

2004

Can B2G portals be used effectively to stimulate business in SMEs?: A case analysis of the 2Cities Business To Government portal

Ian Martinus
Edith Cowan University

Follow this and additional works at: <https://ro.ecu.edu.au/theses>



Part of the [Entrepreneurial and Small Business Operations Commons](#)

Recommended Citation

Martinus, I. (2004). *Can B2G portals be used effectively to stimulate business in SMEs?: A case analysis of the 2Cities Business To Government portal*. <https://ro.ecu.edu.au/theses/1611>

This Thesis is posted at Research Online.
<https://ro.ecu.edu.au/theses/1611>

2004

Can B2G Portals Be Used Effectively To Stimulate Business In SMEs? : A Case Analysis Of The 2Cities Business To Government Portal

Ian Martinus
Edith Cowan University

Recommended Citation

Martinus, I. (2004). *Can B2G Portals Be Used Effectively To Stimulate Business In SMEs? : A Case Analysis Of The 2Cities Business To Government Portal*. Retrieved from <http://ro.ecu.edu.au/theses/1611>

This Thesis is posted at Research Online.
<http://ro.ecu.edu.au/theses/1611>

Edith Cowan University

Copyright Warning

You may print or download ONE copy of this document for the purpose of your own research or study.

The University does not authorize you to copy, communicate or otherwise make available electronically to any other person any copyright material contained on this site.

You are reminded of the following:

- Copyright owners are entitled to take legal action against persons who infringe their copyright.
- A reproduction of material that is protected by copyright may be a copyright infringement. Where the reproduction of such material is done without attribution of authorship, with false attribution of authorship or the authorship is treated in a derogatory manner, this may be a breach of the author's moral rights contained in Part IX of the Copyright Act 1968 (Cth).
- Courts have the power to impose a wide range of civil and criminal sanctions for infringement of copyright, infringement of moral rights and other offences under the Copyright Act 1968 (Cth). Higher penalties may apply, and higher damages may be awarded, for offences and infringements involving the conversion of material into digital or electronic form.

USE OF THESIS

The Use of Thesis statement is not included in this version of the thesis.

**Can B2G Portals be used effectively to stimulate Business in SMEs? A Case
Analysis of the 2Cities Business to Government Portal**

**By
Ian Martinus**

**A thesis submitted in partial fulfillment of the Requirements for the Award of
Doctor of Business Administration**

**At the Faculty of Business, Management Information Systems, Edith Cowan
University, Joondalup Campus**

Submitted April 23, 2004

ABSTRACT

Small and Medium Enterprises (SMEs) have many options when purchasing goods or services. These include personal contacts and networks, familiar centralised supply sources and other ad hoc means. One purchasing possibility is to buy from and sell to other businesses within a similar geographic area. The benefits of buying and selling locally may not occur to SMEs. They seek, like other consumers, to get value for money, fast and efficient service, and a reasonable level of quality. Many factors can impinge upon an SME's decision to purchase locally.

It can be assumed that, given a reasonable local option, SMEs wish to buy from and sell to other local businesses. It can also be reasonably expected that if government purchasers were willing to purchase within their geographic area, SMEs would be interested in supplying local government as well.

This study investigates SMEs in the Wanneroo and Joondalup Regions of Western Australia and considers the factors that may influence their decision to use the 2Cities Business-to-Government (B2G) portal.

The study is concerned with gaining an insight into particular phenomena from a participants' perspective (SME) with the researcher as the primary instrument for data collection and analysis. The study requires the researcher to get close to the natural setting of the study and interact with the small business owners.

This study triangulated results from three major sources. One source of data was contemporary Wanneroo and Joondalup secondary data gathered from research reports relating to local SME matters. This was combined with the semi-structured interviews of forty SMEs and two focus groups. Participant SMEs were invited to discuss factors affecting their decision to use or not use the 2Cities B2G portal.

SMEs have a clear perception of what impedes and assists them in running their business and this comes through strongly. The problem facing the 2Cities portal management board is the extent to which it can influence the SME decision to buy and sell within the local area using the portal. The results form the basis of an improved model for B2G participation.

Keywords: *Small-and-Medium Enterprises (SMEs), small business, portals, Business-to-Government (B2G), Business-to-Government portals*

DECLARATION

I certify that this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any institution of higher education; and that to the best of my knowledge and belief it does not contain any material previously written by another person except where due reference is made in the text.

Date 23 August, 2004

ACKNOWLEDGEMENTS

I would like to thank Associate Professor Dieter Fink for his patience and perseverance throughout this entire journey that began in 2001. A special thanks to Professor Janice Burn who seems to have an extraordinary ability to digest, review and reshape this type of work. To James Ridgway, your assistance has helped immeasurably. To Craig Valli and Greg Rob El Khalili was a walk in the park compared to this. Thanks for your drive and when times got tough.

To the original Martinus family, Len, Barbara and Nigel. Your strength and encouragement over the decades has shown me that life achievements can be made in bit-sized pieces, but the ingredients need to be carefully chosen.

To the new Martinus family, Kirsten, Kian and Ciana, I offer this to you. If not for your sacrifice, this page could not have been written. If not for your love, the lonely weeknights and weekends would have been impossible to bear. To you guys, I owe everything.

Thanks and genuflection to Kirsten for painstakingly taking on the unenviable task of editing the final versions of the thesis. To all the Beins', Martinus', Buehrigs' and Bergmeyers' whom have gone before, your inspiration is appreciated.

Finally, I would like to recall a 'moment' I had while rummaging around in the 300.72 section of the UWA Reid Library. It was during the Summer 2003 vacation period when only social misfits and doctoral students scavenged the shelves. I suddenly felt the urge to scribble down my version of the meaning of life. It read "Love, Laugh and Let Live...strive to be yourself without stepping on others."

TABLE OF CONTENTS

ABSTRACT.....	II
DECLARATION.....	III
ACKNOWLEDGEMENTS.....	IV
TABLE OF CONTENTS.....	V
TABLE OF FIGURES.....	VIII
LIST OF TABLES.....	IX
1 CHAPTER 1 - INTRODUCTION.....	1
1.1 THE BACKGROUND OF THE STUDY.....	1
1.1.1 Australian Federal Government.....	2
1.1.2 The New Economy	3
1.1.3 Business Definitions	4
1.1.4 Small & Medium Enterprises.....	5
1.1.5 SME Purchasing and Government Assistance.....	5
1.1.6 The Local Context.....	6
1.1.7 Portals.....	7
1.1.8 Community Portals.....	8
1.1.9 Business/Community Portals.....	9
1.2 THE PURPOSE OF THE STUDY.....	10
1.3 THE SIGNIFICANCE OF THE STUDY.....	11
1.4 BENEFITS OF THE STUDY.....	12
1.5 RESEARCH QUESTIONS.....	14
1.6 THESIS ORGANISATION.....	14
2 CHAPTER 2: LITERATURE REVIEW.....	16
2.1 GOVERNMENT ISSUES.....	18
2.1.1 E-Government.....	18
2.1.2 Business-to-Government Portal Development.....	18
2.1.5 Online Ordering & Fulfillment	21
2.1.6 Rules of Engagement & Practice.....	21
2.1.7 Needs of Local Buyers.....	22
2.2 SME ISSUES.....	23
2.2.1 Local Supply Opportunities.....	23
2.2.2 Current Use of Web Technologies.....	24
2.2.3 Physical Location	25
2.2.4 Access to Telecommunications.....	26
2.2.5 Lack of Management Training and Lack of Time	28
2.2.6 Financial Resources.....	29
2.2.7 Lack of Skills	30
2.2.8 SME Lack of Size.....	32
2.3 GOVERNMENT ASSISTANCE & TRAINING.....	33
2.4 CHAPTER 2 SUMMARY.....	36
3 CHAPTER 3: RESEARCH DESIGN.....	39
3.1 CHAPTER OVERVIEW OF THE PROBLEM.....	39
3.2 THE 2CITIES CASE.....	40

3.2.1	The Need for 2Cities	40
3.2.2	The Region	40
3.2.3	The Services	41
3.2.4	Business Flyer Pages	41
3.2.5	Regional Electronic Marketplace (REM)	41
3.3	RESEARCH PHILOSOPHY	43
3.3.1	Paradigm Base	43
3.4	INTERPRETIVIST APPROACH	45
3.4.1	Action Research	45
3.4.2	Grounded Theory	46
3.4.3	Ethnography	46
3.4.4	Case Study	46
	RELIABILITY, VALIDITY AND TRANSFERABILITY	50
3.5	INTERVIEWING AND GENERALISATION	51
3.6	CALCULATING AN ADEQUATE SAMPLE SIZE	53
3.7	SME TARGET POPULATION	53
3.7.1	Operationalising the Variables	55
3.8	RESEARCH METHODS	57
3.8.1	Views of the Researcher	57
3.9	ETHICS CLEARANCE	57
3.10	BENEFITS OF BACKGROUND KNOWLEDGE	58
3.11	THE INTERVIEW METHOD	59
3.12	INTERVIEW SCHEDULE	59
3.13	PILOT TEST	60
3.14	INTERVIEW SETTING & QUESTIONS	61
3.14.1	Advantages of Interviewing	62
3.14.2	Minimising the Limitations of Interviewing	63
3.14.3	Lack of Anonymity	64
3.14.4	Interviewer Neutrality	64
3.15	CONDUCTING AN INTERVIEW	65
3.15.1	Use of Open-ended Questions & Interviewer Contamination	66
3.16	TRANSCRIPTS OF INTERVIEWS	67
3.17	SECONDARY SOURCES OF INFORMATION	68
3.18	STRENGTH OF USING THE TRIANGULATION METHOD	69
3.19	FOCUS GROUPS	70
3.19.1	Focus Group Participants and Choice of Participants	70
3.20	CHAPTER SUMMARY	72
4	CHAPTER 4: ANALYSIS AND FINDINGS	73
4.1	N*VIVO DATA ANALYSIS TOOL	73
4.1.1	Functions of N*Vivo	75
4.2	DESCRIPTIVE ANALYSIS	77
4.3	SME INTERVIEW RESULTS	77
4.4	INTERVIEW SUMMARY	113
4.5	FOCUS GROUP RESULTS	115
4.4.1	Q1: "How do you see your business' uptake of new technologies and skills?"	117
4.4.2	Q2: "Would exposure to a local market through electronic means be beneficial?"	117
4.4.3	Q3: "What frustrations and challenges do you have in your business (emphasis on ICT, business practices and tools)?"	119
4.5	FOCUS GROUP SUMMARY	121
4.5.1	Inter-Rater Reliability	122
5	CHAPTER 5 - DISCUSSION AND CONCLUSION	123
5.1	SUMMARY OF THE MAIN FINDINGS	123
5.2	DEPENDENT VARIABLES ACTING AS INHIBITORS OR FACILITATORS	123
5.2.1	Q1. What are the facilitators that encourage SMEs to trade through a business-to-government portal?	124
5.2.2	Q2 What are the inhibitors that discourage SMEs to trade through a business-to-government portal?	128

