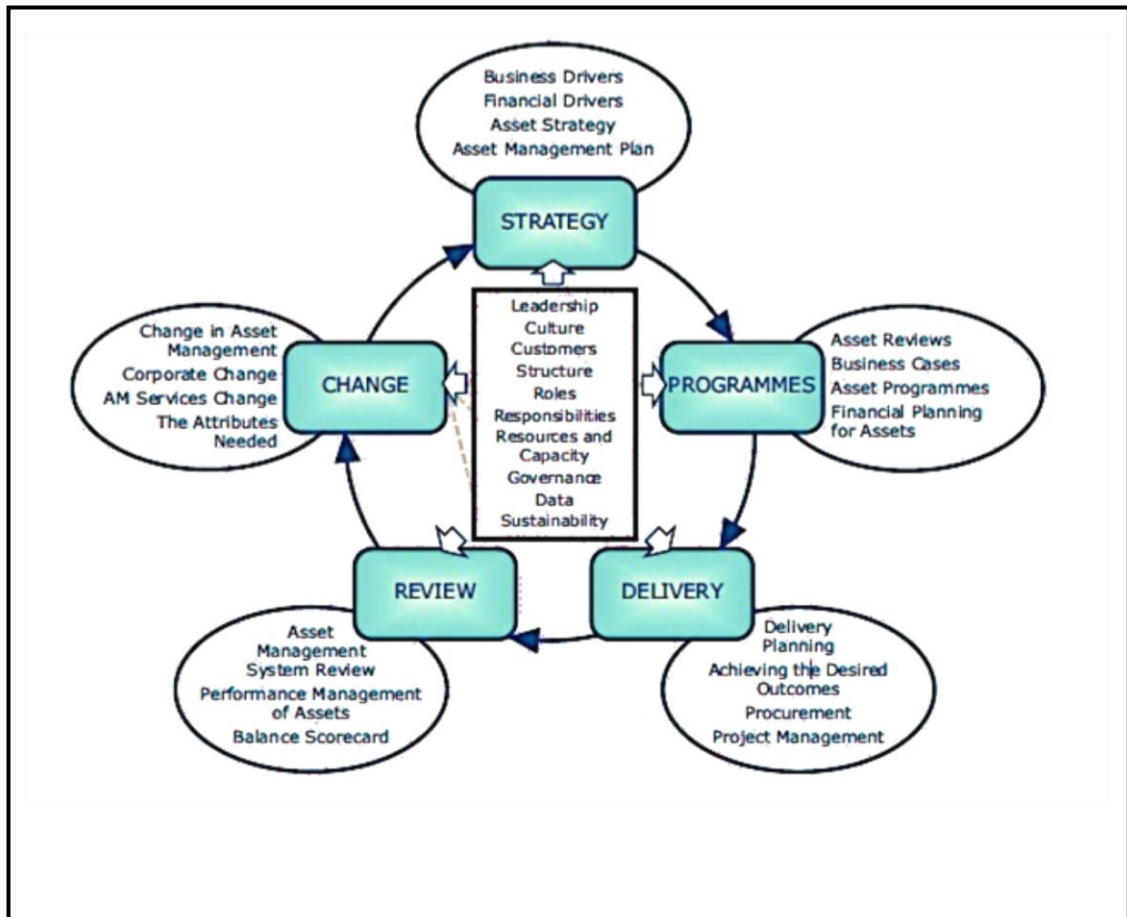


Figure 3.3 Business Process for Assets and Supporting Activities

Adapted from RICS Guidelines (Royal Institution of Chartered Surveyors., 2008)

Asset Strategy

In these guidelines, ‘asset strategy’ is used to describe the general direction that the asset base will take over the next 5-10 years, the approach to be adopted in getting there and the policies that will be applied to decision-making. In consequence, it would consider the business goals and objectives of the organisation, its business drivers, its financial context and the implications for the organisation’s assets. It would describe the organisation’s asset objectives and its longer-term vision for the asset base, the way in which each category of the asset base would be treated in the future and the overall financial framework in which this would happen.

The asset strategy is almost always a central part of a broader document, the asset management plan. In addition to the strategy this broader asset management plan will also describe the organisational arrangements that are to be adopted to

implement the strategy and will make clear the critical success factors and associated performance measures that will need to be met in implementing the strategy, together with an assessment of current performance (Royal Institution of Chartered Surveyors., 2008).

Asset Programs

This chapter of the guidelines considers the next part of the business process, after asset strategies/asset management plans have been prepared. Once the asset strategy has provided a clear statement of direction on the vision for the asset base and the approach to be adopted for each category of the asset base, more detailed work needs to be undertaken to translate this into programmes of action (Royal Institution of Chartered Surveyors., 2008).

The first stage is to review the asset base in detail to examine the practical implications of the asset strategy. For a large or diverse asset base this may have to be done in stages over a number of years. The second stage is to develop specific projects or project options designed to implement the strategy. These projects or project options will need to be evaluated to assess both the degree to which they meet organisational objectives, and their affordability. The third stage is to bring the most beneficial and affordable projects together into a programme of projects for implementation. The fourth stage is to ensure that the programme must be financially robust and be integrated into the organisation's overall financial planning, budgeting and monitoring processes.

Delivery

Delivery of asset strategies and programmes is an extensive subject in its own right and has been written about elsewhere. No matter how well prepared, well written or comprehensive an asset strategy or asset management plan is, it will be wasted and all efforts of asset management will have failed in the absence of real results and positive outcomes. Successful delivery depends upon having the right (Royal Institution of Chartered Surveyors., 2008):

- rationale for delivery
- support, ownership and leadership
- resources
- delivery plan

- delivery processes
- results.

All these items mean developing the rationale and strategy of successful delivery; asset programmes; securing corporate ownership and leadership; the resources for delivery, delivery planning, delivery management; and benefits realisation and risk.

Review

Assessing the performance of the entire asset management system in an organisation is often a prerequisite to more technical performance improvement. Metrics are a key feature in effective performance management of the asset base. Measurement through the balanced scorecard, key performance indicators (KPIs), business ratios and benchmarking enable positive action to be taken to improve delivery, financial efficiency and quality of service to customers.

Some might say that this is where an asset manager should start and in many ways this is true. All asset managers should review, at the beginning of their tenure, or when circumstances dictate, whether all the key elements of asset management are present in their organisation. The review should seek to establish whether all the elements of the key diagram (see **Figure 3.3**) are in place in the organisation and the extent to which improvements will need to be made. To do this, there is a need for an evaluation framework. The RICS suggest that this framework should be based on some description of good practice, be it these guidelines or, for example, the Maturity Matrix from Improving Property Asset Management in the Central Civil Government Estate, PAS 55-Asset Management 2004 or the NAMS Property Manual 2006 (Royal Institution of Chartered Surveyors., 2008). The RICS describes below an example using the key elements of these guidelines. The stages are as follows:

- define your evaluation framework
- identify your assessment criteria
- define your assessment method
- assess performance
- set targets, identify improvement action, and implement that action.

Change

In the previous elements of these guidelines, the need for both an asset management system review and ongoing asset performance review was discussed. Both types of review will often require a response across the whole organisation rather than solely within the service that directly manage the assets. Obtaining responses can be challenging and sometimes the asset manager may not be familiar with the change management techniques required. This section of the guidelines discusses the issues involved in change management. Its purpose is to highlight the importance of being able to manage change in asset management. It identifies the areas of change that are often encountered and records some of the specific features of change in relation to asset management.

The asset management business process diagram used in this guidance also gives an insight into the changes that may need to be made. The changes may be concerned with improving (Royal Institution of Chartered Surveyors., 2008):

- strategy
- programming
- delivery
- review.

As well as changing the contextual activities, such as:

- leadership
- culture
- customer service
- organisational structure, roles and responsibilities
- governance
- resources management and capacity building
- data management.

Two distinct types of change can be identified that an asset manager may be called upon to implement:

- Corporate change, i.e. changes in asset services and individual buildings within the asset base which require the organisation as a whole to respond.

- Asset management services change, i.e. those needed to make sure that asset management services facilitate the delivery of the changes and the improvement in performance of the asset base and individual assets.

An example of state government best practice guideline for the management of municipal assets was introduced by the Queensland Government's Department of Public Works, namely the Strategic Asset Management Framework (SAMF) (Department of Public Works, 2010). This guideline emphasise that systematic decision-making processes throughout the life of the building asset will facilitate strategic asset management. This will ensure that the building portfolio is aligned with departmental service delivery requirements and government priorities and strategies.

The following fundamental principles underpin the SAMF:

- Assets exist to support the delivery of services, consistent with the government's targets and priorities.
- Strategic asset management undertaken by departments needs to be consistent with the requirements of whole-of-government asset management policies and legislation.
- Asset planning is an important activity that should be interrelated with financial, human resource, and information and communication technology planning.
- Non-asset solutions, full life-cycle costs, risks and options should be considered before investing in new build assets.
- Responsibility for assets resides with the department that controls and administers them.
- The full cost of providing, operating and maintaining assets should be included in departmental budgets.

The elements of strategic asset management, shown in **Figure 3.4** each have a role to play in best practice planning, provision, management, maintenance and eventual disposal of assets.

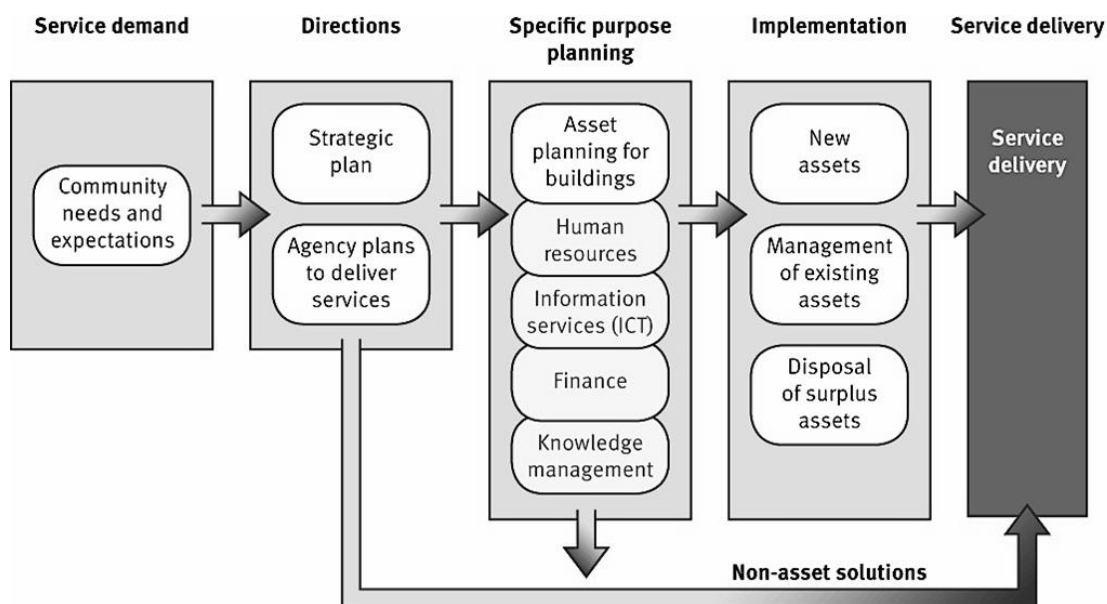


Figure 3.4 Elements of Strategic Asset Management

Adapted from (Department of Public Works, 2010)

The principles and elements of strategic asset management introduced in the SAMF by the Queensland Government consist of service demand, directions, specific purpose planning and implementation. All these principles and elements are aimed to support the delivery of public services. The detailed explanation of these principles and elements, from service demand to implementation is discussed below (Department of Public Works, 2010).

Service Demand

The identification and analysis of the community’s need for government services is regularly undertaken by government and communicated to departments in a range of ways, including emerging policy, legislation, priorities and objectives. These are translated by agencies into specific departmental objectives, performance indicators, services and service standards, these are addressed in major documents such as strategic plans, budget documentation and annual reports (Department of Public Works, 2010).

Directions

Departments should use a structured planning process to develop service delivery plans and strategies, which reflect their objectives, priorities and policies.

An agency's strategic plan should be developed for a period of four years and be sufficiently prescriptive for performance to be measured, but broad enough that it can adapt to changing circumstances (Department of Public Works, 2010).

Specific Purpose Planning

The availability of adequate and efficient resources impacts on the quality of the services that are delivered. Ideally, agency asset planning decisions will be integrated with and also complement the finance, human resource and information and communication technology strategies that support the delivery of departmental services.

Departments should consider the implications of capital investment, the maintenance and use of existing assets and the disposal of surplus assets. Access to relevant, reliable and timely information about building assets is essential in order to (Department of Public Works, 2010):

- assess whether particular building assets are meeting service delivery needs
- determine whether building assets are properly maintained and managed
- evaluate the need for future replacement of assets
- identify and plan for the disposal of surplus or under-utilised building assets
- quantify the cost of the services provided by the department and, if applicable, benchmark against other jurisdictions.

Implementation

Implementation of effective and efficient asset management involves integration of plans to address building portfolio and building asset management issues, such as capital investment, maintenance and the disposal of surplus assets, with the planning process for human resources, finance, information and communication technologies (Department of Public Works, 2010).

These plans need to address strategies that yield the following benefits:

- a clear understanding of the role the building portfolio plays in supporting agency objectives

- alignment of assets with service delivery strategies
- optimal functionality and utilisation of assets
- economies of scale resulting from better coordination of programs and initiatives and the managing of finite resources
- implementation of suitable measures to facilitate achievement of environmentally sustainable outcomes
- maintenance and improvement of the health and safety aspects of buildings
- access to current and accurate asset and portfolio valuations and information to enable identification of surplus assets
- effective and efficient use of capital and maintenance funds
- identification and quantification of opportunities and risks.

New investment requires a structured process to demonstrate the need for the delivery of a new facility. This should include a review of service concepts, consideration of non-asset options and alternative asset delivery solutions. The full lifecycle costs and function of the building asset should also be taken into account. Information on capital investment/procurement planning as the foundation for the delivery of government building projects is available in the SAMF guideline: Capital Investment/Procurement Planning and Project Delivery (Department of Public Works, 2010).

Management of existing assets includes monitoring the physical, operational, functional and financial performance to ensure that they fully support the delivery of the agency's services (Department of Public Works, 2010).

Disposal of surplus assets should be undertaken in a structured and prioritised manner in accordance with prevailing market conditions and government priorities (refer to the SAMF guideline: Asset Disposal) (Department of Public Works, 2010).

3.2.3 UNDERSTANDING PUBLIC SERVICES AND GOVERNMENT RESPONSIBILITIES

To further analyse asset management conducted by governments, it is important to examine the basic characteristics of organisational functions and the responsibilities of governments in general. Therefore, this section first examines government core responsibilities and the scope of public services.

Government core responsibilities

There is no simple straightforward, technically grounded answer to the question of appropriate role, scope and size of government (Jackson, 2008, p. 28). Political philosophers and economists have debated this question over several centuries. Central to the debate according to Jackson are the basic normative questions of government core business, the size of public spending share in the national economy, and whether the government should engage in direct production activities.

Buchanan and Musgrave (1999) state that there are three major roles of government: an allocative role, a distributional role and a stabilisation role. Within the allocative role, the provision of public goods is seen as a means of overcoming various market failures that can arise from ill-defined property rights, externalities, incomplete information, high transactions costs or non-increasing returns to scale. Correcting market failure gives rise to what Buchanan and Musgrave referred to as the service state, i.e. an essential role, which is to repair certain leaks in the efficient functioning of the market as a provider of goods.

The second role of the government is concerned with distributional issues and forms the basis of the welfare state. Given any initial distribution of rights, including property rights, the unfettered market system will grind out a distribution of welfare that may or may not be considered to be socially just and fair. The objective of the distributional role of the state is to adjust the market determined distribution of welfare by bringing it closer to what society regards to be just and fair. This is achieved through regulation, the adjustment of rights, giving access to markets in the face of discrimination, progressive taxation and subsidies.

The third role of government is the stabilisation role. Unconstrained market forces can result in a general equilibrium for an economy that is accompanied by unacceptably high levels of unemployment. Classical economists in the early twentieth century argued that, if left alone, market forces would adjust and unemployment would be eventually eliminated. However, it is argued that an economy can become stuck in a state of high unemployment for many years because the speed of economic adjustment is very slow. Therefore government intervention role in such conditions is needed in the form of public spending changes and/or tax regulation, in order to manage effective demand.

Buchanan and Musgrave (1999) write that besides market failure, public failure and policy failure also exist. Public sector failures arise for reasons that similar to market failures that is high transaction costs and incomplete and imperfect information. In addition, there are the inefficiencies that arise from inadequate incentive structures, severe principal/agent problems and inadequate demand revelation mechanisms as in the case of voting mechanisms. These failures result in both allocative and managerial inefficiencies within the public sector, and are reflected in inappropriate policies being implemented through wasteful bureaucracies.

The scope of public services

In everyday definition, people often refer to public services as being what the public sector does. However, this definition nowadays is no longer relevant—at least not for most countries which have advanced in public asset management (Bovaird & Loffler, 2008b). We have for a long time become used to seeing private firms mending holes in our roads and repairing the council's housing stock. Moore recently it has become commonplace in many areas to see private firms collecting public rubbish and running public leisure center these are but two examples of many.

According to Bovaird and Loffler (2008b), public service is quite subtle but precise; public services are those which merit public intervention because of market failure. In other words, any goods or services would result in suboptimal social welfare if it were provided in a free market should be regulated in some way by the public sector, and in this way it qualifies as a public service. On the other hand, an alternative approach suggested by Bovaird and Loffler (2008b, p. 8) defines public service as coming from political discipline. It suggests that public services are those which are so important for the re-election of politicians or, more realistically, of political parties that they are given a public subsidy. Under this perspective—where a service is so important in political decision making that politicians are prepared to spend some of their budget on it—a service's "publicness" has been bought at the expense of the definition of what potentially constitutes a public service. There are few goods or services that are never important electorally. A third approach introduced by Bovaird and Loffler (2008b) focuses on all those goods where providers are placed under a public service obligation when they are given the right to supply the service. This approach defines a public service all those services in

which Parliament has decreed a need for regulation. Based on the three definitions above, it can be concluded that public service is a service that is provided and or supported directly or indirectly by the government, where the demand for the service is initiated by and for the benefit of its citizens.

3.2.4 ELEMENTS OF PUBLIC ASSET MANAGEMENT

After discussions on asset management definition, best practices in public asset management, and governmental functions and responsibilities, this report now discusses the important content that should be incorporated in the proposed asset management framework. The first element is asset identification. Local governments should be able to identify its assets and provide detailed information regarding to those assets. The second element is asset needs analysis. Differentiation between core assets, to support delivery of public services, and surplus non-core assets is important in the framework. The third element is asset lifecycle guidance, starting from asset design, plan, procurement, development, maintenance, management, utilisation and disposal of the unnecessary assets. These three elements should be bound by the objective and subjective measurements as controlling elements in the framework. The controlling elements are discussed in performance measurement which is part of the fourth elements of the framework.

Public asset identification

The primary purpose of an asset identification and its accompanying components (programs, tasks, or activities) is to help asset managers (Davis, 2007) to:

- know exactly what assets an organisation has (i.e., assets that an organisation is responsible for operating, monitoring, and/or maintaining),
- know precisely where the assets are located,
- know the condition of the assets at any given time,
- understand the design criteria of your assets and how they are properly operated and under what conditions,
- develop an asset maintenance program that ensures that each asset performs reliably when it is needed, and

- perform all of these activities to optimise the costs of operating the assets and extend their useful life to what was intended in the initial design and installation (if not beyond).

Davis (2007) further explain the basic information and requirements to identify the public asset. Those information and requirements are as follows:

- Know exactly what assets an entity has. This might sound simple, but knowing what assets an organisation has is not always easy. Some organisations have "inherited" certain assets that were annexed or may have been previously installed by third party developers, some assets may have been added by the organisations own activities.
- Breakdowns (or outages) occur, as a result organisations may have to deviate from what was at one time somewhat standardised equipment and parts. Field modifications to processes and equipment (i.e., quick fixes, temporary fixes, bypasses) and other unplanned situations have the potential to change some equipment (or process) configurations and can also change their location. This is why organisations need to have a computerised maintenance work order system for all corresponding and documented procedures, roles and responsibilities, and feedback loops to ensure that every time anyone touches one of the assets there is a complete and easily retrieved record of the event.
- Know precisely where the assets are located. Again, this may sound simple, but how much time is still wasted retrieving drawings, searching for documents, or tracking down the last person(s) who worked on an asset in order to locate it. Even worse, facilities that used to be easily accessible may now be hidden under a new building, street, or sidewalk.
- Know the condition of the assets. Actually knowing the condition of each asset can present its own set of problems, especially when the asset is "hidden" (i.e., vaulted, underground, or remotely located). These situations dictate that an organisation must have a system (process or procedure) in place which requires it to do whatever inspections, preventative maintenance, and/or predictive tasks whenever the opportunity presents itself sometimes the opportunity must be created. All

related and pertinent information should be completely and accurately captured, documented, and stored for easy access and review at a future time.

- Davis (2007) also argues that asset owners/managers need to know their assets' design specifications, document them, ensure that equipment is operating within those specifications, and maintain the equipment accordingly. Plant-distributed control systems and even computerised maintenance management systems/enterprise asset management systems (CMMS/EAMS) can be used to monitor this type of data and information.

Asset needs analysis

Countries in transition have been going through a rapid process of redistribution of property and decentralisation of government. The major components of this process are devolution of property from the central to local governments, as well as property privatisation and restitution (Kaganova & Nayyar-Stone, 2000, p. 320). In many countries, property devolution to local governments has outpaced further privatisation and restitution, which leads to an increase of property ownership by local government. This condition has resulted in many local governments becoming the largest property owners in urban areas. The property owned or controlled by local governments goes far beyond what is needed for public functions and services. At the same time, there is a strong trend towards indirect property ownership through the transferring of property from municipalities to enterprises owned by local governments.

In selection of asset ownership, local governments must understand the type of assets they need in order to deliver public services. It is important for them to identify their core businesses. Only then can they categorise which assets are needed and which assets are not important and should be alienated. It is also important to identify and categorise those assets according to their importance and significance to the community. Some assets, such as military assets, are important to the government but not directly significant to the community's needs. Some assets are important to the community but not significant to the government, for example water and electrical infrastructure. All these categorisations can help the government to identify its needs for specific public assets.

In the area of infrastructure assets, Too (2007, pp. 2-3) argues that the adoption of an asset management framework in practice has provided a better understanding of how to align the asset portfolio to best meet the service delivery needs of customers, both now and in the future. Too has also grouped the infrastructure asset management process into strategic analysis, choice and implementation. Strategic analysis, aims to identify the direction that will best utilise infrastructure assets in the delivery of service to the customer. Consequently, it must ensure the compatibility between current asset portfolio and the changing environment within which it operates. This involves three components, 1) analysing the business environment, 2) reviewing and analysing its current asset portfolio, and 3) conducting strategic “gap analysis”. The two main capabilities important to this process are 1) customer responsiveness capability and 2) asset data collection capability.

Customer responsiveness capability involves the collection of information from sources external to the organisation. This, in turn according to Too (2007), will provide organisations with the ability to react quickly to changes in the needs of customers and to undertake strategic change when necessary. In the provision of infrastructure assets and services, there are expectations of the performance of assets from various stakeholders, which can include asset owners, project managers, designers, subcontractors, suppliers, funding bodies, users and the community at large. The most important stakeholder is the customer, that is, the asset user and the community who heavily influence the decision on the service to be provided. Therefore, it is important that any decision on infrastructure provision aims to satisfy the needs of the customers as it can substantially affect their welfare.

Another capability, asset data collection, aims to identify the service gap by comparing the service needs and current organisation’s resources including assets. In order to achieve this aim, Too (2007) argued that a systematic inventory of individual assets is important. This process should record acquisition cost, original and remaining useful life, physical condition, and the cost history for repair and maintenance of the asset. Organisations with a comprehensive database to review their current assets will have an advantage in identifying service gaps in a more accurately and timely manner.

Traditionally, the goal for public asset management is to supply the right amount of property for public goods and services at the least cost compared to all the

feasible alternative arrangements including private sector provision. However, current goals of public asset management are to support local economic development and obtain governmental revenues from alternative sources (Kaganova & Nayyar-Stone, 2000). Furthermore, Kaganova and Nayyar-Stone (2000) argue that public sector asset management includes the same acquisition, holding and disposition activities as in the private sector, but added to that, two other activities i.e. allocation of public land for development and public participation in land development. All these processes need to be developed in a form of guidance.

Asset lifecycle guidance

Hentschel and Kaganova (2007, pp. 24-25) noted that asset management is not a single event but rather a process designed to produce knowledgeable decisions about the purchasing, operating, and disposing of assets which is known as the asset lifecycle. Asset lifecycle comprises planning, design, procurement, maintenance, management, utilisation, and disposal (Charles & Alan, 2005; Churchill, 1992; Dent, 1997). Unfortunately, private sector decision-making models, although numerous, are not always applicable to or reliable examples for government decision-making (Hentschel & Kaganova, 2007). The determination of asset decision-making in relation to asset acquisition, valuation, and disposition is very important for government officials. Property decisions should never be made in a vacuum. According to Hentschel and Kaganova (2007), a building or a parcel of land is nothing more than a resource or a tool to be used for achieving a vision of where a community wants to go and how it intends to get there. Because opportunities to deploy assets are plentiful, well-grounded decisions about the use of assets can best be made through a disciplined plan that includes explicit policies, systematic procedures, and appropriate performance benchmarks.

A well-designed asset management plan spells out a sequence of steps that makes good policy sense. A detailed understanding of the nature, extent, and use of all assets controlled by a government agency is the first step to properly manage the assets. Once an asset is identified and classified as essential or nonessential to an agency's mission, its performance can be continuously measured against established benchmarks while its contribution to that mission is periodically assessed.

Nonessential government assets on the other hand should not be carried unless they contribute ongoing benefits or cash. If they do not make positive contributions,

decision makers should consider their sale or disposal to divert capital to more productive uses that can help achieve a community's goals and vision. Government agencies should always be scouring property portfolios to uncover latent opportunities in unused and underused assets.

Physical assets have a lifecycle; they are planned, created, used, managed and disposed of when no longer required. Understanding the asset lifecycle concept will assist departments to optimise the value, use and benefits derived from the assets they control. The concept 'control of assets' is demonstrated by the ability of a department to use an asset to achieve its objectives, obtain a benefit from the sale of the asset, charge for the use of the asset or deny use of the asset to others. This term is important for financial and asset management purposes (Department of Public Works, 2010). The asset lifecycle is shown in **Figure 3.5**

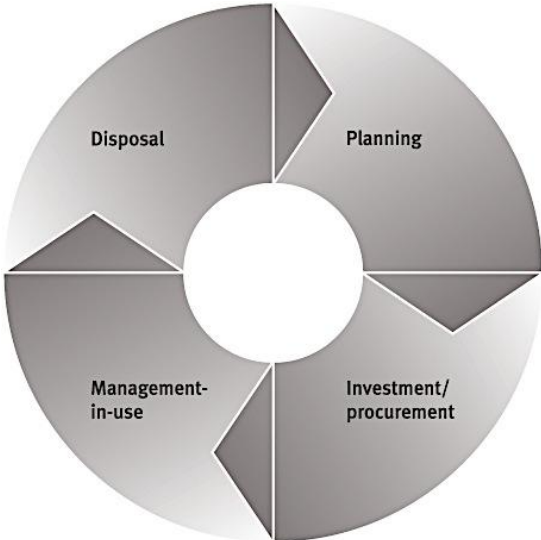


Figure 3.5 The Asset Lifecycle

Figure adapted from (Department of Public Works, 2010)

Performance measurement in public sector organisations

Phang (2006, p. i) shows that measuring performance is a necessary management practice if action is to result in desired outcomes. For example, an

important objective of the New Zealand public sector reforms, which started in the late 1980s, was to focus the attention of public servants on clear specified results rather than bureaucratic procedures. Based on an implicit assumption that all public sector organisations are of a productive in nature, Phang believes that the reforms promised greater efficiency within the public sector by holding managers accountable for results while providing them with greater freedom to allocate resources. Consequently, outputs became key performance measures to enhance the accountability structure and to improve efficiency of public organisations.

The importance of measuring organisational performance has been recognised and emphasised by scholars and practitioners, for example Shand (1997, p. 22) cited in Imbaruddin (2003, p. 45) states that; “if we do not measure performance we do not know what we are doing” and Scott (1994, p. 15) cited in (Carter, Klein & Day, 1992, p. 49) who notes that “without it [performance measurement] we do not know where the organisation is”. In his research, Imbaruddin (2003, p. 45) identifies three main measures of organisational performance; namely prescriptive, descriptive, and proscriptive measures.

Prescriptive performance measurement is undertaken in order to assess how an organisation has achieved its objectives or targets. Prescriptive performance measurement is like a dial, which precisely evaluates inputs, outputs, and outcomes based on defined standards. Thus, prescriptive performance measurement can assess whether an organisation has succeeded or failed to achieve its objectives or targets, and can separate good performers from bad performers.

According to Imbaruddin (2003), in the case where absolute/prescriptive measurement is difficult or impossible to obtain due to organisational objective ambiguity, descriptive performance measurement is more applicable. Descriptive performance measurement gives information about trends in organisational performance by, for example, comparing relative performance over time rather than performance against normative standards or precise targets. Imbaruddin also states that performance measurement may also function like an alarm-bell which warns if undesirable and intolerable circumstances exist in an organisation, without relating these circumstances to specific targets or objectives. Carter et al. (1992) names this type of measurement as proscriptive or negative performance measurement.

Whether performance measurement is undertaken to assess achievements against goals, identify trends, or as an early warning system, helping managers to make appropriate decisions has to be the prime objective of measuring organisational performance. As a result benefits may be produced, such as a more responsive public service as well as an increase in services per unit cost, and the public organisation's value to the public may be improved. In addition, indicators applied in performance measurement may also guide managers to set specific goals, facilitate budget justification, reduce cost, permit control of operations and improve motivation and accountability (Imbaruddin, 2003).

In the early 1900s, organisations focused on developing procedures and measurement techniques to improve efficiency and increase the productivity of workers. For public organisations, the interest in efficiency is transformed into accountability as a reaction to the pervasiveness of patronage and corruption in the way government conducted its business. This triggers a series of efforts to replace rather subjective assessments of government performance with systematic and more precise measurements which automatically lead to rational decision-making and good government (Julnes, 2008, p. 58).

Imbaruddin (2003) states that setting standardised and absolute indicators to assess the performance of multiple objective public organisations is not always easy because the process involves a complex mix of political, financial, social and technical considerations. Therefore, the performances of public organisations sometimes are not assessed in absolute measures but by comparison; four types of comparisons are arguably the most common strategy used. Imbaruddin recognised those four strategies as firstly, the performance of an organisation can be evaluated by a time-series comparison; that is, measuring the performance of the same organisation over time. For instance, the annual records of an organisation can be utilised to assess whether the performance of an organisation in a particular year improves, decreases, or remains stable compared to previous years. Although this type of comparison theoretically measures the same organisation, changes of technology as well as demographic and social circumstances may influence the performance of an organisation over time.

Secondly, comparing its achievement against projected targets or standards can assess the performance of an organisation. Therefore, it should be carefully decided

who the best person is to set the targets, the mechanism of targets prescribed—whether from the top or from bottom up—and the targets’ feasibility. Thirdly, using internal organisational comparisons can assess the performance of an organisation. This is done either by comparing the performances of different units within the organisation or by comparing the performance of the same organisation operating in different regions of the country. Fourthly, although it is rarely applied, performance measurements can also be undertaken by comparing one organisation with other different organisations.

These four strategies were grouped into two most frequently referenced approaches to measure performance of public organisations namely objective and subjective measurements (Imbaruddin, 2003). Objective performance measurement involves measuring service delivery performance characteristics using data from official archives of public agencies. Sometimes called objective measures, these indicators are used to document performance criteria such as effectiveness, efficiency and equity of policy inputs, outputs and outcomes (as in the Imbaruddin study that found efficiency and effectiveness constitute managerial standards of performance which guide the bureaucracy in the provision of public services). Since these elements focus on the price and quantity of services delivered, it is in this area that hard data or objective indicators are most useful and most often used.

Besides the objective indicators a need for evaluating the performance of public sector organisations in terms of subjective indicators exists. Subjective performance measurement evaluates the performance of government agencies using subjective indicators such as public services users’ satisfaction towards the quality of public services delivered by the public entities. Citizen perceptions, preferences and evaluations are important measures of performance in public organisations and therefore must supplement the more objective types of indicators. For example, in order to assess the responsiveness and equity of city service performance, it is necessary to allow the people being served to provide standards of evaluation. In other words, the issues of responsiveness, equity and equality, which are important aspects in the delivery of public services, should be used to support the objective indicators (Gaster & Squires, 2003).

Equality in relation to the delivery of public services relates more to the existence of equal opportunity and access and, consequently, focuses more on the

needs and rights of citizens to obtain public goods and services. An organisation making a genuine effort to understand the needs of all the people the organisation has to serve and actively acknowledge the right of those people, may be said to value equality. In short, while equity gives emphasis to what people actually obtain from the government agencies, equality highlights the measures public organisations undertake to make sure that people can get the goods and services they need (Gaster & Squires, 2003).

The increasing pressures on governments around the world to adopt democratic practices in the 1980s made subjective indicators, such as citizen surveys to measure the performance of government agencies, more important. Brudney and England (1982a, p. 129) cited in (Gaster & Squires, 2003) argue that gathering and publicising public opinions is significant in itself because it reflects the government's adoption of democratic norms. In addition, the process of asking citizens to express their views, as well as their opinions about performance of public organisation 'may have critical behavioural ramifications'. The citizens may be reassured that they are involved in managing public services and that the government is seriously concerned about their views.

Peters and Pierre (2007) note that public administration in the year 2000 is an administration, which serves its clients. Others indicate that in an environment where the general public increasingly demand quality services and client focus, understanding client satisfaction becomes critical and therefore the opinions of clients or public service receivers need seriously to be taken into account. In addition, giving clients every chance to voice their opinions about service quality is particularly relevant in many public sector services which are monopoly suppliers and thus provide clients no exit opportunities. It has also been pointed out that clients' opinions can be of assistance in understanding and establishing public needs, developing, communicating and distributing public services, and assessing the degree of satisfaction with services. After all, citizens are the main beneficiaries of public sector operations they should be involved in the process of performance evaluation in the public sector (Carter et al., 1992).

Besides philosophical arguments for the use of subjective measures, decision-makers or managers in government agencies can obtain useful information from subjective measures such as a citizen satisfaction survey. For example, the public

organisation can obtain information about the type and magnitude of the needs of various service receivers; whether previous changes in service delivery have produced desired results; or identify citizen opinions and preferences regarding specific issues, programs, policies, and priorities. Decision-makers can also obtain information from service receivers who are not likely to express their voice, through existing conventional mechanisms such as writing or calling the agencies or attending public hearings (Hatry et al., 1998, p 2) cited in (Carter et al., 1992).

3.3 LESSONS LEARNED FROM DEVELOPED COUNTRIES

Australia, New Zealand, Canada followed by the UK and the US are considered to be advanced reformer countries in public asset management (Akiko & Gloria, 2005; Akintoye & Beck, 2009; Allen & John, 2008; Conway, 2006; Conway, Kaganova & McKellar, 2006; Dow et al., 2006; Hentschel & Kaganova, 2007; Jolicoeur & Barrett, 2004; Kaganova et al., 2006b; Lloyd, 2010; Nick, 2005; Royal Institution of Chartered Surveyors & Institute of Revenues Rating and Valuation, 2008; Warren, 2006). Despite the strong public sector and service delivery significance, the issues of public asset management processes are surprisingly similar in many different countries regardless of their territorial and regional differences, institutional contexts and policy strategy differences (both developed and developing countries). The following sections discuss the lessons learned from three of those five countries.

Public asset management in Australia

State asset management reform in Australia has derived logically and consistently from broader reforms to increase the productivity and efficiency of Australia's public sector and economy (Conway, 2006, p. 25). The need to strengthen domestic competition and increase labour market flexibility has been a central, recurring theme of reforms. This has applied equally to the economy as a whole and to the government, leading to an increased use of market-type mechanisms in the public sector and to a profound transformation of the Australian public service. The need to make government more efficient and effective while strengthening its financial position has been another important motivation, leading to a completely reformed public budget process focused on outputs and outcomes, not

inputs, and to progressively implement private-sector financial accounting and reporting practices in the public sector organisations (Conway, 2006).

The first asset management reforms appeared in the mid-1980s. They followed the Reid Review and the White Paper Budget Review issued in 1983 and 1984. These reforms affected common services, which are services provided by one government entity to other government entities. The measures that were implemented included instituting user charges, commercialisation, and privatisation (Conway, 2006, pp. 28-29). In 1987, the federal government established the Department of Administrative Services (DAS) which is responsible for 16 common service programs, including property management, building design, construction, repair and maintenance, which had operated separately in nine departments.

In 1995 the Australian National Audit Office (ANAO) examined asset management in the general government sectors (other than the Department of Defence). The outcome of the review was presented in the Audit Report No. 27, 1995-96, Asset Management, an influential document that set the stage for developments to follow. The report covers not only tangible assets, such as land and real estate, but also intangible assets, such as intellectual property rights, computer software and other intangible assets. The stated objectives of the audit were to assess public sector entities in managed their assets in order to produce better outcomes and to identify or develop best practices in asset management processes.

In conjunction with its report, the ANAO also published the Better Practice Guide and the Asset Management Handbook (Conway, 2006), which were based on the following asset management principles:

- asset management decisions should be integrated with strategic planning
- asset planning decisions should be based on an evaluation of alternatives that consider the lifecycle cost, benefits and risks of ownership
- accountability should be established for asset condition, use and performance
- asset disposal decisions should be based on analysis of the options that achieve the best available net return within a framework of fair trading

- an effective internal control structure should be established for asset management.

Public asset management in New Zealand

According to Dow et al. (2006, p. 77), New Zealand is one of the most advanced reformers in the management of public property assets. The reform was driven by the introduction of the new public management system, accounting reforms, and recognition of the financial pay-off to better real estate asset management in the era of budget constraints. The reform clearly increased transparency and accountability in real property transactions as well as reducing the economic inefficiencies associated with public property (Brown et al., 1993; Edwards & Ellison, 2003; Haynes & Nunnington, 2010). The most important triggers for the reform were the relationship between accounting reform and asset management reform, the degree of separation of ownership from management, and information systems (Dow et al., 2006).

The current legal and institutional arrangements for managing state real property are the result of a combination of historical factors and a radical restructuring of the economy and the government between 1984 and 1994. In that period, the Central Government implemented its reform program by passing a series of laws that resulted in (Dow et al., 2006, p. 78):

- The privatisation or corporatisation of the vast majority of state owned trading departments into state owned enterprises.
- The restructuring of ministries and agencies to clarify responsibilities and distinguish among policy, service delivery, and regulatory functions.
- The widespread introduction of performance management and reporting within the government (e.g., performance agreements between ministries and departmental chief executives and purchase agreements between ministers and departments).
- A shift in funding of departments from funding inputs to purchasing defined outputs (including policy and advice) and making capital contributions through the appropriations mechanism.
- The replacement of cash accounting with accrual accounting according to generally accepted accounting practice (GAAP) which is a set of accounting rules approved by the New Zealand Accounting Standards Review Board.

Although the period of radical reform was completed by 1995, subsequent administrations have continued to reform the system incrementally, through governmental regulations and internal policy directives. In the area of state real property management, the reform of trading departments and companies into State-Owned Enterprises (SOEs) was perhaps the most dramatic (Dow et al., 2006, p. 80). The old trading departments and companies were corporatised and many of them were subsequently privatised. The changes have reduced state portfolio, removed the real property from the balance sheet of the Central Government, and allows the new private owners to manage the assets as they see fit. The remaining SOEs were given capital structure relevant to their industrial sectors and were required to pay taxes and earn a competitive rate of return on equity. While still subjected to some constraints on disposal of state-owned property, the new executive boards of the restructured SOEs were given much more authority to manage the companies' assets and to decide on the composition, size, and ownership arrangements of the property portfolios. The chief executives of the reformed Central Government agencies were likewise given new authority to manage assets the agency controlled and used in the production of its services, from human resources to real property (Brown et al., 1993; Edwards & Ellison, 2003; Haynes & Nunnington, 2010).

In general, the government was obliged to comply with legislation governing the private sector in its use, development and management of property holdings and to manage its holdings in the same way as any private sector corporation or individual. At the same time, government agencies were subject to new accountability measures with the introduction of output purchasing agreements at all levels of government. The current output plans that chief executives of departments and other government agencies sign with their respective ministers and define both the outputs that the agency is to produce during the coming year and the indicators to be used to measure success.

This introduction of performance measurement directly affected the management of state real property (Dow et al., 2006, p. 81). According to Simpkins (1998) cited in Dow et al. (2006, p. 81), restructuring the ministries and shifting to purchasing defined outputs through agreements reflect a system with emphasis on the distinction between government's ownership and purchase interests. Performance

from an ownership perspective normally involves achieving a desired return on investment, maintaining capital, etc. On the other hand, a purchaser or customer is interested in whether the service was delivered as agreed or expected.

Public asset management in Canada

The evolution of management structures and practices within the federal government of Canada derive from three sources (McKellar, 2006, p. 53):

- First, the factors particular to the Canadian experience i.e. the history of the nation and its two official languages, French and English; the vast geography of the country; and its people, including its aboriginal societies.
- Second, the factors common across many Western societies are reflected in values and norms, legal and social institutions, political systems, attitudes toward education and training, and separation powers.
- Third, those factors confronting the federal government, which are not necessarily unique to Canada such as deficit and debt situations; the rethinking of government roles in response to changing societal demands; economic threats from global competitiveness; and shifting the balance between centralisation and decentralisation of federal command and control systems. Aboriginal land claims rank very high among these challenges, as does the rising concern with environmental issues from air quality and global warming to soil and water contamination is evident by Canada's commitment to the Kyoto Protocol.