5.2.3	Q3. What are the moderating influences on facilitators and inhibitors to trading through a business-to-government portal such as the size, age and type/nature of SME? ...	132
5.2.4	Q4. How can these form the basis for an improved model of B2G participation for SMEs?	135
5.2.5	Derived Outputs	139
5.2.6	SME Barriers to Overcome	139
5.2.7	Next Steps	141
5.3	LIMITATIONS OF THE STUDY	144
5.4	RECOMMENDATIONS FOR FURTHER STUDY	146
REFERENCES		148
APPENDIX A – INTERVIEW QUESTIONS		A
6 APPENDIX B – REGIONAL BUSINESS-TO-GOVERNMENT PORTAL PROJECT OVERVIEW		C
7 APPENDIX C – ETHICS CLEARANCE (EDITED VERSION)		L

TABLE OF FIGURES

FIGURE 1.1: GRAPHICAL REPRESENTATION OF THESIS LAYOUT	2
FIGURE 1.2: 2CITIES INTERNET GATEWAY HOMEPAGE	9
FIGURE 1.3 FOCUS OF THESIS: CONCENTRATION ON THE BUSINESS COMPONENT OF 2CITIES PORTAL	11
FIGURE 2.1: LITERATURE REVIEW: MAIN ISSUES	17
FIGURE 3.1 CHAPTER OUTLINE	39
FIGURE 3.2: 2CITIES REM LAUNCH PAGE	42
FIGURE 3.3 BURRELL AND MORGAN'S FOUR PARADIGMS (1979)	43
FIGURE 3.4: GRAPHICAL REPRESENTATION OF VARIABLES WITHIN THE 2CITIES CASE STUDY	56
FIGURE 3.5: TRIANGULATION OF RESEARCH METHODS	69
FIGURE 4.1: N*VIVO CONTROL CONSOLE	74
FIGURE 4.2: 2CITIES INTERVIEW TRANSCRIPT IN N*VIVO	75
FIGURE 4.3: CODED TRANSCRIPT WITH CODING NODES IN N*VIVO	77
FIGURE 4.4: 2CITIES REGIONAL BUSINESS-TO-GOVERNMENT PORTAL (REM) PROCUREMENT DEMONSTRATION	98
FIGURE 5.1: ENHANCEMENT MECHANISMS FOR SME'S	136

LIST OF TABLES

TABLE 2.1: ORIGIN OF INTERVIEW ITEMS (MAP DIRECTLY TO INTERVIEW QUESTIONS – SEE APPENDIX A).....	35
TABLE 2.1: ORIGIN OF INTERVIEW ITEMS (CONTINUED).....	36
TABLE 3.1: CHARACTERISTICS OF CASE STUDIES (BENBASAT ET AL., 1987, P.34).....	48
TABLE 3.2: AUSTRALIAN NEW ZEALAND STANDARD INDUSTRIAL CLASSIFICATION CODES (ANZSIC).....	54
TABLE 3.3: JONES (1985) INTERVIEW SCHEDULE MODEL.....	59
TABLE 3.4: QUESTION FRAMEWORK.....	60
TABLE 3.5: ADVANTAGES OF INTERVIEWING (ADAPTED FROM MARSHALL & ROSSMAN, 1995; WALKER, 1985).....	63
TABLE 3.6: THE USE OF OPEN-ENDED QUESTIONING (ADAPTED FROM FINK, 1995).....	67
TABLE 4.1: WHAT IS YOUR OPINION OF DEALING WITH LOCAL SUPPLIERS?.....	78
TABLE 4.2: HOW WOULD THE USE OF IT IMPROVE YOUR CUSTOMER SERVICE?.....	80
TABLE 4.3: IN YOUR OPINION, IS THERE A NEED FOR ELECTRONIC BUSINESS WITHIN MANUFACTURING AND DISTRIBUTION?.....	81
TABLE 4.4: HOW WOULD GOVERNMENT SUPPORT THROUGH TRAINING ASSISTANCE HELP BUSINESS BECOME INTERESTED IN LEARNING ABOUT THE INTERNET & ITS APPLICATIONS?.....	83
TABLE 4.5: HOW COULD SMALL BUSINESS DEVELOPMENT CENTRES HELP YOUR LEARNING ABOUT E-BUSINESS?.....	85
TABLE 4.6: HOW COULD THE WEB OFFER YOUR BUSINESS A BETTER ALTERNATIVE TO TRADITIONAL MEANS OF DOING BUSINESS?.....	86
TABLE 4.7: DO YOU FEEL THAT SPENDING MONEY ON ICT IS A LUXURY RATHER THAN A NECESSITY?.....	88
TABLE 4.8: WHAT IS YOUR OPINION ABOUT THE COST OF SETTING UP AND MAINTAINING AN IT NETWORK FOR YOUR BUSINESS?.....	89
TABLE 4.9: HOW COULD THE USE OF IT OPEN UP OTHER REGIONAL MARKETS TO YOUR BUSINESS?.....	91
TABLE 4.10: HOW WOULD A BETTER TELECOMMUNICATIONS NETWORK (I.E. TELSTRA) AFFECT YOUR DECISION TO USE THE INTERNET FOR BUSINESS?.....	92
TABLE 4.11: HOW WOULD IMPROVED COMMUNICATIONS HELP OVERCOME BEING LOCATED IN A REMOTE BUSINESS LOCATION?.....	94
TABLE 4.12: IN WHAT WAYS WOULD LEARNING WEB TECHNOLOGIES INCREASE BUSINESS-EARNING POTENTIAL?.....	96
TABLE 4.13: HOW WOULD BEING ABLE TO SEARCH ON THE INTERNET FOR QUOTES BE SOMETHING THAT WOULD BE OF VALUE TO YOU?.....	97
TABLE 4.14: WHAT DO YOU THINK ABOUT THE NEED TO CONSTANTLY UPGRADE COMPUTER SKILLS TO KEEP UP WITH THE MARKET?.....	101
TABLE 4.15: WOULD THERE BE ANY VALUE IN OFFERING BUSINESS MANAGERS OPPORTUNITIES FOR SHORT COURSES TO PROMOTE WIDER USE OF NEW TECHNOLOGIES?.....	103
TABLE 4.16: HOW COULD THE USE OF TECHNOLOGY SPEED UP BUSINESS FOR CUSTOMERS AND ALLOW YOU TO FOCUS ON OTHER ACTIVITIES?.....	104
TABLE 4.17: WHAT IS YOUR VIEW ON THE USE OF A COMPUTER AS AN ELECTRONIC ASSISTANT?.....	106
TABLE 4.18: WHAT DO YOU THINK ABOUT THE PERCEPTION THAT THERE IS A HIGH COST ASSOCIATED WITH USING THE INTERNET?.....	108
TABLE 4.19: HOW WOULD YOU MEASURE WHETHER OR NOT THIS BUSINESS TOOL (THE INTERNET) HAS BEEN A SUCCESS FOR YOU?.....	109
TABLE 4.20: WHAT ARE YOUR VIEWS ON 24 HOUR/DAY, 7-DAY/WEEK CUSTOMER SUPPORT DEMANDING UNJUSTIFIABLE RESOURCES FROM YOUR BUSINESS?.....	111
TABLE 4.21: FOCUS GROUP SESSION INFORMATION.....	116
TABLE 4.22: FOCUS GROUP SESSION THEMES.....	116
TABLE 5.1: ANZSIC CATEGORIES AND RELEVANT STATISTICS.....	133

CHAPTER 1 - INTRODUCTION

1.1 The Background of the Study

This thesis investigates the facilitators and inhibitors to SMEs using the 2Cities Business-to-Government Portal. It examines data from a range of sources with the intention of providing a balanced viewpoint to the research questions posed. The point of view is from the SME, with the government view not being addressed. The decision was taken to concentrate solely on the SME viewpoint due to time and sample size constraints.

The Australian economy is attempting to leverage public and private sector initiatives to allow it to be competitive in the international marketplace. Relationship building can occur when the cooperation of public support and facilitation is coupled with private investment and expertise. The Internet is a useful medium to enhance these relationships by connecting government to business services. One example can be found in the United States economy where an active Chamber of Commerce is involved in this type of activity setting up local buying from government (D'Alessandro, 2003; Zawada, 2004).

The Internet can be used by SMEs to their advantage as a means to attract and retain new customers and suppliers. The focus on SMEs is particularly relevant in the West Australian regional context, as they are the main driver in these local economies (Fink & Venkatesan, 2001). This research analyses both the business-to-government relationship and the role of the Internet in facilitating a commercial relationship between them. This relationship has received greater attention in recent times, and has been promoted widely by the Western Australian State government as affecting the strength of local economies (Wanneroo Times, 2003). All levels of government, local, state and federal, are needed to make a co-ordinated effort in assisting SMEs do greater business with government.