Recent reforms within the federal government described by McKellar (2006, p. 54) since early 1990s, following two decades of persistent deficits were significantly higher (as a percentage of GDP) than experienced in the 1960s or early 1970s. This conditions trigger the need for reform in Canada. The first step in reform was within the federal government. The first targets were operating costs, public staff levels and public service remuneration. All three were targeted for significant reductions and this meant a reduction in the inventory of properties that served program needs. But reduction was not enough. Major policy and program reviews followed as the federal government sought to clarify its role in relation to lower tier governments and private sector. The policy and management structures of the federal government had

become too complex and too constraining, the degree of central control had become excessive and uniformity of standards was serving administrative need but little else.

In 1993 according to McKellar (2006, p. 54), a restructuring of the cabinet resulted in a smaller, two-tiered ministry structure in lieu of a large cabinet. Ministerial portfolios were consolidated and departments merged, central corporate controls were relaxed and greater reliance was placed on Special Operating Agencies (SOAs), an initiative begun in 1989 to improve the delivery and cost effectiveness of government services. These special agencies were granted increased freedom from departmental and service-wide administrative rules in return for improved results.

The restructuring of government in 1993 also better positioned ministers and the public service to meet critical challenges ahead by enhancing ministers' control over the policy direction of their portfolios. This was coupled with increased delegation of authority from the Treasury Board and its Secretariat, as well as from other central agencies and common service departments, to the individual ministers, their deputies and line departments. The watershed year for these reforms was 1995. Government continued through the early 1990s to cope with crucial budgetary, policy, and program decisions; however, the February 1995 federal budget precipitated wholesale change. In pursuit of a balanced budget and deficit reduction, this budget required significant cutbacks to the program and other changes that had profound impacts on the structure and size of the public service. This budget marked the beginning of a deliberate, continuous and sustained effort, to achieve a much-needed and fundamental change to fix the federal government budgetary problems.

These fundamental changes as described by McKellar (2006, p. 55) reverberated through every corner of the federal government, including the system for management of federal real property. It was no longer acceptable to view public real property as a free good and to abdicate the responsibility of stewardship over these valuable public assets (Brown et al., 1993; Edwards & Ellison, 2003; Haynes & Nunnington, 2010).

In 1986, The Ministerial Task Force on Program Review known as the "Nielsen Task Force" reported on real property in its review of the Treasury Board (Minister of Supply and Service Canada, 1986, 17 cited in McKellar, 2006, p 55) stating that the existing framework designed in the name of control, probity and prudence had created unneeded barriers to effective management of real property.

In response to the above report, the Treasury Board, in 1993 initiated and approved a policy principle that is, it is the policy of the government to acquire, manage and retain real property only to support the delivery of government programs and in a manner that is consistent with the principles of sustainable development that is to honour environmental objectives, provide adequate facilities for users and respect other relevant government policies.

McKellar (2006, pp. 72-73) concluded his explanation by stating that the Canadian Government is only in the real estate business to the extent that real property is required to support its program mandates. In relation to that principle, the management framework for real property in Canada has three main directions: 1) a centralised policy for the management and information function vested within the Treasury Board, 2) a custodial function divested to the various ministries and agencies who have need of real property to carry out their program mandates, and 3) Canada Lands Corporation, which handles strategic dispositions of real property on behalf of custodians. This framework has evolved over time to meet government needs and address market conditions. The current management system for federal real property is still in its infancy and is still evolving. The foundations are in place for a real property management system that should carry the Canadian Government well into the future.

Improving public asset management in developing countries

There are many differences between asset management undertaken by the government and private sector organisations. The most obvious difference between these two systems is the management of assets conducted by private parties which aims to seek maximum profit, while the main motive of asset management carried out by government organisations is to support public service delivery functions. Despite the difference, the two management systems also have similarities in that they wish to achieve the goals of the organisation as efficiently and effectively as possible.

In addition to lessons from private organisations, lessons from advanced public asset management countries above are valuable sources to be acknowledged in order to develop, apply and improve public asset management for developing countries, particularly for Indonesian local governments. The first lesson is to realign public

asset holdings with governmental responsibilities. The second lesson is the requirements that need to be included in a good public asset management framework.

Realign public asset with governmental responsibilities. Research and experience of advanced practitioners over the past 25 years shows a shift of paradigm in managing public assets (Audit Commission, 2001; Evers, van der Schaaf, and Dewulf, 2002; French, 1994; Gibson, 1994; Gibson, French, and Oughton; 2002; Lundstrom, 1991; Simons, 1993; Wheeler, 1993). This change in thinking encompasses several basic principles and an array of tools to improve public asset management. These basic principles are:

- Public assets must be viewed as a productive asset. Recognising property as an asset has focused attention on systematically assessing the efficiency of the use and the financial performance of public property, including accounting for full costs of real estate ownership, operation and management.
- Governments are not efficient property owners and/or managers. Governments have proven to be poor managers of their productive assets. Their ineffectiveness is highlighted in many post-socialist countries, where local government is no longer responsible for certain services (e.g., many “cultural” services or retail trade in goods and services), but still retains ownership of infrastructure associated with these services.
- Private-sector asset management practice can be a useful model and source of benchmarking for public-asset management. Elements of the private-sector approach to asset management that serve as an example to local governments include systematic performance monitoring and valuation of assets, division into portfolios with defined utilisation and performance targets and a clear-cut legal relationship with users.

These three principles reflect a change in emphasis regarding public-asset management. They do not negate the traditional role of public property in service delivery; much municipally owned infrastructure will continue to serve as a “public good” insofar as it provides the physical plan for government services. However, the rigor of private-sector practices should put this traditional utilisation of property on a more efficient footing. It should also identify where government should consider

other uses of property, including privatisation. This change in approach is the basis for a framework for good public-asset management as outlined in **Table 3.2**:

Table 3.2 Municipal Asset Management

Asset Management Component	Explanation
Inventory	Develop and maintain comprehensive records of properties owned by local government (including properties managed and used by various municipal departments and enterprises).
Property Management and Accounting	Develop, maintain and link a property management and accounting system to improve public asset management practices. Information needs to be record in this component are revenues, costs, occupancy/tenants records, the value of each property and include financial liens against each property.
Asset (Portfolio) Management	Formulate a strategic role, develop classification of property by its role in performing governmental functions and apply this classification while conducting an inventory, apply performance measurements standards, implement a portfolio management approach, including proactive management of social use and surplus portfolio.
Strategy Implementation	Establish a centralised division with overview or direct control over asset management with some power to establish and enforce policies and decisions. It is also important to set up incentives for more efficient use and management of municipal property assets

Adapted from (Kaganova et al., 2006a)

This framework contains an ambitious array of prescriptions to make asset management more effective. The key element of this framework addressing the nexus between asset management and the local government’s role is the classification of real properties into categories depending on their relationship to local government functions and goals. Financial goals are then logically formulated

for each property category. An example given by Utter (1989) cited in (Kaganova et al., 2006a) in order to give technical assistance to countries in transition, Kaganova adapted the classification system initially introduced in Denver, Colorado (**Table 3.3**).

**Table 3.3 Basic Classification of Local Public Property
(The Modified Denver Model)**

Category	Types of Real Estate	Financial Goals
Group A: Core properties (used for mandatory functions)	City hall, water supply facilities, cemetery, etc.	Maximise efficiency, minimise costs (while maintaining acceptable quality)
Group B: Additional properties (used for discretionary functions)	Parks, some cultural facilities, office space for local NGOs, etc.	Quantify and minimize the property-related subsidy
Group C: Surplus property	Investment property, remnants from various sources	Maximise financial returns

Source: Adapted from Utter (1989) cited in (Kaganova et al., 2006a).

Establishing portfolios based on this model helps local governments make decisions about properties on a more rational basis. It forces discipline in deciding what to do with assets that are not required for core functions of local government. It forces local governments to review and determine their own core service responsibilities. This is often an important task in transition countries where local government functional assignments are unclear. A formal policy for determining purposes of properties and an associated set of financial goals, if consistently and transparently applied, can help local governments handle political problems that might result from trying to maximise benefit from properties. Classification helps to defuse confrontation over specific decisions on an asset because it focuses on property and not on the merits of any particular user.

Requirements of good public asset management. In the experiences of public asset management all over the world Elaine (2007) discusses some interesting findings:

- Prior to the introduction of reforms by governments such as Canada, Australia and New Zealand, management of real property assets has been badly handled in all types of countries.
- Asset management by local governments varies widely even within one country and often is either absent or embryonic.
- Even in a regime of direct democracy, such as Switzerland, citizens have the illusion that when democratic rules are respected, efficiency follows. Within the Roman-law systems, the emphasis is on the ownership of material assets, not their maintenance, management, or potential for delivering economic benefits. Most likely, this focus on ownership *per se* is implicitly adhered to in many countries and trumps all other considerations, including effective asset management. This unspoken principle appears to guide politicians, who often find that voters are more concerned with retaining a public asset than utilising it wisely.
- Politics is at the heart of government decision-making when it comes to managing real property assets. This is what sets this area apart from the private sector and makes it difficult to apply asset management models from the private sector. Eliminating political influence from governmental decisions "is like removing sand from the beach". Politicians often have legitimate and appropriate concerns about the management of public property, from promoting economic development to responding to concerns of their constituents. It is important to understand the vagaries of politics and the impact on real property asset management and decision-making.
- In countries that make systematic reform efforts, it takes an inordinate amount of time to gestate programs and produce results, with a timeline often measured in decades, not years.

Asset management practices differ greatly within countries because of a number of factors. First, Central Governments usually do not require a unified approach to reporting, setting policy and managing assets. This tendency contrasts with other parts of local government administration that tend to be more regulated, such as budgeting. Second, there usually are several different types of local government jurisdictions. There will be small rural municipalities, cities and capital cities. Jurisdictions will demonstrate varying degrees of economic development and

hence opportunities for revenue generation through aggressive asset management strategies, with capital cities again almost always being substantially more prosperous. Third, the types of assets owned by these varying jurisdictions will vary. In post-socialist countries, the sequencing and manner of transfers of state property to municipal ownership has led to a situation where even comparable local government entities have widely differing assets (Hsieh, 2008; Kaganova et al., 2006a; Kaganova & Nayyar-Stone, 2000).

The subjective qualities of the people in municipalities lead to radically different approaches to asset management. This manifests itself in two different ways. First, local views and policies regarding properties and financial goals vary. There are especially great differences in views towards properties used for social, cultural and sport functions; vacant properties; and incomplete construction (Kaganova et al., 2006a). Kaganova shows results of a property classification exercise by three groups of local government officials in Kyrgyzstan. This classification based on asset relationship to the local governments' function, namely: Group A: Core assets such as a school building, a municipal multi profile clinic, a children's hospital, street lighting infrastructure, city roads, and water supply infrastructure; Group B: additional assets such as a sport centre, recreational infrastructure, an art centre, bus stops and incomplete infrastructure projects; Group C: surplus assets such as a video salon, car parking lots and premises occupied by a private company. The discussion in these groups shows that both core and surplus assets are easily being differentiated with clear decision; however, they find it difficult to categorise which assets should be grouped in additional assets. Second, the motivation of political leaders and technical staff to implement new and better asset management practices is the fundamental ingredient for success. In Kaganova's (2006a) experience, progress is impossible without champions at the political level and enthusiastic, competent staff persons who can implement new practices. Of course, the quality of political leadership and staff varies greatly by location.

Real property asset management consists of three functions, where the first two are prerequisites for the third (Kaganova & Nayyar-Stone, 2000, p. 311). The first function is inventory i.e. maintaining a record of all properties owned by a company or managed by a portfolio manager. The second is property management/accounting i.e. tracking all information about its tenant occupancy, expenses and revenues. Also

it is important to track its value, depreciation and debt obligations. The third is asset management, which deals with evaluating the financial performance of each property in the context of the whole portfolio. It provides a rationale for acquiring, holding, or disposing of individual properties, considering both financial characteristics of each property and optional portfolio composition.

3.4 HINDRANCES OF PUBLIC ASSET MANAGEMENT APPLICATION IN DEVELOPING COUNTRIES

Having regarded the importance of public asset management and experiences from advanced public asset management countries, it then raises the question about factors that hinder the application of the public asset management. Why it is not implemented yet? This section discusses several problems that hinder public asset management framework applications in many developing countries that were recognised in previous studies. There is an abundance of literature focusing on the barriers of public asset management application in developing countries in general which captures these problems.

The first hindrance is the absence of a legal and institutional asset management framework. The second hindrance is the old perception of local government towards public assets. Some of local government managers suggest that public asset should be used as public tools in supporting public services. Therefore local government should not make any profit out of public assets. The third hindrance is that asset management involves many jurisdictions and application within the local government. Each of this local government have their own views, objectives, functions and roles, which sometimes are not supported by proper communication and coordination among them. The fourth hindrance is the complexity of public organisation objectives. Public organisations' objectives are not as simple as those of private entities which only have a profit motive—public organisations' objectives must also be accountable, effective, efficient and most importantly, have a social return. The fifth hindrance is economic inefficiency associated with public property holding. The sixth hindrance is the lack of available of data required for public asset management.

The absence of legal and institutional framework

An important problem related to asset management application identified by Kaganova and Nayyar-Stone (2000), is that local governments frequently do not have enough discretion in the area of real property asset management, and they have trouble setting up proper incentives for property and asset managers. In other words, the legal and institutional framework for local government asset management is not sufficiently developed in many countries. This problem is typical of many countries, not only in developing or less developed countries but also in developed countries. For example, in Bulgaria, the national law requires a city mayor to sign each lease agreement on municipal property. Because Bulgarian cities have hundreds or even thousands of municipal leases, mayors spend a significant amount of time for this function. Signing leases is a routine property management function that can easily be delegated to less senior municipal officers, who are in charge of real property asset management. A more flexible legal framework would stipulate that local city councils be in charge of establishing local property leasing procedures.

Another issue, also related to the regulatory framework for local asset management, is that in some countries the law does not clearly define the terms of local public property. For example, in Russia, there is still no law that clearly defines which public land in cities is owned by various levels of government (Kaganova & Nayyar-Stone, 2000). Albania and Kyrgyzstan have not passed any laws on public property. The Romanian and Macedonian judicial systems are overwhelmed by legal disputes between central and local governments regarding property ownership.

Rutledge (2004) stated that most cities and municipalities in former socialist countries, such as Croatia, own and control large portfolios of real estate and have not instituted modern asset management practices. Rutledge's project in Varazdin Croatia interviewed city staff and elected officials as well as local professionals and found that the city owns and/or controls about 230 properties classified as surplus that were not directly needed to conduct city business.

Based on the research, Rutledge (2004) prepared a series of recommendations and drafted an asset management manual. The manual contains eleven chapters, which are based on activities that include the development of an inventory of assets, appraisals, financial statements, financial analysis, transitional issues, strategic

planning, and other subjects. They classified assets as: 1) mandatory (i.e. city hall); 2) discretionary (beneficial for the city but not essential such as museums, recreational facilities, space for NGOs, etc.); and 3) surplus (rental/investment).

Non-profit principle of public assets

Although many local governments in developed and developing countries have been under financial pressure due to increasing responsibilities and decreasing subsidies from higher levels of government, they still treat public asset as a public good and as non income generating resources (Kaganova & Nayyar-Stone, 2000, p. 309). There is no systematic consideration of the efficiency of real estate use or financial performance of public property in order to recognise the profitability of the assets. Only the capital costs of new public projects were an issue. A new vision took place in the early 1980s that treated public real estate as an asset producing a mix of measurable and difficult to measure returns (including social benefits), rather than a public good. At about the same time, this approach appeared at the local level in some cities in the US and as a Central Government policy in New Zealand.

This concept is not known in Indonesia. In some provinces, it is even taboo for the government to gain profit from public real property assets such as office buildings. The government believe that those assets are tax payers' assets, the community's assets; therefore it is their right to get benefit from those assets with no costs. This condition is even stronger between government-to-government organisations. It is unusual to charge other government entities for using government's building offices and infrastructure as practiced in many advance public asset management practitioner countries such as Australia (Irham, 2009).

Local governments usually does not acknowledge any income generated from infrastructure assets (Lemer, 1999). This might reasonably be attributed to the fact that the type of revenue generated by infrastructure assets is typically indirect. Such income might be identified, for example, if road improvement or a water-and-sewer extension enhances property values, leading in turn to higher property-tax revenues. Higher sales-tax receipts might also result from infrastructure investments that enable development or expansion of retail and entertainment activities in a downtown or suburban area. Higher income-tax revenues can result when infrastructure improvements facilitate local industry's efforts to expand its

workforce, increase its productivity and compete more effectively by controlling its costs.

Failure to adequately account for the contribution of infrastructure may result in a serious misrepresentation of the government's financial performance of the important contribution from the infrastructure for the people and business that the government serves (Callahan, 2007; Lemer, 1999). Some of these consequences are measured directly in economic terms. The profits of companies that benefit from having access to adequate infrastructure for example, are reported by those companies and subsequently are included in the macroeconomic measures of the region's production (e.g. the gross national product, gross state product). World Bank studies found that businesses in some less developed countries suffered as much as a 30% loss of potential profitability because public infrastructure was grossly inadequate (Lemer, 1999, pp. 257-258).

For many of the benefits of infrastructure, however, there are as yet no direct economic measures. Research has not produced universally accepted ways for estimating the value, for example, of a river's waters kept clean by advanced sewage treatment or the views of distant mountains kept visible by control of automotive air pollution. This is a problem for private business as well as government entities seeking to account for the full environmental costs and benefits of their activities (Lemer, 1999, p. 258).

Cross jurisdictions and disciplines in public asset management processes

Management of public assets is highly grouped with each category falling within a different jurisdiction or bureaucracy. It operates with different functioning policies and procedures within a given bureaucracy. In almost any country, different classes of property, and even individual real property assets are managed according to the local government's own rules. They often adopt traditional practices based on jurisdictional groupings rather than assess and select the most appropriate type of property asset management (Dow et al., 2006).

All jurisdictions or authorities involved in the asset management process have their own regulations, procedures and policies which sometimes contradict each other. This is due to the fact that each authority has its own objectives with no coordination among them. According to Priest (2006, p. 237), the most obvious

issue in many organisations, including local government, is the lack of coordination. The lack of coordination between the property department and the rest of the business has meant that there has often been an imbalance between demand and supply.

In some cases in Indonesia, local governments suffer difficulties in identifying which assets fall in whose jurisdiction, whether it is Central Government's or local government's jurisdiction or other local government's territory. This condition is mainly caused by a lack of coordination and proper asset documentation. There is no evidence of assets ownership—whether it is transferred from Central Government or from other local government or acquired by compulsory acquisition or gifted from other entities (Directorate General of General Affair, 2008).

Lemer (1999, p. 255) indicates that one of the challenges to better manage public assets is that functional infrastructure is managed by a myriad of agencies and at many jurisdictional levels. It is further complicated by the number of professional disciplines involved in the asset management process such as lawyers, engineers, planners, financial analysts, drivers and pedestrians. All of them have unique perspectives, values, languages and traditions that subvert the efficiencies of true system management. At the same time, emerging new technology, science and mathematics are influencing the understanding and approaches in analysing and designing infrastructure and a philosophy of long-term management responsibility is gradually pervading practice.

In relation to Lemer's argument, Halfawy, Vanier and Froese (2006, p. 1460) believe that the use of infrastructure information technology systems has significantly improved the operational efficiency and maintainability of assets. However, the majority of these systems were developed to function as stand-alone systems and therefore have limited or no capability to share and exchange information. Each application typically uses a proprietary data model and stores data in a proprietary file format, which, in most cases, cannot be accessed by or shared with other software applications. Users usually translate the data from one representation and format to another so the data can be used across different applications. The translation process involves many activities which are time consuming, error-prone and inefficient, such as getting output from one application in a paper or digital format, interpreting the output and then re-entering the data into

another application. The lack of interoperability and integration between municipal asset management systems has resulted in problems and inefficiencies in accessing, enhancing and managing the data. Experience shows that the use of proprietary data models and formats has created many obstacles to improving the availability, quality and reusability of data.

The complexity of public organisation objectives

According to Simons (1993, p. 49), the objectives of private organisations and public entities are different. The objective of private firms in managing their real estate is primarily driven by profit motive, either as a cash generator or a tool to aid production. The public sector as a non-profit organisation recognises both efficient operations and equitable distribution of resources as important objectives, as well as the importance to generate a social return (affordable housing, jobs and quality of life) to its constituency.

The current surge in real estate values, driven primarily by the sheer amount of capital to pursue property-related investment, is bringing the real estate debate into sharp focus for operating businesses that are property-heavy (Priest, 2006). The objective being generated in asset management is leading most private and public organisations to acknowledge capital from their assets. Although conceptually simple, identifying value from public assets is complex from operational, fiscal and accounting standpoints. Local government should consider many aspects carefully and keep all aspects and consequences of the management process in perspective.

Program objectives should specify milestones to be attained within certain time periods, but in practice, statements of objectives are often overly general, vague and open-ended in terms of time. Such poorly written objectives fail to convey any management commitment to achieve particular results and provide little guidance for defining meaningful measures to assess performance (Poister, 2003, p. 63). Truly useful program objectives can be developed using the SMART convention; such objectives are specific in terms of the results to be achieved, measurable, ambitious but realistic and time-bound.

Political interests also hold an important effect on asset decision-making in local government organisation (Dooren & Van de Walle, 2008; Dye, 1998; Ranson & Stewart, 1994; Rongen, 1995). Politicians have strong power whether through

their political parties or the House of Representatives, to influence local government asset managers. This power, although not clearly identified nor denied, is already taking place deeply in the local government entities. In Indonesia, for example, the procurements process of new projects is highly targeted by politicians or the House of Representatives' Members, either for financial or political purposes.

Economic inefficiency associated with public property

Public organisations are recognised as inefficient land and property owners and/or managers (Kaganova & Nayyar-Stone, 2000). This argument is supported by various studies in developing and transitional countries where governmental ownership of land often results in huge amounts of illegal construction, shortage of buildable areas, overcrowding of existing housing and underutilisation of buildable sites in prime locations. Countries in transition experience major shortfalls of public ownership of land and real estate and are: 1) continuing allocation of construction sites in locations that do not satisfy the effective demand for end-users of the property; and 2) have an extremely inefficient use of surplus property, resulting in underutilisation of the revenue potential of these assets.

Economic inefficiencies, including physical and economic underutilisation, stem from the fundamental belief, even in capitalist economies, that public property held by a government is a “free good” (as explained earlier), owned by the taxpayers, and not subject to the same economic rationalisation that occurs in the private sector (Kaganova et al., 2006b, pp. 13-14).

One source of inefficiency is the presence of large portfolios of vacant or underused properties. This condition is caused by the change of structure or the scope of government departments and agencies. The demand for space changes faster than local governments' capability to reuse or dispose their properties. While government no longer requires the assets, there is no incentive or financial benefit to put the properties on the market since it is a “free good” and the cost of holding the asset is not emphasized in any chart of accounts. Examples can be found everywhere, from military facilities that are not needed because the war is over to vacant or half vacant school buildings in former USSR countries that are not used due to demographic, economic and social changes. Vacancy rates can be very high in these countries, where it is not unusual to find 30% of total municipally owned floor space unoccupied (Kaganova et al., 2006b).

Further inefficiencies arise because the real cost of holding an asset, plus the opportunity cost, is rarely being calculated. Governments expected financial gains and expose themselves into opportunity costs by holding vacant properties. On the other hand, they incur annual expenses for the maintenance of unused facilities. The US Department of Defence, for instance, estimated its annual expenses in early 2000s for the maintenance of unneeded facilities around 10-15% range (Ungar, 2003) cited in (Kaganova et al., 2006b, p. 13). Governments have a tendency to hold onto properties and thereby preclude obvious economic or social benefits. Unintentionally, they portray an image of neglect and waste within the local community, particularly when the contrast to adjacent private property is highly marketable.

Opportunity losses often result from the failure to capture the “highest and best use” of governmental properties. Some of these decisions are politically motivated, some reflect managerial incompetence or corruption and others reflect disagreement as to how far the market should be allowed to go in dictating property use. The inefficiency ranges from the use of well-located land sites for municipal equipment storage or waste yards, to the systematic practice of leasing public property to private parties for below-market rents without benefit of competition (Kaganova et al., 2006b).

Data availability required for managing public property

Accurate, detailed and current information about an organisation’s property has, for many years, been accepted in principle by private practitioners as the minimum requirement for effective management (Kooymans & Abbott, 2006, p. 198). Ideally, the role of an asset database is to provide information that assists the organisation in its day-to-day facility management function, while contributing to the organisation’s overall financial planning and asset decision-making and influences the organisation’s strategy.

Even among advanced reformers, information about real property has been an issue until very recently (Kaganova et al., 2006b, pp. 14-15). As of 1996, only 65% of all local authorities in New Zealand and 66% in England and Wales had their property records computerised (Bond & Dent, 1998). As of 1997, Washington, D.C., had duplicated and inconsistent inventory records of buildings that the city owned and a substantially incomplete inventory of in-and-out leases. Even in early 2002,

there was no reliable government-wide data on property holdings of the federal government in the US. Its worldwide inventory lacked such key data as space utilisation, facility condition, historic significant, etc. (Ungar, 2003) cited in (Kaganova et al., 2006b, pp. 14-15). Since then the quality of inventory data in the US has improved, but it is safe to assume that inventory deficiencies are the norm in most places.

Income and expenditures are not tracked on a property-by-property basis mainly because this information is not collected within government budgeting systems. The potential market value of real estate is also frequently unknown, even for obviously marketable and legally alienable properties. Bookkeeping values for property often are so out-dated as to be meaningless.

Without lease arrangements and access to the information that a lease documents provides, it is inconceivable how effective management practices can be instituted for many categories of property. Leases record everything from the quantity of space consumed, to the assignment of operating costs. Detailed recordkeeping is essential to cope with owner-tenant disputes, ascertain market trends, set prices, determine values and compare performance against industry standards and benchmarks.

The asset information held will vary between organisations. However, possession of usable information concerning the physical lives of assets, the likely amount and timing of major capital and maintenance expenditure and asset replacement values enables lifecycle maintenance and renewal as an integral part of the organisation's strategic planning. Asset managers are, therefore, able to influence organisational decisions that affect their operations and, in a competently run organisation, have access to the necessary cash-flows without giving the organisation unpleasant surprises (Kooymans & Abbott, 2006, pp. 198-199).

3.5 CONCLUSION

The concept of asset management has become a top priority for almost all organisations, both private and public. At the same time, there are also initiatives to develop an asset management framework accepted by all asset management practitioners worldwide. The efforts that try to unify perceptions, knowledge and skills into an international standard concept have been started by a leading

organisation in the field of asset management. Besides the development of asset management concepts that cover all the interests of the international community, it is also important to examine the strategies that need to be performed to improve the asset management framework. One way to obtain input materials in order to update the framework is to look at asset management practices in countries that have applied asset management reforms in their organisation such as Australia, the UK, New Zealand and Canada.

All the theories and concepts that have been discussed in this chapter are used to solve the problems previously identified in Chapter 2. The theories and concepts in this chapter are expected to provide solutions for problems in developing countries, particularly in Indonesian local governments. Theories discussed include the theory and concept of asset management, some lessons learnt from advanced reformer public asset management countries including how to improve the practices of public asset management in developing countries and factors that hinder public asset management application.

The problems have been identified and the theories related to the problems have been examined, the next chapter will outline the strategy and method that has been conducted in this research to propose possible solutions regarding the problems in developing countries' public asset management practices and in order to develop a Public Asset Management Framework for Indonesian local governments.

Chapter 4: Research Design

4.1 INTRODUCTION

Chapter 2 identified the problems experienced by Indonesian local government in relation to the management of public assets. Conceptually, the main problem regarding Indonesian public asset management is the lack of a Public Asset Management Framework. Chapter 3 discusses the theories to soften these problems, namely that Indonesian local governments need a strategic framework for asset management that builds upon their conditions and needs.

Therefore, this research then formulates a comprehensive asset management framework that can be applied to an Indonesian local government context. To create a public asset management framework, it is necessary to conduct research that has a complex mixture of creative and rational stages. This Research Design chapter aims to give a clear explanation of who, what, where, how and why a particular research approach has been adopted in this study.

To achieve this aim, this chapter is arranged in six sections. Section 4.2 defines the research problem and formulates the research questions and further investigative questions. Section 4.3 explains and justifies the selected research method theoretically and practically. Section 4.4 discusses the local government area selected in the study and the respondents' profile. Section 4.5 explains the data analysis and framework verification process. Finally, Section 4.6 concludes the method chapter.

4.2 CENTER FOR FRAMEWORK DEVELOPMENT

Discussion in Chapter 2 pointed out from the literature that there are many problems related to the management of public assets in developing countries particularly in Indonesian local governments. These problems can be softened by the development and implementation of a Public Asset Management Framework. The concept of asset management has developed rapidly over the last decade. There are a number of guidelines, best practices, models and strategies that have been introduced in various countries for both the private and public sector. Organisations have been

continually updating their asset management framework and aligning their approaches with their organisational objectives and aims. The practices of asset management in private and public organisations are becoming integrated and interrelated and continually learned from each other to improve both the framework and approaches.

The asset management function is needed to provide asset knowledge and the capacity for related management and decision support activities within the context of an organisation's core business (Hastings, 2010). The function of asset management is to provide information and knowledge to support the asset lifecycle process from acquisition to disposal, as required by the asset owner or manager. Comprehensive asset management is needed at any organisational level, providing data for asset planning, to inform decision makers before making any acquisitions and developments, and providing the systems and data needed to support assets throughout their life. Asset management is separated from daily operations, and does not usually involve in the direct design or building of the assets themselves. It is also usually separated from maintenance, however the technical services function that supports maintenance of the property is part of the asset management process. The exact terminology and definition may vary from organisation to organisation (Hastings, 2010). Unfortunately in the case of Indonesian local governments, such framework is still missing or has not yet been developed.

Establishing a policy framework is therefore fundamental not only to improve public asset management processes, but also to improve the efficiency and effectiveness of public service delivery in general. This is crucial in establishing the needs, improving the level of services and assessing the impact on all stakeholders involved. Central to the policy making process are the institutions, goals and objectives, knowledge, information, communication systems and most importantly resources such as human resources and public assets. The environment is also crucial as it reflects the economic, social and political context that influences the policy-making process. The formulation and implementation of an appropriate Public Asset Management Framework therefore requires an understanding of these key elements and their interactions. Following this introduction, the policy context for the delivery of public services is examined in terms of the environment, goals and objectives, information and communication systems, and resources. It is argued that

decisions on whether the private or public sector should provide a particular type of public service and undertake public asset management processes are rarely based on economic considerations alone but a range of factors such as governmental obligations, externalities (third-party costs and benefits), national security and defence (Howes & Robinson, 2005).

It has been acknowledged that every organisation practicing asset management worldwide is likely to have a different culture and socio-economic environment. These differences must be recognised in the development of a global concept for an asset management framework. For example, many members of the GFMAM, including the Asset Management Council in Australia, were incorporated as maintenance focused organisations, whereas others focus on the development of assets. As a global approach to asset management is developed and implemented by the GFMAM, that “*heritage*” must be both acknowledged and built upon if the approach is to be successful. The approach for framework development is also took place in public organisations including Indonesia’s local governments. The starting point to develop a Public Asset Management Framework for Indonesian local governments is to examine and understand the heritage practices and values. Public asset management practices in local governments are different in terms of organisational cultures, languages, objectives and surrounding factors affecting practices. The proposed Public Asset Management Framework needs to be able to acknowledge all of these differences. Other conceptual models from different public organisations may be helpful to present asset management in way that reflects more closely the background and current position of Indonesian local goernments, whilst still maintaining a common method and practice from advanced asset management reformers (Asset Management Council Inc and The Institute of Asset Management, 2010).

This research comprehensively recognises all the aspects involved in not only property related issues but also local government policy when managing its municipal assets. In other words, this research not only investigates the number of assets owned by a particular local government and the type of assets, but also investigates why local government needs the assets, how they manage the assets, what are the factors that influence local government regulation and policy in relation to its asset management, and how should local government manage their assets to be

more effective and efficient. It then incorporates all these findings into a Public Asset Management Framework.

In order to develop a comprehensive strategic Public Asset Management Framework for Indonesian local governments, the current conditions of local government's public asset management and factors that influence these conditions must first be studied. As suggested by the literature, an initial step in developing a new framework is to acknowledge and study the current conditions and then the surrounding environments. By developing the new framework from its own habitat and environment, local governments could accept the framework with no hesitation. Also, it is likely that the practical application of the framework into local government organisations will face no significant obstacles (Bahadoorsingh & Rowland, 2008; Benedict, McMahon & Conservation Fund (Arlington Va.), 2006; Charles & Alan, 2005; Iles, 2005; Jolicoeur & Barrett, 2004; Peterson & Annez, 2007; Piccoli, 2008; Qian & Chan, 2010; Schlapfer, 2007; Whitford, 2009).

This research examines “how” local governments currently manage their public assets—particularly real properties and infrastructure assets—and “why” such practices or policies are conducted. In the process of inquiring the ‘how’ and “why”, it is also important to see in more detail the process resulting in the study examining the “how many” or “how much”. For example, how many public assets do local governments currently manages? How much local government officials involve in the asset management process? Based on the explanation above, this research adopts case studies approach for selected Indonesian local governments as a representation of all Indonesian local governments with an archival analysis on local government documents.

Therefore, to appropriately design a research strategy, research problems should be ascertained (Dane, 1990; David, Brian & Donald, 2008; Denzin & Lincoln, 2008, 2000). Based on the Chapters 2 and 3, it is argued that the main problem related to public asset management in many Indonesian local governments is the absence of a strategic Public Asset Management Framework, with additional technical problems related to the management process such as a lack of information related to the public assets, no needs analysis for assets and asset lifecycle guidance with performance indicators.

In relation to the objective of the study, establishing a policy framework is therefore fundamental to improving the efficiency and effectiveness of the public asset management process and the quality of public service delivery. This is crucial in establishing needs, improving the level of services and assessing the impact on all stakeholders involved. Central to the policy making process are the institutions, goals and objectives, resources, knowledge and information and communication systems. The current condition is also crucial as it reflects the economic, social and political context that influences the policy-making processes in public asset management in provincial governments. The formulation and implementation of an appropriate Public Asset Management Framework therefore requires an understanding of these key elements and their interactions (Allen & John, 2008; Ammons & Rivenbark, 2008; Ascher, Krupp & Palgrave Connect., 2010; Bovaird & Loffler, 2008b; Dent, 1997; Dye, 1998; Howes & Robinson, 2005; Kaganova et al., 2006a; McKellar, 2006; Ronald, 2005; Whitford, 2009).

4.3 RESEARCH PROBLEMS AND RESEARCH QUESTIONS

Following these views, in order to develop a Public Asset Management Framework for Indonesian provincial governments, the current condition of public asset management in provincial governments in Indonesia is examined in terms of the guidance and regulatory framework that direct provincial governments in the process, provincial government's organisational arrangements as the perpetrators in the management process, and the object being managed (that is the public assets themselves). After examining the current conditions, the next key elements that need to be examined are the surrounding factors that affect the public asset management process. These next elements are the hindering, as well as supporting, factors when the assets were transferred to provincial governments and the problems in the management process after the transfer, and tools and subjectivity factors that support the process. Based on the concepts above and literature review in the previous chapter, the research questions were then formulated. The primary research questions and further investigative questions are:

1. How do provincial governments in Indonesia currently manage their public assets?

Investigative questions:

- 1) Do provincial governments have rules and guidelines concerning the management of public assets?
 - 2) Do provincial government officials have knowledge of, comply with and implement these rules and guidelines?
 - 3) How are the provincial governments currently managing their infrastructure and real property assets? Including:
 - a. Legal framework?
 - b. Organisational arrangements?
 - c. Asset lifecycle (design, plan, procurement, maintain, manage and dispose) processes?
 - 4) What are the assets that a provincial government currently has?
 - 5) Do provincial governments have data collection and storage systems?
2. What factors influence the provincial governments in managing these public assets?
- Investigative questions:
- 1) Were there any problems when the assets were transferred from Central Government to provincial governments?
 - 2) What are the problems faced by the provincial governments in managing the assets after the transfer?
 - 3) Do provincial governments have performance indicators related to those public assets?
 - 4) What are the provincial governments' objectives in managing public assets?
 - 5) What are the provincial governments' perceptions towards the public assets?
3. How is a Public Asset Management Framework developed that is specific for the Indonesian provincial governments' situation?
- Investigative questions:
- 1) What could be improved from existing practices?
 - 2) How can public asset management problems be solved in Indonesian provincial governments?

- a. How should provincial governments incorporate public needs and expectations and align them with public assets to deliver public services?
 - b. What are the appropriate asset identification systems suitable for Indonesian provincial government?
 - c. How should provincial governments make decisions about the development, ownership and disposal of infrastructure and real property assets?
 - d. How should provincial governments measure their performances?
- 3) What are the elements that should be incorporated in to the proposed framework?

This research tries to comprehensively recognise all the aspects involved in not only property related issues but also local government objectives, performance measurements and other factors when managing its municipal assets. In other words, this research not only determines how many assets a particular local government has and what the assets are, but also investigates why local government needs the assets; how they manage the assets; what are the factors that influence local government regulation and policy in relation to its asset management; what are the factors that hinder and support asset management and how should local governments manage their assets to be more effective, efficient and fully contribute to the public service delivery process.

4.4 RESEARCH METHOD

This section discusses the selection of the research method and provides a description of the selected research method. The data collection methods used in this research are document analysis, interviews, observation and in-depth interviews. The preliminary result was then validated using a focus group discussion.

The concept of research is referred to as the process in which scientific methods are used to expand knowledge in a particular field of study as a discerning pursuit of the truth. Research involves the application of various methods and techniques in order to create scientifically obtained knowledge by using objective methods and procedures (Hair, Money, Page & Samouel, 2007, p. 216; Welman & Kruger, 2001). Whereas the goal of research, according to Warren (2006, p. 9), is to formulate questions. Finding the answer to each question will lead to many others

being asked. Obviously, not all of the related question can be asked, nor their answer found. In the same way, Dane (1990, p. 5) established that the immediate goals of research exploration, description, prediction, explanation and action provide a strategy for determining which questions to ask and which answers to seek.

In defining research, Buckleys, Chiang, National Association of Accountants (US), and Society of Industrial Accountants of Canada (1976, p. 28), provide a list of conditions which must be satisfied:

- 1) that it be an orderly investigation of a defined problem
- 2) that appropriate scientific methods be used
- 3) that adequate and representative evidence be gathered
- 4) that logical reasoning, uncoloured by bias, is employed in drawing conclusions on the basis of the evidence.

Research can therefore be categorised in a number of ways. It can be draw into a table based on a basic scheme of question series i.e. “who”, “what”, “where”, “how”, and “why”, with the answers then being applied to a matrix of research strategies to determine the most appropriate strategy for the researcher to follow as shown in **Table 4.1** (Hedrick, Bickman & Rog, 1993):

Table 4.1 Research Strategy

Strategy	Form of research question	Requires control over behavioural events	Focuses on contemporary events
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Experimental	How, why	Yes	Yes
Survey	Who, what, where, how many, how much	No	Yes
Archival analysis	Who, what, where, how many, how much	No	Yes/no
History	How, why	No	Yes
Case study	How, why	No	Yes

Source: (Hedrick et al., 1993)

If research questions are typically of the “what” type, they can be either exploratory as in “what are the ways of making something effective”, or be a survey or archival study where the question is, “what have been the outcomes of a particular action”. The “who” and “where” questions will favour survey and archival analysis in measuring the derivatives of the questions “how many?” and “how much?” In contrast, the “how” and “why” questions are far more exploratory and likely to lead to scientific experimentation, or the use of case studies or historical research to trace the operational links over time, rather than mere frequencies or incidence of an event (Yin, 1994, p. 6; 2009). The research question is thus framed within the definitions which differentiate between research and mere speculation and in the quest for at least some answers to the basic “who”, “what”, “where”, “how”, and “why” questions. The quintessential element of research is scientific rigour which provides a hierarchical structure for investigation and a strict definition to the result of the research (Warren, 2006, p. 12).

The most significant categorisation of research methods is between the empirical, quantitative methods and the qualitative approach to research. The quantitative research approach is founded in the pure science of the physical world. It relies heavily on numerical modelling and is conducted via either experimentation or survey. It requires the use of standardised measures so that varying responses can be fitted into a limited number of predetermined response categories (Warren, 2006, p. 12). The advantages of this method are that a great many individual responses can be obtained to a set of questions and the responses analysed through statistical aggregation. The result is a succinct, yet broad and generalised set of findings.

The selection of research strategy does not necessarily dictate the exclusive use of qualitative or quantitative data collection techniques. The strategy for engaging the phenomenon of interest is systematic enquiry (Marshall & Rossman, 1999, p. 76) cited in (Warren, 2006, p. 18).

Yin (2003, p. 1) stated other factors that distinguish the selection of research method: 1) the type of research question being asked; 2) the control a researcher has over actual behavioural events; and 3) the degree of focus on contemporary as opposed to historical events. The main research questions are “how” types of questions. These explanatory types of question are more likely to require the use of case studies, histories or experiments. As this research is examining contemporary events, but with the relevant behaviour unable to be manipulated, the use of case studies is the preferred design.

Qualitative researchers are intrigued with the complexity of social interactions as expressed in daily life and with the meanings the participants themselves attribute to these interactions. According to Marshall and Rossman (1999, p. 2), this interest takes qualitative researchers into natural settings rather than laboratories and fosters pragmatism in using multiple methods for exploring the topic of interest. Thus, qualitative research is pragmatic, interpretive and grounded in the lived experiences of people.

In attempting to make a logical choice between the two paradigms, Patton (2002, p. 39) advocates a ‘paradigm of choice’, which rejects the orthodox methodological appropriateness as the primary criteria and seeks to base the choice on the most sensible decision for the given purpose of the study and the questions being answered. This recognises that different methods are appropriate for different situations and that in making method decisions there are a wide range of possibilities.

As Levy (2006, p. 369) explains, the majority of research published in the property discipline consistently employs quantitative methods. According to Levy, research gained using quantitative methods, if appropriately designed and rigorous, leads to results that are typically generalisable and quantifiable. As a result it does not allow for a rich and in-depth understanding of a particular phenomenon. This is especially so if a researcher’s aim is to uncover the issues or factors underlying that phenomenon. Such an aim would require using a qualitative research methodology, and possibly an interpretive as opposed to a positivist theoretical perspective.