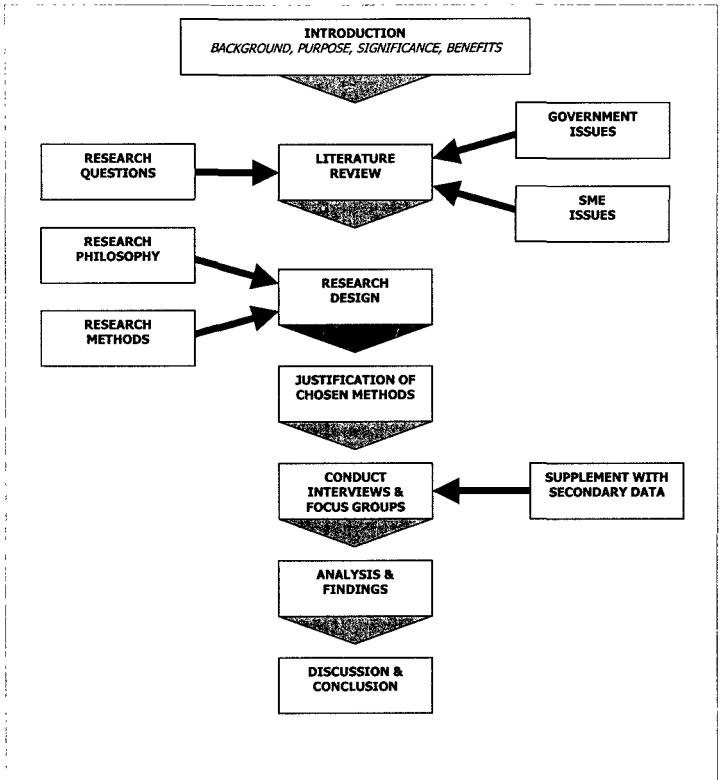


Figure 1.1: Graphical representation of Thesis layout

1.1.1 Australian Federal Government

In Australia, the federal government plays an important role in assisting economic growth. Federal departments and agencies such as the National Office for the Information Economy (NOIE), and the Commonwealth Scientific & Industrial Research Organisation (CSIRO) Internet Innovation Centre are examples of driving

forces aiming to push the boundaries of innovation. This is done mainly through the development of projects within a framework covering broad strategy areas. These include improving service delivery in government, business and community sectors use of Internet technologies, taking a leadership role in allowing business to access government and using technology to help transform government activities (NOIE, 2004).

Australia's strategic online framework is built around the federal government's strategy known as "Government Online". Within the range of strategic priorities, agencies are encouraged by NOIE to take full advantage of the opportunities provided by the Internet, including the transition of government business operations into the online environment. Since 1996, the federal government has invested more than \$9.4M in 94 projects in areas such as agriculture, health and pharmaceuticals, building and construction, automotive and welfare through the Information Technology Online program (NOIE, 2004). The main objective of this program is to encourage collaborative industry-based projects aiming to accelerate the adoption of business-to-government commerce, especially within the SME sector. The ultimate aim of the NOIE campaign is to aid the transition of Australian small business into the New Economy.

1.1.2 The New Economy

Much has been written about what it means to be in the New Economy. This term, whilst difficult to define, has roots within the social science field of economics. Alcala (2003) argues that increases in productivity growth rates linked to an increasing use of Information and Communications Technology (ICT) define the "New Economy". He points out that a critical mass of ICT users is needed in order for noticeable changes in productivity to occur, as users gradually and incrementally learn how to use the new technology.

The case is made for higher productivity growth through advances in ICT (Alcala, 2003). Investment in, and commitment to, long-term technology-based projects and business process improvements are the focus for organisations within the context of the New Economy (Jainschigg, 2003).

The driving force behind productivity growth is demand-driven spending. Government policies should heed some of the wisdom of demand-side economic theory coupling productivity with government commitment to spending in areas that can lead to positive economic outcomes (Krugman, 1999). Government driven investment and spending can influence the expansion of the economy and aid competitiveness. Alende (2003) gives another interpretation of what it means to be in the New Economy, and argues that the fundamental changes made in the dotcom era of the 1990's has led to new types of work relationships and communication.

The terms small business and SMEs are used differently depending on where in the world they are being used, by whom, and for what purpose. The following section defines these for the purpose of this study.

1.1.3 Business Definitions

The Australian Bureau of Statistics (2002) definitions of businesses will be used.

- Micro business - businesses employing less than five people
- Other small businesses - businesses employing five or more, but less than 20 people
- Small business - businesses employing less than 20 people
- Medium business - businesses employing 20 or more people but less than 200
- Large business - employing 200 or more people

Businesses employing less than five people often constitute the majority of businesses within a region. Over 60% of businesses in the Wangara Industrial Estate match the definition requirements of a micro business (Fink & Venkatesan, 2001). Only 13% of the businesses employed more than 20 and less than 200 employees, therefore categorised as medium businesses. In Western Australia in 2001, 87,700 small businesses operate either at home or from home. These businesses made up two thirds of small businesses (WA Business News, 2003).

As previously stated, this study refers to SMEs as any business employing between one and two hundred people.

1.1.4 Small & Medium Enterprises

Part of the government commitment to increase productivity through competitiveness is the focus on SMEs. SMEs are generally thought of as a conservative class of business spending the majority of its time involved in the operational side of business (Fink & Venkatesan, 2001). Little has been done in the past to look at the processes followed by small business when purchasing or supplying.

Information and Communications Technology (ICT) can come in the simple form of email and Internet-based applications (Luchetti & Sterlacchini, 2004). Davenport (1995) points out that ICT is only useful if it helps people do their work better and differently. This holds true for SMEs as they look at manageable ways of surviving in their own small market space (Mower, 2001; Underhill, 2001). The first step is to understand what ICT is and how it can be used to improve the way SMEs are run (Dresner et al., 2001). The second is self-examination of how they have previously conducted business processes and practices, evaluating ways to effectively incorporate the use of ICT.

1.1.5 SME Purchasing and Government Assistance

All levels of government are seeking to assist SMEs to participate in the government purchasing and procurement processes. Evidence of this is the Western Australian example of a government-purchasing platform seeking to engage SMEs. The Government B2G portal is an online buying service where government purchasers can find SMEs willing to supply to government. The Government Electronic Marketplace (GEM) is an environment of low dollar value; high volume buying through quotes and contracts. The GEM marketplace has processed 50,000 purchase orders since its launch in July 2001 (GEM, 2003).

Unfortunately, SMEs are considered quite slow when it comes to purchasing through electronic systems (Telstra, 2000). Government is incrementally increasing

the skill base and comfort level of SMEs in the use of electronic mediums (NOIE, 2004). Further, it must assist with opportunities for SMEs once they gain confidence in using the Internet for transacting. This can be through electronic marketplaces or using the Internet to access business information.

The term Business-to-Government (B2G) is used in this thesis to represent the electronic relationship that exists between business and government. This relationship is transaction-based, meaning the two parties come together to achieve a business result. SMEs desire a business result (e.g. more business and contracts in their local area) and government hopes to facilitate business operations through assistance (e.g. easier permits/licence approvals, commercial/industrial information, statistics etc.).

1.1.6 The Local Context

The previous sections have shown the promoter role the Australian Federal Government plays with respect to engaging the SME sector in the New Economy. For the purposes of this research, the foci will be on the Wanneroo and Joondalup region of Western Australia located within the Perth metropolitan area.

The Wanneroo and Joondalup regions boast the second fastest growing local government area within Australia (Australian Bureau of Statistics, 2002). Growth of this nature can usually attract attention and funding for project-based initiatives from the federal government. The 2Cities project received Regional Assistance Program (RAP) from the Department of Workplace Relations & Small Business funding in early 2001 to appoint a project manager to co-ordinate the development of the concept (see Appendix B).

The 2Cities Internet portal project, henceforth called '2Cities', is an initiative created at the local level with federal government financial support by a private/public stakeholder group. It recognises the demand from its small business sector for greater business-to-government (B2G) and business-to-business (B2B) connectivity.

Since 1999, representatives of the small business sector, namely the Wanneroo Business Association and the Joondalup Business Association, expressed the desire for a greater opportunity to trade with the local government in its local area (Wanneroo Business News, 2001). The Wanneroo Business Association (WBA) promoted 2Cities as a vehicle allowing SMEs the opportunity to quote to local government for goods and services required (Wanneroo Business Association, 2002). The discretionary expenditure from the City of Wanneroo (situated north of Perth) is quite significant and a large percentage of its expenditure leaks out of the local economy and into other regions of the Perth metropolitan area and beyond (City of Wanneroo, 2003).

A detailed study of 200 businesses for the Wangara Industrial Park located in the City of Wanneroo and completed in August 2001, found that over 30% of businesses in the park transacted with government (Fink & Venkatesan, 2001). A number of businesses gained work with the tendering system often involving response to a Request for Tender, Proposal or Quote (Fink & Venkatesan, 2001). Given that less than 15% of Wangara businesses transact through the Internet, this study explores what prevents and what assists the natural connection between the buy side (local government) and the supply side (local SMEs).

1.1.7 Portals

A portal can be described as an online World Wide Web resource allowing a user to launch from it to many other sites, resources and services via the use of hyperlinks (Philips, 1998; O'Leary, 2001). The SME user can list its business' goods or services offered in the form of a Web page and containing information about the business, contact information, product and service description and possibly even facilities allowing a customer to order and pay on the site.

The one-stop-shop approach has been popular, where many products and services can be sourced from one central location (or portal). New approaches and frameworks are constantly being developed such as vertical portals that solely concentrate on selling only one particular type of product or service. An example of

this is the Chinese agricultural sector portal built specifically for Chinese Farmers (World IT Report, 2003).

The literature supports the view that portals are an aggregator of information and facilitator of transactions, both intellectually and physically (Choi & Graham, 2001; Mirchandani & Motwani, 2001; Premkumar & Roberts, 1999).

The dominant feature of a regional portal is local content from a limited geographic area. It can be a positive and powerful attractor for both local residents and tourists wanting either generic or specific information. O'Leary (2000) outlines an opportunity in business portals to be made from dealing with steady, service-minded business buyers.

There has been much activity and development in the state of Western Australia in business and community portals. In 1999, the Peel region of Perth launched their Peel Online portal, with others since following. The two types of portals, namely business and community, are distinguished through the emphasis on the different services offered within their site.

1.1.8 Community Portals

A community portal focuses heavily on the provision of local community information and typically targets local groups (sporting, religious, youth, senior etc.) and offers community information about events and activity options. The Albany Gateway portal is an example of this type of approach. Developed in 1999 in conjunction with Edith Cowan University, it has evolved into a community site featuring local news, access to local employment and local community groups, small business and events (www.albanygateway.com.au).

1.1.9 Business/Community Portals

As financial sustainability is desirable, this second type of portal has emerged in an attempt to secure a recurring revenue stream to sustain the business model. Despite community information being provided free of charge to community groups, there is a cost associated with maintaining this service, the majority being wages to the project manager and the Internet Service Provider (ISP) services provision and maintenance. An ISP stores the information on their equipment (hosting) for a charge. The small business side of portals was seen by some portal projects as a way to ensure cash flow back into projects with known monthly operational expenses needing to be covered. Services being offered in a fee-for-service arrangement include: business listing subscriptions; business Web pages and business quote request systems.



Figure 1.2: 2Cities Internet Gateway Homepage

The main objectives of many of these portals are to encourage SMEs to be more aggressive in their take-up of business opportunities and to encourage them to work with other local enterprises in their region (Philips, 1998). Examples of business-focused portals include 2Cities, Peel Direct, the portal for the Peel region (www.peeldirect.com.au) and the BizeWest portal in Melbourne.

Another example of a small business subscription-based venture is the MySouthWest portal (www.mysouthwest.com.au) covering the Bunbury region in Western Australia. This business/community portal incorporates the ability for member businesses to reply to quote requests from consumers (other businesses or households) searching for products and services within a specific and pre-determined geographical area.

There has been the suggestion that the business portal market may need to be driven by subsidy for the first few years to allow break-even. Financial backing can come from private investors or private companies, such as land developers as they look for ways to integrate land releases with attractive business projects (Martinus, 2001).

The business focus of the 2Cities portal, allowing the user to access the business section of the portal from the front page of the site, is presented in Figure 1.2.

1.2 The Purpose of the Study

What appears to be lacking in the Western Australian marketplace is the ability for SMEs to trade with government through the electronic medium of a portal. The 2Cities project of the Wanneroo and Joondalup regions has developed a Regional Electronic Marketplace (REM) on 2Cities to facilitate government buying in its local area.

Demand for this service is well documented in business association literature dating back to 2000 where there were calls for increased small business opportunities (Wanneroo Business News, 2000). The rationale for the 2Cities project is underlined by the possible benefits of allowing greater trade to occur between local government and local SMEs.

The purpose of the study is to investigate how certain independent variables affect Wanneroo and Joondalup SME's decisions to utilise the B2G component of

the 2Cities portal. The benefit to SMEs will be delivered through a new model highlighting improvements to the ways in which SMEs participate in the electronic world of commerce.

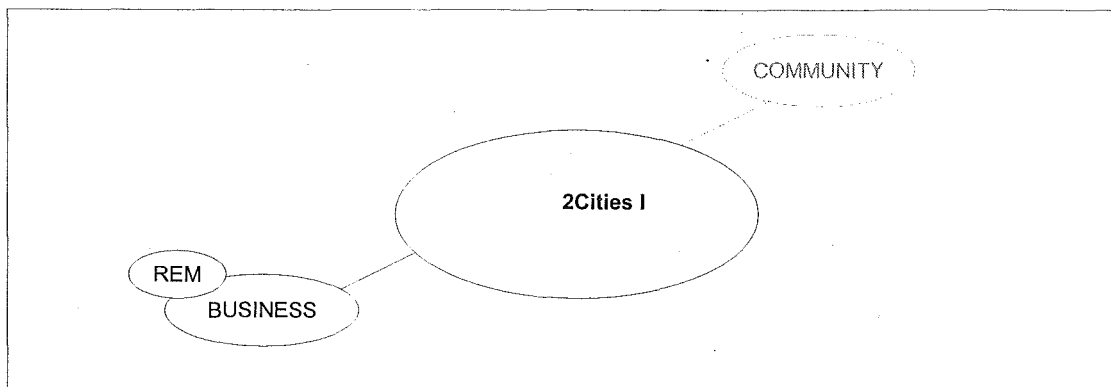


Figure 1.3 Focus of Thesis: Concentration on the business component of 2Cities Portal

From Figure 1.3 (above) the sole focus of the single case study approach is the business component of the 2Cities portal. Other areas of the portal, including the community component are not explored.

1.3 The Significance of the Study

Past research has developed models and presented case studies investigating ICT adoption among SMEs (Fink, 1998; Swatman, 2000). Given that portals themselves are a relatively recent phenomenon, B2G transaction possibilities, benefits and take-up rates do not appear to have been explored in any depth.

The dependent variable in this study is successful market trading for SMEs through the 2Cities B2G portal. The independent variables include the facilitators and inhibitors to SME utilisation of such a portal. Facilitators are defined as factors lending assistance to the take-up of a portal. For the purposes of this study, they are documented within the literature and include factors such as supply, government assistance and training programs, and the current use of World Wide Web technologies. The inhibitors include physical location (and isolation from networks and key critical infrastructure), lack of skills, lack of management training, lack of time and lack of financial resources within the SME community.

1.4 Benefits of the Study

This study contributes to research investigating the portal phenomenon, in particular, portals with the business objective of increasing transactions between business and government instruments. The portal model has evolved considerably over the past decade. Combined with the changing nature of ICT, SME sophistication and the strategic platform of government purchasing, research interest in this area has also increased. The benefit of this study to researchers of B2G portals is the improved model for B2G Participation.

Benefits to flow on to SMEs include a greater understanding of ICT drivers and relevant applications, and the position that government, in particular local government, has taken to assist local purchasing and assistance to SMEs.

Finally, benefits will flow directly to the ongoing project management of the 2Cities portal as it continually enhances its product offering to stakeholders. The ability to constantly refine services within the portal and the ways in which this information is accessed and displayed derives two key benefits.

- The first benefit is for existing users, that is, businesses that have signed up to be a part of the portal, and have their business information displayed on the site. They can continually refine the way in which their business is displayed and the way in which they are located through their portal listing.
- The second benefit for the management committee and the sales and marketing division of 2Cities is the ability to refine the product offered to SMEs. This allows the sales team to stress the points of differentiation offered by the portal, and the value for money proposition of purchasing a Regional Electronic Marketplace (REM) account and business flyer page within 2Cities.

A critical success factor of the REM is that it offers a transactional meeting point for suppliers wishing to enhance their network and buyers wanting the natural

advantages of sourcing locally. There is an opportunity for SMEs to further learn how to get their sales message out into the local community, and thus, the potential to refine their product or service. This may take the form of new types of communication, advertising and marketing.

Although unique to the local conditions of the Wanneroo and Joondalup region, there may be underlying themes that appeal to other entities considering similarly styled public/private initiatives. The Western Australian State Government may be interested in exploring the modus operandi of certain areas of the 2Cities portal in relation to their dealings with SME suppliers. A review of the Government Business-to-Government portal (GEM) instituted in 2001 has recommended more effort be put into enlisting small business as suppliers to State Government. The online marketplace (B2G Portal) where agencies can buy goods or services from thousands of registered suppliers is said to be revolutionising Government buying (Wanneroo Times, 2003).

If it can be shown that there are some significant and dominant facilitators and inhibitors for this new form of ICT adoption, then subsequent government policies encouraging investment and market development could change the way SMEs deal with government. The emergence of dominant variables will also influence the way government policy and initiatives strengthen the relationship between local government and local SME suppliers.

Within the past few years, economic development at the local level has been given priority as a key driver for sustainable development, as evidenced in the City of Wanneroo Strategic Plan (City of Wanneroo, 2002). The 2Cities project is one such venture attempting to marry and harness several of the triple bottom line initiatives linked to social, environment and economic directives.

It is hoped that this study can contribute to local employment generation by raising the level of interest in SME ventures and skills in the use of the Internet and related technologies.

1.5 Research Questions

The following four research questions will be addressed in this study.

1. What are the facilitators that encourage SMEs to trade through a business-to-government portal?
2. What are the inhibitors that discourage SMEs to trade through a business-to-government portal?
3. What are the moderating influences on facilitators and inhibitors to trading through a business-to-government portal such as the size, age and type/ nature of SME?
4. How can these form the basis for an improved model of B2G participation for SMEs?

1.6 Thesis Organisation

Chapter Two as the literature review, is broken up into two streams of study. The first being Government issues, including contemporary issues facing Government in the New Economy. An example is the investigation of existing Government practices and ambitions in the area of electronic services delivery. This includes e-Government, business-to-government portal development, local government & electronic servicing.

The second part of the literature review investigates SME and small business issues. Included are local supply opportunities, current use of Web technologies, telecommunications access and financial resources. Government and small business issues converge at a point best helped by Government assistance and training. All of these main subject areas are presented and analysed.

Chapter Three describes the research methodology, including research design, samples of SMEs and subjects of the study, data collection, interview design, interview framework considerations, pilot testing of interviews, the interview process, secondary data identified and used, and the conduct of the focus groups.

Chapter Four outlines the analysis and findings of the interviews and focus groups. It includes the data captured and entered into N*Vivo software, and results obtained.

Chapter Five discusses and summarises the main findings. This chapter arranges the findings into the implications of B2G initiatives, and presents an improved model for B2G participation. The significance and limitations of the study are covered, and alternatives for future research presented.

CHAPTER 2: LITERATURE REVIEW

This chapter reviews what is known to date about the effects of certain key variables on B2G relationships with particular reference to SMEs. The chapter is divided into two main areas; Government issues and SME issues (refer Fig 2.1). It should be noted that some of the issues discussed are common to both Government and SMEs. For example, telecommunications access and availability affects government and its attempt to deliver services, and SME's goal of maintaining and increasing its online market share.

All of the explanations below regarding the separation of government and business issues were brought together and represented in Figure 2.1 to allow the reader to follow the logic of the chapter at a quick glance.

The Government issues concern the delivery of services in the New Economy. Within this, the author reviews the literature on E-Government, Business-to-Government (B2G) portal development, local government and electronic servicing, local supply opportunities, online ordering and fulfilment, rules of engagement and practice and the needs of local buyers.

The second part of the chapter looks at SME issues and the subsections thereof. As SMEs attempt to maintain their competitiveness on a local and global scale, some key themes are investigated through the literature. They are: current use of Web technologies, physical location of the business, access to telecommunications, lack of skills, lack of management training, lack of time and financial resources.