Rossman and Rallis (1998) cited in Marshall and Rossman (1999, p. 2), offer eight characteristics of qualitative research and researchers: 1) is naturalistic, 2) draws on multiple methods that respect the humanity of participants in the study, 3) is emergent and evolving, and 4) is interpretive. Consequently, qualitative researchers 5) view social worlds as holistic or seamless, 6) engage in systematic reflection on their own roles in the research, 7) are sensitive to their personal biographies and how these shape the study, and 8) rely on complex reasoning that moves dialectically between deduction and induction.

It is argued that in order to understand many behavioural aspects of property markets, the real estate academic community should embrace research that does not merely produce empirical description of markets but also moves to understanding and interpreting them. Levy and Henry (2003) in their research on a variety of academic property journals found a predominance of quantitative research techniques used to answer research questions pertaining to property issues. However, according to Levy (2006, p. 370), although a quantitative approach is capable of answering many questions and hypotheses, its applicability is questionable when seeking to understand meaning or when the question involves uncovering factors related to particular phenomena as is the case in this research project. The details of the research method applied in this study are explained below.

4.4.1 SELECTION OF RESEARCH METHOD

In defining the research methodology it is important to understand Jackson's (1995, p. 5) classification of research types summarised in **Table 4.2**. This classification is restated by Warren to give clearer understanding on the concept (Warren, 2006, p. 15):

Table 4.2 Methodological Approaches in Social Science

	Positivist	Interpretative	Critical
View of science	A tool for uncovering general laws of cause and effect in social behavior	A tool for understanding reality experienced by people	A tool that should be used to improve the condition of the oppressed
View of human behavior	Caused by forces acting on the individual; characterised by regularity and order	Determined by context and individual perception of meaning	Consists of groups attempting to exploit others for their own advantage
Goal of research	To predict behavior, to test general theories of behavior by testing of hypotheses	To provide an adequate reflection of people's experience of the social world testing grounded theory	To improve the social conditions of the oppressed; to achieve a just society; advocacy
Role of values in research	Research should be value-free; relativistic	Research should be value-free; relativistic	Absolutist; research should impose moral; absolute derives from theory
Research design associated with	Surveys, experiments, quasi experiments, secondary data, historical analysis; (tends toward quantitative orientation)	In-depth interviews, participants observations, field studies, document analysis (tend toward qualitative orientation)	Historical, comparative interviews, advocacy, research (uses both qualitative and quantitative approaches)

Source: (Jackson, 1995; Warren, 2006)

The choice of approach advocated by Jackson (1995) is a blending of the categories most appropriate to the circumstances of the study and the researcher. Therefore, in selecting a research methodology, the objective is to consider each of the large array of techniques available, the research question, its constraints and objectives and to choose the best tool for the research project. Although sometimes there are no perfect methods or tools for the research question, an alternative, second best solution is always available. A combination of several approaches may encompass several methodologies within one research project.

In choosing the research methodologies applied in this study, some past and current research within the area of public sector studies, performance measurement studies, asset management research and other related areas by other colleagues are assessed. Phang's (2006, p. 28) study seeks to describe and explain the development of the use of outputs as performance measures in public sector organisations. Phang deployed a qualitative research approach with the use of a case study method. She argues that her study satisfies Yin's (2003) three conditions for whether the case study method is an appropriate strategy. Firstly, it seeks to understand the process (how) and the reasons (why) for the development of performance measures. Secondly, the investigator has no control over the actual behavioural events. Thirdly, while the focus of this thesis is on contemporary events, its historical context was also examined. Multiple information sources are important for triangulation and enriched analysis (Yin, 2003). The sources used in Phang's research include a comprehensive literature review, interviews and document analysis.

Imbaruddin's (2003) (second part) study of Indonesian local government, qualitatively analyses whether factors such as the degree of accountability, competition, and organisational and human resource dimensions in local government agencies have any effect on the institutional capacity of those local government agencies. Information regarding those factors was collected through in-depth interviews and focus group discussions. According to Imbaruddin, although the Indonesian people have experienced a relatively more democratic environment and freedom of expression following the end of Soeharto's authoritarian regime in 1999, public servants in general are still reluctant to talk openly about their organisations. Therefore, the in-depth interview and focus group discussions were considered suitable for this research because it gives the opportunity for the researcher to explore deeply and to identify new clues in order to encourage the informants to express their own experiences, opinions and attitudes, and to gain as much information as possible in a relatively short period of time.

Another research study on the topic of local government in Indonesia was conducted by Mardiasmo (2007). Mardiasmo's research explores the degree of understanding and implementation of good governance at a regional government level in Indonesia, while addressing impeding factors that do not support effective implementation of governance protocols. The study's approach involves document

analysis, in-depth interviews and the application of the International Good Governance Standard. The study applied document analysis to capture the economic, political and current decentralisation condition within Indonesia and identify issues that still need clarification and further exploratory research. In-depth interviews were then employed to discover different thoughts and opinions regarding corporate governance interpretation and their perceived level of implementation within the region.

Silaen's (2006) study on management control systems in research and development organisation in Indonesia used case study research on multiple sites in the government sector in Indonesia. The study adopted applied interviews, observation and documentation as well as telephone interviews as its data collection technique. The study successfully answered the research questions of how management control systems are applied in research and development organisations in government units in Indonesia and why they are applied in such a way.

Thamrin (2005) also conducted a government related study in Indonesia. Her study is an exploration of the possibility of Public Private Partnership in Indonesia to redress some development challenges in the Eastern part of the country. To achieve the aim of her study, she analysed government documents, reports, and economic and policy studies that related to economic development, as well as undertook interviews.

Acknowledging the similarities, relevancies and successfulness of previous studies by other scholars (including previous studies stated above) to gather their required data, this research applies a similar approach as successfully used in previous studies—that is case studies with an application of document analysis, interviews and observations (Firmansyah, Veronika & Trigunarsyah, 2006; Gerring, 2007; Gomm, Hammersley & Foster, 2000; Lin, Gao & Koronios, 2008; Scott & Usher, 2011; Woodside, 2010; Yin, 2009). After the Public Asset Management Framework is developed, the research then used a focus group to validate the proposed framework.

The first approach in the case studies involves document analysis, interviews and observations. This approach is designed to investigate the first research question—that is, how local governments currently manage their municipal assets. The second approach is in-depth interviews. This method is designed to answer the second question—that is, what are the factors affecting local governments in

managing their assets. The third approach is framework formulation by analysing current studies and research from available literature to formulate an asset management framework for local governments and combine with best practices from advanced reformer public asset management countries. This result is then validated with practitioners in public and private asset management, legislative member, academics and customers (public service users) through focus groups. The approach itself is designed to answer the third research question—that is, how should public assets be managed in order to improve local government efficiency, effectiveness and increase public usefulness of municipal assets.

In detail, in order to develop the framework an evaluation of the existing practices of Indonesian local government in managing its assets is a crucial factor. This evaluation aims to understand the current status of key asset management practices in Indonesia and to identify which areas have the most potential for improvement. The methods adopted for this first objective are document analysis, interviews and observations. The analysis of asset documents owned by local government shows the assets owned by government, the laws and orders which regulate the assets, and determines local government procedures in asset management. In other words, organisational arrangements, legal frameworks and asset lifecycle processes are analysed. Observations and interviews cover issues not revealed by document analysis and also act to validate the documents. Perception of local governments towards public assets is collected by interviews.

An inquiry of factors that hinder and support local governments to manage public assets is the second objective. This is achieved through in-depth interviews with Indonesian public asset managers at local government level and selected public service customers. These interviews assess barriers and limitations that local governments face in managing public assets. Other questions covered by the interviews are local governments' consideration of public needs and expectations when delivering public services. The question of performance indicators in Indonesian local government organisations and the government consideration of the quality of public services are investigated in this stage. What are the objectives of local government in relation to public asset management? Finally, local governments' data collection and storage system in relation to asset information is assessed.

The results from the first objective combined with the second objective are used to achieve the last objective of the research—development of an asset management framework suitable for Indonesian local governments. The framework formulation stage comprehensively identifies the existing asset management literature throughout the world and current practice in advanced reformer in public asset management countries to build the framework, which is then adjusted to satisfy the Indonesian local governments' condition in managing its public assets. The resulting framework is then validated through a focus group including Indonesian asset management stakeholders such as public asset managers, legislative members, academics and users. The focus group aimed to assess the applicability of the framework and to capture those related entities' responses and inputs towards the proposed Public Asset Management Framework for better formulation.

4.4.2 DESCRIPTION OF SELECTED RESEARCH METHOD

This section describes the method selected in this study. The explanations are both from a theoretical perspective and practical plan. The method adopted in this research is case studies with several approaches. According to Yin (1993, p. 5) case study research can be based on single or multiple case studies. This approach, despite its single or multiple cases, can be exploratory, descriptive or explanatory. The single case study focuses on a single case only. Multiple case studies involve two or more cases within the same study. These multiple cases should be selected so that they replicate each other, either exact (direct) replications or predictably different (systematic) replications.

The case studies in this research employ document analysis interviews, observations, in-depth interviews and a validation process using a focus group. The asset management process selected in this study is only a partial stage of the whole process due to time constraints. The asset lifecycle is very complex process that could consume a long period of time, therefore only a particular stage of the asset lifecycle is studied. The case is highly dependent on the asset management events occurring at data collection time.

The case studies also aim to generalise the condition of Indonesian local governments. Examining the issues faced by local governments in selected islands in Indonesia and comparing them with other regions throughout Indonesia can identify common issues in the public asset management processes.

Document retrieval

According to Wolff (2004b, p. 284) cited in (Flick, 2006, p. 246), documents are standardised artefacts, in so far as they typically occur in particular formats: as notes, case reports, contracts, drafts, death certificates, remarks, diaries, statistics, annual reports, case reports, certificates, judgements, letters of expert opinions.

Marshall and Rossman (1999, p. 116) outline that from reviewing documents, researchers can comprehensively understand the historical and context surrounding of a specific setting. Minutes of meetings, logs, announcements, formal policy statements and letters are all useful in developing an understanding of the setting or group studied.

Indonesia is a country with a civil law background, where every government activity should be based on law and regulation; this is termed administrative law. Every job description and responsibility in the government organisation in Indonesia should be based on administrative law and regulation. This provision also applies to the local government asset management processes. Regulations regarding municipal asset management are of primary importance in commencing the research; these regulations lead the study in what to look for, how and where.

For the above reasons, document analysis on law and regulations which rule asset management processes in local government are highly important. For example, studying the Act which mandates the transfer of Central Government assets to local governments, municipal land acquisitions and the legal documents needed to dispose an asset. Besides laws and regulations in asset management, local governments produce other significant documents related to the asset management process. These documents include reports, notes, communication documents, asset inventory lists, asset valuation reports, procurement documents and other important documentation. All of these documents were collected and analysed.

The first step in seeking historical information about legislation relating to asset management was to review the literature on decentralisation of government. The decentralisation of government was the trigger for the transfer of public assets from Central Government to local governments and the processes involved. The research was not confined to national law and acts but also encompassed the lowest hierarchy regulation at provincial law level. After gathering some ideas on local

government conditions, the research was then crosschecked against the documents (including laws, regulations and asset reports) in reality with respective local government officials and stakeholders through interviews.

Interviews

Perakyla (2008) assesses that most qualitative research probably is based on interviews. By employing this method, the researcher can reach areas of reality that would otherwise remain inaccessible such as people's subjective experiences and attitudes. Fontana and Frey (Fontana & Frey, 2008) argue that the most common form of interviewing involves individual, face-to-face verbal interchange, but interviewing can also take the form of face-to-face group interchange and telephone interviews. It can be structured, semi-structured, or unstructured. It can be used for the purpose of measurement, or a scope to understand an individual or a group perspective. An interview can be a one-time brief exchange, such as five minutes over the telephone, or it can take place over multiple lengthy sessions.

In relation to the study, interviews are a form of further inquiry after document analysis; interviews are the next strategy enabling further questions to be asked regarding the municipal asset and its management. The most probable type of inquiry by interview deal with public asset management processes including the type of assets owned by local governments, asset inventory databases, laws and regulations in public asset management, as well as local government official's knowledge and understanding of the laws and regulations for managing municipal assets. Therefore, the interviews are conducted with local government asset managers in the form of one-on-one conversations, a face-to-face verbal exchange in a semi-structured mode. Further interviews in the form of telephone interchanges were undertaken to clarify any unclear questions or provide more detail. All interviews were recorded for the purpose of data review with the consent of all participants. In the case of rejection of the recorder manual note taking was conducted.

The interviews were conducted with government officials at both central and local government levels. Besides government organisations that were involved directly with the public asset management process, government auditors and legislative member were also interviewed in this research. In addition to government

officials, private organisations (as asset management practitioners) and other stakeholders were also interviewed.

Interviews have particular strengths in large data collection. An interview is a useful way to get large amounts of data in just a short time. Immediate follow-up and clarification are also possible. Combined with observation, interviews allow the researcher to understand the meaning that people hold for their everyday activities (Fontana & Frey, 2008; Marshall & Rossman, 2006).

Observations

Observation is a fundamental and highly important method in qualitative inquiry. It is used to discover complex interactions in natural social settings (Marshall & Rossman, 1999). Similarly, observation has been characterised as the fundamental base of all research methods in the social and behavioural sciences and as the mainstay of the ethnographic enterprise (Angrosino & Perez, 2000, p. 673).

Observation entails the systematic noting and recording of events, behaviours, and artefacts (objects) in the social setting chosen for study. The observational record is frequently referred to as field notes (Marshall & Rossman, 1999, p. 107) i.e. nonjudgmental, concrete descriptions of what has been observed.

According to Angrosino and Perez (2000, p. 676), conscientious ethnographers have, in fact, long been aware that in naturalistic settings, the interaction of researcher and subjects of study can change behaviours in ways that would not have occurred in the absence of such interaction. They believe however, that it is both possible and desirable to develop standardised procedures that can maximise observational efficacy, minimise investigator bias, and allow for replication and/or verification to check out the degree to which these procedures have enabled the investigator to produce valid, reliable data that, when incorporated into his or her published report, is regarded by peers as objective findings.

Observation strategy consists of two types of approach:

Nonparticipant observation. From this approach, it is expected that simple observers follow the flow of events where behaviour and interaction continue as they would without the presence of a researcher, uninterrupted by intrusion (Adler & Adler, 1998, p. 81) cited in (Denzin & Lincoln, 2000). In this approach, there are four participant roles: 1) the complete participant, 2) the participant as observer, 3)

the observer as participant, and 4) the complete observer. The selection of situation and persons occurs systematically according to criteria of how to have a representative sample, and random sampling is therefore applied.

Participant observation is more commonly used in qualitative research. Denzin and Lincoln (Perakyla, 2008, p. 351) define this approach as a field strategy that simultaneously combines document analysis, interviewing of respondents and informants, direct participation and observation, and introspection. There are three phases of participant observation: 1) descriptive observation at the beginning; 2) focused observation is then used to narrow our perspective on those processes and problems which are most essential for the research question; 3) selective observation, towards the end of the data collection is focused on finding further evidence and examples for the types of practices and processes, found in the second step.

This research used the non-participant observation, starting from observation on how the local government in South Sulawesi province manages its assets. It then moves to specific processes and problems in municipal asset management stages.

After identifying the law, regulation and policy in asset management in municipal property—particularly those laws and regulations which deal with the asset life cycle procedure of local governments—and interviewing local government asset managers; the researcher then observed local government asset managers in their daily duties in order to see if they applied the laws and regulations, and also to see if the documents and reports they produced were accurate.

The objective of this study is not to show the asset managers' behaviour as the centre of attention; the asset lifecycle processes are the centre of the research. Therefore these observations are only a complimentary tool, revealing things that do not appear in documents or interviews and uncover some sensitive matters that officers were reluctant to discuss.

In-depth interviews

Fontana and Frey (1957, p. 149) argue that asking questions and getting answers is a much harder task than it may seem at first. The spoken or written word always has a residue of ambiguity, no matter how carefully we word the questions and how carefully we report or code the answers.

Khan and Cannell (Marshall & Rossman, 1999, p. 108) cited in (1999, p. 108) describe interviewing as a conversation with a purpose; it may be the overall strategy or one of several methods employed in a study. The researcher explores a few general topics to help uncover the participant's views but otherwise respects how the participant frames and structures the responses. This, in fact, is an assumption fundamental to qualitative research: the participant's perspective on the phenomenon of interest should unfold as the participant views it, not as the researcher views it.

In addition to the first round of interviews, there was a second round of interviews to answer the second research question. Although there is no clear separation or time allocation to mark these and to differentiate them from the first interviews, there is a question guide for these interviews in order to keep the discussions on the right track. The researcher let the discussion flow as normally as possible in order to avoid disturbing the data collection in the event of the interviewee jumping to the second research question accidentally. The most important question in these interviews are the factors that support and hinder local government asset managers to do their job, including barriers and limitations, performance indicators, local government considerations and objectives.

These second interviews are aimed at public asset management practice at the policy level. For this reason, only middle and top level managers were interviewed at this second stage. The local government entity selections and respective respondents in this study are explained in detail in the next section.

The detailed research plan from the preliminary literature review to Public Asset Management Framework formulation for the Indonesian local government context can be seen in **Figure 4.1 Research Design:**



Figure 4.1 Research Design

4.5 LOCAL GOVERNMENT INSTITUTIONS SELECTED AND RESPONDENT PROFILES

Indonesia has unique circumstances. The country is an archipelago that comprises 17,508 islands with a huge population that consists of about 500 major ethnic groups (Silaen, 2006). There are six main areas in Indonesia i.e. Sumatra, Jawa, Bali and Nusa Tenggara, Kalimantan, Sulawesi and Maluku and Papua (Bureau of Statistics Indonesia, 2011).

Silaeen's study shows that at least four countries influenced Indonesia during the colonial era. Those countries were Portugal, the Netherlands, the UK and Japan. Considering this situation, the historical, political and cultural background of Indonesia may also influence the practice of management in the government sector.

Indonesia is a unitary state with a Central Government and two levels of autonomous sub-national or local government and administration. The government levels are provincial level government and regency or city government. Currently there are 33 provinces (before the reformation era there were only 27 provinces) and 497 regency and city governments (399 regency and 98 City) (Bureau of Statistics Indonesia, 2006).

4.5.1 LOCAL GOVERNMENTS INSTITUTIONS SELECTION

The focus of this research is public asset management carried out by local government at the provincial level. Asset management at the central government level has had a lot of attention from international institutions like the World Bank and IMF. As a result, asset management at central government level is better than at the local level. At the local government level, as in other countries, more research and study is required to develop an in-depth and suitable asset management program, which can be applied and accepted by local governments.

Of the 33 provinces, some are already categorised as mature and advanced, these include provinces such as West Java, Central Java, East Java, North Sumatra, Kepulauan Riau, Lampung, DKI Jakarta, South Sulawesi, South Sumatra and Banten. Other provinces are categorised as being of the middle position, these include the provinces of Bali, West Kalimantan, West Sumatra, North Sulawesi, Aceh, Nusa Tenggara Timur and Yogyakarta, The rest are listed as bottom line provinces these are usually the newer formed provinces such as West Sulawesi, West

Papua, Gorontalo, East Maluku, Bangka Belitung, Maluku (Bureau of Statistics Indonesia, 2006, 2011).

In this study, the island of Sulawesi was selected. Sulawesi Island was chosen because it represented the condition of Indonesia for the purposes of the focus group adopted in this study. All levels of government categories can be found in Sulawesi, ranging from the large province of South Sulawesi, the mid level provinces of North, Central and Southeast Sulawesi to the small level provinces of Gorontalo and West Sulawesi. These provinces are categorised based on preliminary data collection from the Bureau of Statistics Indonesia (Bureau of Statistics Indonesia, 2006, 2011). There are three grounds for the selection of the province to be studied:

1. The quantity and quality of public assets. The assets that are owned by local governments and their complexity (Marshall & Rossman, 1999, p. 147). Sulawesi has the three levels of government in terms of assets. South Sulawesi represents the largest province, which typically has complex public assets; these include major infrastructure facilities, the majority of land and buildings with which to support the delivery of public services. Mid and small provinces can also be found in Sulawesi Island these being: North Sulawesi, Central Sulawesi, Southeast Sulawesi, Gorontalo and North Sulawesi.
2. Geographical consideration. Sulawesi Island was chosen because it is the gateway to the eastern part Indonesia and is the bridge to western Indonesia. Sulawesi is located in the centre of Indonesia and is well known as Indonesia Centre Point. It is often used as reference or example for other local governments in both western and eastern regions. Travellers from west to east or vice versa normally have to transit at the central part of Indonesia, that is Sulawesi (Bureau of Statistics Indonesia, 2010; Directorate General of General Affair, 2008).
3. The population of the province and its territory. South Sulawesi has a population of more than 8 million people with a land area of around 46 thousand km², this means the population density is 172 people per square km. As a comparison, Queensland's population is almost 2.7 million people with density of 2.6 people per square km (although Brisbane's density at 340 people per square km is the highest, whereas Moreton Island has the lowest density count at 1.7 people per square km) (Australian Bureau of Statistics, 2010). The West Sulawesi population is slightly over 1 million with a territory of almost 17 thousand km² (density of around 50 inhabit/km²). Compared to other provinces in Indonesia, the provinces in Sulawesi Island with their composition are considered representative of the Indonesian population.

4. Logistical reasons and easy access to the government's organisation. You can reasonably travel from South Sulawesi at one end of the island to North Sulawesi at the other. Sulawesi Island can be accessed without consuming too much money, manpower and time. Because this study planned to gather data by focus group, Sulawesi is an ideal location in which to gather participants from all provinces.

In Sulawesi Island, there are six provinces: South Sulawesi, West Sulawesi, Central Sulawesi, Southeast Sulawesi, Gorontalo and North Sulawesi. The entire six provinces are studied in the research. Of the six provinces, four were willing to actively participate in this research. Two other provinces were not successfully contacted by the researcher and have not responded to communication attempts, so only the secondary data obtained through other officials from nearby provinces, as well as that published on the web site or through other mass media was available. From these six provinces, participants to be involved in this research process were selected. Full details of the participants in this research are discussed in the next section.

4.5.2 RESPONDENT PROFILE

Besides the four provincial officers (South, West, Central, and North Sulawesi), the study also involved several other institutions and stakeholders. These institutions and stakeholders are Central Government asset managers, local government asset users, communities, practitioners, academics, a government auditor, a legislator and the Indonesian Consumer Institution Foundation (an NGO that represents the consumers' side). The details of all respondents can be seen on **Table 4.3**.

Table 4.3 Respondent Profile

No	Institution/organisation	Category	Involvement in research	Number of delegates
1	Directorate General of State Asset Management	Central government operational office	Interview, Observations and	4

No	Institution/organisation	Category	Involvement in research	Number of delegates
			Focus Group	
2	The House of Representative, South Sulawesi Province	Provincial Legislator	Interview and Focus Group	2
3	The State Audit Board, Representative of South Sulawesi	Government auditor	Interview and Focus Group	4
4	Provincial Office of South, West, Central and North Sulawesi	Local Government, Asset Manager	Interview, Observation and Focus Group	16
5	District Education Office, Pangkep, South Sulawesi; District Education Office, Makassar, South Sulawesi; Health Regional Office, Makassar, South Sulawesi	Local Government Working Unit ³ , Asset User	Focus Group	3
6	University of Muhammadiyah Makassar; State University of Makassar; Hasanuddin University, Makassar	Academician	Focus Group	3
7	State Administration Bodies, South Sulawesi Province	Local Government Policy Adviser and Academician	Focus Group	1
8	Private Companies	Asset Management Practitioner /Contractors	Interview, Observation and Focus Group	4

Table 4.3 Respondent Profile (Continued)

³ Working Unit is the Authorized Budget User/Authorized Asset User that are part of an organizational unit in the Ministry/Governmental Agency carrying out one or more activities of a state's program (it is the smallest unit within a ministry/governmental unit)

9	PT. Asian Appraisal	Asset Valuer	Focus Group	1
10	USAid NGO and Indonesian Consumer Institution Foundation (NGO)	Representatives from community	Focus Group	2
11	<i>(Unwilling to be identified)</i>	Local Government public policy news journalist	Focus Group	1
	Total Participants			41

Notes: detailed respondent profiles can be found in the appendix A

Respondents listed in **Table 4.3**, were selected based on their duties and functions in their respective organisations, which are closely related to the process of managing public assets. The local government superiors appointed respondents, who came from government organisations, and the researcher was unable to intervene in the appointment. The researcher could only filter participants based on their duties and functions that relate to public asset management processes. An official task letter from the respective authority at their office proved these duties and functions. Academic respondents were selected based on their expertise and local government officers' references and were then approached by the researcher. Practitioner and asset management stakeholder respondents were selected via references from local government officers and through the researcher's own observations. Community and NGO respondents were selected based on their field of concern and from researcher knowledge.

4.6 DATA ANALYSIS

This section outlines the data analysis and framework validation undertaken in this research. The data recording, managing and analysing that applied in the study is discussed. The application of Computerised Assisted Qualitative Data Analysis (CAQDAS) and Microsoft Excel as an analytical tool in this study is explained in the next section. This research validates the framework in relation to stakeholders. The detail on the framework validation is also discussed in this section.

4.6.1 DATA ANALYSIS

Once the overall strategy, site, sample selection and data collection methods have been determined, the researcher should discuss how this large amount of data will be recorded, managed and analysed (Strauss & Corbin, 1997). The process of storing the data and information on data storage and the combined transcription and preliminary analysis greatly increases the efficiency of the data analysis. The researcher's transcription of the literature review, previous data, and earlier analytical memos were a useful part of data analysis and should not be seen as merely clerical duties.

Data analysis is the process of bringing order, structure and interpretation to the mass of collected data. It is a messy, ambiguous, time consuming, creative and fascinating process. It does not proceed in a linear fashion and it is not neat. Qualitative data analysis is a search for general statements about relationships among categories of data; it builds grounded theory (Marshall & Rossman, 1999, p. 150)

As Fielding and Lee (1998, p. 58) pointed out, typical analytic procedures fall into six phases which this study has adopted, these are:

- 1) Organising the data: identifying salient themes, recurring ideas or language, and patterns of belief that link people and settings together is the most intellectually challenging phase of data analysis and one that can integrate the entire endeavour.
- 2) Generating categories, themes and patterns: the process of category generation involves noting patterns evident in the setting and expressed by participants. As categories of meaning emerge, the researcher searches for those that have internal convergence and external divergence. That is, the categories should be internally consistent but distinct from one another.
- 3) Coding the data: this process is the formal representation of analytical thinking. The tough intellectual work of analysis is generating categories and themes. The researcher then applies some coding scheme to those categories and themes and diligently and thoroughly marks passages in the data using codes. Codes may take several forms: abbreviations of key words, coloured dots, numbers, etc.
- 4) Testing emergent understanding: as categories and themes are developed and coding is well under way, the researcher begins the process of evaluating the plausibility of understanding and exploring them through the data. This entails a search through the

data during which the researcher challenges the understanding, searches for negative instances of the patterns, and incorporates these into larger constructs, as necessary.

- 5) Searching for alternative explanations: as the researcher discovers categories and patterns in the data, the researcher should engage in critically challenging the very patterns that seem so apparent. The researcher should search for other, plausible explanations for these data and the linkages among them. Alternative explanations always exist; the researcher must search for, identify, and describe them, and then demonstrate how the explanation offered is the most plausible of all.
- 6) Writing the report: writing about qualitative data cannot be separated from the analytic process. In fact, it is central to that process, for in the choice of particular words to summarise and reflect the complexity of the data, the researcher is engaging in the interpretative act, lending shape and form, meaning, to massive amounts of raw data.

The researcher used notes, voice recorders, cameras and other tools as needed to record all data collected from the study. Data recording and storage were adjusted to the research methodology and participants' sensitivities and the researcher ensured that all research tools were only be used with participants' consent.

All collected documents, were then analysed by a content analysis approach. Content Analysis is a research technique aimed to achieve objective, systematic, and quantitative description of document content of communications. Content analysis is also a research tool that focused on the actual content and internal features of manifest substance. It is used to determine the presence of particular characters, words, phrases, sentences, themes, concepts, or within texts or sets of texts and to quantify the presence of these content in an objective approach (Busha & Harter, 1980). According to Busha & Harter (Busha & Harter, 1980)

“Texts can be defined broadly as books, book chapters, essays, interviews, discussions, newspaper headlines and articles, historical documents, speeches, conversations, advertising, theater, informal conversation, or really any occurrence of communicative language”.

To perform a content analysis on a text, the text is then coded into manageable unique characteristics on a variety of levels – word, phrase, sentence, or theme – and then analyse using one of content analysis basic methods i.e. conceptual analysis or relational analysis. The results of the analysis are then used to make inferences

about the meaning or intention within the text(s), the writer(s), the audience, and even the culture and time of which these messages are a part and interconnected each other.

This research also used software in data processing. Quantitative data was analysed by Microsoft Excel software and qualitative data was analysed by Computer Assisted Qualitative Data Analysis (CAQDAS) software. The abilities of data processing available in Microsoft Excel satisfied the need of simple data processing of quantitative data analysis in this research. On the other hand, a justification for using the CAQDAS as an analytic tool in qualitative research is inextricably tied to the character of qualitative data. This research produces an enormous variety of qualitative data from interviews, in-depth interviews, documents, audio recordings, videos and photos.

In light of this, one justification for computer use in qualitative data analysis is that the machine can facilitate the task of data management (Lewins & Silver, 2007, p. 6). Furthermore, Fielding and Lee (1998) state that the second justification for applying computer use to the needs of qualitative research is because of the computer's capacity to potentially extend the capabilities of qualitative research. The computer in other words provides analytical possibilities difficult to accomplish by manual methods. A third justification according to them is that it can enhance the acceptability and credibility of qualitative research. Some of the early enthusiasm for using computer programs seems to have been driven by a concern to make qualitative research more scientific.

There are three leading software programs in CAQDAS i.e. ATLAS, MAXqda, NVivo and Leximancer. The NVivo 8 is used in this study. NVivo is designed to approach qualitative analysis as researchers do. QSR International, the developers of NVivo, promise to provide a set of tools that will assist researchers in undertaking the analysis of qualitative data. The usage of a computer is not intended to supplant time-honoured ways of learning from data, but to increase effectiveness and efficiency of such learning. The computer's capacity for recording, sorting, matching and linking can be harnessed by the researcher to assist in answering the research questions from the data, without losing access to the source data or contexts from which the data have come (Bazeley, 2007; Patton, 2002; Williamson & Long, 2005).

There are five principal ways that NVivo supports analysis of qualitative data (Bazeley, 2007). These principals have been adopted in this research. They are:

- 1) Manage data. NVivo is used to organise and keep track of all data gathered in the study. Data includes raw data files from interviews, observations and focus groups. The data is in the form of notes, sound recorded, video recorded, pdf files, photos, Microsoft Office document formats (Ms Word, Excel and Power Point), research documentary sources, rough notes and ideas jotted as memos and information about data sources.
- 2) Manage ideas. NVivo is used to organise and provide rapid access to conceptual and theoretical knowledge that has been generated in the research, as well as all the data that supports the concept and knowledge. At the same time, retaining ready access to the context from which such data has come.
- 3) Query data. NVivo is used to ask questions of the data, and have the program retrieve from its database all information relevant to determining an answer to the questions. The results of the questions are saved to allow further interrogation.
- 4) Graphically model. The NVivo is also used to show cases, ideas and concepts being built from the data relationships; then present those ideas and conclusions in visual displays using models and matrices.
- 5) Report from the data. Finally, NVivo is used to report the contents of the qualitative database, including information about, and in, the original data sources, the ideas and knowledge developed from the data are then processed to reach the outcomes.

The study is started simply with a question. The program then stores those first ideas in rich text documents, lets the researcher edit them as they change and link what has been written to other files as the study progresses. From this tentative beginning, researchers can generate some early concepts, ideas and categories. NVivo stores these as nodes that can be explored, organised or changed. Documents can be edited or imported into the NVivo project in rich text format. This study involves some information about cases, sites and people and those are needed when questions are asked about the data. NVivo stores such information as attributes of documents or nodes. Observations are recorded and ideas captured as memos about the documents or annotations in them. NVivo's tools are used to assess concepts, review the performance of nodes and the nodes system, seek and explore associations

and findings, find and validate patterns. Researchers can then easily return to the data for detailed understanding, insight and conclusion

It is recommended that each new category be identified, compared and contrasted with all the categories previously formed. If there is no congruence with any other category then a new code should be developed. Nodes that share common themes are grouped together as sister or daughter nodes. An analytical, constant comparative scheme and rules should be established so that each category set should remain internally consistent and the entire set mutually exclusive (Bazeley, 2007; Bazeley, Richards & Ebooks Corporation., 2000; Edhlund, 2008; Hoover & Koerber, 2011).

4.6.2 TRUSTWORTHINESS OF THE DATA AND INFERENCES

In terms of qualitative research, trustworthiness—sometimes referred to as reliability or objectivity—refers to the attempts of researchers to secure a solidity of meaning from qualitative data that is often a complicated and opaque process. There are no agreed or precise methods for ‘teasing out’ themes or theories that can lead to objective understanding. In addition, the wide variety of qualitative data, or ‘texts’, that can be incorporated into a research project further complicates the process. Generally, the aim is to develop categories and codes that reflect similar issues or ideas in the data under review; meaning objectivity is entwined with the gerund objectifying. It is a research activity in which the researcher aims to convince the reader of the soundness and sense of their research especially in a case study research (Thorpe & Holt, 2008).

Several approaches establish the trustworthiness of the qualitative data and the credibility of the inferences in the data. There are four criteria that contribute collectively to the trustworthiness of a qualitative investigation and these included credibility, transferability, dependability and conformability (Lincoln & Guba, 1985). Credibility defines by (Schwandt, 1997, 2001) as that component of trustworthiness that “addresses the issue of the inquirer providing assurances of the fit between the respondent’s views of their ways of life and the inquirer’s reconstruction and representation of the same”. Consequently, a range of strategies substantiate credibility at each stage of the study. Some of the strategies used in this study to ensure data was accurately represented included (Keffe, 2004):

- the multi-method design of the study engaged qualitative and quantitative methodologies that complemented each other
- the semi-structured interview format
- paraphrasing and summarising information during interviews confirmed researcher interpretations with the participants
- focus groups clarified and confirmed interpretations
- the quality and responsiveness of the interview process
- findings reported back to the participants.

Transferability relates to the ability of the study to generalise the findings to other individuals, situations, cases or the broader population. The quality of the evidence presented from the study is maintained through accurate reporting, verbatim quotes and cross-referencing between participants and focus groups. Explicating the issues from the quantitative analysis and exploring issues further in the qualitative stage of the study provides a test for the transferability of the data (Keffe, 2004; Lincoln & Guba, 1985; Schwandt, 2001; Thorpe & Holt, 2008).

Dependability, according to Schwandt (2001), refers to the researcher's ability to ensure that the process of the study is logical, accountable, traceable and accurately documented. To this effect, case notes and transcriptions of interviews were recorded as documents in the NVivo program. The functions in NVivo, such as memo and annotation, recorded the progress of the study and provided the auditing roles described earlier. Transcriptions of the interviews were recorded as a document for analysis.

Conformability relies on a consistent fit between the data and the interpretations (Keffe, 2004). As such, the findings reported in this thesis do not prescribe outcomes; rather they provide an interpretation of the data and information that contributes to a better understanding of the public asset management processes conducted in Indonesian local governments. A number of strategies used in the study maintained this integrity these included: linked nodes, documents, sets and attributes, cross-referenced reports and verified interpretations with the focus group representatives as well as the participants' comments on the reporting of the data. These measures ensure the findings were not fabricated or presented in a biased way by the researcher.

4.6.3 FRAMEWORK VERIFICATION

The method of interviewing participants in the form of focus groups comes largely from marketing research but has been widely adapted to social science and applied research. The groups are generally composed of 7 to 10 people (although they range from as small as 4 to as large as 12) who are unfamiliar to one another and have been selected because they share certain characteristics relevant to the study's questions. This method creates a supportive environment, asking focused questions to encourage discussion and the expression of differing opinions and points of view (Marshall & Rossman, 1999, p. 115).

The advantages of focus group approach mentioned by Morgan (1999, p. 115) and other scholars (Fontana & Frey, 2008; Krueger & Casey, 2000; Marshall & Rossman, 2006) is that this method is socially oriented, studying participants in an atmosphere more natural than artificial experimental circumstances and more relaxed than the exposure of a one-to-one interview. When combined with participant observation, focus groups are especially useful for gaining access, focusing site selection and sampling, and even for checking tentative conclusions. Additionally, Marshall and Rossman (1999, pp. 114-115) argue that the format allows the facilitator the flexibility to explore unanticipated issues as they arise in the discussion.

This study formulates a suitable asset management framework for Indonesian local government through an adoption from other countries' best practice. This includes Australia and provides advanced literature references with some adjustment to meet the Indonesian environment. The result is then justified through literature and theory on asset management to build up an asset management framework for local government in Indonesia. Before the study reached a conclusion on its framework, a validation process was carried out in the form of focus group with local government officers who are involved in asset management processes, together with practitioners from private sectors, academic scholars, legislative members and public service end users to gauge their responses towards the developed framework.

The results of the focus group enriched the developed Public Asset Management Framework. Some adjustments and justifications were made after the focus group. There were many things obtained from the focus group process. In particular, many technical issues arose which cannot be found in the literature and

practice of other countries, such as how to obtain the value of an asset at a local government level. Another important outcome from this focus group was the sharing of perceptions and expectations of the Central Government, local government, auditors, stakeholders, and society in relation to public assets. The focus group meetings were the first time members from the various organisations had been able to express their views and expectations in the setting of an academic forum.

4.7 CONCLUSION

Proper identification of research problems will significantly guide the researcher to design and develop a proper methodological strategy in pursuing the research aim. Furthermore, a good research design will facilitate the researcher in conducting research and answering all research questions. The determination of the research approach affects the data obtained during the research process therefore it is very important to properly decide on what and how in the research method.

This chapter gives an explanation on who, what, where, how and why a particular research approach was adopted in this study. The research design chapter firstly defines the research framework used in the case studies on Indonesian local government. This chapter points out the research questions asked and details the further research questions and investigations. The chapter also explains and justifies the methods used in this research, which are document analysis, interviews, in-depth interviews and observations. In the application of the research methods, local government at the provincial level was selected together with their stakeholders in managing public assets. All data gathered in this research was qualitatively analysed with an application on NVivo software. Before the research conclusion and a Public Asset Management Framework was proposed, the framework was validated using a focus group.

The next chapter of this thesis is a report of the data collection process using the above approach. The result of the data collection is separated into two chapters. The first results chapter (Chapter 5) reports on the answers to the first research question. The second results chapter (Chapter 6) reports the findings of the second research question.

Chapter 5: Current Conditions of Public Asset Management in Indonesia

5.1 INTRODUCTION

Chapter 4 examined the methodologies that were selected and adopted to find answers and to investigate the research questions. This chapter reports on the outcomes of the data collection phase particularly for the first research question: “*How do provincial governments in Indonesia currently manage their public assets?*” The first research question was designed to examine the current condition of public asset management in Indonesian local governments.

The literature review revealed that many, if not all, local governments in developing countries including Indonesia typically do not have the institutional, financial or knowledge base to properly manage the public assets in their authority especially for public real property and infrastructure. Conceptually, this condition is even more complicated by the fact that most developing countries do not have a legal, organisational and asset management framework. All these arrangements as prerequisite requirements to better manage public assets were examined in an Indonesian local government context as the first stage to develop a Public Asset Management Framework.

This chapter outlines the findings of the research method selected to find the answer to the first research question. Section 5.2 explains the data collection process. Section 5.3 outlines the assets that local governments have. Section 5.4 shows the public asset management arrangements in local government organisations, and closes with a conclusion section (Section 5.5).

5.2 DATA COLLECTION PROCESS

The data collection process followed three key strategies: document analysis, interviews and observations. Document analysis was designed firstly to examine the bigger picture of public asset management's current condition in Indonesia. The approach was set to get a broader view of public asset management in general, beginning by exploring the law on regional autonomy that became the trigger for the

transfer of public assets to local governments. The document analysis then moved to the law and regulations that were more specific to the scope of local government and to other documents produced by local governments.

Interviews were the next strategy to ask further questions regarding municipal assets and their management processes. The most essential questions posed by these interviews were to do with public asset management processes, including the type of assets owned by local governments, asset inventory databases, laws and regulations in public asset management as well as local government officials' knowledge and understanding relating to laws and regulations in managing municipal assets.

This research also applied non-participant observations, which started with observing how local governments in Sulawesi Island manage their assets. After this, the research observed processes in municipal asset management practices and enquired about further stages. As mentioned previously, the first objective of this study is to reveal the asset lifecycle processes performed by local government asset managers, this was central to the research. For this reason, the observations are only a complimentary tool used to reveal information that is not shown on the documents or in interviews and for some sensitive matters that officers were reluctant to discuss.

To investigate typical assets owned by local governments, the regulations and legislative documents relating not only to public assets directly, but also the rules and regulations in a broader spectrum, especially those ruling the regional autonomy, public service, local government, finance and budgeting need to be examined. The rules and regulations referred to dealt not only with the central level but also at the regional level. It should also be acknowledged that although local governments have decentralised local authority and autonomy, the regulations made by the local governments should not be different and/or contradict the rules operating at the Central Government level. Those laws and regulations are listed in **Table 5.1**:

Table 5.1 Law and Regulation for Document Analysis

No.	Regulation's Number and Title	Year of Enforcement	Level of Regulation	Subject Matter
1	Law No. 10 of 2004 on the Establishment of Laws	2004	The Central Government	Formation and the making of a law and legislation including its hierarchical position
2	Law Number 32 of 2004 on Regional Governments	2004	The Central Government	The foundation for decentralised local governments
3	Indonesian Government Regulation No. 6 of 2006 on Management of State/Regional Owned Asset	2006	The Central Government	Governing the management of both the Central Government assets and the local government assets
4	Regulation of the Minister of Internal Affairs No. 17 of 2007 on the Technical Guidelines for Management of Regional Assets	2007	The Central Government	Intended to give technical guidance on the management of provincial governments assets
5	Decree of the Minister of Internal Affairs No. 7 of 2002 on the Location and Asset Code for Provincial / District / City Asset	2002	The Central Government	Codification of public assets both the Central Government's assets and the local governments' assets
6	South Sulawesi Provincial Regulation No. 4 of 2007 on Regional Asset Management	2007	The local government	The management of provincial assets for South Sulawesi province
7	Central Sulawesi Provincial Regulation No. 4 of 2009 on Regional Asset Management	2009	The local government	The management of provincial assets for Central Sulawesi province
8	West Sulawesi Provincial Regulation No. 14 of 2009 on Regional Asset Management	2009	The local government	The management of provincial assets for West Sulawesi province

Detail regulations are attached in appendix B

Among the rules and regulations listed in **Table 5.1**, some are published and can easily be obtained via local/Central Governments' websites and other mass media; however some can only be obtained from the local Governor's office. Regulations and laws that difficult to be obtained by non-local governments' officials are mainly local regulations and ministerial regulations. Examples of these regulations include those from South Sulawesi and West Sulawesi local government regulations. As for Central Sulawesi province, local regulations on asset management are still a matter for discussion between local government and legislative members. In addition to laws and regulations, there were other documents which were also important and had to be examined in relation to the first research question. These documents were the local government asset inventory reports, annual working meeting materials, annual reports, official letters and notes. The asset inventory reports were collected from the provincial government of South Sulawesi, Western Sulawesi, Southeast Sulawesi and North Sulawesi provinces in the form of soft copy i.e. Microsoft Excel format. The annual working meeting materials were collected from Public Works Makassar, South Sulawesi in the form of hard copy.

All collected documents, were then analysed by a content analysis approach. Laws and regulations were grouped and categorised by the order of hierarchical regulations applicable in Indonesia. The order of hierarchy in Indonesian law starts with the constitution at the top of the list, followed by laws/Acts, government regulations that replace the laws/Acts, government regulations, presidential regulations, presidential decrees, ministerial regulations, ministerial decrees, local government regulations, governor regulations, and governor decrees.

Once grouped into hierarchies, laws and regulations can then be examined in relation to the duties and functions of local government in providing public services and matters related to regional assets. To obtain a complete understanding, the relevant laws and regulations were compared, specifically looking at their consistency, the matters governed by the laws and regulations, and how feasible implementation was by local government officials.

The purpose of the interviews was to investigate public asset management processes and dealt with the types of assets owned and managed by local government, asset inventory records, regulation and guidance in public asset management. The interviews were also used to confirm and assess local government

officials' knowledge and understanding in relation to the laws and regulations in managing municipal assets.

The researcher interviewed three employees from South Sulawesi province and three employees from West Sulawesi province, one official from North Sulawesi province and one from Central Sulawesi province. In addition to these participants, the researcher also interviewed two employees of the Central Government and two employees of private companies who were partners in the maintenance and development of the provincial government assets. In total twelve respondents were interviewed at this research stage. The details of the interviewees are presented in **Table 5.2**.

Table 5.2 Interviewee Details

No	Code	Institution/organisation	Category	Position	Involvement in research
1	I1	Directorate General of State Asset Management	Central Government regional office	Head of Section	Interview and Focus Group
2	I2	Directorate General of State Asset Management	Central Government operational office	Officer	Interview, observation and Focus Group
3	I3	Provincial Office of South Sulawesi	Local Government, Asset Manager	Head of Asset Maintenance Division	Interview, observation and Focus Group
4	I4	Provincial Office of South Sulawesi	Local Government, Asset Manager	Officer, Asset Registration and Administration Sub Division	Interview
5	I5	Provincial Office of South Sulawesi	Local Government, Asset Manager	Officer, Asset Registration and Administration Sub Division	Interview

Table 5.2 Interviewee Details (Continued)

6	I6	Provincial Office of West Sulawesi	Local Government, Asset Manager	Head of Asset Storage and Inventory Sub Division	Interview and observation
7	I7	Provincial Office of West Sulawesi	Local Government, Asset Manager	Officer	Interview and observation
8	I8	Provincial Office of West Sulawesi	Local Government, Asset Manager	Officer	Interview and observation
9	I9	Provincial Office of Central Sulawesi	Local Government, Asset Manager	Officer	Interview and observation
10	I10	Provincial Office of North Sulawesi	Local Government, Asset Manager	Head of Asset Planning and Distribution Sub Division	Interview and Focus Group
11	I11	Private company	Asset maintenance practitioner, stakeholder	Owner	Interview and observation
12	I12	Private company	Asset development and maintenance contractor	Owner	Observation, Interview and Focus Group

Most of the interviewees, particularly those from local governments and Central Government, have more than ten years experience working in a public asset management related area. Interviewees from the private sector are those who worked closely with local governments, mainly in the maintenance and development of public buildings and offices. Collectively, these interviewees possess a rich

understanding and knowledge of a diverse range of public asset management, with a focus on asset administration and maintenance. The depth of the interviewees' knowledge and experience both from government and private enterprise suggest that the data collected in these first step interviews have strong and valid data input in a past and current context.

As mentioned earlier, to develop a Public Asset Management Framework, current conditions in Indonesia should be examined first. This examination aimed to capture the current condition of Indonesian local governments in managing public assets. This notion is examined through further investigative research questions:

- 1) Do provincial governments have rules and guidelines concerning the management of public assets?
- 2) Do provincial government officials have knowledge of, comply with and implement these rules and guidelines?
- 3) How are the provincial governments currently managing their infrastructure and real property assets? Including:
 - a. Legal framework?
 - b. Organisational arrangements?
 - c. Asset lifecycle (design, plan, procurement, maintain, manage and dispose) processes?
- 4) What are the assets that a provincial government currently has?
- 5) Do provincial governments have data collection and storage systems?

The interview process was conducted with a flexible schedule in June 2009 (preliminary data collection) and from January 2010 to July 2010. Some interviews were conducted on the basis of prior notification, but there were others which were carried out as time was made available when the researcher made visits to the local government office. Interviews began with the researcher explaining to the interviewees the aim and objective of the research. Interviewees then were asked to confirm that they understood the overall research processes and were willing to participate in the research processes. Some of the interview process was recorded and some was noted on the researcher's minutes. All interviews were conducted in *Bahasa Indonesia*, it was therefore necessary that the data collected in the interviews

be translated into English without changing the original data. Finally, data collected from interviews was analysed to derive meaningful information.

After identifying the laws, regulations and policy in the area of asset management in municipal property and interviewing local government officials the researcher then observed the local government officers performing their daily duties to discover if they applied the laws and regulations and also to find out if the documents and reports they produced matched with what actually occurred. The observations, as has been stressed several times, were only a complimentary tool used to reveal issues that are not shown on documents or revealed in interviews and for some sensitive matters that officers were reluctant to discuss.

5.3 TYPICAL ASSETS OWNED BY LOCAL GOVERNMENTS

After analysing the public asset management process in Indonesian local governments, both from the law/regulation and from practical point of view, this study then identifies typical assets owned by local governments through interviews and document analysis. *Internal Affairs Ministerial Regulation No. 17/2007 Article 3* defines regional assets to include:

- a. Assets purchased or obtained at the expense of government budget, and
- b. Assets obtained from other legitimate acquisition; that is 1) Assets obtained from grants / donations or the like; 2) Assets obtained as the implementation of the agreement / contract; 3) Assets obtained under the provisions of law; or 4) Assets obtained under a court ruling that has permanent legal enforcement.

5.3.1 ASSET TYPES AND ASSET DATA MANAGEMENT

The province of South Sulawesi was studied during the preliminary studies conducted on May to June 2009. From this study, asset inventory records were collected from officers (I4, 2009) based on appropriate approvals (I3, R6, 2009). These records shows that South Sulawesi province has categorised its asset into five asset types:

- a. Land, that is all types of land that are acquired through the local government budget financing and other legitimate acquisition such as grants, transfers from other parties. Land details are provided in Section 5.3.2.

- b. Equipment and Machinery, such as heavy equipment, vehicles, workshop equipment, agricultures equipment, office equipment, studio equipment, medical equipment, laboratory equipment and security equipment.
- c. Buildings, such as buildings and monuments.
- d. Road, Water and Network Infrastructure such as roads and bridges, water irrigation systems, installations and networks.
- e. Other Fixed Assets such as books, arts and animals.
- f. Construction in progress.

When confirmed and matched with asset inventory records owned by other provinces in the data collection in January–July 2010, this research found that grouping and classification practiced by the province of West Sulawesi, Central Sulawesi and North Sulawesi is similar with the grouping and classification in South Sulawesi province. Attachments of Regulation of the Minister of Internal Affairs Number 17 Year 2007 on Technical Guidelines on Management of Regional Asset, at Bookkeeping Section, rule that asset users/users’ representatives shall register and record regional assets on the List of Users Assets/List of Representation of Assets User. In performing the registration process, asset users/representatives of asset users in the registration of goods and conformity recording must follow the following format:

- 1) Asset Inventory Card A Land;
- 2) Asset Inventory Card B Equipment and Machinery;
- 3) Asset Inventory Card C Building and Building;
- 4) Asset Inventory Card D Roads, Water and Networks Infrastructure;
- 5) Asset Inventory Card E Other Fixed Assets;
- 6) Asset Inventory Card F Construction in Progress;

The difference is just technical presentation of the asset record. For example, asset data in South Sulawesi province is presented using the grouping of asset type (**Figure 5.1**); thus, land under the jurisdiction of all Regional Working Units, for example, is listed in the land report. On the other hand, in the province of West Sulawesi the report is presented based on Regional Working Units (**Figure 5.2**). Therefore, for one Regional Work Unit, all types of assets owned are registered in a single report. According to interviewees (I5 and I7, 2009), this difference is a result

of data sent to the Regional Asset Manager from asset users or representatives of asset users.

Name	Date Modified	Size	Kind
South Sulawesi	7:17 PM	--	Folder
HASIL SENSUS BARANG MELIK NEGARA.xls	28/01/09	123 KB	Microsoft Excel 97-2004 workbook
HASIL SENSUS BARANG MILIK DAERAH BAWASDA 2008.xls	28/01/09	156 KB	Microsoft Excel 97-2004 workbook
Kib A. Land	11/05/09	--	Folder
Aset di Kota Mksr.xls	Yesterday	319 KB	Microsoft Excel 97-2004 workbook
Daft Sensus All SKPD Tanah 09.xls	25/07/04	643 KB	Microsoft Excel 97-2004 workbook
Daft Sensus All SKPD Tanah Apbn.xls	21/07/04	442 KB	Microsoft Excel 97-2004 workbook
Kib B. Equipment and Machinery	11/05/09	--	Folder
Daft Sensus All SKPD a. Berat.xls	26/07/04	692 KB	Microsoft Excel 97-2004 workbook
Daft Sensus All SKPD b. Kend 09 Apbn.xls	23/07/04	659 KB	Microsoft Excel 97-2004 workbook
Daft Sensus All SKPD b. Kend 09.xls	26/07/04	881 KB	Microsoft Excel 97-2004 workbook
Daft Sensus All SKPD c. Bengkel.xls	25/07/04	119 KB	Microsoft Excel 97-2004 workbook
Daft Sensus All SKPD d. Pertanian.xls	25/07/04	98 KB	Microsoft Excel 97-2004 workbook
Daft Sensus All SKPD e. Alat Kantor RT .xls	26/07/04	3.1 MB	Microsoft Excel 97-2004 workbook
Daft Sensus All SKPD e. Alat Kantor RT Apbn.xls	26/07/04	3.3 MB	Microsoft Excel 97-2004 workbook
Daft Sensus All SKPD f. Studio .xls	26/07/04	614 KB	Microsoft Excel 97-2004 workbook
Daft Sensus All SKPD g. Kedok .xls	26/07/04	471 KB	Microsoft Excel 97-2004 workbook
Daft Sensus All SKPD h. Lab.xls	26/07/04	377 KB	Microsoft Excel 97-2004 workbook
Daft Sensus All SKPD i. Keamanan.xls	26/07/04	418 KB	Microsoft Excel 97-2004 workbook
Sensus All SKPD b. Kend 009.xls	22/03/09	1.1 MB	Microsoft Excel 97-2004 workbook
Kib C. Buildings	11/05/09	--	Folder
Daft Sensus All SKPD a. Bang 09 Apbn.xls	23/07/04	492 KB	Microsoft Excel 97-2004 workbook
Daft Sensus All SKPD a. Bang 09.xls	26/07/04	737 KB	Microsoft Excel 97-2004 workbook
Daft Sensus All SKPD b. Bangu Monumen.xls	4/08/04	29 KB	Microsoft Excel 97-2004 workbook
Kib D. Road, Water and Network Infrastructures	11/05/09	--	Folder
Daft Sensus All SKPD a. Jln Jmbtan.xls	25/07/04	389 KB	Microsoft Excel 97-2004 workbook
Daft Sensus All SKPD b. Bang Air.xls	24/07/04	53 KB	Microsoft Excel 97-2004 workbook
Daft Sensus All SKPD c. Instalasi.xls	26/07/04	78 KB	Microsoft Excel 97-2004 workbook
Daft Sensus All SKPD d. Jaringan.xls	26/07/04	119 KB	Microsoft Excel 97-2004 workbook
Kib E. Other Fix Assets	11/05/09	--	Folder
Daft Sensus All SKPD a. Buku.xls	26/07/04	885 KB	Microsoft Excel 97-2004 workbook
Daft Sensus All SKPD b. Kesenian.xls	26/07/04	115 KB	Microsoft Excel 97-2004 workbook
Daft Sensus All SKPD c. Hewan.xls	26/07/04	57 KB	Microsoft Excel 97-2004 workbook

Figure 5.1 South Sulawesi Asset Inventory Data

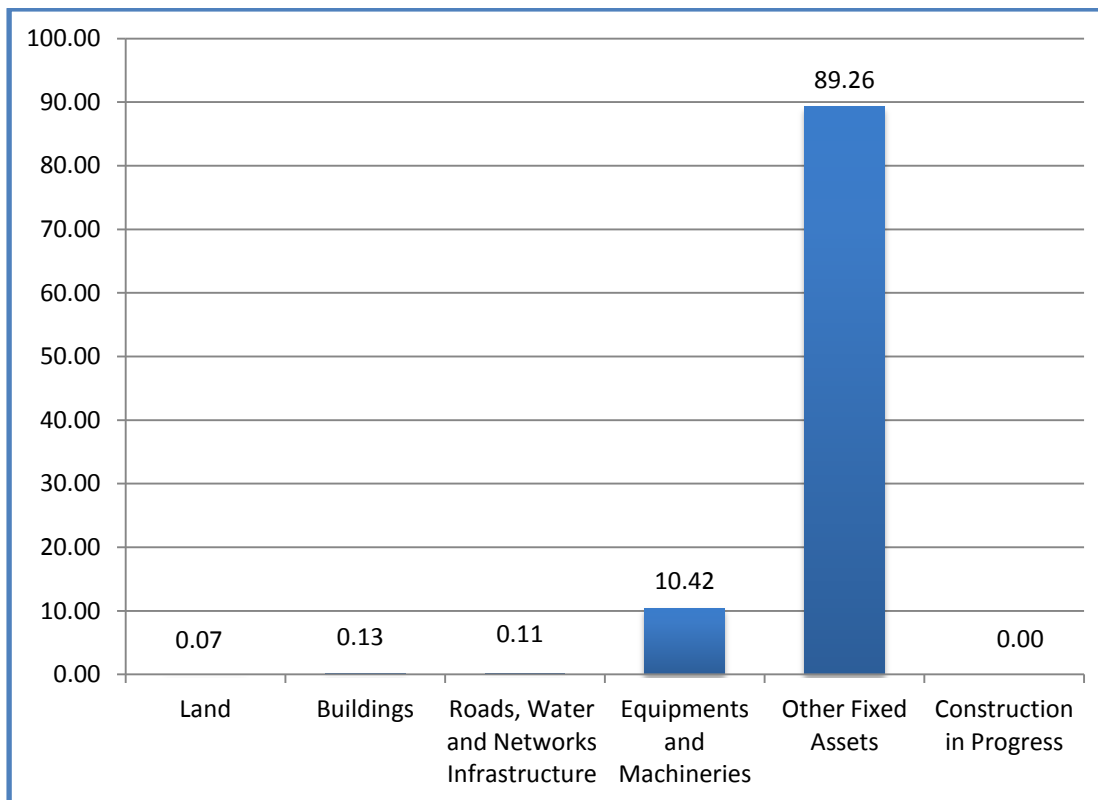
Figure 5.1 shows that in South Sulawesi, the data inventory record is classified based on the type of assets, whereas in West Sulawesi the data inventory record is classified based on the asset user or Work Unit classification, and is also separated based on the year of purchase/acquisition as shown on Figure 5.2.

Name	Date Modified	Size	Kind
▼ West Sulawesi Asset	7:21 PM	--	Folder
▶ West Sulawesi 2005	10/02/10	--	Folder
▶ West Sulawesi 2006	10/02/10	--	Folder
▶ West Sulawesi 2008	10/02/10	--	Folder
▼ West Sulawesi 2009	7:24 PM	--	Folder
Badan Kepegawaian 09.xls	3/02/10	90 KB	Microsoft Excel 97–2004 workbook
Badan Kesbang Politik & LD 09.xls	27/01/10	57 KB	Microsoft Excel 97–2004 workbook
Badan ketahanan p...peny daerah .09.xls	3/02/10	70 KB	Microsoft Excel 97–2004 workbook
Badan Pemberdayaan & PMD 09.xls	3/02/10	57 KB	Microsoft Excel 97–2004 workbook
Badan Pemberdaya...empuan & KB 09.xls	27/01/10	66 KB	Microsoft Excel 97–2004 workbook
Badan Pengendalian Dampak LH 09.xls	3/02/10	57 KB	Microsoft Excel 97–2004 workbook
Badan Promosi PMD 09.xls	21/01/10	61 KB	Microsoft Excel 97–2004 workbook
Bappeda 09.xls	3/02/10	70 KB	Microsoft Excel 97–2004 workbook
Biro ekonomi & pembangunan 09.xls	8/02/10	66 KB	Microsoft Excel 97–2004 workbook
Biro Hukum 09.xls	8/02/10	61 KB	Microsoft Excel 97–2004 workbook
Biro humas dan protokoler 09.xls	3/02/10	66 KB	Microsoft Excel 97–2004 workbook
Biro Kesra 09.xls	6/02/10	61 KB	Microsoft Excel 97–2004 workbook
Biro keuangan 09.xls	8/02/10	61 KB	Microsoft Excel 97–2004 workbook
Biro Organisasi & Kepeg 09.xls	27/01/10	61 KB	Microsoft Excel 97–2004 workbook
Biro perlengkapan 09.xls	9/02/10	139 KB	Microsoft Excel 97–2004 workbook
Biro tata Pemerintahan 09.xls	10/02/10	66 KB	Microsoft Excel 97–2004 workbook
Biro umum 09.xls	8/02/10	74 KB	Microsoft Excel 97–2004 workbook
Dinas Perkebunan 09.xls	24/03/11	70 KB	Microsoft Excel 97–2004 workbook
Dinas Energi & SDM 09.xls	1/02/10	86 KB	Microsoft Excel 97–2004 workbook
Dinas Kehutanan 09.xls	1/02/10	66 KB	Microsoft Excel 97–2004 workbook
Dinas Kelautan & Perikanan net 09.xls	1/02/10	70 KB	Microsoft Excel 97–2004 workbook
dinas kesehatan 09.xls	3/02/10	66 KB	Microsoft Excel 97–2004 workbook
dinas Koperasi 09.xls	1/02/10	74 KB	Microsoft Excel 97–2004 workbook
Dinas Olahraga & Pemuda 09.xls	2/02/10	86 KB	Microsoft Excel 97–2004 workbook
Dinas Pendapatan Daerah 09.xls	3/02/10	66 KB	Microsoft Excel 97–2004 workbook
dinas pendidikan 09.xls	16/02/10	78 KB	Microsoft Excel 97–2004 workbook
Dinas Pertanian & Peternakan 09.xls	3/02/10	82 KB	Microsoft Excel 97–2004 workbook
Dinas PU 1 09.xls	16/02/10	90 KB	Microsoft Excel 97–2004 workbook

Figure 5.2 West Sulawesi Asset Inventory Data

From both **Figure 5.1** and **Figure 5.2**, it can be seen that the current asset data management system in many local governments is using a manual database, in this case Microsoft Excel. The manual database is very vulnerable to computer virus attack and computer error. From the observation to the local governments asset data entry, the asset database files can easily be access by un-otorised officials who might delete or change the asset data. Also from the observation, this asset database is already out of date as it is not update regularly. In South Sulawesi and West Sulawesi, the data is just recently made to response the government auditor just before the data collection process.

Percentages of assets owned by the local governments are also interesting. Percentages are based on the asset quantities and qualities. An example of South Sulawesi province Regional Asset Percentages is illustrated in **Figure 5.3**:

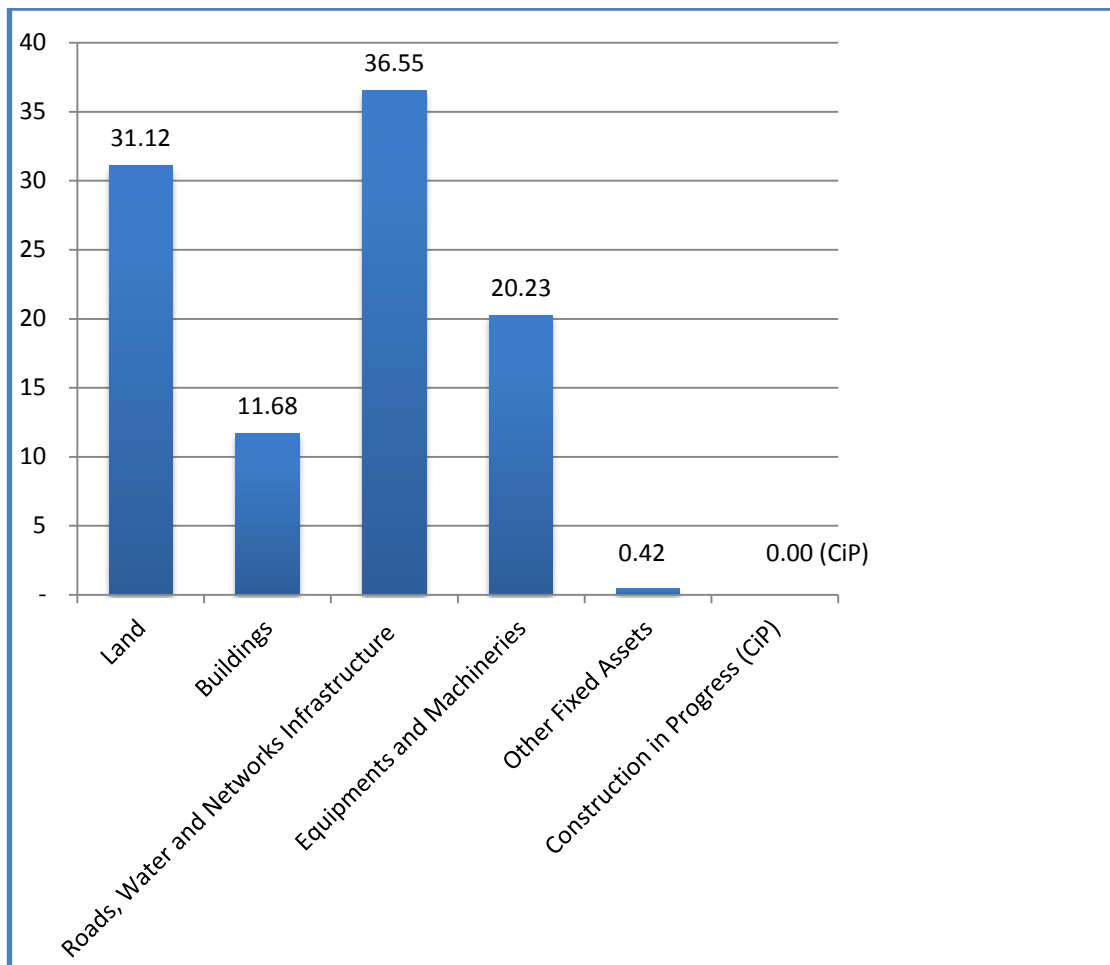


Note: There is no data available for construction in Progress

Figure 5.3 South Sulawesi Asset Composition Based on the Number of Assets

From **Figure 5.3**, for the case of South Sulawesi it can be seen that Other Fixed Assets dominate when compared with other asset categories. Almost 90% of South Sulawesi asset items are Other Fixed Assets (including books, arts and animals) where the second largest asset, Equipments and Machineries, account for only almost 10.5%.

However, when compared with the quality or value of the assets, the dominant assets are infrastructure, land, equipment and machineries, and buildings: 36.5% for infrastructure, over 31% for land, slightly over 20% for equipments and machineries, and almost 12% for buildings. However, because of the nature of the building assets—where buildings are attached to land—land and buildings are normally itemised as one component, accounting for almost 43% of the total assets owned by the South Sulawesi province. **Figure 5.4** details these percentages.



Note: There is no data available for construction in Progress

Figure 5.4 South Sulawesi Asset Composition Based on the Value of Asset

This research also observed practices of local governments in recording asset data into their asset inventory database, which can be seen in **Figure 5.5**. The information stored is (in order of the original sheet): name and type, code, condition, construction, volume, location, documentation, ownership, fund resource, prices, and notes. The data is recorded in a manual system by entering it into Microsoft Excel software. According to I5 and I7, in South Sulawesi and West Sulawesi a tailored asset database application is normally used; however during the data collection period the computer software was not in use due to technical problems.

KARTU INVENTARIS BARANG (KIB)																
C. GEDUNG DAN BANGUNAN																
a. Bangunan Gedung (Milik APBD)																
3 SATUAN KERJA : DINAS PENDIDIKAN																
No	Jenis Bangun/ Nama Bangun	Nomor		Kondisi Bang.	Konstruksi Bangunan		Luas Lantai (M2)	Alamat	Dokumen Gdng		Luas (M2)	Status Tanah	Nomor Kode Tanah	Asal - Usul	Harga	Kait
		Kode Bg	Register		Bertingkat/ok	Beton ssk			Tgl/Thn	No.						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Tanah Bangunan Kantor	-	-	B	Bertingkat	Beton	-	J. P. Kemendekaan Km. 10 Mks	-	-	9,000	Hak Pakai	-	APBD	4,000,000	
2	Tanah Bangunan Masjid	-	-	B	Tidak	Beton	-	J. P. Kemendekaan Km. 10 Mks	-	-	-	-	-	-	-	-
3	Tanah Bangunan Pos Penjagaan	-	-	B	Tidak	Beton	-	J. P. Kemendekaan Km. 10 Mks	-	-	-	-	-	-	-	-
4	Tanah Bangunan Kantor	-	-	B	Bertingkat	Beton	-	J. Selandul Sudirman No. 23 Mks	-	-	12,027	Hak Pakai	-	APBD	8,000,000	
5	Tanah Bangunan Rumah Dinas	-	-	B	Tidak	Beton	-	J. Lantio Dg Pasawang No 1 Mks	-	-	1,411	Hak Pakai	-	APBD	1,500,000	
6	Tanah Bangunan Gedung	-	-	B	Tidak	Beton	-	J. Amannagappa Mks	-	-	1,599	Hak Pakai	-	APBD	1,000,000	
7	Tanah Bangunan Gedung	-	-	B	Tidak	Beton	-	J. Ir. Sudarni	-	-	2,701	Hak Pakai	-	APBD	100,000	
8	Tanah Bangunan Gedung	-	-	B	Tidak	Beton	-	J. Ince Nurdin	-	-	2,071	Hak Pakai	-	APBD	1,000,000	
9	Tanah Bangunan Rumah Dinas	-	-	B	Tidak	Beton	-	J. Nuril No.27 Mks	-	-	382	Hak Pakai	-	APBD	200,000	
10	Tanah Bangunan Gedung	-	-	B	Tidak	Beton	-	J. Muh. Jufri	-	-	841	Hak Pakai	-	APBD	150,000	
															12,950,000	

Source: adopted from south Sulawesi Asset Inventory record

Figure 5.5 South Sulawesi Asset Inventory Sheet for Buildings

In North Sulawesi, according to I10, the provincial government promotes the establishment of good Regional Asset Management compliance with prevailing regulations (including more accurate and reliable management), through the Regional Financial Management System which is information technology based. As a result, the North Sulawesi provincial government has cooperated with the Agency for Financial and Development Supervision (BPKP)⁴ in the management of regional assets by developing a computer application system which is a product of the Financial and Development Supervisory Agency, known by the name "SIMDA BMD". A snapshot of SIMDA BMD is provided in Figure 5.6.

⁴ the Agency for Financial and Development Supervision (BPKP) has the task of carrying out government tasks in the field of financial control and development in accordance with the legislation in force. Its position is in line with the Central Government Ministerial i.e. one of central government agency.



The SIMBADA BMD snapshot captured on observation of the software demonstration by (RS)

Figure 5.6 Capture of SIMBADA BMD in North Sulawesi

This computer software is used in North Sulawesi province for the whole asset management process from needs planning and budgeting; procurement; use; utilisation; security and maintenance; assessment; disposal; transfer; administration; and guidance, supervision, and control. The example of the asset management process is shown in **Figure 5.7**.

The SIMBADA BMD snapshot captured on observation of the software demonstration by (RS)

Figure 5.7 Capture of SIMBADA BMD Content in North Sulawesi

Based on the experience of the two systems above—that is using Microsoft Excel or applying special software designed specifically to help the regional asset

management process—each provincial asset manager expressed that the system is very helpful. According to them, they can quickly provide data on regional assets if necessary or required.

As noted earlier, this research is limited only to the major assets owned by local governments: infrastructure—specifically roads and bridges; and land and buildings—specifically vacant and occupied land and buildings (without monuments and specialised buildings).

5.3.2 LAND

Each agency or government agency, in carrying out their functions, tasks and responsibilities, requires parcels of land for office buildings or other operational activities. The ownership of land by local governments is governed by the Regulation of the Minister of Internal Affairs No. 17 of 2007. This regulation also refers to the Government Regulation No. 40 of 1996 which rules the rights of land including land owned by local government. In relation to local government land, the Regulation of the Minister of Internal Affairs No. 17 of 2007 has set the terms ranging from:

- land provision
- determination of status
- utilisation; and
- transfer of land.

Interviewee II (2010) from Central Government pointed out that land occupied by any government for any purpose must have a legitimate basis for the land rights; that is the rights of land granted by the competent authority. The competent authority in granting land rights in Indonesia is the National Land Agency. There are several land ownership rights in Indonesia; however, governments can only have legal rights over land on:

- i. Rights to use, if land is used alone for purposes directly related to the implementation of the main tasks and functions of local government; and
- ii. Rights to manage, if land is used for other purposes that are not directly related to the main tasks and functions of local government, such as land parcel for housing of

employees / members of parliament, the land that used in cooperation with third parties or land that will be determined its use later by the Head of the Regional Government.

Table 5.3 Land Percentage and Comparison displays percentages and comparisons of land owned by South Sulawesi, West Sulawesi and Central Sulawesi. From **Table 5.3**, it can be seen that Central Sulawesi’s land accounts for more than 50% of land value compared to other asset types. In other provinces, land also accounts for a significant proportion compared to other assets. Thus the management of land as a public asset should receive extra attention.

Table 5.3 Land Percentage and Comparison

No	Province	Item	Value	Land Value
1	South Sulawesi	706	Rp. 1,310,477,293,030 equal to AUD 145,608,588.11	31%
2	West Sulawesi	NA	Rp. 146,228,865,898 equal to AUD 16,247,651.76	17.34%
3	Central Sulawesi	449	Rp. 554,475,188,000 equal to AUD 61,608,354.22	59.50%

Currency rate: AUD 1 equal to approximately Rp. 9.000

Land listed on the local government report is all types of land owned and managed by that particular provincial government, including developed and undeveloped land, vacant and occupied land, and land utilised for buildings and infrastructures. **Table 5.3** shows that, in general, local governments in Indonesia

have a significant amount of land, especially in terms of land value. This means that improving the management of land will impact local governments significantly.

5.3.3 BUILDINGS

Table 5.4 Building Percentages and Comparison outlines the percentage of building asset value owned by the local governments. Based on **Table 5.4**, typically local governments have more than a thousand buildings to support the delivery of public services and other government activities. The majority of the buildings are office buildings which are very important to the success of a government. Other assets categorised in the building group according to Regulation of the Minister of Internal Affairs No. 17 of 2007 on the Technical Guidelines for Management of Regional Assets are: 1) buildings including office buildings, construction buildings, installation buildings, places of worship buildings and residential houses; and 2) monuments including temples, natural monuments, historical monuments and memorial monuments. The general percentages for building assets can be seen in **Table 5.4**.

Table 5.4 Building Percentages and Comparison

No	Province	Item	Value	Building Value
1	South Sulawesi	1279	Rp. 491,972,544,697 equal to AUD 54,663,616.07	11.68%
2	West Sulawesi	NA	Rp. 79,260,641,693 equal to AUD 8,806,737.96	9.40%
3	Central Sulawesi	1691	Rp. 279,224,882,000 equal to AUD 31,024,986.88	30%

Currency rate: AUD 1 equal to approximately Rp. 9.000

Besides land, local governments normally have building assets as the second, if not the largest, asset compared to other types of asset. If land and building assets are combined they will cover more than half of the total assets owned by typical Indonesian provincial governments; again, any improvements in this area will significantly contribute to provincial governments' performance.

5.3.4 INFRASTRUCTURE

Based on Regulation of the Minister of Internal Affairs No. 17 of 2007, those assets categorised as infrastructure assets are road, water, installation and network infrastructure, which are then broken down into:

- a) roads and bridges including roads, bridges, tunnels and other types.
- b) the building of water/irrigation systems including water irrigation buildings, high tide barrier buildings, swamp development and polder water buildings, drinking water buildings, dirty water buildings and other water buildings.
- c) installation including drinking water installations, dirty water installations, waste treatment plants, building material treatment plants, power installation plants, electrical substation installations and others.
- d) networks including drinking water networks, electricity networks and others.

The typical percentages of infrastructure assets owned and managed by the provincial governments in Indonesia are represented in **Table 5.5**.

Table 5.5 Infrastructure Percentages and Comparisons

No	Province	Item	Value	Value
1	South Sulawesi	1279	Rp. 1,538,709,686,129.3 Equal to AUD 170,967,742.90	36.55%

• 2	West Sulawesi	NA	Rp. 394,844,041,825 Equal to AUD 43871560.20	46.82%
• 3	Central Sulawesi	NA	Rp. 288,200,000 Equal to AUD 32,022	0.03%

Currency rate: AUD 1 equal to approximately Rp. 9.000

From **Table 5.5**, it is surprising to see that Central Sulawesi Provincial Government only has 0.03% of its assets classified as infrastructure assets, whereas other provinces have significant infrastructure assets. Another surprising figure is that West Sulawesi province holds almost 47% infrastructure assets, considering that West Sulawesi is a newly formed province having separated from South Sulawesi province. The value of the infrastructure assets are far more significant in South Sulawesi which account for slightly over 1.5 trillion rupiah.

5.4 PUBLIC ASSET MANAGEMENT ARRANGEMENTS

The interviews revealed that most local government employees knew and realised that the process of managing public assets should always be based on rules and regulations. The regulations that became the main reference are Government Regulation Number 6 Year 2006 on Management of State/Regional Owned Asset and the Regulation of the Minister of Internal Affairs Number 17 Year 2007 on the Technical Guidelines for Management of Regional Assets.

This interviewee's knowledge and realisation can be seen in the interviewee (I10, 2010) response below:

"In order to improve the implementation of financial management and management of state and regional property and to support the realization of good governance in the implementation of regional autonomy, the government has issued several regulations relating to the governance of the management of public property".

Additionally, the interviewee (I10, 2010) also mentioned that:

*"...these challenges and responses must have been carried out systematically and thoroughly as an apparent attempt by the Minister for **Internal Affairs** as the main element of authority that has issued regulations concerning the*

Regional Property Management and of course thoroughly each local government must conduct and carry out administrative management based on the guides of Permendagri 17 of 2007 [Regulation of the Minister of Internal Affairs Number 17 Year 2007] and PP 6 [Government Regulation Number 6 Year 2006].”

Another response from an interviewee from South Sulawesi province (I3, 2010) that shows their acknowledgement and understanding regarding the rules and regulations in public asset management:

“... we have a lot of basic laws and policies on asset management area so far, include:

- (1) PP [Government Regulation] number 38 of 2008 concerning amendments to the PP. 6 Year 2006*
- (2) Keppres [Presidential Decree] number 80 Year 2003 on Guidelines for Procurement of Assets / Services*
- (3) Permendagri [Minister of Internal Affairs Regulation] number 17 Year 2007 on Regional Property Management Guidelines*
- (4) Perda [Regional/Provincial Regulation] number 4 Year 2007 on Local Property Management*
- (5) Pergub Sulsel [Governor Decree] number 6 Year 2010 on Procedures of Handling Local Owned Inventory*
- (6) Pergub Sulsel number 91 Year 2009 on Procedures for the Implementation of Public Vehicle Regional Property Sales”*

On another discussion, (I3, 2010) also explained that:

“... actually, provincial government has the legal power to regain recognition of its assets. Regulation of the Minister of Internal Affairs number 17 year 2007 on Technical Guidelines for Management of Provincial Public Asset has clearly set the period of lease of government property only for two years. After that, both sides reviewed the cooperation contract”

An interview with a government official from the province of Central Sulawesi (I9, 2010) indicated that:

There are already a lot of regulations issued by the Central Government and local governments in terms of orderly government assets.

One interviewee (I9, 2010) also mentioned that:

Under Regional Regulation number 4 Year 2003 on Sales, Dispose and Grant of Central Sulawesi Province Assets, regulates that leased assets if not renewed within two years, it will automatically be taken over by the local government.

Other interviewees from local government essentially had the same opinion as interviewees I10, I3 and I9 above—that the Government has issued many laws and regulations relating to local government-owned asset management. According to interviewees, this rule can be identified from the “remembrance/preamble consideration” at the opening section of all regulations that have been made by the provincial governments. These opinions showed that the majority of local government officials are aware of, and realise the existence of, laws and regulations in the area of public asset management. These regulations were issued by the Central Government and the local governments.

Based on the interview results, detailed evaluation of regulations regarding public asset management subjects need to be carried out to further examine the condition of local government asset management. The evaluation should start with understanding the regulations that triggered the decentralisation of government, which then led to the transfer of public assets from the Central Government to local governments. These regulations are Law No.32 of 2004 on Regional Government and its implementing rules.

Law No.32/2004 on Regional Government and Law No.33/2004 concerning the Financial Balance between Central Government and local government replaced the Law relating to the policy of decentralisation through regional autonomy that proclaimed a new government in this reform era, namely Law No.22 of 1999 and Law No.25 of 1999 with the same title. This decentralisation law was enforced and took effect on October 18, 2004. The law, commonly called the Regional Government Law, has a number of articles in relation to the transfer of public assets from central to local governments. Thus, this Act is the first document that must be assessed in this phase. This Act is a public document and can be located on the internet, therefore there was no special approach required to access it.

There are some definitions regulated by this Act which are also necessary to examine early in the process. These definitions are Central Government, regional

governance, local governments, the body of local government, regional autonomy, decentralisation, deconcentration, and co-administration. The Central Government (or 'the Government') is the President of the Republic of Indonesia, who holds power over the government of the Republic of Indonesia as defined in the *Constitution of the Republic of Indonesia Year 1945*. Regional governance is the implementation of government affairs by local governments and parliaments according to the principles of autonomy and duty of assistance with the principle of broad autonomy within the system and the principle of the Unitary Republic of Indonesia as defined in the *Constitution of the Republic of Indonesia Year 1945*. The body of local government is the governor, regent or mayor, and the region as elements of regional governance. Regional autonomy is the right, authority and obligation of an autonomous region to organise and manage their own affairs and interests of local communities in accordance with legislation. Decentralisation is the transfer of governmental authority by the Government of the autonomous region to manage and administer governmental affairs in the Republic of Indonesia. Deconcentration is the delegation of governmental authority by the Government to the Governor as the representative of the government and/or to Government agencies in certain areas. Co-administration is the assignment of government to the regions and/or village from the provincial government to the district and/or village, and from city to rural local governments to carry out specific tasks.

Article 2 of Law No.32/2004 regulates that local governments, in running the affairs of government, have links with the Central Government as well as with other local governments. These links include the authorities, finances and public services relationships. In detail, the relationships in the financial sector between the Government and local governments referred to in Article 2 include: a.) provision of financial resources to conduct the affairs of government into local government authority; b.) the allocation of equalisation funds to local governments; and c.) lending and/or grants to local governments. Whereas, the relationship between local governments in the financial sector area as referred to in Article 2 includes: a.) tax- and non-tax sharing between Provincial and City/District government; b.) funding of government affairs become a shared responsibility; c.) joint financing of inter-regional cooperation; and d.) regional intergovernmental loans and/or grants. The relationship in the field of public services between the Government and local

governments includes: a.) authority, responsibility and determination of minimum service standards; b.) allocation of funding public services into the regional authority; and c.) facilitating the implementation of cooperation among local governments in public service delivery. The relationship in the field of inter-governmental public service areas includes: a.) implementation of public utility which is the regional authority; b.) cooperation among local governments in the organisation of public services; and c.) license management with the public utilities. All the above mentioned relationships are regulated further in separated legislations.

The Law No. 32/2004 Chapter III article 10 paragraph (1) regulates local governments' organising the affairs of governmental authority, except for those affairs which by this Law is determined to be affairs of the Government. Paragraph (2) regulates that in the conduct of government affairs, which became the regional authority as referred to in paragraph (1), local governments run broad autonomy to organise and manage their own affairs based on the principle of local autonomy and duty of assistance. Governmental affairs of the Government referred to in paragraph (1) include: a.) foreign policy, b.) defence, c.) security, d.) justice, e.) monetary and national fiscal policy and f.) religion. In the conduct of governmental affairs referred to in paragraph (3), the Government performs its own or can delegate part of government affairs to the Government representative in the local area or can be assigned to local governments and/or village governments. For the affairs of government outside the government's authorities as referred to in paragraph (3), the Government may: a.) organise their own government's affairs, b.) delegate part of government affairs to the Governor as representative of the Government, or c.) assigned to the local government's affairs and/or village government based on the principle of co-administration.