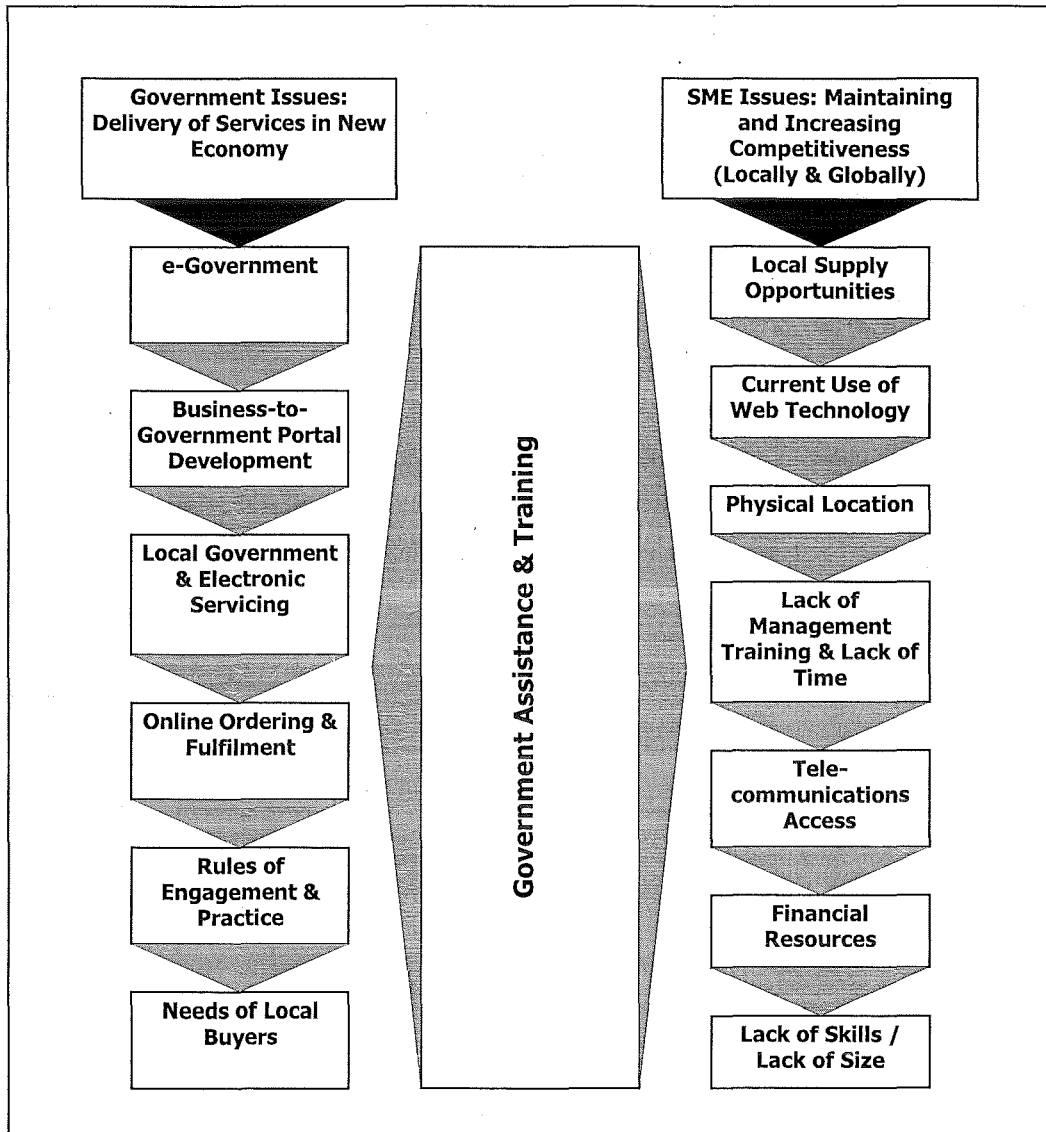


Figure 2.1: Literature Review: Main Issues

2.1 Government Issues

2.1.1 E-Government

Businesses can choose their customers and target markets, whereas this is more difficult for government to do. Businesses can develop their business plan to suit the good or service that they will take to the market. Government, on the other hand, often has governance and decision-making authority over a certain geographical area. It also often enjoys a monopolistic advantage regarding the rate and timing of service delivery.

Government is attempting to build online capabilities and resources that can benefit SMEs and other customer bases. An example of this is the availability of online licences and permits (Symonds, 2000a). It is acknowledged that government will need to invest in a wide range of IT products and services to build and extend these capabilities (Sood, 2001; Dean, 2000; Symonds, 2000b). Two immediate areas of investment include the upgrade of telecommunications infrastructure to services such as broadband and wireless networks as well as investments into new business processes associated with new Web initiatives (Piatt, 2000).

Parallel to upgrading infrastructure and the development of new business processes emerge the dual dangers of government over-regulation of Internet-based trade activities and problems associated with security and privacy (Harkness, 2001; Swatman, 2000; Matthews, 2000). In a cautioning tone about the evolution of government services in the electronic environment, the perceived problems of security and privacy are not only limited to the private sector (Said, 2000; Neeley, 2000). These problems will impact equally, if not to a greater extent, on government attempts to roll out government initiatives incorporating technology applications.

2.1.2 Business-to-Government Portal Development

Many of the issues from section 2.1.1 spill into the area of business and government exchanging goods and services. The development of this new type of exchange relationship is in the early stages, but some trials have shown strong opportunities for development and success (Sood, 2001). The public/private

partnership model in Queensland, Australia, shows government and a number of private sector collaborators, including Unisys and Microsoft, coming together to deliver an electronic-community portal to allow SMEs to find new market opportunities (Parker, 2003). The portal provides business and government the opportunity to share information through interaction and participation.

New models may offer government agencies a way to realise efficiencies by eliminating wasteful practices and promoting consistent purchasing processes (Slywotsky & Morrison, 2001). For this to occur, the transformation of core business processes and the strategic benefits of doing so need to be examined (Sood, 2001). Membership within B2G portals can allow businesses to check prices of products and the status of their online trading as well as access product catalogs. The aim is to increase membership in online marketplaces with a strong emphasis on content.

Business-to-Government portals can fail to meet the expectation of developers and potential business customers (O'Leary, 2000). Software vendors have been criticised for failing to meet suppliers' expectations in online marketplaces (Ohlson, 2001). A lack of supplier engagement is given as a reason why online marketplaces have not lived up to expectations (O'Leary 2001). Further, a large number of SMEs have been slow to embrace electronic business because of confusion about the technology and its benefits, which may be due to the type of product offered to the SME customer (Simes, 2001; Spiegel, 2001).

Measuring the level of customer satisfaction in dealing with a B2G portal is also a contentious issue. Measuring success and value should be cautiously approached using conservative and traditional approaches (Choi & Graham, 2001; Lambert, 2001). Others look at more intangible benefits when utilising Business-to-Government portals where business and government meet to transact (Wood, 2000). The intangible side focuses on customer benefits from reduced costs, higher quality and better access, while the conservatives favour traditional measurement tools, such as the 'Total Cost of Ownership' and 'Days of Sales Outstanding'.

2.1.3 Local Government & Electronic Servicing

Contemporary local governments are facing all of the above-mentioned issues relating to measurement and benefits of new exchange relationships as they look at other means of delivering services and conducting business. We are reminded that an IT-savvy government workforce will be the catalyst needed to achieve the widespread benefits of electronic government services (Thibodeau, 2000, Prince, 2000, Matthews, 2000). Government workers providing services or participating in an online environment with customers need to have the training and skills in order to offer efficient services through Web technologies. E-Government growth levels were predicted to rise dramatically with the market for business-to-government e-commerce solutions whetting the appetite of many solutions providers and consultants to government (Taft, 2000). More recent evidence shows this to be true (Barlas, 2001, Luccheti & Sterlacchini, 2004).

Local government is finding itself being asked to participate in the electronic age by reviewing and modifying its processes and behaviours. Government bodies are researching the possibilities of new strategies incorporating electronic elements (Barlas, 2001; Mower, 2001). Chambers of Commerce and local business associations are participating in the first stage of implementation.

The United Kingdom government's 4-stage e-Government strategy of 1999 was an early attempt at electronic service delivery. This involved the development of a range of electronic portals and gateways for access to government services and information (Mower, 2001). Within this is the underlying attempt to maximise buying power and minimise costs. Similarly, the City of Wanneroo has been reviewing systems to aggregate purchasing and increase savings. Over the past few years, this typically meant the audit and upgrade of financial systems such as Oracle. Newer versions of this type of platform have recognised the growing desire to incorporate local purchasing abilities.

With relevant systems in place, local government can facilitate greater collaboration between suppliers, service providers and ratepayers. Local government workers and others who need goods and services can then purchase directly from

suppliers, both previously known and unknown to them. Wittig (2000) supports this view of government procurement to help small local SMEs grow. Governments, by removing barriers to SME participation in public buying, can go as far as providing preference to local SMEs, a form of subsidy.

2.1.5 Online Ordering & Fulfillment

Online confirmation of orders, and the ability to place, change, and track orders online has already proven to be valued highly by customers of such systems as parcel delivery tracking (Mattingly Jr., 2001). Emphasis on the speed of fulfillment can give a competitive advantage whereas slow order processing can result in rapid customer loss (Jordan and Gruber, 2001). An SME's ability to become part of mechanisms such as a B2G portal may have an impact on the bottom line in future years. Sophisticated systems that are the backend of an appealing front page(Website) can provide a great number of automated options.

2.1.6 Rules of Engagement & Practice

While there is uncertainty regarding purchasing online, incomplete information is a general problem associated with business decisions (Essig & Arnold, 2001). The demand side may well be better served through the use of electronic procurement tools that help with more complete supplier information before transacting. Information deficits are defined as either ex-ante or ex-post. As a wide range of information is shared and available freely through devices such as portals, the negative aspects of ex-ante decision-making is reduced. Benefits occur when the buyer is more informed before the decision-making process is complete.

To reduce ex-post negatives, Rooks and Snijders (2001) argue that the installation of easy-to-understand rules of engagement makes life easier for both buyers and suppliers in an E-procurement setting. Their research on SME purchasing behaviours shows that inadequate documentation is the main cause of dispute amongst suppliers. Within this, they point out the need for SMEs to communicate any problems of contract and fulfillment to suppliers. Further, the imposition of sanctions, such as opting not to pay, can assist with the quality control of supplier arrangements. They add that the integrity of any system is tested through the strength

of its fundamental rules of engagement (Rooks and Snijders, 2001). The integrity of a system helps to achieve stability between supply and demand.

2.1.7 Needs of Local Buyers

Stability can be achieved in local demand and supply patterns when the needs of buyers within a local area are observed. Sarkis & Talluri (2002, p.18) explain how certain critical objectives of purchasing officers and departments include obtaining the product or service:

“...At the right cost in the right quantity with the right quality at the right time from the right source.”