Article 11 of the Law rules that:

- (1) The affairs of government are divided based on the criterion of externality, accountability and efficiency with regard to harmonious relations between the composition of government.
- (2) The affairs of government as referred to in paragraph (1) is an implementation of the authority relationship between the Government and the provincial, district and city or regional intergovernmental inter-related, dependent, and synergistic as a system of government.

(3) Government affairs, which became the local government authority which was held on the basis of criteria referred to in paragraph (1), comprise compulsory and optional affairs.

(4) Implementation of compulsory government affairs is based on minimum service standards implemented in stages and is set by the Government.

Article 12 of the Law orders that affairs handed over to the local governments are followed by the transfer of funding sources, facilities and infrastructure, and personnel in accordance with a decentralised affair. Government affairs are delegated to the Governor along with the funding in accordance with the affairs of the deconcentrated. In Article 13 paragraph (1) Affairs shall be the authority of provincial government within the provincial scale includes:

- a. planning and development control;
- b. urban design planning, utilisation, and control;
- c. implementation of public order and tranquillity of the community;
- d. provision of public facilities and infrastructure;
- e. handling of the public health sector;
- f. educational administration and allocation of human resources potential;
- g. handling of cross-regent/city social problems;
- h. inter-municipal manpower services;
- i. facilitating the development of cooperatives enterprises (*koperasi*), small businesses, and medium including inter-regental/municipal;
- j. environmental control;
- k. land services including cross-district;
- l. population service and civil records;
- m. governmental general administrative services;
- n. investment administration services, including cross-district;
- o. implementation of other basic services which cannot be executed by the district/city; and
- p. Other affairs and concerns mandated by legislation.

Whereas the provincial government affairs, which are optional, include government affairs that regulated and have the potential to improve people's welfare in accordance with the conditions, characteristics and excellent potential areas concerned. Implementation of the provisions referred to in Article 10, Article 11, Article 12, and Article 13 are further regulated by Government Regulation. A visual representation of the government's affairs is shown on **Figure 5.8**.

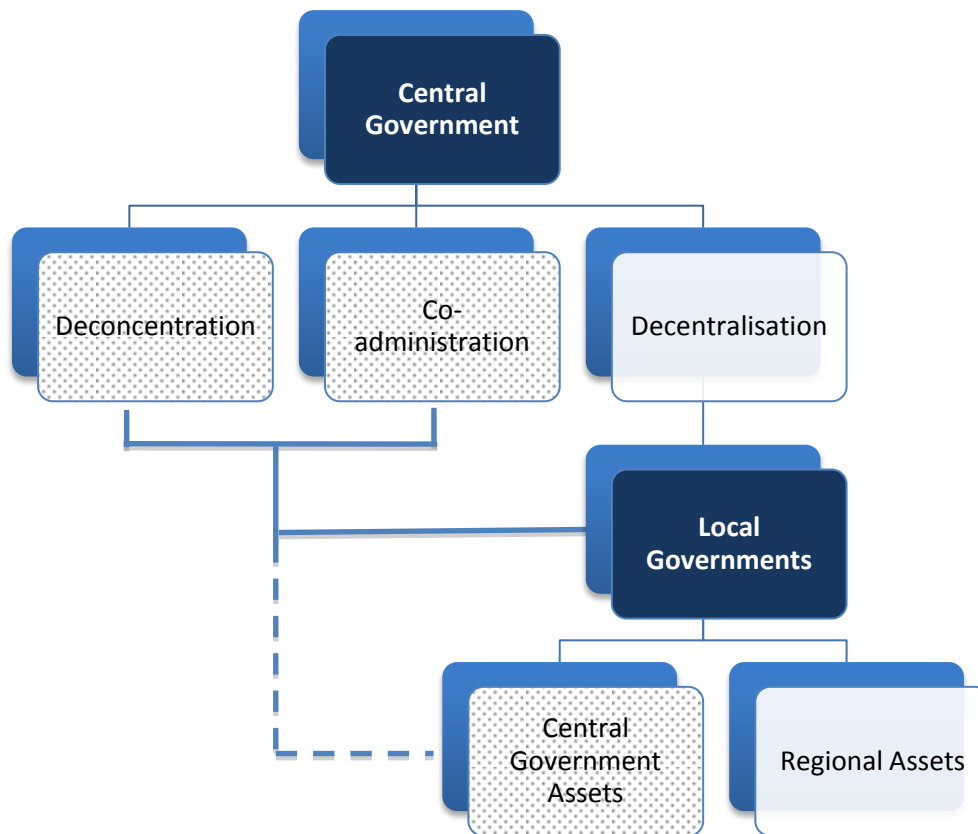


Figure 5.8 Governmental Affairs and Asset Relationship

The explanation for **Figure 5.8** is that there are three Governmental affairs in Indonesia namely Deconcentration, Co-Administration and Decentralisation. The main responsibilities of the local governments are the decentralisation affairs. If the Government has affairs that should be performed in a regional area within the regional government’s jurisdiction, the Government can transfer the affairs to the local government in the form of Deconcentration and Co-Administration. In the case of Government delegating the affairs (Deconcentration and Co-Administration) to local government, the local government should perform the tasks. These tasks are delegated to the local government along with the resources needed to perform the tasks, which in many cases include land, buildings and infrastructure.

This delegation adds the complication of public asset management in local governments. Sometimes it is difficult for the local governments to identify which assets belong to the Government and which assets belong to them. In particular, if the tasks and affairs are a cooperation between the Government and local government, the resources used are un-separable.

5.4.1 LEGAL ARRANGEMENTS

As an introductory discussion of the regulations on the management of public assets, the hierarchical structure of governance rules and regulations should also be considered. The composition of this hierarchy is very important considering the number of regulations issued by different authorities governing public assets. The principle of common-law rule in Indonesia is that legislation that has a higher hierarchy level over-rules legislation that has a lower legal hierarchy—the new law has higher hierarchy than the old law. With these legal principles, regulations governing public asset management can be further understood.

Article 1 point 2 of Law No. 10 of 2004 on the Establishment of Laws and Legislations defines law and legislation as written rules established by state agencies or authorised officials. The substance of legislation is binding in general and has an abstract meaning, not concrete, and is not specific as is the decision determination.

Types and hierarchy laws under Article 7 paragraph 1 of Act No. 10 of 2004 are:

- 1) The Constitution of the Republic of Indonesia,
- 2) Laws / Lieu of Law,
- 3) Government Regulations,
- 4) Presidential Regulation, and
- 5) Local Regulations. Local Regulation consists of the Provincial Regulations, District/City Regulations, and Village Regulations.

Besides those types of laws above, Article 7 paragraph (4) Law No. 10 of 2004 also states that other regulations are recognised and have binding legal force as long as ordered by higher legislation.

The Ministry also produce another type of legal product—Ministerial Regulation—which also has a binding power. Besides Presidential Regulations and Ministerial Regulations, there are also Decree of the President and Decree of the Minister; however, there is still disagreement on the legal products issued by these two authorities. However, as long as their substance is binding, both products are legal and could be included in the category of Presidential Rule or Ministerial Regulation.

After establishing the hierarchy of Indonesian law, the research then explores the laws and regulations in public asset management. Some of the legislation governing public asset management in local governments is outlined in **Table 5.6**:

Table 5.6 Identified Law and Regulation in Provincial Government Asset Management

No.	Regulation Type	Quantity of Regulation	Level of Regulation	Subject Matter
1	Laws	6	The Central Government	Governing financial and budgetary issues of the central and the local governments
2	Government Regulation	6	The Central Government	Governing a wide range of issues namely the local governments organisation, financial matters, the local governments affairs, asset management of both the Central Government assets and the local government assets, etc.
3	Presidential Decree	1	The Central Government	Governing procurement of public assets (central and local governments)
4	Ministerial Regulation	6	The Central Government	Intended to give technical guidance on the financial and asset management of provincial government assets
5	Ministerial Decree	5	The Central Government	More specific issues such as the translation of more general regulation above such as codification of public assets both the Central Government's assets and the local governments' assets
6	Provincial Regulation	4	The Local Government	The management of provincial assets for South Sulawesi province

Currently, the main regulation in regard to public asset management is the Government Regulation No. 6 of 2006 on Management of State/Regional Public Asset. This government regulation is a practical guidelines that develop in

consideration and in accordance of the State Asset Act No. 17/2003, the State Budget Act No. 1/2004, the Auditing and Reporting State Budget Act No. 15/2004, and the Decentralised Government Act Number 32/2004.

Despite the many rules and regulations governing public asset management processes, the content and terms set out in these laws and regulations are the same and there are no specific differences to accommodate the locality of local governments' condition. On the other hand, the regulations made by each local government are usually based only on the results of study visits to other local governments that already have those types of rules, as a result there are no new and/or different subject/matter covered in the regulations.

Although the local governments have decentralised local authority and autonomy, unfortunately **Table 5.6** shows that regulations governing public asset management are still mainly proposed, developed and enforced by the Central Government. Therefore, local governments need to improve their capacity to be able to propose, develop and enforce their own regulations.

5.4.2 ORGANISATIONAL ARRANGEMENTS

The Indonesian Government Regulation No. 6 of 2006 Chapter II on Management of State/Regional Public Asset, article 5 regulates that the Governor/Regent/Mayor is the holder of the regional asset management authority. The holder of this authority has the power to:

- a. Assigning officials to manage and store the assets belong to the regional governments;
- b. Examining and approving the regional government needs plan;
- c. Examining and approving the regional government asset maintenance plan needs;
- d. Overseeing the implementation of the use, disposal, and the transfer of the asset that has been approved by the governors/regents/mayor or parliament;
- e. Coordinating the implementation of regional asset inventory;
- f. Conducting supervision and control over regional asset management.

Additionally, the Secretary of the Regional Government is the regional asset manager who is in charge and responsible for:

- a. Assign officials to manage and store the assets belong to the regional governments;
- b. Examine and approve the regional government needs plan;
- c. Examine and approve the regional government asset maintenance plan needs;

- d. Oversee the implementation of the use, disposal, and the transfer of the asset that has been approved by the governors/regents/mayor or parliament;
- e. Coordinate the implementation of regional asset inventory;
- f. Conduct supervision and control over regional asset management.

Article 8 of this government regulation also rules that the head of the Regional Working Unit as the Regional Government Secretary line/horizontal organisations are the users of regional assets. The head of the Working Units have the authority and are responsible for:

- a. Submitting asset needs plan for the for unit he/she leads;
- b. Applying for a determination of status for the possession and use of regional asset obtained from the local budget expenses and other legitimate acquisition;
- c. Keeping records and inventory of regional assets within their control;
- d. Using the regional asset within their control for the benefit of the implementation of the main tasks and functions of Regional Work Unit he/she leads;
- e. Securing and maintaining the regional assets within its control;
- f. Proposing transfer of regional assets such as land and/or buildings that do not require the approval of Parliament other than land and buildings;
- g. Surrendering land and buildings that are not utilised for the benefit of the implementation of the main tasks and functions of the local Work Unit he/she leads to the governor/regent/mayor through the regional asset manager;
- h. Conducting supervision and control over the use of regional assets within their authority;
- i. Preparing and submitting semester and annual reports in relation to the use of assets within their control to the regional asset manager.

Regulation of the Minister of Internal Affairs No. 17 of 2007 on the Technical Guidelines for Management of Regional Assets, Chapter II, Article 5 rules: Regional Head is the holder of the power of the regional asset management authority and has the responsibility for the development and implementation of local property management. In implementing the provisions of its Authority, the Regional Head is assisted by the:

- a. Regional Secretary as manager;
- b. Head of Bureau/Division of Equipment/General/Unit within the Regional Secretary Office as the asset manager assistant;

- c. Head of “SKPD” (Regional Working Unit) as the user;
- d. Head of the Regional Technical Implementation Unit on behalf of the user;
- e. Storage Officer of regional asset; and
- f. Management officer of regional asset.

Article 6 paragraph 1 of the Ministerial Regulation rules that Regional Head as the holder of regional asset management authority has the power to:

- a. Set regional asset management policies;
- b. Specify the use, utilisation, transfer of land and buildings;
- c. Specify the security policy of regional assets;
- d. Propose transfer of regional asset that requires Regional Parliament approval;
- e. Approve the proposal of the transfer and the disposal of regional asset within the limits of its authority; and
- f. Approve the proposal of utilisation of the regional assets other than land and / or buildings.

Paragraph 2 rules that the Regional Secretary as manager, has the authority and responsibility to:

- a. Assign officials to manage and store the regional asset;
- b. Examine and approve the regional asset needs;
- c. Examine and approve the regional asset maintenance needs;
- d. Oversee the implementation of the use, disposal and transfer of regional property that has been approved by the Head of the Region;
- e. Conduct coordination in the implementation of regional asset inventory; and
- f. Conduct supervision and control over regional asset management.

Paragraph 3 rules: Head of Bureau/Division of Equipment/General/Unit within the regional asset manager office is responsible for coordinating the implementation of the regional asset management of existing asset within its Working Unit.

Paragraph 4 rules: Head of the Regional Work Unit as the user of regional assets has the authority and responsibility to:

- a. Submit plans for the regional asset needs with in his/her Work Unit through the regional asset manager;

- b. Apply for a determination of status for the possession and utilisation of regional assets obtained from the local budget expenses and other legitimate acquisition through the regional asset manager;
- c. Keep records and inventory of regional asset within its control;
- d. Use the asset within their control for the benefit of the implementation of the main tasks and functions of local Work Unit he/she leads;
- e. Secure and maintain the regional asset within its control;
- f. Propose transfer of assets such as land and/or buildings that do not require the approval of the Regional Parliament and regional asset other than land and/or buildings to the Head of the Region through asset manager;
- g. Surrender the land and buildings that are not utilised for the benefit of the implementation of the main tasks and functions of local Work Unit he/she leads to the Regional Head through the asset manager;
- h. Conduct supervision and control over the use of regional asset within its control; and
- i. Prepare and submit semester and annually reports of regional asset located within its control to the manager.

Paragraph 5 rules: Head of the Regional Technical Implementation Unit on behalf of users of the regional asset has the authority and responsibility to:

- a. Submit plans for the regional asset needs for the purpose of Work Unit he/she leads to the Head of Regional Work Units concerned;
- b. Keep records and inventory of regional assets within its control;
- c. Use the asset within its control for the benefit of the implementation of the main tasks and functions of Work Units he/she leads;
- d. Securing and maintaining the assets within its control;
- e. Conduct supervision and control over the use of existing assets within its control; and
- f. Prepare and submit a report semester and annually of the assets located within its control to the head of the local Work Unit concerned.

Paragraph 6 rules: Storage officer is responsible to receive, store and distribute the assets that are at the user/user's representative. Paragraph 7 rules: Management officer of the assets is in charge of the usage of each user/user's representative. All organisational relationships are illustrated in **Figure 5.9**.

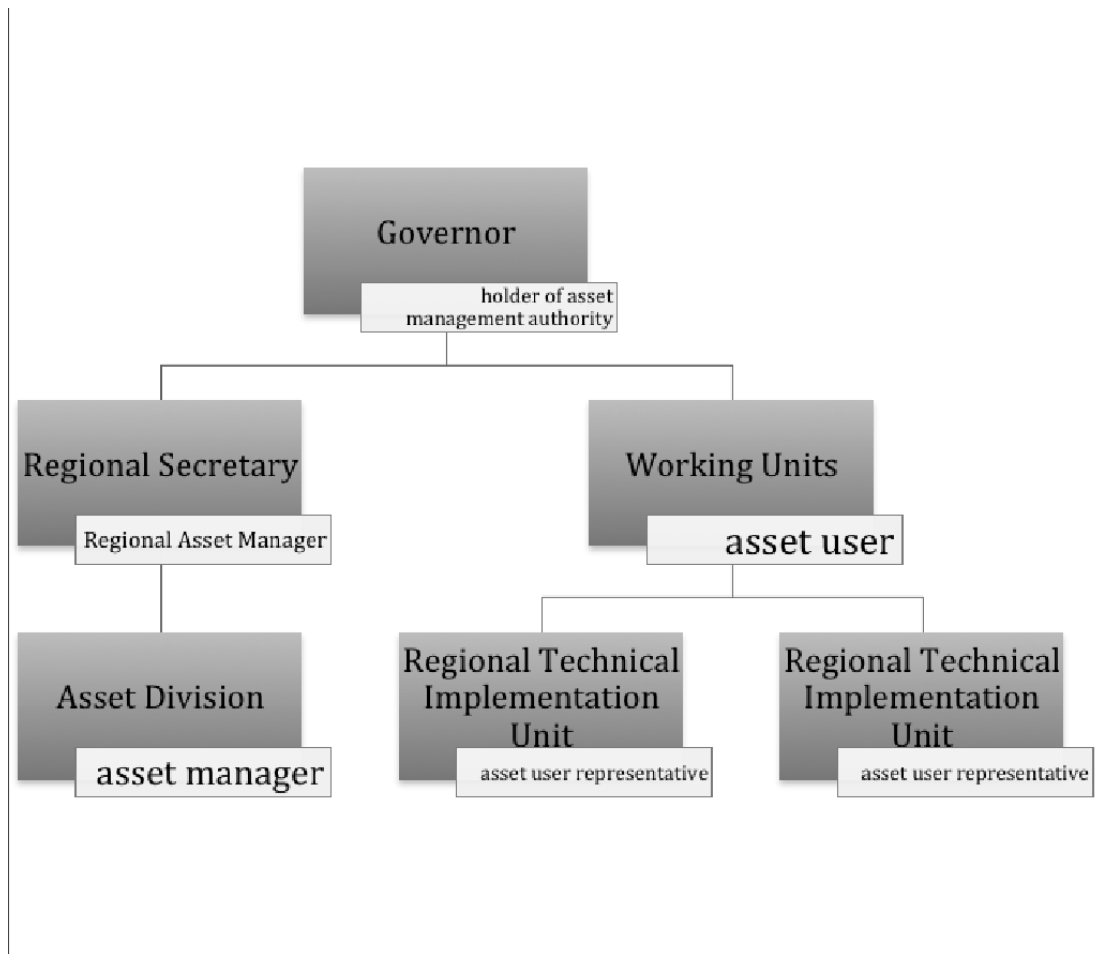


Figure 5.9 Typical Provincial Governments Organisational Relationship

The data shows that within provincial governments' organisations, there is no specialised body responsible for the management of public assets; only a small division under the Provincial Secretary Unit is appointed to manage the whole of provincial assets. This organisation only has a small authority in regards to the public assets and operates at a lower level compared to the Working Unit. Though the user of provincial assets is the Working Unit, as a result the asset division cannot order the Working Unit directly to comply with its asset related decisions. In order to improve the organisational arrangement in provincial governments there is a need to improve the capacity of the asset division in provincial governments, organisationally and individually.

5.4.3 ASSET LIFECYCLE PROCESSES

Regional asset management is arranged in Indonesian Government Regulation No. 6 of 2006 on Management of State/Regional Owned Asset, which is then followed by and translated into the Regulation of the Minister of Internal Affairs No. 17 of 2007 on the Technical Guidelines for Management of Regional Assets. Article 4 of Ministerial Regulation No. 17/2007 rules the scope of public asset management in local governments which consists of needs planning and budgeting; procurement; use; utilisation; security and maintenance; assessment; disposal; transfer; administration; and guidance, supervision, and control (shown in **Figure 5.10**).



Figure 5.10 Current Local Governments Asset Management Processes

Regional assets are managed under the principles of functionally, legal certainty, transparency and openness, efficiency, public accountability and certainty

of value. According to interviewee I1 (2010), the philosophical background of this principle can be traced to the Ministry of Finance of Indonesia. The Ministry of Finance in cooperation with the Ministry of Internal Affairs are the ministries that create and propose these principles. Furthermore, according to interviewee I1, it was the working group of the Draft Regulation on the Management of State/Regions Assets who proposed these principles. Interviewee I1 (2010) then explains that functionality means decision-making and problem solving in the management of public assets conducted by asset managers and/or users of the asset according to their functions, powers, and responsibilities. Legal certainty means the management of public assets must be conducted under the laws and regulations, as well as the principle of decency and fairness. Transparency and openness mean the implementation of the management of public assets must be transparent and open to the rights and role of the community in obtaining correct information and public participation in managing the assets. Efficiency means the use of public assets is directed and limited according to the standard required to support the implementation of the government's main tasks and to ensure it functions optimally. Public accountability means each public asset management processes must be accountable to the community as the state supreme sovereign. Certainty of value means efficiency of public assets must be supported by the accuracy of quantity and quality of public assets. Certainty of value is one of the basic principles in the Preparation of the Government Balance Sheet and the process of public asset transfer when needed. Details and explanation of these processes are regulated in Article 7 to Article 82, Chapter III to XIII of Ministerial Regulation No. 17/2007.

Interviewee I3 stated that local government assets are basically used to support the implementation of the main tasks and functions of regional government, therefore it is prohibited to transfer these assets. On the other hand, land and/or buildings that are not used by local government to deliver public services, should be submitted and surrendered to the Governor/Regent/Mayor. The Governor/Regent/Mayor is authorised to determine the status of the (a) use (b) utilisation and (c) transfer of the land and buildings which are submitted. In addition, land and/or buildings that are not used for basic tasks and functions or are idle, can be used or transferred to other parties after obtaining approval from the authorities and the result of this use or transfer should be deposited to the treasurer's regional account.

5.5 CONCLUSION

The first research question “How do local governments in Indonesia currently manage their public infrastructure and real property assets?” was designed to examine the current condition of public asset management in Indonesian local governments. Document analysis, interviews and observations were utilised to investigate this question.

The document analysis shows that local governments have a wide range of assets such as land; equipment and machinery; buildings; road, water and network infrastructure; other fixed assets; and construction in progress. The data also shows that land, buildings and infrastructure are the major assets owned and managed by local governments. The management process of these assets creates highly complex problems for local governments. Many land, building and infrastructure assets are not transferred and recorded properly in the asset database. Because these assets are not identified properly, these assets suffer underutilisation and poor maintenance. Some of the assets are also surplus assets which are not relevant or needed to deliver public services and perform government functions and responsibilities. From the data inventory records, it can be concluded that there is a need to improve the practice of public asset management in Indonesian local governments. Legal arrangement, organisational capacity and asset management processes also need to be developed and improved in order to support local governments in managing these assets.

In conclusion, local governments need to develop and apply a Public Asset Management Framework to minimise all the problems in the management process. The framework should meet the Indonesian local governments’ requirements and needs. This means that the framework must be viable and feasible for local governments (human resources, budget, equipment/tools), integrated to the existing system and practices, and in accordance with Central Government practices it must be in accordance with and meet the law and regulation requirements.

Chapter 8: Factors Affecting Public Asset Management Practices

8.1 INTRODUCTION

Chapter 4 examined the methodologies that were selected and adopted to find answers and investigate the research questions. Chapter 5 outlined the current condition of provincial governments in managing their public assets, particularly for real property and infrastructure. This chapter discusses the second research question, which is: “*What factors influence the provincial governments in managing these public assets?*” The second research question was designed to investigate the hindering factors that surround public asset management processes in Indonesian provincial governments.

In order to answer the second research question, this chapter starts by explaining the data collection process in Section 6.2. It then discusses the hindrance factors in public asset management arrangements at the provincial government level in Section 6.3. Section 6.4 groups the problems in order to identify major problems and then closes with the conclusion in Section 6.5.

8.2 DATA COLLECTION PROCESS

In addition to the first round of interviews, there was a second round of interviews that aimed to investigate the factors that affect provincial government asset managers’ ability to perform their asset management responsibilities, including barriers and limitations, provincial government’s performance measures, provincial government’s objectives and perception. These queries were formulated into further investigative questions as follows:

- 1) Were there any problems when the assets were transferred from Central Government to provincial governments?
- 2) What are the problems faced by the provincial governments in managing the assets after the transfer?
- 3) Do provincial governments have performance indicators related to those public assets?

- 4) What are the provincial governments' objectives in managing public assets?
- 5) What are the provincial governments' perceptions towards the public assets?

Only middle and top level managers were interviewed in this stage. There were eleven interviewees from different public organisations as listed in **Table 8.1**.

Table 8.1 Interviewee Details

No	Code	Institution/organisation	Category
1	R1	Directorate General of State Asset Management	Central Government
2	R2	The House of Representative, South Sulawesi Province	Provincial Legislator
3	R3	The State Audit Board, Representative of South Sulawesi	Auditor
4	R4	The State Audit Board, Representative of South Sulawesi	Auditor
5	R5	The State Audit Board, Representative of South Sulawesi	Auditor
6	R6	Provincial Office of South Sulawesi	Provincial Government
7	R7	Provincial Office of South Sulawesi	Provincial Government
8	R8	Provincial Office of West Sulawesi	Provincial Government
9	R9	Provincial Office of West Sulawesi	Provincial Government
10	R10	Provincial Office of North Sulawesi	Provincial Government
11	R11	Provincial Office of Central Sulawesi	Provincial Government

Similar to the previous interviews, in these second round interviews, the majority of the participants had more than ten years experiences working in a public asset management related area. These interviewees possess a rich understanding,

knowledge and experience in a diverse range of public asset management practices and policymaking.

The interview with the Central Government official was to explore the grantor of public assets point of view, whereas the interviews with provincial government representatives were to explore the public asset grantee's standpoint. On the other hand, an interview with a legislator aimed to capture the lawmaker opinion and interviews with government auditors aimed to examine the broader condition of the public asset management auditing view.

The interview process was conducted with a flexible schedule starting in June 2009 (preliminary data collection) and from January to July 2010. There were three interview time arrangements in this stage. The first arrangement was interviews conducted on the basis of scheduled appointments, the second arrangement was based on existing events when the researcher visited the provincial government office and the third arrangement was interviews conducted on the focus group discussion day.

As an introductory step to the interview process, these interviews began with the researcher explaining to the interviewees the aim and objective of the research. Interviewees were then asked to confirm that they understood the overall research process and were willing to participate in the process. Some of the interview processes were recorded and some were noted on the researcher's minutes. All interviews were conducted in *Bahasa Indonesia*, therefore, all data collected in the interviews were translated into English and the researcher tried as much as possible not to change or intervene in the original data. Finally, data collected from interviews were analysed using NVivo 8 software to derive meaningful information.

8.3 HINDRANCES EFFECTING PROVINCIAL GOVERNMENTS' MANAGEMENT OF PUBLIC ASSETS

As mentioned previously, there were five investigative questions to support the second research question. This section reports interviewees' answers to these five investigative questions. Substantial quantities of rich data from the interviews were collected in this study. It is important that all information was stored systematically to maintain the accuracy and validity of the represented knowledge from interviewees to facilitate comprehensive analysis in the next stage of the research.

The interviewees' answers were then coded into several nodes by NVivo 8 to identify the patterns of themes and topics regarding the factors surrounding public asset management processes.

Functions in the NVivo 8 qualitative software assisted the researcher in the systematic recording, coding, analysing and cross checking of qualitative data. Interviewees were identified in code to protect their anonymity. Transcripts from each interview were translated and then attached to the NVivo software as documents/sources. Recurring themes, common ideas, categories of information or concepts were coded within the text and stored in the database in what is referred to in the NVivo program as a tree node. As recommended in the literature (detailed information discussed in the Research Design chapter), as each new category was identified, it was compared and contrasted with all the categories previously formed. If there was no congruence with any other category then a new node was developed. Nodes that shared common themes were grouped together as child nodes. An analytical, constant comparative scheme and rules were established so that each category set should remain internally consistent and the entire set mutually exclusive. A full map of the coded nodes with source and references of the interview result is shown in **Table 8.2**.

Table 8.2 Map of Coded Nodes from Interviews

Type	Parent Node	Child Node	Sources	References
Tree Node	Transfer problems			
		Misunderstanding and miscommunication	1	1
		Poor asset data and information	2	2
		No problems	2	2
		Not available	2	2

Table 8.2 Map of Coded Nodes from Interviews (Continued)

Tree Node	Asset management problems		
	Low public participation	1	1
	No single treasury account	1	1
	Local culture and beliefs barrier	1	1
	Inefficient and ineffective	3	3
	Not developed for long term goals	4	4
	Corruption, collusion and nepotism	3	4
	Conflict of interests	4	4
	Limited public funds	2	4
	Unclear legal status	4	9
	Poor accounting systems	6	10
	Law and regulation is not sufficient	5	10
	Poor asset database systems	6	12
	Lack of human resources	7	12
	Lack of shared understanding in PAM	6	15
	Poor asset data	6	16
	Unneeded asset	7	22
	Lack of asset lifecycle guidance	7	23
Tree Node	Performance measurement		

	Increase government revenues	3	3
	Budgeting and financial performance by APBD	6	6
	Orderly administrative	4	7
	Compliance with law and regulation	4	8
	Efficiency and effectiveness	6	9

Table 8.2 Map of Coded Nodes from Interviews (Continued)

Tree Node	Public asset management objective		
	Strategic functions	2	2
	Improve data accuracy	1	2
	Proper asset needs and budgeting analysis	1	2
	Guarantee the availability of public services	3	3
	Increase revenue	3	3
	Improve the quality of public services and regional development	4	4

	Improve accountability	2	4
	Improve compliance to the regulations	4	6
	Improve efficiency and effectiveness	5	10
Tree Node	Perception towards public asset		
	Not available	1	1
	Income sources	4	4
	Based on good governance principles	5	5

Exported from NVivo 8, Full version of Tree Nodes is attached in Appendix D

To maintain the trustworthiness of the NVivo results, the Tree Nodes were then compared to the results of the document analysis, interviews and observations gathered in the previous stage. The detailed examination of major themes which emerged from the interviews is discussed in the next sections. Each section analyses the four major themes which emerged from the interviews. These four major themes were selected based on the most frequently referenced themes by the most speakers.

8.3.1 TRANSFER PROBLEMS

There are four groups of answers from interviewees in response to the first investigative question (**Table 8.3**): misunderstanding and miscommunication problems, poor asset data and information when transferred to the provincial governments, no problems at the time of transfer, and no information available regarding the transfer.

Table 8.3 Problems of Public Asset Management Practices

<p>First investigative question:</p> <p><i>Were there any problems when the assets were transferred from Central Government to provincial government?</i></p>
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First investigative question: <i>Were there any problems when the assets were transferred from Central Government to provincial government?</i>	
Interviewees response	Major remarks
Not Available (R2 & R8)	<ul style="list-style-type: none"> • Not applicable
No problem at the time of transfer (R6 – R7, R10)	<ul style="list-style-type: none"> • There weren't too much problems in the transfer time, after the verification team was formed and they listed all the assets to be transferred from the Central Government to the South Sulawesi province, it then was audited by the Government Auditor Agency and then approved by the House of Representatives • There were no problem at the time of transfer
Poor asset data and information (R3 – R5, R11)	<ul style="list-style-type: none"> • The transfer process from the Central Government to the provincial government did not happen smoothly. Although some of the major assets were already transferred such as hospitals, school buildings and infrastructure, but in many cases the transfer documents were not confirmed with the physical assets. • At the time of decentralisation, assets were transferred from the Ministry/ Agency directly to the respective Regional Office of Ministry/Agency without going through to the Bureau of Supplies and the General Province, so many assets were not detected by the Bureau of Supplies and General • Assets that were transferred through the provinces much just on paper [sic] but not followed by delivery of physical assets, as a result many provincial autonomy assets cannot be located or identified physically

Table 8.3 Problems of Public Asset Management Practices (Continued)

First investigative question:	
<i>Were there any problems when the assets were transferred from Central Government to provincial government?</i>	
Interviewees response	Major remarks
Misunderstanding and miscommunication problem (R1)	<ul style="list-style-type: none"> There should be no problems when the assets were transferred from central to provincial government because it is regulated by the law and audited by government auditor. Although in some provinces there could be problems, but merely because of misunderstanding and miscommunication

Misunderstanding and miscommunication problem

This response was given by the Government as the grantor of the asset to the provincial governments. It is not surprising that the Government gave this answer because they initiated and prepared the transfer process. Therefore, it is unlikely the Government as the grantee would denounce the work that they initiated and contributed greatly to during the execution of this initiative. However, this answer should be compared with the provincial governments' point of view as the recipient of the assets as to whether there were problems at the transfer time or not, as discussed below.

Poor asset data and information

Contrary to the Government response, the provincial governments expressed that at the time of asset transfer many problems occurred in the process such as poor asset data and information resulting in the assets being difficult to physically locate; the assets were directly transferred from Government to the Working Unit in provincial government organisations without the knowledge of the Provincial Government Asset Manager in the Asset Bureau.

Similarly, the State Audit Board responded that the transfer process from the Government to the provincial government was not smooth. Although some of the major assets had already been transferred, such as hospitals, school buildings and

infrastructure, in many cases the transfer process was put on hold for some period of time due to the transfer documents not matching the physical assets.

No problem at the time of transfer

Interestingly, two provinces involved in the second round interviews responded that there were no problems at the time of transfer. These two provinces are the South Sulawesi province and the North Sulawesi province. It is interesting to examine further the differences between these two groups of provincial government that resulted to different conditions in the transfer process. After further investigation, the difference in the transfer process between these two groups was that for the “*no problem*” group, Parliament approval was obtained before the transfer. The documents and physical assets were audited by the State Audit Board to check their conformity. Whereas for the “*many problems*” group, there was no auditing process prior to the asset transfer to the provincial government; documentation went directly to Parliament house and was approved without going through to State Audit Board.

In relation to this difference, it is important to examine the law and regulation regarding the transfer process. The Decree of Ministry of Finance at the Central Government level regulated the transfer process. In this decree, it is not compulsory for both the grantor or grantee to hand over to the State Audit Board to audit the documents and the physical assets when the transfer process takes place. Although in some provinces the auditing process was conducted before approval by the legislator, it is a voluntarily initiative by the particular provincial government.

No information available regarding the transfer

Besides the three responses above, some interviewees also reported having no information relating to the transfer. These interviewees were from the West Sulawesi province and one was the legislator. For the West Sulawesi province, the investigative question was not applicable because at the time of decentralisation and transfer of assets from Central Government, the West Sulawesi province had not yet separated from the South Sulawesi province. However, the West Sulawesi official stated that there were no problems when the assets transferred from the South Sulawesi province as the parent province.

8.3.2 ASSET MANAGEMENT PROBLEMS

There are 17 groups of interviewee answers in response to the second investigative question; however, only four major problems were referenced and mentioned by almost all of the interviewees. These four major problems are: lack of asset lifecycle guidance and insufficient law and regulation, unneeded and underutilised asset problems, asset data related problems and human resource related problems. **Table 8.4** lists the four major problems and related major remarks.

Table 8.4 Problems of Public Asset Management Practices

Second investigative question:	
<i>What are the problems faced by the provincial governments in managing the assets after the transfer?</i>	
Interviewees response	Major remarks
Lack of asset lifecycle guidance and insufficient law and regulation (R1,R2, R6 – R11)	<ul style="list-style-type: none"> • Lack of applicable regulations and guidelines on asset management areas that could be directly applied by the provincial government employees. • A proper acquisition and maintenance guidance of assets so the asset is not to be lost, damaged, or stolen, and so forth. • The main constraint in the utilization of public assets is that although the asset has the potential for income resource, it is not fully optimized especially in the form of rent and cooperation with third parties due to the lack of clear regulations and practical guidance.
Unneeded and underutilised assets problem (R2 – R11)	<ul style="list-style-type: none"> • ...not to full fill basic public needs, provincial governments spent public fund for unnecessary maintenance for assets that are unrelated to public service delivery. • Planning activity is still considered as a standalone process, the needs of the Working Unit is not carefully analysed based on priority scale, as a result some unneeded public assets are purchased whereas the needed assets are not available. • The main constraint in the utilization of public asset is that although the asset has the potential for income resource, it is not fully optimized especially in the form of rent and cooperation with third parties due to the lack of clear regulations and practical guidance. • The unsynchronized understanding of public asset

Second investigative question:	
<i>What are the problems faced by the provincial governments in managing the assets after the transfer?</i>	
	<p>management process between the Working Unit and the Bureau of Asset as the provincial government asset manager, especially in coordinating and synchronizing asset needs plan with accordance to facilities, infrastructure and rate standards.</p> <ul style="list-style-type: none"> • Disposal of unneeded assets is happening every year, although there is no careful examination towards the asset whether it is really unneeded or simply just not utilized optimally. • There are a lot of vacant and underutilised assets which are not managed optimally.
<p>Asset data related problem (R1 – R11)</p>	<ul style="list-style-type: none"> • Incomplete data about quantity, value, condition and ownership status. • Unavailability of accurate database for the preparation of the Balance of Government. • There is no clear document which assets under provincial government • Inventory of government assets in West Sulawesi province Mamuju are not recorded properly so that the existence of these assets is not clear and inviting trouble. • Low accuracy of data provided by SKPD (Working Unit). • Error in asset nomenclature allocation for example capital expenditures. • Data between asset manager (Bureau of General Supplies and Asset) with asset user (SKPD/Working unit) is not synchronised.
<p>Human resources related problem (R1 – R11)</p>	<ul style="list-style-type: none"> • The second problem is the asset management officer has a lack of understanding on the asset management regulations regarding the management of public assets. This is the major problem in managing regional assets. • Lack of human resources available to manage provincial assets. • Understanding of SKPD (Working Unit) in asset management area is still lacking. • Human resources are not sufficient: one of Central Sulawesi provincial government efforts to improve the quality of personnel resources is by implementing the Coordination

Second investigative question:	
<i>What are the problems faced by the provincial governments in managing the assets after the transfer?</i>	
	<p>Meeting of General Supplies and Asset of Central Sulawesi province. So it is expected that through this activity, it will create an understanding of the public asset management process for the realization of orderly administration of Regional asset management.</p> <ul style="list-style-type: none"> • Management of state assets was not as easy as imagined. In practice, many factors are an obstacle, such as the lack of HR staff to present the financial report. • Each entered the new fiscal year, the officer who is responsible for the storage/management of the assets in each SKPD (Work Unit) often changed. That is a problem because the new officer tends not to understand what assets belong to the SKPD (Work Unit). • Human Resources (HR) who knows the Technical Asset Valuation is limited.

Lack of asset lifecycle guidance and insufficient law and regulation

Where the question of the problems faced by the provincial governments in managing the assets after the transfer were asked, the majority response from interviewees were the statement that there is a lack of applicable regulations and guidelines on asset management areas that could be directly applied by the provincial government employees. In their words, in terms of regulations and guidance in public asset management processes, almost all interviewees from the provincial government complained about the lack of clear regulations and applicable guidelines to lead them in their daily public asset management duties. As a comparison, in Australia, New Zealand and Canada, provincial governments are not only equipped with asset management guidance but are also provided with tools and supplementary guidance that lead provincial government practices in specific processes or stages.

Unneeded and underutilised assets problem

The interviewees also raised the issue that provincial governments hold and maintain a number of unnecessary assets which are actually not required for public service delivery purposes. This condition can be proven by examining the number of

unutilised assets held by provincial government. The easiest way to identify unutilised assets is by identifying vacant land owned by the provincial government.

In order to ensure data trustworthiness, one approach adopted in this study (mentioned previously in the Research Design chapter) is to cross reference data collection results. The data were collected using a multi-method design which engaged qualitative and quantitative methodologies that complemented each other. Results from the document analysis and interviews are cross-referenced and featured in this section. The result from document analysis in relation to vacant land owned by the South Sulawesi province can be seen in **Table 8.5**.

Table 8.5 Unutilised Land in South Sulawesi Province

Total Land	Unutilised Land	Percentage (%)	Total Land Area (m ²)	Unutilised Land	Percentage (%)
706	40	5.67	14,190,976.04	2,049,769	14.44

More than 5% of parcels of land or more than 14% of total land area owned by the South Sulawesi province is vacant or unutilised. These figures illustrate that the South Sulawesi province has a significant number of unneeded assets or at least underutilised assets. At the same time, it shows that the South Sulawesi province has a significant potential income if the assets are offered on the market, and can also potentially save the public funds needed to maintain these unnecessary assets.

Table 6.6. presents another figure from document analysis collected from the West Sulawesi province showing (**Table 8.6**) unutilised assets in this province. The figure features different perspectives of unutilised public assets in West Sulawesi. Early in 2009, the West Sulawesi province purchased 11 parcels of land and at the time the data was collected in 2010, four of these land parcels were still unutilised.

Table 8.6 Unutilised Land in West Sulawesi Province Purchased 2009

Land Purchased	Unutilised Land	Percentage (%)	Land Purchased Area (m ²)	Unutilised Area (m ²)	Percentage (%)
11	4	36	207,358	9,476	4.57

According to interviewees (R2 – R11), there are a number of factors causing this unutilised or underutilised public land. Some of the factors and reasons are (as displayed in **Table 8.4**):

- planning activity is still considered as a standalone process
- the needs of the Working Unit are not carefully analysed based on a priority scale and as a result some unneeded public assets are purchased, whereas the needed assets are not available
- the main constraint in the utilisation of public assets is that although the asset is a potential income source it is not fully optimised, especially in the form of rent and cooperation with third parties due to the lack of clear regulations and practical guidance
- the unsynchronized understanding of the public asset management process between the Working Unit and the Bureau of Asset as provincial government asset manager especially in coordinating and synchronizing asset needs plans with accordance to facilities, infrastructure and rate standards.

Asset data related problems

Another major problem faced by the Indonesian provincial governments is data availability in managing public assets. This data can be from inside the provincial government organisations such as: data about quantity, value, condition and ownership status of the assets; and documents related to the assets under the provincial governments' control. The data could also be from outside the government organisation such as unavailability of property market data—even if it is available its reliability is still doubtful.

The data problems could also be triggered by low data accuracy provided by the Local Government Working Unit (SKPD), errors in asset nomenclature allocation, data between the asset manager and asset user/Working Unit is not synchronised, and inventory of government assets is not recorded properly. These problems are also interrelated with the provincial governments’ human resources involved in the process of public asset management.

Human resource related problems

The subject of greatest complaint related to human resources responsible for managing public assets is the quantity and the quality of officials. In West Sulawesi, there are almost 6,000 provincial government officials from the lowest to the highest grade. Unfortunately, only around 10% were allocated to the Provincial Government Secretary Working Unit which is responsible for the management of public assets. Even worse, only 1% are directly involved in the public asset management process—that is 60 officials in the General Bureau under the Provincial Government Secretary Working Unit.