As simple as this appears, it clearly sends a message to electronic supply chain systems such as portals, that there is a strong need for the right balance between suppliers and buyers within the marketplace, whether electronic or not. Sarkis & Talluri (2002) note that while supplier selection is one of the most fundamental and important decisions that a buyer makes, it may also be one of the most difficult and critical. This is mainly due to the complex decision-making process when evaluating suppliers. Any apparent reluctance of SMEs and government purchasers to use the system may be due to historical dependencies and existing levels of comfort. It is possible that this type of reluctance can be overcome as purchasers are exposed to the benefits of dealing with local suppliers and possibly meeting these businesses in informal gatherings such as business-after-hour's events and sundowners.

Chapman (cited in Sarkis & Talluri, 2002, p.21) shows that supplier selection is based on multiple criteria that include price, product (or service) quality and delivery. The intangible aspects should not be ignored. An example of this is the friendliness of the SME and the apparent willingness of the business to satisfy the standard and non-standard needs of purchasers. This may take the form of special delivery times or customised packaging.

Human resource issues are relevant for every size of business. Business systems are mechanical, but need to be driven by people. The way in which SMEs purchase has been looked at by Barua et al., (2001) and shows a link between being

aware of how a business currently buys, the possibilities of doing it through electronic mediums, and the implications on the human resource component of the equation. It was discovered that talking to suppliers and finding out what they are comfortable with could be the first step toward changing buying methods (McGinnis and Vallopra, 2001). The supplier/buyer relationship can evolve into a partnership that gets rid of unnecessary steps, and focuses on the needs of both parties (Roche, 2001). This can be through an agreement as to the structure of how orders are taken and fulfilled.

The Internet squeezes out intermediaries who exist as go-betweens and order-takers as it facilitates direct marketing options (Dresner et al., 2001). As rosy as this united future seems, Dresner et al. (2001) caution that not many of the smaller or micro businesses are indeed willing or able to take up the challenge of using the Internet as a tool for integrating supply options. This may be due in part to other variables covered in this study, for example: lack of time, lack of skill and lack of financial resources to improve those skills. One of the potential facilitators to aid business take-up rates is government assistance & training. Where usage differs according to company size, SMEs seem to be at risk of falling behind in the use of Internet technology to support their supply chain activities.

2.2 SME Issues

This section of the chapter focuses on the issues SMEs face as they enter into the New Economy and seek to maintain their competitiveness in the marketplace, both locally and globally. As has been mentioned earlier, many of the issues outlined are not exclusively reserved for SMEs alone, and some of the issues that Government also faces are expressed here. The two issue sets (Government and SME) converge at a point of government education, assistance and training. This is discussed at the end of this chapter. This may be one of the ways to improve B2G commercial interaction.

2.2.1 Local Supply Opportunities

Local SMEs may look for ways to supply more to the local market. There are definite benefits attributed to focusing on the local supply chain (Mullins, 2002). These can be in terms of improving customer service through business being able to

devote more time to their customer base. The customer network is closer and generally very accessible. Another gain is more efficient distribution for the same reasons as geographical proximity. The result is greater information sharing across the supply chain (Westervelt, 2002).

This reinforces the arguments of Roadcap et al. (2002) that local trading communities are able to streamline processes and reduce costs. Reyes et al. (2002) further investigated the opportunities of cost reduction and found that there are benefits to be gained from the stimulation of simultaneous cost reduction and revenue growth. It is revealed that a problematic step for any local supply system will be the ability to reduce the uncertainty in demand levels over time. This means that systems can try to more accurately predict fluctuations in demand for raw materials and final products and services through information sharing and retrieval systems.

2.2.2 Current Use of Web Technologies

Some of the drivers involved in SME use of Web technology include the SME owners' perception of the Web and subsequent patterns of adoption (Lee and Runge, 2001). The individual business owners' positive or negative perception of the advantage plays a critical role in the decision to use the Web. The extension of a small business' customer base at a moderate cost through the World Wide Web is worth investigating (Burn & Tetteh, 2001). SMEs need to be aware of the possible hurdles and hidden costs as well as the potential benefits.

A strategic advantage may be gained by a business learning how to cost-effectively reach new markets and compete with larger competitors. This can include searching for competitive product information, making purchases or developing new online relationships with suppliers previously unknown to them (Dandridge & Levenburg, 2000). A growing number of SMEs are cited as considering the Internet important for achieving strategic business objectives. This is despite concerns that SME use of computer and Web systems lies mainly in the operational, rather than the strategic and decision-making realm (Bridge & Peel, 1999).

Strategically focused Web investments have risen in parallel to the growth of e-commerce activity, but with some interesting results (Whitten et al., 2000). Businesses who both buy and sell on the Web appear to be spending less on ICT investments and less per total employee than companies who only sell on the Web. The product and services marketing component of using the Web presents business with a low cost option to customers (Fink & Laupase, 2000). This assumes those businesses have chosen their form of Web presence carefully, fitting it to their strategic objectives.

SME's technical and technological inexperience could become a cause for alarm despite an enthusiasm to invest in new technologies. Swatman (2000) offers examples of SME success in adopting low cost Web and email-based technologies. The Internet, as a promotional tool to generate business leads can be through simply Web or email-only technology (Said, 2000). There is no need for a deep understanding of sophisticated software.

Internet acceptance and uptake can also depend on SME classification. The Locke & Cave (2002) study of 1200 New Zealand SMEs found that less than half of the businesses in the retail sector used computers, whilst over 90% of wholesalers and nearly 100% of financial services businesses used them. There was evidence that certain categories consistently display low-use rates for e-commerce transactions, including storage and construction.

From the literature, SME use of Web technologies depends on a number of things. The first is the SMEs perception of using ICT. It was acknowledged that the necessity to capture certain basic pieces of information drove the desire to use Web technologies, and strategic business reasons influenced SME usage and adoption rates. If kept simple, Web technology greatly benefited those wanting to use it as an online promotional tool to generate business leads and sales.

2.2.3 Physical Location

Physical location is one issue that the literature deals with in regard to SME access to services and opportunities. The study of Jensen & Pompelli (2002)

identified the importance of site location options for SMEs against other factors such as the proximity to raw materials and supply, buyers/customers and labour pools (Jensen & Pompelli, 2002; Wataid & DiSanzo, 2000). It was found that the relative importance of these varied by industry sector and the nature of industry SMEs worked within.

Current location and expected short-term growth rates also greatly affected site location decisions (North & Smallbone, 2000, Patel, 2001). Bartik (cited in Jensen & Pompelli, 2002) identified certain issues, including workers compensation and insurance rates, wages in specific areas and industries, education levels of the population, construction costs, population densities and energy prices as affecting a business' decision of where to locate.

Love and Crompton (cited in Jensen & Pompelli, 2002) add the availability and work ethic of the local labour force, access to transportation and logistics and proximity to customers to the list of factors influencing the physical location of a business.

2.2.4 Access to Telecommunications

The impact of the Internet on business communications is as large as, if not greater than, the introduction of the telephone. SMEs are offered new and alternative methods of communicating effectively and efficiently as well as the traditional forms of business communications. Wales (2002) identifies that there is a cost associated with connecting to the Internet. Connection speed, as well as the amount of data sent and received, are often the determining cost factors. If email is the primary application, a low-cost connection is often adequate.

Venner (2000) begins by plainly identifying that the adoption of certain technologies can fundamentally change the way business is done. Convergence of voice and data presents both an opportunity and a threat. It is further pointed out (Venner, 2000, p.36) that what is critical are the choices made:

“...The right telecommunications tools and services can be an enormous benefit to any company. However, the wrong telecom services can put a

serious drag on a company's sales, expenses, operations, and overall financial results.”

Telecommunications companies still have difficulty with the fragmented SME market because of the problematic nature of identifying individual needs and concerns (DeZoysa, 2001). Despite this, broadband subscriber numbers continue to gain momentum (Sanders, 2002).

Availability of broadband access is a challenge for many regions of the world where infrastructures are not built-out or have just begun implementation. Madden & Coble-Neal (2002) present statistics to show the solid growth in the number of Internet Service Providers (ISPs) in Australia. Fischer (1999) comments that a company's Internet connection is now the lifeblood of its commercial operations, regardless of industry. Clear opportunities exist for service providers in the provision of basic Internet access to SMEs, but the development of better security for users is an issue raised by SMEs taking up new services (Sanders, 2002).

Kelly (2000) highlights SME use of the digital subscriber line (DSL) connection making dial-up access through the telephone network as increasingly irrelevant. The majority of SMEs signing up for broadband never go back to a dial-up connection once they realise the benefits of an always-on, high-speed service (Kelly, 2000).

However, high-speed networks can come at a cost. The deregulation of the telecommunications industry searching to maximise efficiencies and roll out new networks can end up in market failure (Starr, 2002). There is concern over attempts to provide a new era of service standards and user benefits. This can cause a large financial burden, as enormous amounts of capital investment are needed (Huleatt, 2002). Telecommunications carriers are often viewed as long-term players representing real assets and hard infrastructure. Within Wanneroo and Joondalup, it may become apparent that obsolete networks designed for carrying voice will continue to deteriorate as the installation of obsolete equipment continues.

Dawson (2000) states that widespread access to affordable telecommunications services in all regions, especially remote, needs support through policy changes. Remote areas, including those in outer metropolitan areas considered to be high-cost, will likely be offered fewer technologically advanced services.

Puentes & Rothenberg (2001) blame the sluggish global economy and business failure of alternative telecommunications companies as a reason for incumbent carriers failing to offer a better quality of service. The absence of meaningful competition from the weakened private carrier sector results in a limited choice for the end-user. The excesses identified by Kelly (2001) of grand plans for gargantuan global networks could have contributed significantly to the current situation. Bloch et al., (2001) argue that government reform can limit the influence of a natural monopoly.

Regardless of hard infrastructure ownership, SMEs look for options that provide cost effective high-speed Internet access at an affordable price. Any portal project relies on connection rates and speeds as the lifeblood of businesses connecting to each other. If a satisfactory minimum standard can be achieved, then other factors such as skill levels can be enhanced to make use of available tools.

2.2.5 Lack of Management Training and Lack of Time

As was mentioned, the SME is often faced with the opportunity cost of investing in training and being away from the workplace. They must weigh up the possible results these investments may yield.

Time-poor SMEs have to decide, usually with limited understanding or advice, whether or not there is going to be a positive return on any training investment made. The need to train and the need to “go online” (Blackburn & Athayde, 2000, p.290) are cited as the main business imperatives to enhance and maintain competitiveness through training. The SME laggard is being urged by government to take up the training challenge through a range of incentives that help take up rates (Patton et al., 2000; Tarley, 2002).

SMEs are encouraged to come together to look at ways to improve their business (Pollock, 2002). In this way, they can tackle the dual problems of being deficient in training and not having the time to attend formal courses. Getting together with like-minded businesses may lead to new opportunities, previously unknown and untapped (Mitra, 2000). Informal networks can spark innovation while solving time issues.

Matlay (2000) suggests that an SME is a learning organisation, and this has not been acknowledged in research or by wider media. Matlay's work has the view of an SME as a learning-based individual innovating through collective development. Portals rely on the fact that SMEs, while driven by self-determination, can appreciate the opportunities of getting together in small, informal groups. The individual is ultimately responsible for choosing to group with others or self-discover.

The development of self-awareness and self-discipline, instead of a particular training course allows an SME to improve time management (Shetcliffe, 2002; Pollock, 2002). Before evaluating the benefits technology usage brings to an SME, a manager is advised to analyse how their time is spent. It follows that the restriction of lower value activities allows greater focus on factors such as customer relationships or producing financial stability (Pollock, 2002). The learning and technology familiarity may, however, become a new form of distraction, side-tracking a business from achieving better financial results (Bordner, 2002).

2.2.6 Financial Resources

Investment in information technology is costly, but necessary for business to achieve new initiatives (Williams, 2002). If the SME wants a clear understanding of how to evaluate and measure this investment, they can electronically track their business (Barua et al., 2001). This is done by calculating the percentage of goods purchased online from suppliers, the number of existing online customers, the number of new customers acquired online, and the percentage of customer-service requests handled.

It is suggested that SMEs can realise a high return on investment by opting for electronic procurement options. This can be achieved by automating the entire

purchasing process. Despite the complex-sounding nature of this task, SMEs are said to handle systems integration challenges much better than larger companies due to their smaller size and ability to adapt easily (Roche, 2001).

Begin & Boisvert (2002) canvassed SMEs to find out why they had not incorporated IT components in their business. Financial constraints including prohibitive costs of systems and structural changes rated highly. Other items included lack of resources (financial and staff), doubt regarding the profitability of electronic commerce, poor equipment and computer systems, and a lack of technological skills.

The Begin & Boisvert (2002, p.2) analysis defines inductors or inhibitors as independent variables either assisting or constraining technology adoption.

“When these internal factors favour the adoption of Internet technologies and their deployment within business processes, they are referred to as inductors. On the other hand, if they hinder or block the introduction of online activities, they can be described as inhibitors.”

The reluctance of some SMEs to go online due to financial considerations has created public sector opportunities where low-cost training can aid the transition into technology adoption without perceived heavy entry costs (Karkoviata, 2001). The benefits of organisational improvement and financial performance may ease the anxiety of SME's feeling they are overhauling entire business processes (Williams, 2002). When adequate measures are in place prior to engagement, business can focus on attaining a measurable return on investment (ROI) for their efforts.

2.2.7 Lack of Skills

The upgrade and revision of workplace skill levels is a topical area of study. It is more important than ever to maximise staff potential through the provision of opportunities to stretch skills and learning (Craig, 2000). It is argued ICT classes should be totally integrated into courses for the SME, and acknowledged as part of life for the SME needing skills to equip all facets of their business (Anckar & Walden, 2001). Even entry-level business careers are considered to need a reasonable ICT component.

Learning is considered to be an indispensable component of any job in today's workplace (Lee et al., 2001). The reality is a reduction and possible elimination of old skills as demand intensifies for the development of new skills. This is caused by changes in market, technology and work practices and processes. It is also argued that performance standards are increasingly demanding, and that continuous skill development will become a given. Waller (2000) finds that some workers are upgrading their equipment faster than their skills. The point is made that certain occupations depend on technology to conduct their jobs more efficiently and effectively.

Government intervention is pushing SMEs to adopt the Internet and its applications for their use (Karkoviata, 2001). The logic behind government investment is that using the Internet is a more efficient way of doing and generating business. Organisations like the Small and Medium Industries Development Corporation and Multimedia Development Corporation offer funding for SMEs to upgrade computer systems and skills (Karkoviata, 2001).

London and Smither (cited in Lee et al., 2001) put forward that a great deal of workplace learning takes place without any connection to either trainers or training programs. Indeed it is suggested that the majority of workplace learning occurs informally and incidentally. Only outstanding businesses sustain competitive advantage through training and development programs. Inadequate training resulting in marginal improvements may not be worth the effort (Lee et al., 2001).

Pulley et al. (2002) address the dual issues of enhancing skills in an environment that is also aware of how much time this takes. A Fortune 500 example shows a large international company wanting to deploy training quickly and effectively, as well as minimising time away from the job. The approach highlights the difference between SMEs and larger corporations. Larger companies can compile several strategies of training development together to achieve sustainable results. This includes a balanced program of face-to-face training (onsite and offsite), some Web-based learning (facilitated by onsite training) coaching (internal) and internal

mentoring. SMEs cannot afford the luxury of customised on-site training, or the program of internal mentoring.

The unfortunate reality is that formalised training will more than likely occur offsite, away from the premises of the SME. The dilemma for an SME is calculating their rate of return of leaving the business (usually to someone knowing much less about the business) and time taken to do the training.

The challenge for Government is to devise ways of delivering the message to SMEs that training offers a way to tackle small business issues such as maintaining and increasing competitiveness on both a local and global scale. The answer may lie in a more concentrated marketing and communications effort by Government to educate SMEs on the value of focused training as a means of developing their business locally and globally.

The drivers for this assistance and training are:

1. Skills enhancement of SMEs (flow-on benefits to national economy)
2. Improvement in the quality of advice sought and given
3. More informed SME sector
4. Customising the range and scope of training to meet specific business needs

2.2.8 SME Lack of Size

The size of the SME determines how ICT/Web systems are used throughout the company. Rutherford et al., (2001) developed a model to demonstrate how size affects SME behaviour and reactions. Size influences company ideology and the aggression in adopting new systems and approaches. Dymi (2003) reflects that actual company size affects its ability to absorb market demand. Eventually, all SMEs must consciously decide to stay the same, expand, downsize or even sell. Sekhar (2001) uses a case study to show how some firms use smallness to their advantage by retaining the intellectual capital in-house. Skills are continually cultivated and

business relationships and partnerships enhanced (Dymi, 2003; Sekhar, 2001). Hiring the right people with a suitable skill mix enhances performance. SMEs need to be particularly vigilant in hiring decisions. This is due to the responsibility of each member of the small team needing to perform so that others can do their job. An example of this is a four person cabinet-making team, where the drafts person is relied upon to complete their technical drawings in order for the purchasing person to source the correct quantity of material to complete the order.

2.3 Government Assistance & Training

Training can add value to the output of SMEs, in turn, contributing to the national economy as skills are enhanced and further productivity gains become apparent (Zinger et al., 2001; North & Smallbone, 2000). The availability of various government assistance programs (including technology acquisition and skills enhancement programs) can add to the effectiveness of technology adoption among SMEs.

SME reluctance to install and use a network to benefit their bottom line can have an adverse effect on their output (Bridge & Peel, 1999). Often, training tools require a minimum level of telecommunications and equipment in order to run. Training allowing motivated individuals to access different options can lead to a more profitable future, both in terms of strategic direction and financial success.

The primary benefits of government training and assistance can be through the quality of advice sought and given (Wood, 1999). This becomes impossible, however, when take-up rates are poor. Definite detrimental effects occur when formal management and employee training is ignored by SMEs (Patton et al., 2000).

Government bodies may need to invest considerable resources into broadening the range and scope of training schemes and options to entice SMEs. Different bodies should also reward SMEs who support employees seeking external training opportunities. Jennings and Hawley (cited in Patton et al., 2000, p.44) feel SMEs are noticeably reluctant to engage in training programs regardless of the

incentives offered. If the training does not meet the needs of SMEs, there is a high probability of under utilisation (Carrier, 1999).

Organisational barriers to SME engagement in training may compound ignorance of the benefits of training programs and courses (Patton et al., 2000). These may include the lack of understanding by management as to the value of certain courses.

Chrisman & McMullin (2002) point practically to the fact that SMEs value advice and training if they believe it will enable them to improve performance. The argument is raised that government assistance programs can actually benefit the economy by generating revenue due to business growth. As SMEs access programs at a greater rate, the chance for greater productivity is possible as better skills are at their disposal. The greater output increases profit flows indirectly back to the government in the form of higher taxes paid.

It is argued that support systems are far more effective when driven at the local level. Local schemes, in the form of seminars, workshops, and presentations are considered to be better at disseminating awareness and encouraging local participation. Carrier (1999) cautions, however, that the number of seminars and training assistance options available at the local level does not necessarily correspond to better results in the marketplace. Any training intervention needs to focus on value perceptions, expectations and the development needs of SMEs.

Table 2.1 summarises the issues identified through this review of the existing research literature. These form the basis for the development of the structured interviews and are discussed more fully in Chapter 3.