Table 8.7 Provincial Government Officials in West Sulawesi Province in 2009

Total Officials	Provincial Government Secretary Working Unit	Officials in General Bureau
5960	589	60

Similar to the West Sulawesi province, in South Sulawesi there are only 52 officials involved in the process of public asset management. These officials are responsible for managing almost 1,000,000 assets which are valued around AUD 500 million (see Table 6.8).

Table 8.8 Provincial Government Officials in South Sulawesi Province in 2010

Quantity of Asset	Value of Assets	Officials in Asset Management Bureau
966,508	Rp. 4,210,379,131,824 equal to AUD 467,819,903.54	52

Currency rate: AUD 1 equal to approximately Rp. 9.000,-

8.3.3 PROVINCIAL GOVERNMENT'S PERFORMANCE MEASUREMENT

There are five groups of interviewee answers in response to the third investigative question. Those are efficiency and effectiveness, compliance with law and regulations, orderly administrative, government budget and financial performance by "APBD", and an increase in provincial government revenues. The first four groups are discussed further in this section (**Table 8.9**).

Table 8.9 Provincial Government's Performance Measurement

Third investigative question: <i>Do provincial governments have performance measurement related to those public assets?</i>	
Interviewees response	Major remarks
Efficiency and effectiveness (R1 – R7, R10 – R11)	<ul style="list-style-type: none"> • Control spending, and efficiency of budget financing in order to control the budget deficit, and the effectiveness of the management of state property • Efficiency and effectiveness • Many land and buildings in a prime location were not optimally utilized, on the other hand, the government allocate a lot of public money on unproductive assets for maintenance

Third investigative question:

Do provincial governments have performance measurement related to those public assets?

<p>Compliance with law and regulation (R3 – R5, R8 – R11)</p>	<ul style="list-style-type: none"> • Budgets can be used as a reference in evaluating whether the programs have been carried out by Provincial Government in accordance with the provisions of law and regulation • Efficiency, effectiveness and compliance with the regulations • Management of public assets should be conducted in accordance with law and regulations • Work in accordance with applicable regulations and to improve the knowledge and skills in performing the tasks.
<p>Orderly administrative (R6 – R11)</p>	<ul style="list-style-type: none"> • The implementation of orderly administration and orderly public asset management process • Status of the use of the property in respective regions on SKPD (Working Unit) set out in the framework of orderly regional asset management and the assurance of rights, powers and responsibilities of the Chief SKPD (Working Unit) • Organizing a good administrative public asset • The measurement of government performance can be seen in the reports that we produce
<p>“APBD” government budgeting system (R1 – R7, R10 – R11)</p>	<ul style="list-style-type: none"> • Budgets can be used as a reference in evaluating whether the programs have been carried out by Provincial Government in accordance with the provisions of law and regulation • Control spending, and efficiency of budget financing in order to control the budget deficit, and the effectiveness of the management of state property

Third investigative question:	
<i>Do provincial governments have performance measurement related to those public assets?</i>	
	<ul style="list-style-type: none"> • An appropriate and balanced target and the realization report

Efficiency and effectiveness

The majority of interviewee responses to the third investigative question were that provincial governments measure their performance by calculating their efficiency and effectiveness in managing public assets. However, further inquiry revealed that provincial government officials have no clear indicator to really measure the efficiency and effectiveness of their performance. The response given by the Government interviewee was to control spending, and efficiency of budget financing in order to control the budget deficit, and the effectiveness of the management of state property. On the other hand, the provincial government interviewees' responses were that the measurement of efficiency and effectiveness is achieved by comparing the progressing financial report with last year's report in terms of its target and achievement.

Compliance with law and regulation

This response was strongly given by the State Auditor Board officials followed by provincial government officials. It was not surprising to receive such a strong response from the auditors as their main task and responsibility is to check the management of state finances conducted by the Central Government, provincial governments, other state institutions, The Central Bank of Indonesia, State-Owned Enterprises, public service agencies, regional-owned enterprises and the agency or other entity that manages state finances. The State Auditor Board audit includes examination, performance examination, and examination with a specific purpose to promote the establishment of an orderly management of state finances, in accordance with the laws and regulations, economical, efficient, effective, transparent and accountable with respect to a sense of justice and propriety.

Orderly administrative

What is actually meant by the interviewees regarding this response was a proper administration process in reference to paper work, proper recording of public

assets, complete paper requirements (including legal documents) in accordance with duties, authority and responsibility. Another important aspect to asset administration given by the interviewees was an accurate data collection process, proper data recording, ease of access and convenience of retrieval in the future.

The following is a statement from a North Sulawesi province official (R10):

“Status of the use of the property in respective regions on SKPD (Working Unit) set out in the framework of orderly regional asset management and the assurance of rights, powers and responsibilities of Chief SKPD (Working Unit)”...

This means that the provincial governments wanted an independent public asset management process without the intervention of a variety of interests—the interests of the Central Government, politics and or intervention of other parties that may interfere in provincial governments’ ability to perform their duties.

Budgeting and financial performance by “APBD “

State Finance Law⁵ regulates that the Regional Budget Revenue and Expenditure (*APBD*) Statement is a form of financial management that is determined annually by the regional regulation. The statement consists of the revenues budget, expenditures budget and finances. Regional revenues are derived from local revenues, balance funds from the Central Government and other legitimate income such as grants. Local revenues are local taxes, levies, the results of regional natural resources and other legitimate income. Balance funds are Revenue-Sharing, the General Allocation Fund (*DAU*) and Special Allocation Fund (*DAK*). On the other hand, according to the Ministry of Internal Affairs Regulation No. 13/2006 there are two Regional Expenditures, namely direct and indirect. Direct expenditures are expenditures that have direct linkages with provincial government programs and activities that include personnel expenditure, expenditure for assets and services, and capital expenditures. Indirect expenditures are expenditures that have no direct connection with the implementation of regional government programs and activities that include personnel expenditure, interest expenditure, subsidies, grants, social

⁵ Law No. 17/2003

assistance, expenditure for financial balance with the Central Government, financial aid, and unplanned spending.

8.3.4 PROVINCIAL GOVERNMENTS' OBJECTIVES

There are nine answer groupings from interviewees in response to the fourth investigative question: to improve government's efficiency and effectiveness, compliance with the regulations, government's accountability, and the quality of public services and regional development as seen in **Table 8.10**.

Table 8.10 Provincial Governments' Objectives in Managing Public Assets

Fourth investigative question: <i>What are the provincial government's objectives in managing public assets?</i>	
Interviewees response	Major remarks
<p>To improve government's efficiency and effectiveness (R1, R3 – R5, R6 – R7, R10 – R11)</p>	<ul style="list-style-type: none"> • To improve efficiency, effectiveness and compliance with the regulations • Optimising benefits and reduce costs • Regular asset maintenance in order to achieve efficiency and effectiveness • Transparent, accountable, effective and efficient • Efficiency and effectiveness of public asset management process
<p>To improve compliance to the law and regulation (R3 – R5, R8 – R11)</p>	<ul style="list-style-type: none"> • To improve efficiency, effectiveness and compliance with the regulations • Management of public assets should be conducted in accordance with law and regulations • Encouraging the establishment of Regional Asset Management in compliance of prevailing regulations, more accurate and reliable, through the Regional Financial Management System which is information technology based

Fourth investigative question: <i>What are the provincial government's objectives in managing public assets?</i>	
To improve government's accountability (R6 – R7, R11)	<ul style="list-style-type: none"> • The provincial government should have accurate information on regional assets and wealth • Transparent, accountable, effective and efficient • Improve accountability
To improve the quality of public services and regional development (R1 – R2, R6 – R7, R10)	<ul style="list-style-type: none"> • Improve the quality of public services and regional development • Leading in public asset management process through improvements of services by the professional governments' officials

In this section, two answers of the main response groupings were new themes while the other two followed up from previous investigative questions. The two new themes were to improve the quality of public services and regional development, and improve government's accountability. These two responses show that provincial governments consider, and are concerned with, the quality of public services through the process of public asset management.

8.3.5 PROVINCIAL GOVERNMENTS' PERCEPTIONS

There are three groups of interviewee answers in response to the fifth investigative question: public asset management should based on good governance principles, public asset can be an income source for provincial government, and one province could not describe or explain their perception towards the public asset as listed in **Table 8.11**.

Table 8.11 Provincial Government's Perception toward Public Assets

Fourth investigative question:	
<i>What are the provincial government's perceptions towards the public assets?</i>	
Interviewees response	Major remarks
<p>Based on good governance principles (R1, R3 – R7, R10 – R11)</p>	<ul style="list-style-type: none"> • The process of public asset management should be based on the principles of openness, accountability, legal certainty, public alignment and sustainability/continuity • The management of public assets should be conducted comprehensively and under the principle of good governance • Leading in public asset management process through improvements of services by professional government officials • In order to improve the implementation of financial management and management of state/regional assets and to support the realisation of good governance in the implementation of regional autonomy
<p>Public asset is an income source (R2, R6 – R7, R10 – R11)</p>	<ul style="list-style-type: none"> • Government could make use of the regional assets as long as it increases government revenue and to keep in mind that in the event it started to lose [money], then the government should stop • The main constraint in the utilization of public assets is that although the asset has the potential for income resource, it is not fully optimized especially in the form of rent and cooperation with third parties. • Leasing out of public assets is not commonly done within provincial government body or agency; however, leasing out to private organisations might be allowed by the regulations • Land is also one of the main capital [sic], both as a place of development as well as factors of production to produce trading commodities that is necessary in order to increase provincial revenues

Based on the good governance principles

The most referenced answer by the interviewees was that the management of public assets should be based on good governance principles. Interviewees explained several indicators to measure the implementation of good governance principles. These indicators were accountability, transparency, honesty, equality, public participation and accordance with the constitution.

This response was strongly given by the North Sulawesi province officials, and South Sulawesi province officials. In regard to this answer, the commitment from these two provinces was proven recently on 25 April 2011 at the Celebration of Regional Autonomy Anniversary held in Bogor, West Java province, Indonesia. The Vice-President of Indonesia awarded the North Sulawesi province as the Best Performers of Regional Autonomy, South Sulawesi province as the second best and West Java province as the third best. The award was given based on several indicators including financial aspects of regional government, regional government personnel, the conduct of government affairs, and regional economic development aspects.

Public asset is an income source

Currently the provincial government does not regard municipal assets as potential sources of revenue. Although there seemed to be hesitation from the Central Sulawesi province official who mentioned that the leasing out of public assets is not common practice for provincial government, the majority of interviewees from other government bodies were comfortable in expressing that it is permissible to utilise public assets as an income resource as long as it is done in accordance with the law and regulation and that it could increase provincial government revenue. This view evolved very quickly during the course of the study—in early 2009, at the early stages of this research, the South Sulawesi province still thought that it was not permissible to gain benefit from a third party, including the community, from the utilisation of public assets.

8.4 CONCERNS IN MANAGING PUBLIC ASSETS

The interviewee findings successfully identified 38 sub-themes (shown in **Table 8.12**) as responses from all investigative questions in research question 1, 2 and 3 as the major concerns in managing public assets in provincial governments.

These 38 sub-themes were analysed (Table 8.12) using Matrix Coding Queries in NVivo.

Table 8.12 Nodes and Cases Matrix Coding Queries

Sub Themes/Nodes	Interviewees/Cases											Total Reference
	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	
Local culture and beliefs barrier	0	0	0	0	0	0	0	0	0	0	1	1
Misunderstanding and miscommunication	1	0	0	0	0	0	0	0	0	0	0	1
Not available	0	0	0	0	0	0	0	1	1	0	0	2
Strategic functions	1	0	0	0	0	0	0	0	0	1	0	2
Low public participation	0	0	1	1	1	0	0	0	0	0	0	3
No single treasury account	0	0	1	1	1	0	0	0	0	0	0	3
Increased government revenues	1	1	0	0	0	0	0	0	0	0	1	3
No problems	0	0	0	0	0	1	1	0	0	1	0	3
Not Available	0	1	0	0	0	0	0	1	1	0	0	3
Improve data accuracy	0	0	0	0	0	2	2	0	0	0	0	4
Increase revenue	0	1	0	0	0	1	1	0	0	0	1	4
Proper asset needs and budgeting analysis	0	0	0	0	0	2	2	0	0	0	0	4
Poor asset data and information	0	0	1	1	1	0	0	0	0	0	1	4
Income sources	0	1	0	0	0	1	1	0	0	1	1	5
Improve the quality of public services and regional development	1	1	0	0	0	1	1	0	0	1	0	5
Conflict of interests	1	1	0	0	0	1	1	1	1	0	0	6
Inefficient and ineffective	0	1	1	1	1	1	1	0	0	0	0	6
Guarantee the availability of public services	0	0	1	1	1	1	1	0	0	1	0	6
Improve accountability	0	0	0	0	0	2	2	0	0	0	2	6
Limited public funds	0	0	0	0	0	3	3	0	0	1	0	7
Not developed for long term goals	1	0	1	1	1	1	1	0	0	1	0	7
Corruption, collusion and	0	1	1	1	1	0	0	2	2	0	0	8

Sub Themes/Nodes	Interviewees/Cases											Total Reference
	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	
nepotism												
Based on good governance principles	1	0	1	1	1	1	1	0	0	1	1	8
Budgeting and financial performance by APBD	1	1	1	1	1	1	1	0	0	1	1	9
Improve compliance to the regulations	0	0	1	1	1	0	0	1	1	1	3	9
Orderly administrative	0	0	0	0	0	1	1	2	2	2	2	10
Compliance with law and regulation	0	0	2	2	2	0	0	1	1	2	3	13
Unclear legal status	0	1	0	0	0	4	4	1	1	0	3	14
Law and regulation is not sufficient	2	0	0	0	0	3	3	2	2	1	2	15
Efficiency and effectiveness	1	2	2	2	2	2	2	0	0	1	1	15
Improve efficiency and effectiveness	1	0	1	1	1	3	3	0	0	2	3	15
Poor accounting system	1	2	1	1	1	3	3	2	2	1	0	17

Table 8.12 Nodes and Cases Matrix Coding Queries (Continued)

Sub Themes/Nodes	Interviewees/Cases											Total Reference
	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	
Lack of human resources	1	1	1	1	1	2	2	3	3	3	1	19
Poor asset database system	1	0	1	1	1	4	4	1	1	4	1	19
Lack of shared understanding in PAM	1	1	0	0	0	5	5	4	4	2	2	24
Poor asset data	2	1	0	0	0	6	6	2	2	2	3	24
Lack of asset lifecycle guidance	1	3	0	0	0	8	8	5	5	3	2	35
Unneeded assets	0	3	1	1	1	9	9	4	4	1	3	36

Full Matrix Coding Queries is attached in Appendix E

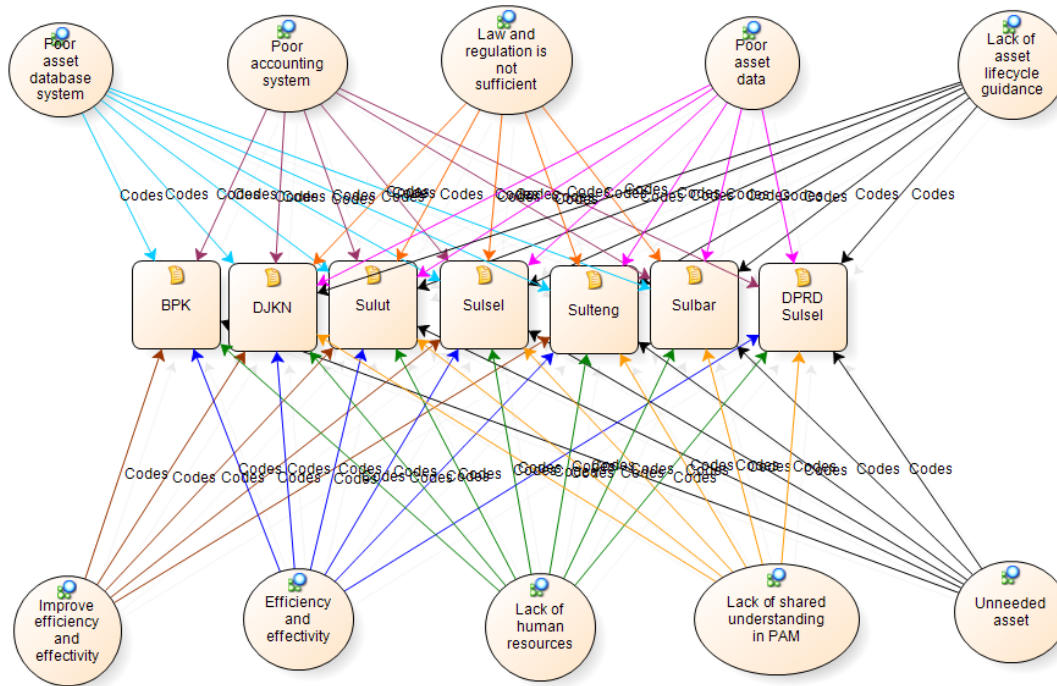
Matrix coding queries create a table (**Table 8.12**) to compare multiple pairs of specified items, in ways that data were being specified. Like any other query, a Matrix coding query can be restricted to a specified scope; it is called a Matrix Coding Query because matrices are made of nodes that code data. In this study, the sub-themes as nodes were specified for rows and the interviewees' detail as cases were specified for columns. The cells of **Table 8.12** contain data coded as the combination of those specified nodes and cases. The Matrix Coding Queries were run using the "AND" Boolean operator. The result listed on the query cells or Matrix Cell Content is the Coding References.

The result of the Queries above identified the top 10 most referenced sub-themes by interviewees (see **Table 8.13**):

Table 8.13 Major Concerns from In-depth Interviews

No	Sub Themes/Nodes	Total Reference
1	Unneeded assets	36
2	Lack of asset lifecycle guidance	35
3	Poor asset data	24
4	Lack of shared understanding in PAM	24
5	Poor asset database system	19
6	Lack of human resources	19
7	Poor accounting system	17
8	Improve efficiency and effectiveness	15
9	Efficiency and effectiveness	15
10	Laws and regulations are not sufficient	15

These major concerns were mentioned by almost every group of respondents (Central Government, local governments, auditor and legislator). The visualisation model developed in NVivo8 shows the relationship between the respondents and these major concerns as can be seen in **Figure 8.1**.



Note : BPK (Auditor), DJKN (the Central Government), Sulut (North Sulawesi), Sulsel (South Sulawesi), Sulteng (Central Sulawesi), Sulbar (West Sulawesi) DPRD Sulsel (Legislator)

Figure 8.1 Relationship between Respondents and Major Concerns

These major remarks can then be merged into five groups to consider their similarities (shown on **Table 8.14**). These are unneeded and underutilised assets, lack of asset lifecycle guidance and insufficient law and regulation, asset data related problems, human resources problems, and economic efficiency and effectiveness.

Table 8.14 Merged Major Concerns from In-depth Interviews

No	Sub Themes/Nodes	References	Total Reference
1	Unneeded assets	36	36
2	Lack of asset lifecycle guidance and insufficient law	35 + 15	50

No	Sub Themes/Nodes	References	Total Reference
	and regulations		
3	Asset data related problems (poor asset data, poor asset database system)	24 + 19	43
4	Human resource problems (lack of shared understanding in PAM and lack of human resources)	24 + 19	43
5	Economic efficiency and effectiveness (Poor accounting system, improve efficiency and effectiveness and efficiency and effectiveness)	17 + 15 + 15	47

8.4.1 UNNEEDED AND UNDERUTILISED PUBLIC ASSETS

Private organisations treat their assets as income-generating resources. In contrast, many public sector organisations have no systematic way of quantifying the benefits of public assets. As a result, provincial governments still hold many public assets which are actually not necessary in the day to day operations of public organisations. It is difficult to identify and analyse whether the assets are necessary or underutilised. In the South Sulawesi province there is no performance measurement to control expenses and measure revenues generated by public assets. In the Central Sulawesi province it is not common practice for the provincial government to earn profits from public real property assets such as office buildings; the government believes that those assets are taxpayers' assets and, therefore, it is their right to benefit from those assets at no cost as part of the good governance principle—that is, to provide free public services. This situation is more evident between government organisations. It is unusual for asset managers to charge other government entities for the use of public building facilities, including offices and infrastructure, although a charging regime is very much the norm in developed countries such as Australia.

Public assets such as office buildings are utilised by government organisations free of charge. The South Sulawesi Provincial Government Secretary allows provincial government divisions (known as Dinas) to utilise public offices without any lease or contract agreement. Introducing and educating public asset managers on current public asset management practices should help to transform provincial governments' perceptions of public assets, with a shift from uncontrolled public

assets usage to efficient use of the assets. If it is possible aim to achieve not only efficient and effective public asset utilisation, but also sifting from non-profit to revenue generating public assets. By adopting such practices, provincial governments will be able to identify and classify assets into core assets, additional assets and surplus assets, and identify which assets are unnecessary, which are underutilised and which assets have potential to create an extra income.

8.4.2 LACK OF ASSET LIFECYCLE GUIDANCE AND INSUFFICIENT LAWS AND REGULATIONS

In 2004, the Indonesian Government implemented the *Decentralised Government Act*⁶, which mandated the Central Government to transfer authority for managing some public assets to the provincial governments. This meant that the provincial government authorities became responsible for managing their municipal assets. Although some important and strategic assets are still under the control of the Central Government (such as major airports and seaports, military defence equipment, etc.), the majority of the assets were transferred to the provincial government authorities.

There is other legislation which regulates public asset management processes in Indonesia, including the *State Asset Act*⁷, the *State Budget Act*⁸ and the *Auditing and Reporting State Budget Act*⁹. At a lower level, there are also several government regulations relating to public asset management¹⁰. These are at both the central as well as the provincial government level of regulations. The latter regulations provide general guidance on provincial government asset management processes, from planning through to acquisition and then disposal. This indicates that provincial government in Indonesia already have the legal framework for managing public assets. Although the content needs to be improved to adopt best practices, the

⁶ The Decentralised Government Act Number 32/2004

⁷ State Asset Act No. 17/2003

⁸ State Budget Act No. 1/2004

⁹ Auditing and Reporting State Budget Act No. 15/2004

¹⁰ Government Regulation No. 6/2006

foundation to build a robust Public Asset Management Framework exists and Indonesian provincial governments are already heading towards better public asset management processes.

However, these legislative and regulatory frameworks are ambiguous. The definition of municipal public property is based on the Central Government Regulation¹¹, but it is too general and is difficult to translate into practice by provincial government officials. There is no further practical guidance for provincial government officers with regard to their public asset management activities.

Despite the many rules and regulations governing public asset management processes, the content and terms set out in these laws and regulations are the same and there are no specific differences to accommodate the locality of provincial governments' condition. On the other hand, the regulations made by each provincial government are usually only formed on the basis and results of study visits to other local governments that already have this type of rule; as result there are no new or different rules across provinces.

Furthermore, the ability of provincial government officials to develop localised practical regulations is not as advanced as in Central Government. In the West Sulawesi province, Central Sulawesi province and North Sulawesi province for example, there is no specialised agency within the provincial government responsible for managing public assets and the responsibility is allocated to the Provincial Government Secretary. At the national level, as a comparison, the Government formed the Directorate General of State Asset Management under the Indonesian Ministry of Finance¹².

8.4.3 ASSET DATA RELATED PROBLEMS

Data is a key element for successful asset management. The South Sulawesi province has an asset register, recording such information as name and type of assets, asset code and asset register, asset dimensions, year of acquisition, location/address, ownership status and the documentation details, type of utilisation, source of funds

¹¹ The Government Regulation No. 6/2006

¹² The Presidential Decree Number 66/2006

and price of purchase. However, data such as asset market value, lease agreement, asset revenues and expenses, the use of assets and other non-physical data are not universally or reliably recorded. This current level of data is not sufficient to support asset management decision-making and as a result it is difficult for asset managers to make any reliable decisions about property assets.

Furthermore, asset maintenance information is not recorded on the same page as the asset register; this is recorded in a different report by another division. Provincial governments have no systematic record of asset cost, asset condition or rental income. This makes it impossible for managers to review whether an asset is under-performing or successfully achieving adequate returns. Unfortunately, asset management data is not seen by Indonesian provincial governments as a valuable resource and in the absence of any incentive to collect the data, asset managers are left to make decisions blindly.

8.4.4 HUMAN RESOURCES PROBLEMS

Another key challenge mentioned by interviewees is a limitation on the number of staff available to manage assets. The number of assets owned by provincial governments usually far outnumbers the staff responsible for managing them. In addition, the provincial government has no experts in the area of asset management such as engineers, lawyers, information technology professionals, asset values, etc.

To overcome this challenge, more staffs are needed and the current staffs must be trained in appropriate asset management skills. For a short-term alternative, the provincial government could recruit and employ asset manager experts from private organisations. A study of public sector asset management practices in developed countries reveals that in most cases their practices were adopted from private sector real estate management and this was carried out under the direction of real estate experts employed by government. A comprehensive approach to property asset management in the US, Canada, New Zealand and Australia was introduced when a real estate expert was recruited to manage public assets in the city government (Dow et al., 2006; Jowett, 2006; Kim & Brian, 2004; Kloot, 2001; McCusker, 2006; Phang, 2006; Susilawati & Armitage, 2004). The experience of non-real estate corporations in managing their assets offered valuable lessons for local governments.

Another human resource issue is poor coordination and communication between the central and provincial governments, and among provincial governments. In some cases, provincial government managers have difficulty in identifying which asset falls into which jurisdiction. It is often not clear whether a particular asset is under the Central Government's or the provincial government's jurisdiction and these situations are mainly caused by a lack of coordination and proper asset documentation. There is ambiguity of asset ownership, i.e., whether it is transferred to a provincial government from the Central Government or from another local entity.

As a result it is important to improve communication and coordination between the Central Government and provincial government bodies, as well as among local government entities. In the case of the South Sulawesi Provincial Government, better communication and coordination would help to clarify jurisdictions, responsibility and authority related to public assets. The coordination should be based on the South Sulawesi Provincial Regulation on managing public assets.

8.4.5 ECONOMIC INEFFICIENCY ASSOCIATED WITH PUBLIC ASSETS

One source of inefficiency in the South Sulawesi province is the presence of large portfolios of vacant or underused properties. This situation arises from the harmonisation of structure or the change of services provided by government departments and agencies which is faster than the provincial governments' capability to utilise or dispose of public properties. The regulations for disposing of or reusing vacant property are too complicated, time consuming and legally risky. Such regulations create a condition where provincial government officials are reluctant to sell or utilise the property.

In the case of South Sulawesi province, of 776 parcels of land (with a total of 14.6 million m² valued at a purchase price or historical cost at around USD138.3 million equal to AUD 133,5 million) owned by the provincial government, 10% is surplus (South Sulawesi Province Secretary, 2009). Disposing of all surplus land and property would save the provincial government a considerable sum and raise up to USD 803.1 million (equal to AUD 854.3 million) at current market value—far more than the historic book value of the whole provincial portfolio.

8.5 CONCLUSION

This chapter reported on the data collection process for the second research question. In-depth interviews with four groups of government bodies—Central Government, the state auditor, provincial legislator and the provincial governments—were carried out to investigate the second research question.

Five investigative questions were asked to identify the factors that affect public asset management practices in Indonesian provincial government. These investigative questions aimed to identify problems at the time the Central Government transferred public assets to the provincial governments, problems in management processes, provincial government's performance measurement, objectives and perceptions in managing public assets. As result, there were five major themes noted by interviewees: unneeded and underutilised public assets, the lack of asset lifecycle guidance and insufficient laws and regulations, asset data related problems, human resource problems and economic inefficiency in managing assets. These factors need to be accommodated in the proposed Public Asset Management Framework in order for it to be applicable to and accepted by Indonesian provincial governments. These factors can potentially solve, or at least soften, public asset management problems.

The next chapter analyses these major themes with reference to and reflection of the theories from the literature. It proposes areas that can be improved as well as solutions to overcome the problems experienced by provincial government in managing public assets.

Chapter 9: Discussion

7.1 INTRODUCTION

Chapter 5 outlines the current condition of local governments in managing their public assets, particularly for real property and infrastructure. Chapter 6 reports on the supporting and hindering factors surround public asset management processes adopted by Indonesian local governments. This chapter analyses the findings of the research based on data in Chapters 5 and 6 in order to answer the third research question: “How should public assets be managed in the Indonesian local government context?”

As pointed out in the literature review, to develop a Public Asset Management Framework for Indonesian local governments, local government current practices should be examined (first research question); as well as the surrounding factors that effect and impact existing practices (second research question). By examining these two areas, a proposed framework was developed as the basis to improve public asset management practices at the local government level.

Section 7.2 proposes improvements that can be made to the current public asset management arrangements based on the current practices and surrounding factors. Section 7.3 proposes a framework as a solution to solve the problems experienced in public asset management at the Indonesian local government level. Section 7.4 reports on the validation process of the proposed improvements and solutions. Section 7.5 examines the opportunities for local governments to adopt the proposed Public Asset Management Framework.

7.2 IMPROVING THE EXISTING PRACTICES OF PUBLIC ASSET MANAGEMENT ARRANGEMENTS

Successful provincial governments are those governments who successfully facilitate the delivery of high quality public services. To enable provincial governments to provide and deliver public services at a local level it is necessary to have sufficient public assets and a proper Public Asset Management Framework to manage those assets (Howes & Robinson, 2005, pp. 32-33). Requirements of a good Public Asset Management Framework are an effective public asset holding, a policy

framework with strong legal arrangements, accurate public asset data management, proficient and capable human resources with a good organisational body, and an efficient and effective asset management framework (Allen & John, 2008; Asset Management Council Inc and The Institute of Asset Management, 2010; Bahadoorsingh & Rowland, 2008; Cagle, 2003; Charles & Alan, 2005; Department of Public Works, 2010; Hastings, 2010; Hentschel & Kaganova, 2007; Joe, 2008; Kaganova & Nayyar-Stone, 2000; Kaganova, Tian & Undeland, 2001; Lloyd, 2010; "Maintenance and asset management go together," 2008; Reina, 2006; Ronald, 2005; Too, 2007; Zhang & Gockenbach, 2008). In other words, the provincial governments should have, and keep improving, an asset holding, the legal arrangements that rule asset management, information management related to the assets, its human resources and organisational arrangements and the process of public asset management in their organisation. All of these elements are formulated together to form a Public Asset Management Framework for provincial governments.

7.2.1 IMPROVING PUBLIC ASSET HOLDING/POSSESSION

In order to align asset ownership with asset needs, provincial government should understand and then carefully analyse provincial government's core responsibilities and the scope of public services. According to Jackson (2008, p. 28), there is no simple, straightforward, technically grounded answer to the question of appropriate role, scope and size of government. Central to the debate according to Jackson are the basic normative questions of government affair functions, the share of public spending in the national economy, and the level of government engagement in direct production activities.

Buchanan and Musgrave (1999) state that there are three major roles of government, namely an allocative role, distributional role and stabilisation role. Within the allocative role, an essential responsibility of government is to repair certain leaks in the efficient functioning of the market as a provider of goods. Correcting market failure gives rise to what Musgrave has referred to as the 'service state'. The second role of government is concerned with distributional issues and forms the basis of the welfare state. The objective of the distributional role of the state is to adjust the market-determined distribution of welfare by bringing it closer to what society regards to be just and fair. This is achieved through regulation, the adjustment of rights, giving access to markets in the face of discrimination,

progressive taxation and subsidises. The third role of government is represented by the stabilisation role. Unconstrained market forces can result in a general equilibrium for an economy that is accompanied by unacceptably high levels of unemployment. Therefore government intervenes where needed in the form of public spending changes and/or tax regulation in order to manage effective demand.

Another perspective in relation to government core business is the role and responsibility delegated to government agencies by the Central Government (Rodgers-Bell, 2009). According to Rodgers-Bell, the government core business involves two key elements: fundamental core business and functional/operational core business activities. Fundamental core business is an element of core business centred on the government agency's role and responsibility as delegated by Government, and is generally evident in the Vision and Mission statements of the government agency and the underlying 'philosophy' applied in carrying out their core business. Whereas functional/operational core businesses are those activities that are developed specifically by government agencies in order to deliver on core business outcomes. These government core businesses have impacted the scope of public services and adopted as government responsibility. From an economist perspective, public services are those that merit public intervention because of market failure. In other words, any good or service that would result in suboptimal social welfare if it were provided in a free market should be regulated in some way by the public sector, and in this way qualifies as a public service (Bovaird & Loffler, 2008b).

An alternative approach from political discipline suggests that public services are those which are so important for the re-election of politicians or, more realistically, of political parties that they are given a public subsidy. Under this perspective—where service is so important in political decision-making that politicians are prepared to spend some of their budget on it—a service's 'publicness' has been bought at the expense of the definition of what potentially constitutes a public service; there are few goods or services that are never important electorally (Buchanan & Musgrave, 1999).

Another approach introduced by Bovaird and Loffler (2008b) focuses on all those goods where providers are placed under a public service obligation when they

are given the right to supply the service. This approach defines public service as those services in which Parliament has decreed a need for regulation.

Based on the four definitions above, it can be concluded that public service is a service that is provided and/or supported directly or indirectly by the government, where the demand for the service is initiated by, and for, the benefit of its citizen.

After illustrating the theories of government's core business and responsibilities, the next stage is to evaluate provincial governments' functions and responsibilities to the community in the Indonesian context. The Decentralisation Law¹³ regulates that the role of provincial government is to organise the affairs of governmental authority, except for those affairs which by the Decentralisation Law is determined to be the affairs of the Central Government. Provincial governments are largely autonomous to organise and manage their own affairs based on the principle of local autonomy and duty of assistance. Governmental affairs, which provincial governments do not have the authority to perform, are laid on the Central Government authority and include foreign policy, defence, security, justice, monetary and national fiscal policy, and religion.

There are three types of governmental affairs to be performed by provincial governments: deconcentration, co-administration and decentralisation. The affairs of government are divided based on the criterion of externality, accountability and efficiency with regard to harmonious relations between the composition of the government. These affairs are an implementation of the authority relationships between the Central Government and the provincial, district and city or regional governments. Government affairs that are delegated to the Governor as the Central Government representative at the local area are supported by findings from the Central Government in accordance with the affairs of the deconcentration and co-administration. Whereas, the affairs that are handed over to the provincial governments are in conjunction with the transfer of funding sources, facilities and infrastructure, and personnel in accordance with decentralised affairs. Government affairs under the authority of local governments are held on the basis of compulsory

¹³ The Law No. 32/2004 Chapter III article 10 paragraph (1)

and optional affairs. Implementation of compulsory government affairs is based on minimum service standards implemented in stages and is set by the Government. Compulsory affairs under the decentralised scheme are the authority of provincial government within the provincial scale include ("Local Government Act (Undang-Undang Nomor 32 Tahun 2004 tentang Pemerintahan Daerah)," 2004):

- planning and development control;
- urban design planning, utilisation, and control;
- implementation of public order and tranquillity of the community;
- provision of public facilities and infrastructure;
- handling of the public health sector;
- educational administration and allocation of human resources potential;
- handling of cross-regent/city social problems;
- inter-regental/municipal manpower services;
- facilitating the development of cooperatives enterprises (*koperasi*), small businesses, and medium including inter-regental/municipal;
- environmental control;
- land services including cross-district;
- population service and civil records;
- governmental general administrative services;
- investment administration services, including cross-district;
- implementation of other basic services which cannot be executed by the district/city; and
- other affairs and concerns mandated by legislation.

Whereas, the optional provincial government affairs include government affairs that have the potential to improve provincial communities' welfare in accordance with the conditions, characteristics and potential areas concerned. Implementation of the provisions above are further regulated by the Central Government Regulation.

These affairs are then converted into the provincial government's Working Unit namely Department Offices (*Dinas*) and Technical Offices (*Kantor Teknis Daerah/Unit Pelaksana Teknis*). The Central Government issued a Government

Regulation¹⁴ that regulates the establishment of regional government organisations. This regulation orders the requirement of Working Unit formation i.e. based on a provincial government's population, area and budget. Previous government regulations¹⁵ order the requirements to form Working Unit based on 1) authority possessed by the provincial governments, 2) provincial governments' characteristics, potential and needs, 3) provincial governments' financial capacity, 4) availability of human resources, and 5) development of provincial governments' cooperational pattern between regions and/or other parties. An example of the North Sulawesi province's Working Unit that complies with the current regulation is listed below:

Departmental Offices:

1. Department of Agriculture and Animal Husbandry,
2. Department of Marine and Fisheries
3. Department of Plantation
4. Department of Energy and Mineral Resources
5. Department of Public Health
6. Department of Regional Revenue
7. Department of Manpower and Transmigration
8. Department of Transportation, Communication and Information
9. Department of National Education
10. Department of Social Services
11. Department of Industry and Trade
12. Department of Forestry
13. Department of Public Works
14. Department of Culture and Tourism
15. Department of Cooperatives and Small to Medium Enterprise
16. Department of Youth and Sports

Technical Offices:

1. Provincial Inspectorate
-

¹⁴ Government Regulation No. 41/2007 on the Regional Government Organisation.

¹⁵ The Central Government Regulation No. 8/2003 on Guidelines for the Regional Organisation (replaced by Government Regulation No. 41/2007)

2. Regional Development Planning Agency
3. National Unity and Community Protection Agency
4. Environmental Agency
5. Food Security Agency
6. Investment Coordinating Agency
7. Library, Archives and Documentation Agency
8. Community Empowerment Board and Village Government Agency
9. Women Empowerment and Child Protection Agency
10. Regional Personnel Agency
11. Education and Training Agency
12. Regional Special Hospital Class A
13. The North Sulawesi Provincial Government Liaison Office in Jakarta

Other Working Units:

1. Regional Disaster Management Board
2. Daily Executing Narcotics Board
3. Secretariat of Coordinating Board for Agriculture, Fisheries and Forestry Counsellor
4. Civil Service Police Unit
5. Integrated Licensing Services Board
6. Regional Secretariat of the Indonesian Broadcasting Commission

All these provincial Working Units were designed to perform all provincial governments' compulsory and optional affairs. The Working Units consist of 16 Departmental Offices, 13 Technical Offices and six other Working Units. These numbers were calculated based on the North Sulawesi's population, area and local budget.

After the identification of provincial governments' compulsory affairs and their translation into Working Units, the next stage is to align and classify provincial assets into these core businesses. Kaganova et al. (Kaganova et al., 2006a) introduce an asset management framework where the key element of the framework addressing the nexus between asset management and the provincial governments is the classification of municipal assets into categories depending on their relationship to the provincial core businesses. Financial goals are then logically formulated for each asset category.

Establishing municipal assets based on Kaganova et al.'s (2006a) classification helps provincial governments make decisions about the assets on a more rational and measured basis. It drives provincial governments to review and determine their own compulsory and optional affairs and pushes them to adjust and align their municipal asset ownership with the affairs. It also forces provincial governments to decide the best action toward the assets that are not required to deliver the provincial governments' compulsory and optional affairs.

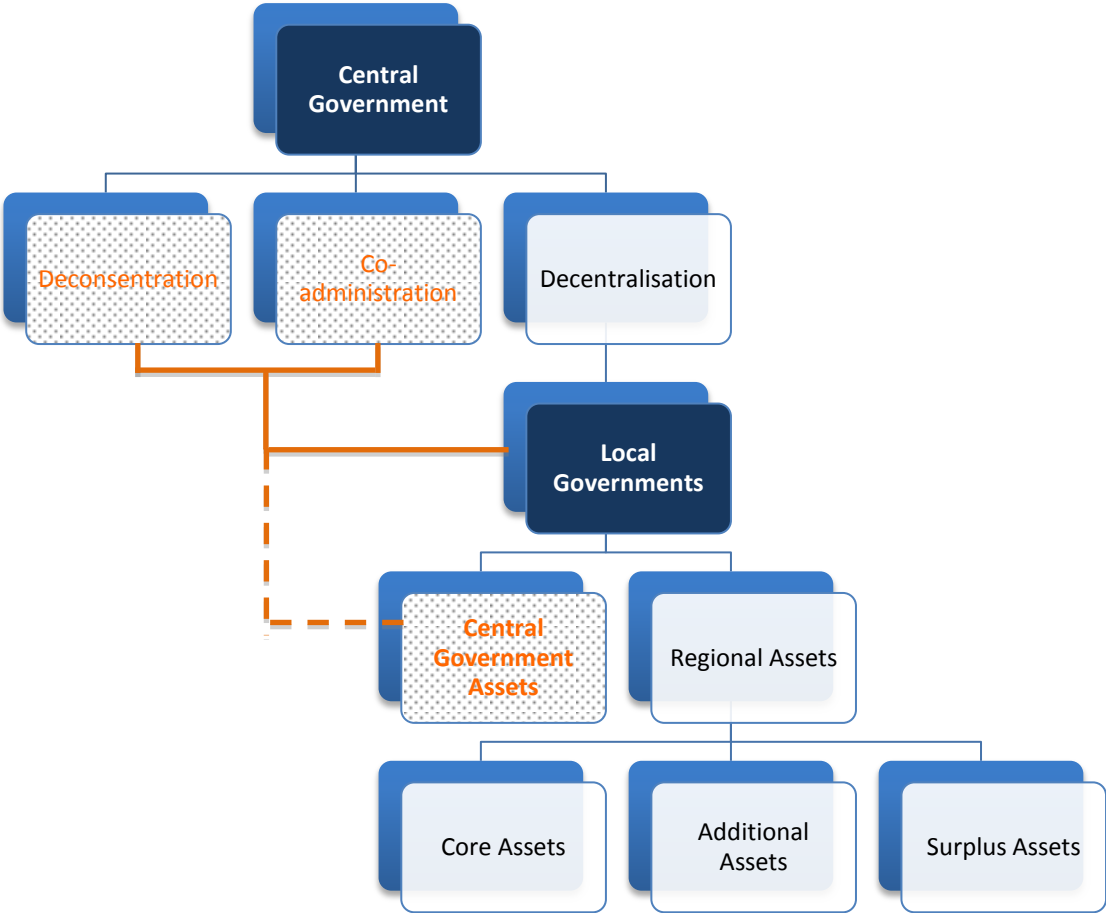


Figure 9.1 Provincial Government Affairs and Asset Classification

Figure 9.1 illustrates the classification of provincial assets based on Kaganova et al.'s (2006a) model. A formal regulation and policy helps provincial governments to determine provincial affairs and the assets required for those affairs, and make decisions on unneeded assets. Such regulation and policy can also help provincial governments to reduce political frictions that might result from efforts to maximise

benefits from municipal assets. Current regulations and policy are not sufficient for provincial governments to dispose of unneeded assets, therefore there is a need to improve the current provincial regulations and policies.

7.2.2 IMPROVING PROVINCIAL ASSET GUIDANCE AND LEGAL ARRANGEMENTS

National and local governments need a common legal and regulatory framework that clearly establishes the authority of local governments over its public assets, in this instance provincial governments (Burstedde, 2009). In practice, guidelines and tools in relation to the management of public assets also need to be developed to lead provincial governments in the management processes. Both laws and guidance should be feasible and applicable to fit the needs of provincial governments in managing their assets.

Based on data collection in Chapter 5, there are seven groups of laws and regulations that govern provincial assets, namely: 1) laws as the highest hierarchy, 2) Central Government regulations, 3) presidential decrees, 4) ministerial regulations, 5) ministerial decrees, 6) provincial government regulations, and 7) provincial government decrees as the lowest hierarchy. Unfortunately, although there are a number of rules and regulations governing the public asset management process, the content and terms set out in these laws and regulations are the same for each province and there are no specific differences to accommodate a provincial government's unique condition. On the other hand, the regulations made by provincial governments are only basic and mostly result from study visits to other local governments that already have this type of regulation. As a result there are no significant differences and/or improvements in the regulations. Despite the implementation of these laws and regulations, in many instances, there are still areas of contradiction and which lack clarity that potentially discourage local governments in their asset decision-making initiatives. Such conditions were also found by Burstede (2009) in the province of Aceh, Indonesia.

Like any other system of government, the asset management functions have to be understood in the context of the social and political environment. According to Burstede (2009), the laws and regulations will, to some extent, reflect these realities. The legal and administrative framework consists of the applicable laws and regulations that affect the ownership and management of public assets. The legal

system can define asset ownership—including rights, responsibilities, sale and registration—differently. The laws and guides lead the management, utilisation, acquisition and disposition of public assets. All these processes are aimed to support the delivery of provincial governments' compulsory and optional affairs.

Unfortunately, in line with the results from Chapter 5, interview results analysed in Chapter 6 shows that current regulations are still insufficient to guide provincial governments in their asset management practices. To improve these conditions, regulation of public assets should be re-identified. Subjects that are regulated by each level of the legislation must be clear and in accordance with the appropriate authority so as not to overlap but complement higher hierarchy regulations, as the higher the hierarchy the more general it is. Harmonisation and synchronisation of law and regulations hold an important point; existing law and regulations should be examined to identify subjects that are not regulated or are not clear, then propose new law to fill this gap.

7.2.3 IMPROVING PUBLIC ASSET DATA MANAGEMENT

The cornerstone of asset management is a well functioning asset database system. The system should contain information that enables provincial governments to quickly assess what the government owns, the type of properties and their location, what decisions need to be made, as well as an updated value indicating the methodology used to assess the value (Burstedde, 2009). Municipal asset information supports the efficient and effective management of assets to ensure that they optimally support the delivery of provincial compulsory and optional governmental affairs. Information is required at every level of management, from the asset component level (to ensure the efficient operation, maintenance and long-term sustainability of individual assets) to the strategic performance and program outcomes level (to ensure effective program delivery). Increasingly, the primary outcome of providing effective and efficient asset support to program delivery requires data availability and sharing among organisations, programs and various levels of governance (Jowett, 2006).

However, most organisations lack the knowledge about the conditions of the infrastructure assets they possess (Too, 2007). This means that the resources that are available, or their maintenance and repair, are often used ineffectively, inefficiently and inappropriately. Those conditions affect not only the organisation but also the

stakeholders through increased health and safety risks, reduced economic competitiveness, inefficient maintenance strategies, reduced value of infrastructure assets and the need to increase funding or maintain the infrastructure asset. In some cases, the overall inefficiency will actually create the need for new investment in infrastructure, even when suitable facilities already exist or can be modified. In short, organisations need to develop the capability to efficiently capture all the necessary asset data they possess.

It is found that in some cases in Indonesia, local governments suffer difficulties in identifying the jurisdiction under which an asset falls—whether it is Central Government’s jurisdiction, local government’s jurisdiction or another local government’s territory. This condition is mainly caused by a lack of coordination and proper asset documentation. There is a vague data of the asset’s ownership, whether it is transferred from Central Government or from another local government or acquired by compulsory acquisition or a gift from other entities.

A detailed analysis on the South Sulawesi asset inventory database found that information collected and stored in the inventory worksheet is insufficient, not only for addressing the purpose of decision-making but also to satisfy the regular practice and additional purpose such as climate change effects. The information stored is (in order of the original sheet): name and type, code, condition, construction, volume, location, documentation, ownership, fund resource, prices, and notes.

Data availability required for asset identification creates challenges for local government to adopt current asset inventory practices. As of 2008–2009, only 50% of all Working Units or departments in South Sulawesi Provincial Government have their property records computerised. There is no reliable up-to-date inventory data on property holdings of the government. It was found that inventory reports lack strategic and meaningful data such as property utilisation, condition, historic significance, climate related data and other important information. This, in turn, causes poor decision-making related to public asset management. Revenues and expenses are not tracked on a property-by-property basis, mainly because this information is not collected within governmental budgeting systems. The potential market value of real estate is also frequently unknown, even for highly marketable and legally permissible properties; reports quote out-of-date historical property

values. Such conditions are due to the fact that current market values are not available or not recorded properly by government officials.

Based on the literature and the research findings, this research agrees with Qian and Chan's (2010) suggestion on how to improve and adopt an asset database system in provincial governments. There are several factors which need to be improved or supported to successfully develop a public asset database:

- Technical: improve availability, reliability and knowledge of efficient technologies related asset database development;
- Institutional: provide technical input, financial support and proper programme design and monitoring expertise;
- Financial: provide financial mechanisms to support asset database development activities;
- Managerial: develop appropriate programme management practices and staff training;
- Asset management policy and regulation: supportive guidelines, law and regulations significantly affect public asset management current practices; and
- Information diffusion: collect and maintain appropriate asset information in a wider view of efficiency, effectiveness and quality of public services.

A proper asset identification system should be developed as a first step in the asset data collection strategy. The current practice of asset identification no longer satisfies the decision-making process. In addition to current practice, information related to the impact of assets on the environment, as well as information related to the effect of climate change on the asset should be collected and maintained in a proper way and incorporated into the current asset identification system.

To improve Indonesian provincial governments' asset databases, this research suggests that provincial governments adopt principles and practices from advanced public asset management countries with some adjustments. The general principles guiding the management of municipal assets adopted from Canada are founded on broad information management experiences. The principle suggests that information is a valuable resource that should be shared, easily accessible, user focused, and managed to enable effective decision-making and transparency. These principles include (McKellar, 2006):

- Information should be shared to support collaboration among provincial government departments and other communities within the provincial government. The information should not remain solely in local possession. Only information that requires protection because of sensitivity or security needs to be safeguarded.
- Information should be easily accessible and should meet the demonstrated needs of employees, clients, partners and stakeholders. It must be freely available to the public, the auditors, Parliament members, and other government departments.
- Information should be relevant, complete, accurate and understandable.
- Information management practices should allow for the integration of compulsory and optional provincial affairs. Information should be created or acquired once and made available to many users.
- Managing information includes delegated responsibilities, and managers should be accountable for information management in their areas, ensuring that staff members have training and skills development opportunities to effectively manage information. Information management responsibilities for all employees should be clearly articulated.
- Real property custodians should have in place an information management plan to ensure that information management and information technology policies, procedures, and data standards are in place, and that information management systems support the performance and management of municipal assets. Information management is a key component of a Public Asset Management Framework.

In order to adopt the above principles and practices, the first step for provincial government officials is to review whether the existing inventory of their asset base already satisfies the above principles or not. After that, accuracy of information, functionality of data format, cost efficiency in comparative terms, and accessibility of the database should be updated to achieve valuable and high quality asset data to support the decision-making process with transparent systems for data retrieval.

7.2.4 IMPROVING HUMAN RESOURCES AND ORGANISATIONAL ARRANGEMENTS

Human resources and organisational arrangements for asset management have to respond well to the local strength and the administrative processes of the provincial government. Provincial governments need well-established offices and personnel in charge of asset management. Their experience should contribute to the improvement of the system inputs (Burstedde, 2009; Joe, 2008).

Asset management is both a financial management and local physical planning function. Therefore, an asset management unit, integrating the contributions of different relevant departments, helps to achieve the objectives of developing an improved and coordinated asset management system. According to Burstedde (Burstedde, 2009) attracting highly qualified and motivated professionals to this important function will depend on the financial and institutional strength of the provincial government. The major problems in human resources in provincial governments are the financial capacity of the governments to offer salary levels that are competitive to attract highly capable asset manager professionals, a lack of incentive programs, a lack of training, and low morale. In general, there is more intense involvement in capital planning than in people planning.

Human resources in Indonesian provincial governments are currently not only insufficient in terms of quantity/number but also in quality. There are two solutions offered by Joe (2008) in this instance, that is, organisations can either promote from within the provincial government organisation or recruit from outside the organisation. In both cases, appropriate training must address the specific requirements of each organisation. Provincial governments need to develop sustainable capacity building for their officials. They need to improve and maintain certain qualifications and standards needed to manage the municipal assets. In some provinces, intensive training to fulfil short term targets to satisfy human resource capacity to manage assets is desperately needed. An alternative strategy for provincial governments' human resources shortage is to seek assistance from the Central Government, international bodies and private asset management companies.

Joe's (2008) method is a valuable resource to be adopted to improve Indonesian provincial governments' human resources. To begin shifting an appropriate amount of emphasis to the human side of provincial affairs, provincial governments need to look at several people oriented components. Programs and skilled professionals are available to help address activities directly related to the people side of operations. They include:

- Programs that assist in self evaluation:
 - A program in which a provincial government looks at itself and identifies needed improvements
 - Includes workshops, interviews, small group activities and identification of issues

- Business planning and related action plans,
 - Includes vision, mission, goals, brand, issues identification and prioritisation, and organisational structure issues
 - Development of action plans/follow-up plans and reports
 - Link with capital improvement plans, budgets and emergency response plans
- Succession planning, and
 - Recognition that institutional knowledge lost from departing employees is critical in effective local government service delivery
 - A program to attract, train and retrain employees that addresses any needed enhancements
- Comprehensive leadership training programs:
 - Recognising that good technicians do not necessarily make good supervisors
 - Identifying and prioritising the topics needed
 - Developing comprehensive blocks of instruction and lesson plans and recruiting appropriate trainers
 - Ensuring that top management and local coordinators are involved and committed.

These four types of specific programs have been designed to allow a provincial government to pick and choose which of the approaches best fits the needs of that particular province. Often it is beneficial to start with a self evaluation that leads to an issues prioritisation and planning development process (Joe, 2008). Self evaluation allows a provincial government to see itself in a different light, which can lead to the next step—a comprehensive business plan/action plan. Often the first two activities will identify staffing deficiencies that can then be addressed with succession planning and comprehensive leadership training.

Effective improvement begins with clearly defining the current status of the provincial governments and then charting or refining the government's course toward the necessary improved performance. This efficiency and effectiveness can in turn be measured. Provincial governments can then progress systematically through the other activities as the prioritisation dictates.

7.2.5 IMPROVING PUBLIC ASSET MANAGEMENT EFFICIENCY AND EFFECTIVITY

As pointed out by Kaganova (2006a, p. 298), governments are not efficient property owners and/or managers. Just as they tend to be poor entrepreneurs, governments have proven to be poor managers of their productive assets. Their ineffectiveness is highlighted in many post-socialist countries, where local government is no longer responsible for certain services (e.g. many “cultural” services or retail trade in goods and services), but still retain ownership of infrastructure associated with these services.

Financial aspects of asset management including accounting and auditing, valuation methods and analysis of options are also considered to be important factors. The objective of financial management is to ensure that efficiency gains of asset management should lead to larger social and economic gains for the municipal population. The invested resources and recurrent expenditures should generate real and positive economic benefits or be clearly justified by social benefits.

Financial reporting is one of the strategic building blocks of provincial government capacity that can help attract investors and lenders, and explore real investment options strategically. A systematic review of the accounting standards and financial reports can provide useful feedback for improving or strengthening of efficiency and effectiveness of public asset management processes. Accounting standards and practices determine when and how transactions and economic events are reflected in the financial statements.

One indicator used to analyse input and output of public assets is asset evaluation. The purpose of the evaluation and appraisal should be to give both the provincial government as well as citizens of the jurisdiction and beyond access to valuable information for the purposes of planning, approval, negotiation, execution and monitoring of performance for provincial governments’ use of municipal assets. The evaluation methods should link services provided with net revenues or costs associated with the management of particular public assets. To make the evaluation of assets more credible, the methods of evaluation and assumptions used (for example applicable comparative and weighted prices in adjacent properties), have to be explicitly incorporated in the inventory of asset reports, especially for the most critical or strategic assets (Adair, 1996; Ammons & Rivenbark, 2008; Anthony &

Michael, 2004; Callahan, 2007; Julnes, 2009; Landsman, 2007; Vincent, 2005; Wireman, 2005).

Furthermore, to improve efficiency and effectiveness of provincial governments, performance measures need to be introduced and adopted in municipal asset management practices. There are two approaches most frequently used to measure performance of public organisations (Imbaruddin, 2003). The first approach involves measuring service delivery performance characteristics using data from official archives of public agencies. Sometimes called objective measures, these indicators are used to document such performance criteria as effectiveness, efficiency and equity of policy inputs, outputs and outcomes. The second approach is subjective performance measurement. This measurement evaluates the performance of government agencies using subjective indicators such as public services users' satisfaction towards the quality of public services delivered by public entities.

7.3 PROPOSED FRAMEWORK FOR IMPLEMENTING PUBLIC ASSET MANAGEMENT

In order to implement the elements of a good public asset management system into the Indonesian Public Asset Management Framework, the current Indonesian local government condition needs to be examined. Chapters 5 and 6 found that there are five major concerns facing Indonesian local governments that should be recognised in relation to its public asset management conditions. These concerns are discussed with specific examples in the next paragraphs.

The first concern is that local governments hold and maintain a large number of unneeded and underutilised assets. There is no synchronisation between asset ownership and asset needs in provincial government organisations. The adoption of an asset needs analysis by local governments can assist in aligning local government assets to best meet the service delivery needs of their community and governmental affairs. The second condition is the lack of asset lifecycle guidance and insufficient laws and regulations. In addition, the local government asset lifecycle is not inter-related; although some regulations mention asset planning, procurement, execution, maintenance and disposal processes, unfortunately these processes do not correlate or support each other. The third condition is asset data related problems. In many cases, local governments in Indonesia suffer difficulties in identifying which asset falls into which jurisdiction—whether it is Central Government's or local

government's jurisdiction or other local government's territory. This condition is mainly caused by a lack of coordination and proper asset documentation. Not only is the status of an asset unclear, but other asset related information—such as asset location, physical conditions, vacant or available, asset value—that help decision makers to manage the assets are not available or not recorded well. The fourth condition is a human resource problem. Provincial government officials complain about the quality and quantity of human resources responsible for managing public assets. The number of officials available to manage the municipal assets is significantly inadequate compared to the quantity of municipal assets. At the same time, the officials responsible for managing assets have insufficient skills and knowledge to properly carry out their asset management responsibilities. The fifth condition is economic inefficiency and ineffectiveness associated with public assets. Provincial governments have no systematic way of measuring the efficiency of their real estate use or the financial performance of their public properties in order to recognise the profitability of these assets—only the capital costs of new public assets were a concern.

All those conditions suffered by local governments can be lessened by applying a Public Asset Management Framework (Charles & Alan, 2005; Hodges, 2007; Joe, 2008; Kaganova & Nayyar-Stone, 2000; Lutchman, 2006; McCusker, 2006; Penrose, 2008; Reina, 2006; Ronald, 2005; Warren, 2006). Although there might be other non-asset solutions to soften the problems, adoption and application of a Public Asset Management Framework will significantly reduce the impact of these circumstances. The proposed framework developed in this study addresses the research findings in regard to provincial governments' public asset management circumstances and applicability to the provincial government environment. The elements of the proposed framework are: asset identification, asset needs analysis, asset lifecycle guidance and performance measurement as a controlling element. These elements were verified by a focus group that captured stakeholders' responses and inputs to the suggested elements, as outlined in the next section.

7.3.1 PUBLIC ASSET IDENTIFICATION

The primary purpose of asset identification and its accompanying components (programs, tasks or activities) is to help asset managers to: 1) know exactly what assets they have for the purpose of operating, monitoring and/or maintaining the

assets, as some organisations have inherited certain assets that were annexed or may have been previously installed or improved; 2) know precisely where the assets are located to reduce the time wasted in locating drawings, searching for documents, or tracking down the last person(s) who worked on the assets in order to locate them; 3) know the condition of the assets at any given time, which requires local government organisations to have a system (process or procedure) in place for conducting inspections, preventive maintenance and/or predictive tasks whenever the opportunity presents itself; 4) understand the design criteria of the assets and how they are properly operated and under what conditions; 5) develop an asset maintenance program that ensures that each asset performs reliably when it is needed; and 6) perform all of these activities to optimise the costs of operating the assets and extend their useful life to what was intended in its initial design and installation (Jowett, 2006; Lin et al., 2008; Mustafa & Russell, 2006; Piccoli, 2008; Tweedale, 2003).

A combination of improved data, multiple-scale modelling and better designed monitoring will provide a high-quality database of information stored on an asset inventory system. The information stored would therefore no longer be historical, but would represent the current and future condition that supports the decision-making process.

A proper public asset database is an extremely important component of the asset management process. Easy access for future retrieval, user-friendliness, and updateability are vital features that an asset database should accommodate. Flexibility to add necessary information and indicators in the database is also key. One of the trends in public asset management, due to its significant impact on human lives, is the delivery of an environmentally friendly asset identification system.

Discussions in the literature point out that important information should be gathered at the asset identification stage in order to address and mitigate the problems noted above. This process should record acquisition cost, original and remaining useful life, physical condition, and cost history repair and maintenance of the asset. In detail, the required information includes:

- Information related to the assets owned by an organisation, such as asset name, asset identification code, asset ownership, ownership documentation, acquisition process,

asset type, asset model, asset volume, asset serial number, asset specifications, purchase information, and if necessary asset pictures, etc.

- Information related to the asset's location, such as coordinate, boundaries, slopes, asset movements, and whether it is on the ground, underground, in the water, map visualisation, etc.
- Information related to the asset's condition, such as physical conditions, economical conditions, functional conditions, etc.
- Information related to the asset's design.
- Information related to the asset's maintenance procedure and process, such as: past maintenance, current maintenance, and future maintenance schedules, parties involved in the process, costs maintenance related, etc.
- Information related to the asset's performance measures, both quantitative and qualitative performances.

The information mentioned above is the standard information on current asset identification practices adopted by many organisations. Required additional asset inventory information includes:

- An asset's status in relation to provincial government affairs specifically, asset status to Working Unit responsibilities and functions in regards to the provincial government's compulsory and optional affairs.
- An asset's utilisation measurement—that is whether the asset is utilised to maximum effect or underutilised. This could be done by, for example, conducting a feasibility study on a particular asset.

The framework should also be flexible to accommodate any new indicator, for example climate sensitive information. In order to address the climate change issue, additional information is needed such as:

- Information related to the impact of assets to climate change, such as energy consumption, water consumption, electricity consumption, carbon dioxide emission, greenhouse gas emission, pollution level, asset's components/materials, carbon capture, etc.

- Information related to the effect of climate change on the asset, such as sea level, surroundings' temperature, past, current and predicted weather extreme occasions, floodwise, and any other natural disaster records, etc.

Asset data collection is aimed to identify the service gap by comparing the service needs and current organisation's resources including assets. In order to achieve this aim, it is important to have a systematic inventory of individual asset holdings. Organisations that are able to have a comprehensive database to assist in reviewing their current assets will have an advantage in identifying service gaps more accurately and in a timely manner.

7.3.2 ASSET NEEDS ANALYSIS

In selection of asset ownership, local governments should be aware of the type of assets they need to enable them to deliver public services and perform their compulsory and optional governmental affairs. It is important for provincial governments to identify their core businesses, then they can categorise the assets based on the needs—that is, core assets, additional assets and surplus assets and assets that should be alienated. It is also important to identify and categorise assets according to their importance and significance to the community.

Research (Kaganova & Nayyar-Stone, 2000, p. 320) shows that countries in transition, including Indonesia, have been going through a rapid process of redistribution of property and decentralisation of government. The major components of this process are devolution of property from the central to local governments, and property privatisation and restitution. In many countries, property devolution to local governments has outpaced further privatisation and restitution, which leads to an increase in property ownership by local government, with many local governments becoming the largest property owners in urban areas. The property owned or controlled by local governments goes far beyond what is needed for public functions and services. At the same time, there is a strong trend towards indirect property ownership through the transferring of property from municipalities to enterprises owned by local governments.

Consequently, given the large and unmanageable size of municipal property holdings, one might expect that local governments would be active in disposing of those properties. However, local authorities frequently oppose further property

privatisation. Government officials usually believe that municipal property represents a potential source of local public wealth and income that will be lost if property is privatised. In their view, by divesting this property to the private sector, cities will lose one of the few sources of fairly predictable revenue over which they have control (rents) and this will mean increased dependency on transfers from the Central Government. Local governments consider these transfers as unpredictable and unreliable. The fear of losing a source of local revenue by privatising municipal properties, especially real estate, are grounded in the fact that property taxation is highly centralised in most transition countries, including Indonesia, and municipal governments have little control over their revenues from land and property taxes. Therefore, local governments will not support the idea of disposing of their huge property portfolios until proper fiscal incentives are set up.

In the area of infrastructure assets, the adoption of an asset management framework in practice can provide a better understanding of how to align the asset portfolio to best meet the service delivery needs of customers, both now and in the future. The infrastructure asset management process consists of strategic analysis, strategic choice and strategic implementation. Strategic analysis is the capabilities that aim to identify the direction that will contribute to the best utilisation of infrastructure assets in the delivery of services to customers. Consequently, it must ensure compatibility between the current asset portfolio and the changing environment within which it operates. Thus it involves three components 1) analysing the business environment, 2) reviewing and analysing its current asset portfolio; and 3) conducting a strategic “gap analysis”. There are two main capabilities important to this process, customer responsiveness capability and asset data collection capability (Too, 2007, pp. 2-3).

Customer responsiveness capability involves the collection of information from sources external to the organisation. This in turn will provide organisations with the ability to react quickly to changes in the needs of customers and to undertake strategic change when necessary. In the provision of infrastructure assets and services, there are performance expectations in relation to assets from various stakeholders which can include asset owners, project managers, designers, subcontractors, suppliers, funding bodies, users and the community at large. The most important stakeholders that heavily influences service decisions are the

customers; that is, asset users and the community. Therefore, it is important that any decision made on infrastructure provision must aim to satisfy the needs of customers as it can substantially affect their welfare. Infrastructure assets in essence are not just a product but rather a service to customers. As such, an understanding of the service requirements is a very important step before moving forward to the execution of infrastructure asset delivery. Due to the complex process involved in this process, it is important that customers' needs are understood, appreciated and captured as accurately as possible.

Nonessential government assets, on the other hand, should not be carried unless they contribute ongoing benefits or cash. If they do not make positive contributions, decision makers should consider sale or other disposal options to divert capital to more productive uses that can help achieve a community's goals and vision. Government agencies should always be scouring property portfolios to uncover latent opportunities in unused and underutilised assets.

In the case of Indonesian provincial governments, asset needs analysis should be adjusted and performed based on 1) provincial government affairs, and 2) community needs on public services. Firstly, this adjustment and performance should mainly consider provincial governments' compulsory and optional affairs. The affairs themselves should also be clarified and purified to ensure unnecessary programs or projects are not undertaken. Secondly, in terms of community needs, the method applied by the Bendemere Shire in Queensland can be adopted. In investigating community needs, the Bendemere Shire used a combination of methods (Bovaird & Loffler, 2008b; Conway, 2006; Kim & Brian, 2004; Whitford, 2009):

- Expressed needs: those stated by residents themselves (predominantly wants which in fact can be needs or rights). Methods used in this data collection were the Bendemere Shire Community Needs Survey; focus group meetings in the areas of youth, sport and recreation and culture; consultation with appropriate service providers in the areas of health, housing, education, aged care, youth, sport and recreation, legal and safety; Bendemere Shire Council workshop.
- Indicative needs: those that are indicated by characteristics of the community, particularly demographic statistics. The Australian Bureau of Statistics' Community Profile (2001 Census) was a primary source of information.
- Normative Needs: those derived from applying benchmarks or recommended levels of service provision (Aged Care Benchmarks south west region—ABS 1999).

- Comparative Needs: those suggested by comparing the community to others that are similar in some way. Existing work used included the Roma District Health Service Community Consultation Report (Wallumbilla, Yuleba & Jackson) 1999 and the Rural Health Priority Map 2000 (Department of Health & Aged Care). In addition to health, other needs in this report were identified using this method in the areas of education, aged care, youth, transport, sport and recreation, legal and safety, telecommunications and technology, infrastructure and culture.

7.3.3 ASSET LIFECYCLE GUIDANCE

Hentschel and Kaganova (2007, pp. 24-25) noted that asset management is not a single event but rather a process designed to produce knowledgeable decisions about purchasing, operating and disposing assets which is known as the asset lifecycle. The asset lifecycle encompasses planning, design, procurement, maintenance, management, utilisation, and disposal. The determination of asset decisions in relation to asset acquisition, valuation and disposal is very important for government officials. Public asset decisions should never be made in a vacuum. A building or a parcel of land is nothing more than a resource or a tool to be used to achieve a vision of where a community wants to go and how it intends to get there. Because opportunities to deploy assets are plentiful, well-grounded decisions about the use of assets can best be made through a disciplined plan that includes explicit policies, systematic procedures and appropriate performance benchmarks. When combined with incentives for government agencies to practice sound asset management, such a plan makes spotting underperforming resources reasoned rather than random. Ideally, it also recycles proceeds from asset sales to opportunities of superior strategic importance.

A well-designed asset management plan spells out a sequence of steps that makes good policy sense. A detailed understanding of the nature, extent and use of all assets controlled by a government agency is the first step to wise asset management. Once an asset is identified and classified as essential or nonessential to an agency's mission, its performance can be continuously measured against established benchmarks while its contribution to that mission is periodically assessed. Nonessential government assets, on the other hand, should not be carried unless they contribute ongoing benefits or cash. If they do not make positive

contributions, decision makers should consider their sale or disposal to divert capital to more productive uses that can help achieve the government's objectives.

When considering the privatisation of essential assets like roads, water, sewer systems and public transit systems, citizens and governments should contemplate whether conveying title to underlying real property is necessary or wise. The governments should consider the private investor reaction if projected profit targets fail to materialise. Similarly, the government should also adopt strategies to reduce system maintenance, cutbacks in service, or loss of realty assets to foreclosure affects of the public goods.

7.3.4 PERFORMANCE MEASUREMENT AS CONTROLLING ELEMENT

Jolicoeur and Barret (2004) indicate that the application of strategic asset management with performance measurement as its backbone in the municipal sector is of growing concern and importance. The measurement of performance has become an essential element of the strategic thinking of asset owners and managers. Without having a formal measurement system for performance it is difficult to plan, control and improve the asset management process. For example, Ahren and Parida's (2009) study, which focused on maintenance performance measurement of the railway infrastructure system, provides a basis for improvement. Without measurement, the improvements achieved cannot be assessed and will affect the organisational strategic objectives.

Particularly in public organisations, measuring performance is a necessary management practice if action is to result in desired community needs. For example, an important objective of the New Zealand public sector reforms that started in the late 1980s was to focus the attention of public servants on clear specified results rather than bureaucratic procedures. Based on an implicit assumption that all public sector organisations are productive in nature, Phang (2006) believes that the reforms promised greater efficiency within the public sector by holding managers accountable for results, while providing them with greater freedom to allocate resources. Consequently, outputs became key performance measures to enhance the accountability structure and to improve efficiency of public organisations. Furthermore, the development of performance measurements to date appears inadequate in that the most important component of results outcomes is overlooked by the measurement.

In general, there are two approaches that are most frequently used to measure performance of public organisations. The first mode of analysis involves measuring service delivery performance characteristics using data from official archives of public agencies. Sometimes called objective measures, these indicators are used to document performance criteria such as effectiveness, efficiency and equity of policy inputs, outputs and outcomes.

Efficiency and effectiveness constitute managerial standards of performance, which guide the bureaucracy in the provision of public services. Since these elements focus on the price and quantity of services delivered, it is in this area that hard data or objective indicators are most useful and most often used—this is one of the reasons for the popularity of objective performance measurement in the public sector.

The second measurement type is the subjective performance measurement. As noted earlier, this measurement evaluates the performance of government agencies using subjective indicators such as public services users' satisfaction towards the quality of public services delivered by the public entities. Imbaruddin (2003) argues that in order to assess the responsiveness and equity of city service performance, it is necessary to allow the people being served to provide standards of evaluation. In other words, the criticisms of objective performance measurement and the issues of responsiveness, equity and equality—which are important aspects in the delivery of public services—are not able to be measured by objective indicators.

Peters and Pierre (2007) notes that in an environment where the general public increasingly demands quality services and a client focus, understanding client satisfaction becomes critical and therefore the opinions of clients or public service receivers need seriously to be taken into account. In addition, giving clients every chance to voice their opinions about service quality is particularly relevant in many public sector services, which are monopoly suppliers and thus provide clients no exit opportunities. It has also been pointed out that clients' opinions can help in understanding and establishing public needs; developing, communicating and distributing public services; and assessing the degree of satisfaction with services. After all, Peters and Pierre argue that as citizens are the main beneficiaries of public sector operations they should be involved in the process of public sector performance evaluation.

Decision-makers or managers in government agencies can obtain useful information from subjective measures such as a citizen satisfaction survey. For example, they can obtain information about the type and magnitude of the needs of various service receivers; whether previous changes in service delivery have produced desired results; or identify citizen opinions and preferences regarding specific issues, programs, policies and priorities. Decision-makers can also obtain information from service receivers who are not likely to express their voice, through existing conventional mechanisms such as writing or calling the agencies or attending public hearings (Imbaruddin, 2003).

A key element of performance measurement is to ensure that each service has very specific targets in regards to timeliness, quantity, quality and cost. A department's performance was measured on how well it achieved these set targets. In addition to these measures, it is also important to carry out customer and employee surveys.

Data collection revealed that, based on Indonesian provincial governments' conditions, it is necessary to develop and establish a performance measurement system as part of local governments' public asset management process. This study provides suggestions from published documents and literature in the area of public asset management, particularly from the performance measurement discipline.

Derived from the conditions discussed in the previous section, the most feasible alternative solution to soften the problems is to improve efficiency and effectiveness of provincial government organisations and ensure prudent financial management of government budgets. These objectives can only be achieved by implementing performance measurement in local government organisations. Bureaucratic reform is needed through more efficient and effective restructuring, oriented towards improving all aspects of services to the public at every level of provincial government. Administrative management needs to be applied consistently according to the principles of good governance. Simultaneously, concrete steps will be taken to ensure public services are improved.

Having discussed strategies for improving existing practices and solving public asset management problems, this research now proposes a Public Asset Management Framework, illustrated in **Figure 7.2** (see over).

7.3.5 THE PROPOSED PUBLIC ASSET MANAGEMENT FRAMEWORK

The case studies in this research illustrated those world best practices on public asset management is not perform in many Indonesian local governments organisation. Base on the local government documents, interviews and focus groups, there is a need to improve the existing practices on local government public asset management and realign the practices with the international best practices. According to the case studies, the local government officials are already identified such conditions above and has made these issues as the main concern and interest of the local governments decision makers in making public asset decision. Therefor, in order to achieve this objective, there is an urgent requirement to develop public asset management framework based on the case studies data on this research. This study proposes a framework developed based on the Indonesian local governments characteristics, needs and traits.

The framework proposed in this study is based on a combination of several guidelines, models and best practices such as the Asset Management Conceptual Model from the Asset Management Council Inc. and the Institute of Asset Management, the Business Process for Assets and Supporting Activities from the Royal Institute of Chartered Surveyors, and Strategic Asset Management from the Department of Public Works, Queensland, Australia.

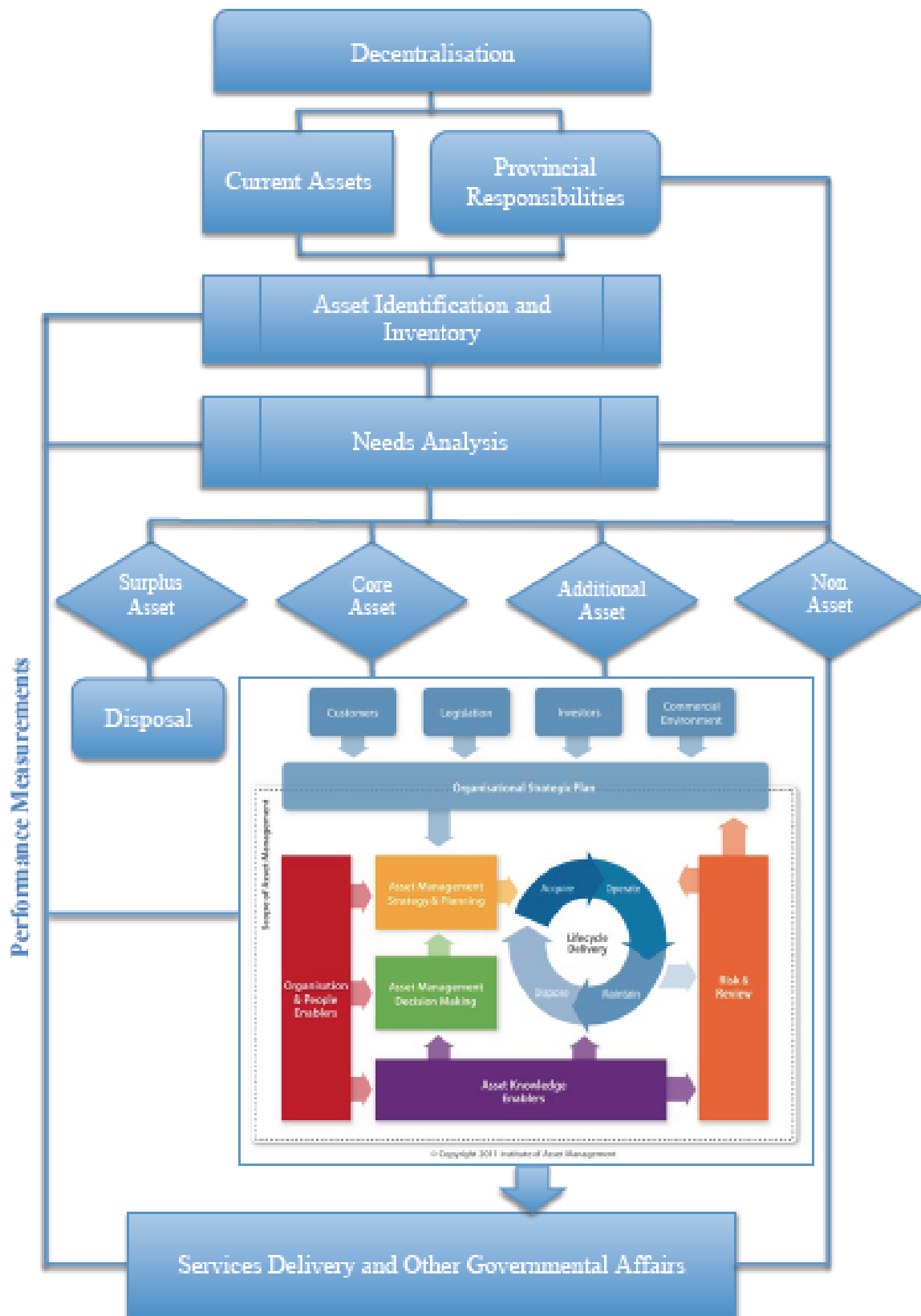
Following the research findings, the proposed framework is tailored to best meet Indonesian local governments' needs and requirements. The study revealed that local governments face asset holdings inconsistent with their needs, a lack of asset management regulation and guidance, improper asset data management, human resource shortages both in regards to quantity and quality, and recurrent inefficiency and ineffectiveness.

The proposed framework starts from current conditions experienced by the decentralised provincial government, which has already received transferred assets from the Central Government. The transferred assets need to be identified, recorded and stored in a database system. All recorded assets should then be analysed and classified based on their relationship with the provincial government's functions and responsibilities. Surplus or unnecessary assets should be disposed to avoid unnecessary burden. Purified assets (core and additional assets) should then be managed using the Asset Management Model from the Asset Management Council

Inc. and the Institute of Asset Management to deliver public services to the community.

At the same time, the provincial government should also analyse their functions and responsibilities to consider non-asset base solutions to deliver public services. An example of a non-asset solution to deliver services is a building permit documents license published by the local government for a construction site; this avoids long queues for the developer or homeowner as it is not necessary to recruit more officials and add extra office buildings. An alternative non-asset solution is to educate and encourage users not to lodge their applications close to the due date time but recommend they process it during the early stages.

All these processes in the framework should be measured with proper performance measurement indicators. It is also important to acknowledge that the measurements should take into consideration the officials' point of view, as stated in the literature, by adopting both qualitative and quantitative measurement. A visual representation of the proposed framework is illustrated in **Figure 9.2**.



Source: Author and the Institute of Asset Management (2008)

Figure 9.2 Proposed Public Asset Management Framework

7.4 VERIFICATION PROCESS FOR THE PROPOSED FRAMEWORK

The proposed framework was verified with provincial government officials and their stakeholders. According to Kaganova (2006a), there are some reasons that make local leaders excited about changing current practices and implementing at least elements of the asset management framework. These reasons are:

- Desire to innovate. Engaging in new practices related to physical assets in local communities is an avenue for local officials to do something that is innovative and tangible. For technical staff, this new area of activity appeals to natural curiosity and creativity within the governmental context, where opportunities to express creativity are rare. Given the variety of elements required to improve management, and relative newness of asset management as a function of local government, there is much opportunity to be an “innovator” in any country context.
- Political dividends. Local elected officials often see improved asset management as a means for them to deliver, in a very public manner, positive changes for their constituencies. In Croatia’s 2005 local election campaigns, several local mayors touted their successes in maximising financial benefit from municipal assets.
- Financial interest in more aggressive management of property, with emphasis on identifying surplus property. Mayors and council members are often unaware of the actual value of their assets and the potential for increasing revenues by adopting a more market oriented approach to these assets. Often prime assets are provided at a nominal price to organisations that do not perform local government services. The revelation of potential revenues stemming from a more rational policy toward such assets can be an eye-opener. Further, city officials have concluded that conducting a proper inventory can bring to light previously unaccounted assets.
- Concern over physical deterioration of assets. Many local governments, particularly in poorer post socialist countries, are prompted to action because of their properties’ extreme deterioration. Officials in poorer countries are pressed to prioritise and make difficult decisions regarding their assets because of the lack of resources and the poor quality of many buildings. In particular, buildings are frequently in such poor condition that rapid action is needed in order to retain any value that these structures might have.
- Desire to appear fair. While rarely a motivation unto itself, when local officials decide to engage in a more proactive stance involving disposition of property, they also recognise the need to prepare these dispositions in a way that is legally unassailable and

with clear financial benefit. Of course, the opposite is also true: those officials who are quietly leasing municipal properties for personal gain oppose the asset management framework.

The proposed framework is aligned with Kaganova’s (2006a) theory. It has innovative features, such as the information collected for asset inventory purposes not only includes traditional information but also information regarding the relationship of the assets with provincial governments’ affairs, the level of asset utilisation, and climate sensitivity. Improving public asset management slogans also an interesting point of view in relation to advertising in political campaigns. Other elements cover the rest of Kaganova’s theory on the introduction of the integrated framework.

The focus group was conducted on July 13, 2010 in Makassar, South Sulawesi.

Table 9.1 details the focus group participants. The participants comprised local government representatives and other stakeholders.

Table 9.1 Focus Group Participants

No	Institution/organisation	Category	Number of participants
1	Directorate General of State Asset Management	Central government operational office	4
2	The House of Representative, South Sulawesi Province	Provincial Legislator	1

Table 9.1 Focus Group Participants (Continued)

No	Institution/organisation	Category	Number of participants
3	The State Audit Board, Representative of South Sulawesi	Government auditor	2
4	Provincial Office of South Sulawesi	Local Government, Asset Manager	3
5	Provincial Office of North Sulawesi	Local Government, Asset Manager	2
6	Department of Education Office, Pangkep, South Sulawesi	Local Government, Asset User	1
7	Department of Education Office, Makassar, South Sulawesi	Local Government, Asset User	1
8	Health Regional Office, Makassar, South Sulawesi	Local Government, Asset User	1
9	University of Muhammadiyah Makassar	Academician	2
10	State University of Makassar	Academician	1
11	Hasanuddin University, Makassar	Academic	1
12	State Administration Bodies, South Sulawesi Province	Local Government Policy Adviser and Academician	1
13	Rope and Works Maintenance	Asset maintenance practitioner, stakeholder	1
14	CV. Flascheanindo	Asset development contractor	1
15	CV. Lia Sejahtera	Asset development and maintenance contractor	1

Table 9.1 Focus Group Participants (Continued)

No	Institution/organisation	Category	Number of participants
16	PT. Asian Appraisal	Asset Valuer	1
17	USAid NGO	Community representatives	1
18	Indonesian Consumer Institution Foundation (NGO)	Community representatives	1
19	<i>(Unwilling to be identified)</i>	Local government public policy news journalist	1
	Total		27

All participants agreed that it is important to collect and store asset information properly. The ability to easily update and access asset information is also crucial for them. However, it is also agreed that it is difficult to start the process due to the quantity and complexity of the assets. It is difficult for local government officials to collect some asset related data such as market data and an asset's condition. Local government officers' capacity and their tools are important factors in the process.

According to the focus group participants, it was difficult to implement an asset needs analysis at the beginning of the decentralisation process, where the Central Government transferred the majority of its assets to local governments. The reason was that the transfer was mandated by the *Decentralisation Act*, despite local governments' needs in relation to their core businesses. Post transfer, local governments still experience difficulties disposing of unneeded assets due to complicated process involved. However, all participants agreed on, and realised the importance of, an asset needs analysis in the framework.

The majority of focus group participants argued that the asset lifecycle already exists in the current public asset management process. However, there are countless numbers of laws and regulations that rule the process. The problem is they are not integrated and are spread across different regulations and governmental jurisdictions.

Each process is conducted by a different organisation in local government entities, which frequently do not communicate or coordinate well amongst themselves. The participants also indicated that they need detail and clear guidelines to direct them in managing public assets.

Targets and benchmarks that measure efficiency and effectiveness are the most widely used terms in local government organisations in managing their performance. Unfortunately, people are not as familiar with qualitative measurement as quantitative measurement. According to participants, local governments rarely ask their stakeholders, the community and their staff to provide feedback on local government performance in a qualitative form.

In general, the focus group participants agreed that the proposed Public Asset Management Framework is acceptable and that implementation is feasible in the Indonesian provincial government context. However, efforts are still needed in order to adopt and implement the framework, for example, the need for practical regulations and policies to implement the framework. Significant public funds also need to be allocated to support the short term application of the framework. Most importantly, political and provincial officials' willingness to implement the framework is required for successful implementation.

7.5 POTENTIAL BENEFITS FOR PROVINCIAL GOVERNMENT IN ADOPTING PUBLIC ASSET MANAGEMENT

There are strong indications that there are benefits for provincial government to gain from the adoption of current practices of public asset management. Those benefits include: more effective and efficient organisations, more accountability and transparency (through audits) in managing public assets, increased local government portfolios, and improvements in the quality of public services.

By collecting and recording up-to-date asset information into asset management documents, such as asset databases, local government will be able to identify vacant, underutilised and surplus assets. Through this information, local government can then identify the need for allocating public funds or discontinuing unnecessary expenditures.

In South Sulawesi province, one source of inefficiency is the presence of large portfolios of vacant or underused properties. This condition is caused by the harmonisation of structure or the scope of government departments and agencies that progress faster than local governments' capability to reuse or dispose of public assets. The regulations for disposing or utilising vacant property are too complicated and time consuming. Such regulation creates an environment where local government officials are reluctant to dispose of or utilise properties.

The South Sulawesi province owns 776 parcels of land with a total of 14,603,000 m². Those properties are valued at a purchased/historical value around USD 138,3 million (equal to AUD 147.2 million). Ten percent of those properties are considered surplus (South Sulawesi Province Secretary, 2009). By disposing of the surplus properties, South Sulawesi Provincial Government could save a huge amount of public funds currently used to maintain the surplus land; in many cases expenses for the maintenance of unused facilities exceeds development/production costs. Another benefit from the disposal of surplus land is that local government could earn additional income. By disposing of those assets at market price in 2008 (USD 550/AUD 585.1 per square metre), South Sulawesi Provincial Government could have earned an additional income of just over USD8 million/AUD 8.51 million. This is far beyond the current purchased/historical value of the total assets owned by the local government.

The second benefits that presents itself is for local government organisations to be more accountable and transparent (achieved through an audit process). For example the use of an accrual base accounting system for the administrative and financial reporting system of public assets will increase local governments' performance. The data used in the accrual based government financial report enables the assessment of accountability and performance of government entities.

Good asset management needs regular data updating, which means increasing the quality of information that is made available to the community or to other local government stakeholders. Quality information will provide decision makers with a better understanding, which in turn will improve the quality of decisions. Provincial governments such as the South Sulawesi, West Sulawesi and Central Sulawesi have limited information stored in their asset census reports; they only store and maintain general asset information. This type of information cannot be used to support the

decision-making process. There is no current asset condition information to indicate whether the assets need to be refurbished, maintained or otherwise managed.

The third benefit is that local governments could gain from an improved portfolio, which means better fiscal capacity mapping for domestic and foreign investors. Currently, according to the Ministry of Finance Indonesia (2009), Sulawesi Island, which consists of six provinces, is categorised as an average rate province in terms of fiscal capacity mapping.

Traditionally, provincial government uses historical value for public property accounting in its financial report. By applying current practice of public asset management, provincial government have the opportunity to correct the value of their properties. The use of current market value provides an opportunity to increase the value of local government portfolios. Analysis of the asset census produced by provincial governments in Sulawesi Island in 2009, revealed that almost all data in the report is outdated. The value of property is based on historical value; that is, based on transaction price of the property. Of the 776 parcels of land owned by the South Sulawesi province, almost 90% was purchased 15 to 25 years ago. The correction of just one aspect of the asset management in the process—applying market value to the property—will have significant impact on governments' portfolios. By comparison, the Central Government of Indonesia has increased the value of its property by 100%, from USD 21,206,316 equal to AUD 22.5 million (valued in 2006 accounts) to USD 42,862,105 equal to AUD 45.5 million (valued in 2009 accounts), as a result of revaluation of their assets (Directorate General of State Asset Management, 2009). In 2006, the asset census was just an accumulation of historical asset value data, whereas in 2009 the Central Government re-valued its public assets in accordance with market value.

The fourth benefit presented to local governments by adopting current asset management practices is the improved quality of public services. In the selection of asset ownership (as one part of the asset management process) local governments select the type of assets they need to deliver public services. It is important for them to identify and align their assets with their core businesses. It is also important to categorise those assets based on their importance and significance to the community. Some assets, for example military assets, are important to the government but not directly significant to the community's needs. On the other hand, some assets, such

as water and electricity infrastructure, are important to the community but not significant to the government to own and manage. This categorisation can help local governments identify their needs in regards to public assets as a supporting source in public service delivery.

As discussed previously, the adoption of an asset management framework by local governments can provide governments with a better knowledge of how to align their assets to best meet the service delivery needs of the community. Needs analysis, as one asset management process, aims to identify customers’ expectation trends in relation to public service delivery. Consequently, local government asset managers must ensure that current asset portfolios are compatible with the public services the local government provides.

The summary comparing the current condition of public asset management in Indonesian Provincial Government, identified limitations based of research findings, how the proposed framework address these limitations and potential benefits that the local government could achieved by applying the proposed framework, can be seen in **Table 9.2**.

Table 9.2 Summary table of Indonesian local governments public asset management current condition compare to the proposed framework

No.	Current condition and identified limitations of PAM in local governments	Limitation addressed by the proposed PAM framework	Potential benefits by applying proposed framework
1.	<p>Chapter 10: Poor asset data management can be seen from application of Microsoft Excel for asset database which vulnerable to computer virus and</p>	<p>Asset identification and inventory with proper database (refer to p. 198)</p>	<ul style="list-style-type: none"> • Clear identification and information of asset with safe and reliable asset database (refer to p. 36, 57, 231) • Enable the local government to identify vacant, underutilise and surplus asset (refer p. 231)

No.	Current condition and identified limitations of PAM in local governments	Limitation addressed by the proposed PAM framework	Potential benefits by applying proposed framework
	<p>data error; easy to be accessed and changed by unauthorised officials; and in many cases the database is not updated regularly (refer to p. 134)</p>		

Table 9.2 Summary table of Indonesian local governments public asset management current condition compare to the proposed framework (continued)

No	Current condition and identified limitations of PAM in local governments	Limitation addressed by the proposed PAM framework	Potential benefits by applying proposed framework
2.	Own and maintain a large number of un-needed and underutilised asset (refer to p. 134, 173, 191)	Asset needs analysis (refer to p. 198, 217)	<ul style="list-style-type: none"> • Improve asset ownership and asset utilisation to avoid unnecessary maintenance and maximise asset benefit (refer to p. 198) • Asset alignment with actual needs to deliver public services (refer to p. 54)
3.	Insufficient clarity and applicability of law and regulation with limited power to regulate their public asset as the local government has authority of the lowest hierarchy of regulation (refer to p. 153, 173, 179, 192)	Re-identified and create codification to the law, regulation and guidelines regarding the asset management process (refer to p. 205, 220)	Avoid law and regulatory overlapping, which at the same time increase clarity and applicability of these law and regulation (refer to p. 67, 231)
4.	Local government's asset manager is under the Regional Secretary working unit. This condition creates insufficient authority and power for the asset manager to impose and enforce public asset management policy and decision (refer to p. 155)	Organisational empowerment for local government asset manager by upgrading the asset manager organisational level (refer to p. 209)	Sufficient power and authority for the local government's asset manager for the purpose of asset decision and policy application (refer to p. 30, 231)
5.	Separated asset lifecycle processes which only perform based on occurring accidents and perform by different division (refer to p. 160, 173, 192)	The framework proposes an interrelated asset lifecycle process. The process is performed by the asset manager (refer to p. 205, 220)	Comprehensive and linked asset lifecycle process through proper planning with no surprise to the failure of asset performance and availability (refer to p. 57, 67, 231)

Table 9.2 Summary table of Indonesian local governments public asset management current condition compare to the proposed framework (continued)

No	Current condition and identified limitations of PAM in local governments	Limitation addressed by the proposed PAM framework	Potential benefits by applying proposed framework
6.	Unclear performance indicator, regulated in many different regulation, causing confusion to local government's officials, measure only based on quantitative measurements. This condition resulted in inefficient and ineffective performance measurements in local governments (refer to p. 179, 184, 195)	Qualitative and quantitative performance measurements throughout asset lifecycle and public services delivery (refer to p. 212, 213)	Improve efficiency and effectivity of local governments in delivery public services particularly in asset management process (refer to p. 231)
7.	Insufficient human resources both in terms of quantity and quality (refer to p. 169, 173, 194)	Continuous improvement of human resources' capability and capacity (refer to p. 209, 213)	Ensure the capability and capacity of human resources to manage the public asset and to deliver the public services (refer to p. 231)

The table shows the identified areas that need to be improved from the current condition, these areas were discussed and addresses in the proposed framework development including their potential benefits.

Chapter 11: Conclusions

8.1 RESPONSE TO RESEARCH QUESTIONS

The implementation of the *Decentralisation Act* has resulted in many problems for Indonesian local governments in regard to their municipal asset management. Those problems include unidentified and underutilised provincial assets—surplus assets that burden the provincial budget. This condition is worsened by the lack of an asset lifecycle guidance, insufficient laws and regulations regarding the management of municipal assets, poor asset data management, a lack of human resources and organisational arrangements, and multiple inefficiencies in asset management processes. The literature indicates that such problems and conditions can be softened by the application of a Public Asset Management Framework.

Unfortunately, local governments in developing countries, such as Indonesia, rarely have a Public Asset Management Framework. Adopting frameworks used in other countries would not necessarily meet and satisfy Indonesian local governments' needs and requirements. There is a need to seek solutions that are appropriate to country-specific conditions and to develop a tailored framework. Therefore, the aim of this study is to develop the a Public Asset Management Framework that meets and satisfies the Indonesian local government context.

The literature suggests that existing practices and the environment they are employed in are essential factors to be studied and analysed in order to develop a suitable Public Asset Management Framework. Therefore, this thesis formulated the first research question to investigate the current practices and propose areas that should be improved. The second research question is aimed at investigating the environments surrounding these existing practices in order to propose possible solutions with regard to the problems. The findings from these two research questions, combined with theories and best practices from developed countries, resulted in the development of a Public Asset Management Framework that meets the specific Indonesian provincial governments' needs and requirements. In detail, the results of these research questions are:

The current practices of public asset management in Indonesian local governments

The study revealed that despite of their poor asset identification and inventory system, the major assets owned and maintained by local governments are real property and infrastructure assets. The current conditions and practices show that local governments hold and manage public assets far beyond their capability and needs. This is because the public assets were transferred from the Central Government without analysing the local governments' functions and requirements in delivering public services. Correspondingly, local governments are incapacitate to measure their performance in the asset management process. The data also shows that local government's legal and organisational arrangements and asset management processes are insufficient to help them manage their public assets.

As a result, the findings from the first research question suggest that Indonesian provincial governments' current public asset management practices need to be developed in order to improve their effectiveness and efficiency, and the quality of public services. The specific areas that desperately need to be improved are asset identification/inventory system and asset data management, public asset holdings, asset guidance and legal arrangements, human resources and their organisational arrangements, and asset management efficiency and effectiveness.

The factors that effect Indonesian local governments' ability to manage their public assets

Five investigative questions were employed to identify the factors that affect public asset management practices in Indonesian provincial government. These investigative questions aimed to identify 1) problems which arose at the time the Central Government transferred the public assets to provincial governments, 2) problems in asset management processes, 3) government's performance measure, 4) provincial governments' objectives and 5) provincial governments' perceptions regarding the managing of public assets.

The results of the second research question show that the factors effecting local governments public assets management process concists of two groups, namely supporting factors and hindering factors. These hindering factors are the factors that concerned local governments the most. The research findings show that there are

five major concerns out of 38 that were expressed by the interviewees. They are asset data related problems, unneeded and underutilised public assets, a lack of asset lifecycle guidance and insufficient laws and regulations, human resource problems, and economic inefficiency in managing assets. These major concerns are consistent with the findings from the first research question. These factors need to be accommodated in the proposed Public Asset Management Framework in order for it to be applicable to, and accepted by, Indonesian provincial governments. These factors potentially solve, or at least soften, the public asset management problems experienced by Indonesian provincial governments.

The proposed Public Asset Management Framework that meets Indonesian local governments' needs and requirements

To answer the third research question, the findings from the first and the second research questions were synthesised with theories and best practices from advanced public asset management practitioner countries to propose the Public Asset Management Framework for the Indonesian provincial government context.

The framework must be feasible and able to be implemented by provincial governments in terms of their human resources, budget, equipment and tools. It needs to be integrated into the existing system and practices, such as current database and current processes. The framework must be aligned with Central Government practices, as the provincial governments are essentially an arm of the Central Government. It must be in accordance with the laws and regulations; must promote linkages between agencies; and most importantly, must improve the effectiveness and efficiency of existing service delivery practices.

Since the assets were already transferred to local governments, there is a need to identify and record all information regarding the assets. Following that, needs analysis is a necessary stage to classify an asset's relationship and importance to local government functions and responsibilities in delivering public services. If the assets have already been "purified" to just support the government's functions and responsibilities, these assets will then be managed using the appropriate asset lifecycle processes. Those assets that are categorised as surplus assets—those that are not relevant to support the local government's functions—should be disposed. At the same time, the functions and responsibilities that do not need asset solution

should be directly performed by the local government. These processes must be measured using performance measurement indicators. All these stages should be guided and regulated with sufficient laws and regulations. Constant improvements to the quality and quantity of human resources hold an important role in successful public asset management processes.

8.2 ORIGINAL CONTRIBUTION OF THE RESEARCH

Public asset management at the local level has predominantly been researched in developed countries. This research focuses on developing countries and contributes toward the knowledge of public asset management systems at the local governments level in developing countries, in particular Indonesia. The findings of the research enrich the literature with the locality of Indonesian provincial asset management conditions.

A Public Asset Management Framework provides the local governments with advanced tools and strategies to improve their effectiveness and efficiency in managing public assets, which also potentially improve the quality of public services. This framework ensures that the best decisions are made throughout asset decision ownership and provide a better asset lifecycle process, which will lead to selection of the most appropriate asset, improve asset acquisition and delivery processes, optimise asset performance, and provide an appropriate disposal program.

By applying the proposed framework, the local governments could potentially improve their asset identification and inventory system, realign asset needs and public services delivery functions, integrate asset lifecycle processes, strong organisational, law and regulation arrangements, sufficient performance measurements with continuous improvement of human resource capacity and capability. Therefore, the propose framework will enhance efficiency and effectiveness, accountability, transparency, of public asset management and improve the quality of public services.

It has been acknowledged that every organisation practicing asset management worldwide is likely to have a different culture and socio-economic environment. These differences must be recognised in the development of a global concept to asset management. The proposed framework is developed based on Sulawesi island local governments, where this island is ideally represents the whole condition of

Indonesian local governments context. Therefore the framework is transferrable and applicable to other local governments in Indonesia. In a larger context, the proposed framework is also developed based on pre-centralised country context and culture. Indonesian local government's condition is similar to the condition of many developing countries and other decentralised countries type that previously is a centralised country (as identified in the Chapter 2 and 3). Therefore, the proposed framework can also be transferred and applied in these countries. However, for those countries that not being reformed into decentralised country, there is a need to be examined closely their conditions and environments before the proposed framework could be applied.

8.3 RESEARCH LIMITATION

This research only covers the conditions relating at the provincial government level in developing countries with decentralisation experience. Although there are some similarities between countries which are not decentralised, a detailed examination and investigation into their public asset management processes is needed before generalising the results of this research.

This research also only focuses on real property and physical infrastructure, therefore other type of assets were not covered in this research such as equipment and machinery, electronic assets, furniture, etc. These uncovered assets have different characteristics and nature, and therefore a detailed examination is also necessary before applying the proposed framework.

Time limitation is the other boundary of this study. It is realised that an asset's lifecycle ranges from a very limited time to an unlimited period of time. For example, a bridge from design to disposal could consume 30 to 100 years or even more. Therefore, it is impossible to study one particular bridge throughout its lifecycle. As a result, the study is based on available stages of the asset management process as they occurred during the data collection period in Indonesia. This research is about asset management as a general process that could be applied to real property and infrastructure assets and not as tools on how a specific asset should be managed. Studies on detailed tools to manage a particular asset also need to be undertaken.

Although there is a strong expression from interviewees in regard to human resource factor in the successful of public asset management application in the local

governments organisation, this research is not going to discuss this area due to the complexity of the subject. Therefore, the human resource matters in the public asset management processes is needed to studied further.

8.4 RECOMMENDATION FOR FUTURE RESEARCH

Besides real property and infrastructure, Indonesian local governments also have other assets such as equipment and machinery, and furniture (which is the second largest asset group after the land, buildings and infrastructures group) which have different characteristics and also need serious attention.

This study also highlights the need for research into the alignment of asset ownership with community needs; it is important for local governments to align the public services they provide with the community's expectations. In the end, there is a clear distinction between core assets, additional assets and surplus assets from the community's perspective.

Human resources as one of important factor in the public asset management processes also need to be studied extensively which is not covered by this research. Therefore, this research recommends that the human resources that meet the Indonesian local government condition need to be researched further.

Another recommendation from this study is that there is a need to study public asset management practices in other types of countries such as those countries under the monarchy and socialist system. These countries have different system and characteristics to former centralised countries such as Indonesia. Specific analysis to develop a similar Public Asset Management Framework that meets the needs of these countries' systems is needed.

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Appendices

Appendix A : Detail of Participants Profile

Appendix B : List of law and regulations analysed from Document Retrieval

Appendix C : List of all identified law and regulations regarding Indonesian public asset management

Appendix D : Tree Nodes from NVivo

Appendix E : Result of Cases and Nodes Matrix Coding Quiries from NVivo

Appendix F : List of Publication and Research Outcomes

Participants Profiles

No	Code	Initial	Institution / organisation	Category	Gender	Position	Involvement in research
1	R1	Ya	Directorate General of State Asset Management	Central government operational office	Male	Head of Office	Interview and Focus Group
2	I1	AWJ	Directorate General of State Asset Management	Central government regional office	Male	Head of Section	Interview and Focus Group
3	F1	YN	Directorate General of State Asset Management	Central government regional office	Female	Head of Section	Focus Group
4	I1	NA	Directorate General of State Asset Management	Central government operational office	Male	Officer	Interview, observation and Focus Group
5	R2	AP	The House of Representative, South Sulawesi Province	Provincial Legislator	Male	Head of Commission	Interview
6	F2	AM	The House of Representative, South Sulawesi Province	Provincial Legislator	Male	Officer	Focus Group
7	R3	MF	The State Audit Board, Representative of South Sulawesi	Government auditor	Male	Head of Division	Interview
8	R4	DS	The State Audit Board, Representative of South Sulawesi	Government auditor	Male	Head of Sub Division	Interview
9	R5	II	The State Audit Board, Representative of South Sulawesi	Government auditor	Female	Head of Section	Interview and Focus Group
10	F3	STII	The State Audit Board, Representative	Government	Male	Officers	Focus Group

No	Code	Initial	Institution / organisation	Category	Gender	Position	Involvement in research
			of South Sulawesi	auditor			
11	R6	MS	Provincial Office of South Sulawesi	Local government, Asset Manager	Male	Head of Bureau of general supplies and regional asset	Interview
12	R7	TTTR	Provincial Office of South Sulawesi	Local government, Asset Manager	Male	Head, Bureau of general supplies and regional asset (Secondment)	Interview
13	I3	AA	Provincial Office of South Sulawesi	Local government, Asset Manager	Male	Head of Asset Maintenance Division	Interview, observation and Focus Group
14	F4	MN	Provincial Office of South Sulawesi	Local government, Asset Manager	Male	Head of Asset Disposal Sub Division	Focus Group
15	F5	LR	Provincial Office of South Sulawesi	Local government, Asset Manager	Female	Head of Asset Registration and Administration Sub Division	Focus Group
16	I4	SSO1	Provincial Office of South Sulawesi	Local government, Asset Manager	Male	Officer, Asset Disposal Sub Division	Interview
17	I5	SSO2	Provincial Office of South Sulawesi	Local government, Asset Manager	Male	Officer, Asset Registration and Administration Sub Division	Interview
18	R8	AH	Provincial Office of West Sulawesi	Local government, Asset Manager	Male	Regional Secretary of West Sulawesi	Interview

No	Code	Initial	Institution / organisation	Category	Gender	Position	Involvement in research
19	R9	BosSu	Provincial Office of West Sulawesi	Local government, Asset Manager	Male	Head of Asset Storage and Inventory Sub Division	Interview and observation
20	I6	Su	Provincial Office of West Sulawesi	Local government, Asset Manager	Male	Head of Asset Storage and Inventory Sub Division	Interview and observation
21	I7	WSO1	Provincial Office of West Sulawesi	Local government, Asset Manager	Male	Officer	Interview
22	I8	WSO2	Provincial Office of West Sulawesi	Local government, Asset Manager	Male	Officer	Interview
23	R11	KL	Provincial Office of Central Sulawesi	Local government, Asset Manager	Male	Head of General Supplies and Regional Asset Bureau	Interview and observation
24	I9	Ra	Provincial Office of Central Sulawesi	Local government, Asset Manager	Male	Officer	Interview and observation
25	I10	RCYM	Provincial Office of North Sulawesi	Local government, Asset Manager	Male	Head of Asset Registration and Administration Sub Division	Focus Group
26	R10	RS	Provincial Office of North Sulawesi	Local government, Asset Manager	Male	Head of Asset Planning and Distribution Sub Division	Interview and Focus Group
27	F6	Ad	District Education Office, Pangkep, South Sulawesi	Local Government, Asset User	Female	Teacher	Focus Group

No	Code	Initial	Institution / organisation	Category	Gender	Position	Involvement in research
28	F7	AM	District Education Office, Makassar, South Sulawesi	Local Government, Asset User	Male	Head of Junior High School	Focus Group
29	F8	MBP	Health Regional Office, Makassar, South Sulawesi	Local Government, Asset User	Male	Senior Bureaucrat	Focus Group
30	F9	MHN	University of Muhammadiyah Makassar	Academician	Male	Senior Lecturer	Focus Group
31	F10	BS	State University of Makassar	Academician	Female	Senior Lecturer	Focus Group
32	F11	SK	Hasanuddin University, Makassar	Academician	Male	Senior Lecturer	Focus Group
33	F12	BD	State Administration Bodies, South Sulawesi Province	Local Government Policy Adviser and Academician	Female	Local Government Policy Adviser and Senior Lecturer	Focus Group
34	I11	SDj	Rope and Works Maintenance	Asset maintenance practitioner, stakeholder	Male	Owner	Interview and observation
35	F13	MN	Rope and Works Maintenance	Asset maintenance practitioner, stakeholder	Male	Senior staff	Observation and Focus Group
36	F14	Sdm	CV. Flascheanindo	Asset development contractor	Male	Owner	Interview and Focus Group
37	I12	ARB	CV. Lia Sejahtera	Asset development and maintenance contractor	Female	Owner	Observation, Interview and Focus Group
38	F15	BI	PT. Asian Appraisal	Asset Valuer	Male	Owner	Focus Group
39	F16	Sa	USAid NGO	Representatives from	Male	Senior Staff	Focus Group

No	Code	Initial	Institution / organisation	Category	Gender	Position	Involvement in research
				community			
40	F17	La	Indonesian Consumer Institution Foundation (NGO)	Representatives from community	Female	Senior Staff	Focus Group
41	F18	Ale	<i>(Unwilling to be identified)</i>	Local government public policy journalist	Male	Journalist	Focus Group

List of law and regulation were analysed from document retrieval:

- 1) Law No. 10 of 2004 on the Establishment of Laws (State Gazette of the Republic of Indonesia Year 2004 Number 53, Supplementary State Gazette of the Republic of Indonesia Number 4389)
- 2) Law Number 32 of 2004 regarding Regional Government (State Gazette of the Republic of Indonesia Year 2004 Number 125, Supplement to the Republic of Indonesia Number 4437) as amended by Law No. 8 of 2005 on Stipulation of Government Regulation in Lieu of Law No. 3 of 2005 concerning Amendment to Law Number 32 of 2004 on Regional Governance Become Law (State Gazette of the Republic of Indonesia Year 2005 Number 108, Supplementary State Gazette of the Republic of Indonesia Number 4548)
- 3) Indonesian Government Regulation No. 6 of 2006 on Management of State/Regional Owned Asset which amended by Indonesian Government Regulation No. 38 of 2008 on the Amendment of Government Regulation No. 6 Year 2006 on the Management of State / Region
- 4) Regulation of the Minister of Internal Affairs No. 17 of 2007 on the Technical Guidelines for Management of Regional Assets
- 5) Decree of the Minister of Internal Affairs No. 7 of 2002 on the Location and Asset Code for Provincial / District / City Asset
- 6) South Sulawesi Provincial Regulation No. 4 of 2007 on Regional Asset Management
- 7) West Sulawesi Provincial Regulation No. 14 of 2009 on Regional Asset Management
- 8) Central Sulawesi Provincial Regulation No. 4 of 2009 on Regional Asset Management

List of all identified law and regulation regarding provincial public asset management:

- 1) Law No. 17 of 2003 on State Finance (State Gazette of the Republic of Indonesia Year 2003 Number 47, Supplementary State Gazette of the Republic of Indonesia Number 4286)
- 2) Law No. 1 of 2004 on State Treasury (State Gazette of the Republic of Indonesia Year 2004 Number 5, Supplementary State Gazette of the Republic of Indonesia Number 4355)
- 3) Law No. 10 of 2004 on the Establishment of Laws (State Gazette of the Republic of Indonesia Year 2004 Number 53, Supplementary State Gazette of the Republic of Indonesia Number 4389)
- 4) Law No. 15 of 2004 on the Audit of the Management and Financial Responsibility (State Gazette of the Republic of Indonesia Year 2003 Number 66, Supplementary State Gazette of the Republic of Indonesia Number 4400)
- 5) Law Number 32 of 2004 regarding Regional Government (State Gazette of the Republic of Indonesia Year 2004 Number 125, Supplement to the Republic of Indonesia Number 4437) as amended by Law No. 8 of 2005 on Stipulation of Government Regulation in Lieu of Law No. 3 of 2005 concerning Amendment to Law Number 32 of 2004 on Regional Governance Become Law (State Gazette of the Republic of Indonesia Year 2005 Number 108, Supplementary State Gazette of the Republic of Indonesia Number 4548)
- 6) Law No. 33 of 2004 on Financial Balance between Central and Local Government (State Gazette of the Republic of Indonesia Year 1999 Number 126, Republic of Indonesia State Gazette Number 4438)
- 7) Indonesian Government Regulation Number 58 of 2005 on Regional Financial Management
- 8) Indonesian Government Regulation No. 6 of 2006 on Management of State/Regional Owned Asset
- 9) Indonesian Government Regulation No. 38 of 2007 on the Division of Government Affairs between the Central Government, Provincial Governments and District/City Governments

- 10) Indonesian Government Regulation No. 41 of 2007 on the Organization of the Regional Government
- 11) Indonesian Government Regulation No. 38 of 2008 on the Amendment of Government Regulation No. 6 Year 2006 on the Management of State / Region
- 12) Presidential Decree No. 80 of 2003 on Guidelines of Procurements of Assets and Services for Governments, mandated by Presidential Decree No. 80 Year 2003
- 13) Regulation of the Minister of Internal Affairs No. 13 of 2006 on Regional Financial Management Guidelines
- 14) Regulation of the Minister of Internal Affairs No. 7 of 2006 on the Standardisation of Work Facilities and Infrastructure for Regional Governments
- 15) Regulation of the Minister of Internal Affairs No. 11 of 2007 on the Standardisation of Work Facilities and Infrastructure for Regional Governments (amandement of Regulation of the Minister of Internal Affairs No. 7 of 2006)
- 16) Regulation of the Minister of Internal Affairs No. 17 of 2007 on the Technical Guidelines for Management of Regional Assets
- 17) Regulation of the Minister of Internal Affairs No. 9 of 2009 Transfer of Facilities and Infrastructuer from Developers to Regional Governments
- 18) Decree of the Minister of Internal Affairs No. 42 of 2001 on Guidelines for Transfer of Assets and Liabilities to Newly Developed Regional Governments
- 19) Decree of the Minister of Internal Affairs No. 12 of 2003 on Guidelines for Regional Asset Valuation
- 20) Decree of the Minister of Internal Affairs No. 49 of 2001 on Regional Assets Information System Management
- 21) Decree of the Minister of Internal Affairs No. 7 of 2002 on the Location and Asset Code for Provincial / District / City Asset
- 22) South Sulawesi Provincial Regulation No. 4 of 2007 on Regional Asset Management
- 23) West Sulawesi Provincial Regulation No. 14 of 2009 on Regional Asset Management

- 24) Central Sulawesi Provincial Regulation No. 2 of 2008 on Provincial Government Affairs
- 25) Central Sulawesi Provincial Regulation No. 4 of 2009 on Regional Asset Management.

Tree Nodes from NVivo

Type	Name	Memo Link	Sources	References	Created On	Created By	Modified On	Modified By
Tree Node	Transfer problems		0	0	12/06/11 17:33	SR	12/06/11 17:33	SR
Tree Node		Miss understanding and miscommunication		1	1	12/06/11 22:04	SR	16/06/11 7:53
Tree Node		Poor asset data and information		2	2	12/06/11 17:34	SR	14/06/11 7:40
Tree Node		No problems		2	2	14/06/11 6:13	SR	14/06/11 7:41
Tree Node		Not Available		2	2	14/06/11 6:15	SR	14/06/11 7:39
Tree Node	Asset management problems		0	0	12/06/11 17:33	SR	12/06/11 17:33	SR
Tree Node		Low public participations		1	1	12/06/11 21:41	SR	14/06/11 7:37
Tree Node		No single treasury account		1	1	12/06/11 21:45	SR	14/06/11 7:37
Tree Node		Local culture and believes barrier		1	1	12/06/11 22:49	SR	14/06/11 7:40
Tree Node		Inefficient and ineffective		3	3	12/06/11 21:59	SR	14/06/11 7:41
Tree Node		Not developed for long term goal		4	4	12/06/11 21:42	SR	14/06/11 7:41
Tree Node		Corruption, collusion and nepotism		3	4	12/06/11 21:43	SR	14/06/11 7:39
Tree Node		Conflict of interests		4	4	12/06/11 22:19	SR	14/06/11 7:41
Tree Node		Limited public fund		2	4	12/06/11 22:26	SR	14/06/11 7:41
Tree Node		Unclear legal status		4	9	12/06/11 22:46	SR	14/06/11 7:41
Tree Node		Poor accounting system		6	10	12/06/11 21:43	SR	14/06/11 10:45
Tree Node		Law and regulation is not sufficient		5	10	12/06/11 22:10	SR	14/06/11 7:41
Tree Node		Poor asset database system		6	12	12/06/11 21:44	SR	14/06/11 7:41
Tree Node		Lack of human resources		7	12	12/06/11 21:44	SR	14/06/11 7:41
Tree Node		Lack of shared understanding in PAM		6	15	12/06/11 22:12	SR	14/06/11 7:41
Tree Node		Poor asset data		6	16	12/06/11 22:06	SR	14/06/11 7:41
Tree Node		Unneeded asset		7	22	12/06/11 19:00	SR	14/06/11 10:45
Tree Node		Lack of asset lifecycle guidance		7	23	12/06/11 22:14	SR	14/06/11 10:45
Tree Node	Performance measurement		0	0	12/06/11 17:33	SR	12/06/11 22:30	SR
Tree Node		Increase government revenues		3	3	12/06/11 22:16	SR	14/06/11 7:40
Tree Node		Budgeting and financial performance by APBD		6	6	12/06/11 21:48	SR	14/06/11 7:41
Tree Node		Orderly administrative		4	7	12/06/11 22:31	SR	14/06/11 7:41
Tree Node		Compliance with law and regulation		4	8	12/06/11 21:49	SR	14/06/11 7:40
Tree Node		Efficiency and effectivity		6	9	12/06/11 18:25	SR	14/06/11 7:41
Tree Node	Public asset management objective		0	0	12/06/11 17:33	SR	15/06/11 21:08	SR
Tree Node		Strategic funtions		2	2	12/06/11 22:20	SR	14/06/11 7:38
Tree Node		Improve data accuracy		1	2	12/06/11 23:29	SR	14/06/11 7:41
Tree Node		Proper asset needs and budgeting analysis		1	2	12/06/11 23:29	SR	14/06/11 7:41
Tree Node		Guarantee the availability of public services		3	3	12/06/11 21:54	SR	14/06/11 7:41
Tree Node		Increase revenue		3	3	12/06/11 22:57	SR	14/06/11 7:41
Tree Node		Improve the quality of public services and regional developmen		4	4	12/06/11 22:21	SR	14/06/11 7:41
Tree Node		Improve accountability		2	4	12/06/11 22:55	SR	14/06/11 7:41
Tree Node		Improve compliance to the regulations		4	6	12/06/11 21:54	SR	14/06/11 7:40
Tree Node		Improve efficiency and effectivity		5	10	12/06/11 21:53	SR	14/06/11 7:41
Tree Node	Perception towards public asset		0	0	12/06/11 17:33	SR	15/06/11 21:09	SR
Tree Node		Not available		1	1	14/06/11 8:26	SR	14/06/11 8:26
Tree Node		Income sources		4	4	12/06/11 22:43	SR	14/06/11 7:41
Tree Node		Based on good governance principles		5	5	12/06/11 21:56	SR	14/06/11 7:41

Result of Matrix Coding from NVivo

	A : R1	D : R2	E : R3	F : R4	G : R5	H : R6	I : R7	J : R8	K : R9	B : R10	C : R11	Total reference
9 : Local culture and believes barrier	0	0	0	0	0	0	0	0	0	0	1	1
35 : Misunderstanding and miscommunication	1	0	0	0	0	0	0	0	0	0	0	1
20 : Not available	0	0	0	0	0	0	0	1	1	0	0	2
34 : Strategic functions	1	0	0	0	0	0	0	0	0	1	0	2
10 : Low public participations	0	0	1	1	1	0	0	0	0	0	0	3
11 : No single treasury account	0	0	1	1	1	0	0	0	0	0	0	3
24 : Increase government revenues	1	1	0	0	0	0	0	0	0	0	1	3
36 : No problems	0	0	0	0	0	1	1	0	0	1	0	3
37 : Not Available	0	1	0	0	0	0	0	1	1	0	0	3
29 : Improve data accuracy	0	0	0	0	0	2	2	0	0	0	0	4
32 : Increase revenue	0	1	0	0	0	1	1	0	0	0	1	4
33 : Proper asset needs and budgeting analysis	0	0	0	0	0	2	2	0	0	0	0	4
38 : Poor asset data and information	0	0	1	1	1	0	0	0	0	0	1	4
19 : Income sources	0	1	0	0	0	1	1	0	0	1	1	5
31 : Improve the quality of public services and regional development	1	1	0	0	0	1	1	0	0	1	0	5
1 : Conflict of interests	1	1	0	0	0	1	1	1	1	0	0	6
3 : Inefficient and ineffective	0	1	1	1	1	1	1	0	0	0	0	6
26 : Guarantee the availability of public services	0	0	1	1	1	1	1	0	0	1	0	6
27 : Improve accountability	0	0	0	0	0	2	2	0	0	0	2	6
8 : Limited public fund	0	0	0	0	0	3	3	0	0	1	0	7
12 : Not developed for long term goal	1	0	1	1	1	1	1	0	0	1	0	7
2 : Corruption, collusion and nepotism	0	1	1	1	1	0	0	2	2	0	0	8
18 : Based on good governance principles	1	0	1	1	1	1	1	0	0	1	1	8
21 : Budgeting and financial performance by APBD	1	1	1	1	1	1	1	0	0	1	1	9
28 : Improve compliance to the regulations	0	0	1	1	1	0	0	1	1	1	3	9
25 : Orderly administrative	0	0	0	0	0	1	1	2	2	2	2	10
22 : Compliance with law and regulation	0	0	2	2	2	0	0	1	1	2	3	13
16 : Unclear legal status	0	1	0	0	0	4	4	1	1	0	3	14
7 : Law and regulation is not sufficient	2	0	0	0	0	3	3	2	2	1	2	15
23 : Efficiency and effectivity	1	2	2	2	2	2	2	0	0	1	1	15
30 : Improve efficiency and effectivity	1	0	1	1	1	3	3	0	0	2	3	15
13 : Poor accounting system	1	2	1	1	1	3	3	2	2	1	0	17
5 : Lack of human resources	1	1	1	1	1	2	2	3	3	3	1	19
15 : Poor asset database system	1	0	1	1	1	4	4	1	1	4	1	19
6 : Lack of shared understanding in PAM	1	1	0	0	0	5	5	4	4	2	2	24
14 : Poor asset data	2	1	0	0	0	6	6	2	2	2	3	24
4 : Lack of asset lifecycle guidance	1	3	0	0	0	8	8	5	5	3	2	35
17 : Unneeded asset	0	3	1	1	1	9	9	4	4	1	3	36

List of Publication and Research Outcomes

Journal Article

Hanis, Muhammad Hasbi, Trigunaryyah, Bambang, & Susilawati, Connie (2011) The application of public asset management in Indonesian local government: a case study in South Sulawesi Province. *Journal of Corporate Real Estate*.

Conference Paper

Hanis, Muhammad Hasbi, Susilawati, Connie, & Trigunaryyah, Bambang (2011) Asset identification: addressing the climate change in public asset management process. In *Proceedings of the 17th Pacific Rim Real Estate Society Conference*, Gold Coast, Australia.

Hanis, Muhammad Hasbi, Trigunaryyah, Bambang, & Susilawati, Connie (2010) Elements of public asset management framework for local governments in developing countries. In *8th International Conference on Construction and Real Estate Management (ICCREM 2010)*, 1-3 December 2010, Royal on the Park Hotel, Brisbane.

Hanis, Muhammad Hasbi, Trigunaryyah, Bambang, & Susilawati, Connie (2010) Measuring performance of municipal real estate: softening the impact of financial crisis to local governments. In *Proceedings of International Real Estate Research Symposium (IRERS) 2010*, National Institute of Valuation (INSPEN), Putra World Trade Centre, Kuala Lumpur.

Hanis, Muhammad Hasbi, Trigunaryyah, Bambang, & Susilawati, Connie (2010) Public asset management framework for local governments: opportunities and challenges for public asset managers. In *Proceedings of 2nd International Postgraduate Conference on Infrastructure and Environment*, Hong Kong Polytechnic University, The Hong Kong Polytechnic University, Hong Kong.

Hanis, Muhammad Hasbi, Trigunaryyah, Bambang, & Susilawati, Connie (2010) The significant of public asset management framework application for Indonesian local governments: Opportunities and challenges. In *Proceedings of 1st Makassar International Conference On Civil Engineering*, Clarion Hotel, Makassar, Province of South Sulawesi, Indonesia.

Other Relevant Outcome

Research Contributor: George E. Peterson & Olga Kaganova (2009), *Aligning Regulation of Sub-National Land Assets with Sub-National Debt Regulation*, World Bank.

Glossary of Indonesian Words

Agency for Financial and Development Supervision:	Badan Pengawas Keuangan dan Pembangunan (BPKP)
Bureau of Statistics Indonesia	: Badan Pusat Statistik (BPS)
Central Government Financial Report	: Laporan Keuangan Pemerintah Pusat (LKPP)
Central Government's Budget Revenue and Expenditure:	Anggaran Pendapatan dan Belanja Negara (APBN)
Cooperatives Enterprises	: Koperasi
Deconcentration and Co-Administration:	Dekonsentrasi dan Tugas Perbantuan (Dekon/TP)
Directorate General of State Asset Management:	Direktorat Jenderal Kekayaan Negara (DJKN)
District Education Office	: Dinas Pendidikan Kota/Kabupaten
General Allocation Fund	: Dana Alokasi Umum (DAU)
Government's Balance Report	: Laporan Neraca Pemerintah
Head of Bureau/Division of Equipment/General/Unit:	Kepala Biro Perlengkapan/Kepala Biro Umum
Health Regional Office	: Dinas Kesehatan Propinsi
Key Performance Indicator	: Indikator Kinerja Utama (IKU)
Local Government Financial Report	: Laporan Keuangan Pemerintah Daerah (LKPD)
Ministry of Finance	: Kementerian Keuangan
Ministry of Internal Affairs	: Kementerian Dalam Negeri
Provincial Government	: Pemerintah Propinsi
Provincial Government Divisions	: Dinas Pemerintah Propinsi
Regional Government's Budget Revenue and Expenditure:	Anggaran Pendapatan dan Belanja Daerah (APBD)
Regional Secretary	: Sekretaris Daerah (Sekda)
Regional Technical Implementation Unit	: Unit Pelaksana Teknis (UPT)
Regional Working Unit	: Satuan Kerja Perangkat Daerah (SKPD)
Special Allocation Fund	: Dana Alokasi Khusus (DAK)
State Administration Bodies	: Lembaga Administrasi Negara (LAN)
State's Audit Board	: Badan Pemeriksa Keuangan (BPK RI)
State's Owned Enterprise	: Badan Usaha Milik Negara (BUMN)
Technical Offices	: Kantor Teknis Daerah
The House of Representative	: Dewan Perwakilan Rakyat (DPR)
Working Unit	: Dinas