Table 2.1: Origin Of Interview Items (Map directly to Interview Questions – see Appendix A)

Facilitators & Inhibitors	References
2.1 Current Suppliers in Region	
Use of IT to improve customer service	Mullins (2002)
Understand the functions of local supply chain	Mullins (2002), Westervelt (2002)
The need for e-business processes in manufacturing and distribution.	Mullins (2002)
Differentiate service offerings from other out-of-region Businesses	Mullins (2002)
Completion of installations of software systems	Mullins (2002)
2.2 Government Assistance & Training Programs	
Government support will enable learning infrastructures	North & Smallbone (2000)
Impact of Small Business Development Centres and Procurement Programs	Carrier (1999), Zinger et al., (2001)
Public policy affecting owner's perceptions of government sponsored technological help	Carrier (1999), Wood (2000)
2.3 Current Use of Web Technologies	
Better alternative due to less expensive nature	Whitten (2000)
Increased spending on IT and networks	Bridge & Peel (1999) Whitten, (2000)
Small business' perception of benefits	Said (2000), Lee & Runge (2001)
IT as a necessity rather than a luxury	Lee & Runge (2001)
IT as support role or central role in business strategy	Locke & Cave (2002), Lee & Runge (2001)
Affordability to have in-house IT staff to professionally manage and diffuse IT	Lee & Runge (2001)
Using a computer to complete daily job functions	Bridge & Peel (1999), Swatman (2000), Waller (2000)
2.4 Physical Location	
Technology allows work to be distributed anywhere giving more elastic locational choice	Patel (2001)
IT opening up metro regional markets	Patel (2001)
Increase in available bandwidth in major population centres	Patel (2001)
Need to provide improved communications because of remote business location	Coffman (2000)
External assistance to achieve innovation from within region	North & Smallbone (2000)
Lower density, disbursed distribution leads to less innovation	North & Smallbone (2000)
Hostile business environment (competitive) encourages innovation adoption	North & Smallbone (2000)
SMEs in peripheral regions may embrace new technologies	North & Smallbone (2000)
Collecting and transmitting order data and responding to customers remotely	Watad & DiSanzo (2000)
2.5 Lack of Skills	
Needing to know technology to make business decisions	Anckar & Walden (2001)
Learning Web technologies to keep business earning potential	Anckar & Walden (2001)
Changes in market, technology, and work processes reduce or eliminate need for old skills and demand development of new ones	Lee et al. (2001)

Table 2.1: Origin Of Interview Items (Continued)

Facilitators & Inhibitors	References
Businesses should recognise skill gaps that affect work demands	Lee et al. (2001)
Using technology to do business more efficiently and effectively	Waller (2000)
Searching databases for quotes instead of traditional means	Waller (2000)
2.6 Lack of Management Training	
Adequate training and development to equip workers to use new technologies	Lee et al. (2001)
Provision of practical application to follow	Tarley (2002)
Offer of short program to small business	Tarley (2002)
Instant feedback to see if small business is using what they have learned	Blackburn & Athayde (2000), Tarley (2002)
Uncomfortable environment because Internet technologies are yet to be considered customary	Patton et al., (2000), Begin & Boisvert (2002)
2.7 Lack of Time	
Using computer as electronic assistant	Pollock (2002)
Using technology to keep low value enquiries to a minimum	Shetcliffe (2002)
Adoption of new, faster channels to speed up business for customers, allowing time for other activities	Bordner (2002)
Accessing the internal environment of small business – allowing focus on profit avenues	Begin & Boisvert (2002)
Use to ease routine search tasks	Begin & Boisvert (2002)
Postponed projects and waste of available time	Bordner (2002), Begin & Boisvert (2002), Pollock (2002)
2.8 Lack of Financial Resources	
Perception of high cost of becoming involved in the Internet as business resource	Williams (2002), Begin & Boisvert (2002)
Difficulty of anticipating Return on Investment (ROI)	Begin & Boisvert (2002)
Provision of 24/7/365 customer support demands unjustifiable resources and support	Begin & Boisvert (2002)
Achieving security and integration as high cost propositions	Begin & Boisvert (2002)

2.4 Chapter 2 Summary

The literature offers many examples of SMEs entering into the New Economy, and the changes needed to business processes, practices and mindsets. The personal attitudes and beliefs of each SME determine whether they embrace or reject the Internet and its business applications. Embrace can demand a certain amount of transformation. Government, as a facilitator of business development, also has to transform from within. Its policies and strategies have to take a piece of the 'real world' and offer value to the SMEs it deals with. Delivery of such factors as SME Internet training does not automatically imply success.

There is also the potential collision course that Government sets as it tries to internally skill itself in the ways of the New Economy, as well as developing and offering training assistance to SMEs. Both groups have to not only rely on the good intentions of the software applications training, but also on the hard infrastructure making this all possible.

The importance and critical nature of a telecommunications backbone is highlighted, and shows opportunities for SMEs to access and create new markets and relationships. Telecommunications carriers often forget the SME market, as it appears unable to provide an appealing business case to warrant better service or options. Broadband availability and accessibility results in the layering of business applications (software such as accounting packages) on top of the bed of the telecommunications infrastructure. The question of the laissez-faire approach to markets or governments determining areas of unmet telecommunications need was raised. Discussion revolving around a high-quality, low-cost, ubiquitous service leads any investigation into equitable access for all businesses.

SME resilience was shown through their savvy to minimise the cost of inputs (training and investments of time and money) while attempting to maximise the outputs (profits). Some leverage government assistance and training if they feel it is beneficial to their business needs. The barriers to SMEs accessing training were discussed. Some SMEs are quick to realise the benefits to their business and use Web technologies as a marketing and promotions tool. Those who develop strategic benefits for the business often reap rewards in the marketplace.

Learning was also highlighted as critical to advancing new business techniques and methods. A controversial area of discussion is the way SMEs learn and the purpose of that learning. Some argue learning can be centralised, course driven and goal specific. Others say that learning is often serendipitous and specific to problems that arise needing solutions. The structured approach would include elements of government assistance, but both schools of thought agree that the informal networks formed through either formal or informal learning are almost as valuable, if not more valuable, to SMEs trying to establish new relationships, and with them, new markets and customers.

The approach of the section regarding the lack of management training and lack of time can be distilled by simply saying that any suitable business case implying and offering opportunities for greater profit maximisation will be of interest to SMEs. Constraints on financial resources can also be bundled into this basket. What is more interesting is the way SMEs evaluate and measure their investment in new techniques and systems against their own bottom line.

Yin (1994) starts with theory development as the initial step in case study design. For the purposes of this study, Yin's design was modified with the literature review incorporated as the first step (Refer to table 2.1). The literature was examined to strengthen the survey design and to identify gaps in the research. The interview questions were then formulated from the key points identified within the available body of literature. The 2Cities research was framed against key outcome areas explored in detail during the data collection process.

Note that the origin of interview items focuses on SME responses to the facilitators and inhibitors facing them and their decision to join the 2Cities B2G portal.

CHAPTER 3: RESEARCH DESIGN

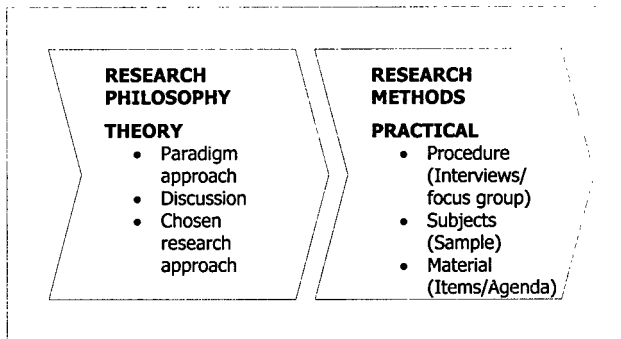


Figure 3.1 Chapter Outline

3.1 Chapter Overview of the problem

This chapter commences with a section entitled the ‘2Cities Case’. The reason for this section is a clear framing of the research philosophy and methods within the context of the subject. A greater understanding of the short history and objectives of 2Cities allows an easier digestion of the chosen research rationale.

Following this, the chapter is then broken down into two main areas. Firstly, the research philosophy is examined from a theoretical perspective. This includes framing the paradigms and evaluating all aspects of the chosen research approach.

Secondly, the practical section of this chapter describes how the theory has been applied. The research methods are explored, including both interviews and focus groups. It should be noted that the theory and its practical application overlap in areas throughout the chapter. Amongst discussions involving research philosophy and research methods, are sections justifying sample sizes chosen. Figure 3.1 is used to support the theoretical approach.

Due to the nature of the in-depth case analysis and the need to interact directly with the SME participants, the case study approach was considered more appropriate than quantitative analysis.

3.2 The 2Cities Case

The 2Cities Internet Gateway project is a joint venture between the Cities of Wanneroo and Joondalup, Edith Cowan University, the Wanneroo Business Association and the Joondalup Business Association. The concept was tested in late 1999 because of research into the early work of the E-Brisbane project in Queensland, Australia.

The early steering group realised the similarities for SMEs across the country, and a need for local SMEs to have a greater opportunity to trade with partners in their local area. The range of partners quickly grew to incorporate a Business-to-Government component. The importance of this exchange relationship was soon uncovered as local government purchasing needs were beginning to be measured and highlighted in the local area.

3.2.1 The Need for 2Cities

As the need to aggregate local suppliers within one area grew in 1999/2000, the concept of 2Cities took shape. The 2Cities Internet Gateway seeks to provide a single point of entry to all SMEs, community groups and community services within the Joondalup and Wanneroo region. The mission of 2Cities is to foster local community and business development and to facilitate commercial and social interaction between Government, business and the community. 2Cities provides a platform to showcase the local area and bring the benefits of the Internet to local community groups and SMEs.

3.2.2 The Region

The catchment for 2Cities consists of two local government areas with a Wanneroo and Joondalup population of 250,000 people (ABS Census, 2002). The

Wanneroo population alone is projected to grow dramatically from less than 90,000 in 2004 to over 217,000 in 2021 (City of Wanneroo, 2004).

2Cities has a diverse local economy consisting of about 7,500 businesses covering industries from Agriculture, Tourism, Construction, Education, Professional services, Light and heavy industrial and Commercial (Australia On Disc, 2001).

3.2.3 The Services

The 2Cities Internet Gateway consists of several services that make up what is commonly referred to as a business/community portal. The portal is predominantly divided into seven areas that reflect the 'verticals' within the community. These range from Education, Health, Community, Education, Business, Sport and Tourism and their purpose of showcasing those key community areas. It is within each of these that 2Cities offers two services, namely community group Web sites and business flyer pages.

Other services include an employment register, events calendar and news register. All services are listed on individual pages directly accessible from the main homepage. These items can also be distributed within pages in the community verticals. For example, a news item displayed on the news page could also be displayed on a number of vertical pages such as the business homepage, sport homepage and/or a sport sub-homepage.

3.2.4 Business Flyer Pages

Business flyer pages are single Web pages within the 2Cities Web site allowing SMEs to showcase the products and services they offer. SMEs can update their page as required but are limited to one single page. Importantly this service is designed to compliment an SME listing within the REM, as it allows them to provide more information and graphical representations of their business.

3.2.5 Regional Electronic Marketplace (REM)

The 2Cities portal provides an online business directory exclusively for SMEs located within the Cities of Wanneroo and Joondalup. The REM is designed to

allow SMEs, local residents, households, and other organisations to purchase from locally based suppliers. The REM operates as a search facility allowing people to locate a specific type of SME listed in the REM. For example, if a person wishes to locate a plumber or a printer, and there are a number of these SMEs registered with the REM, they will be listed in the search.

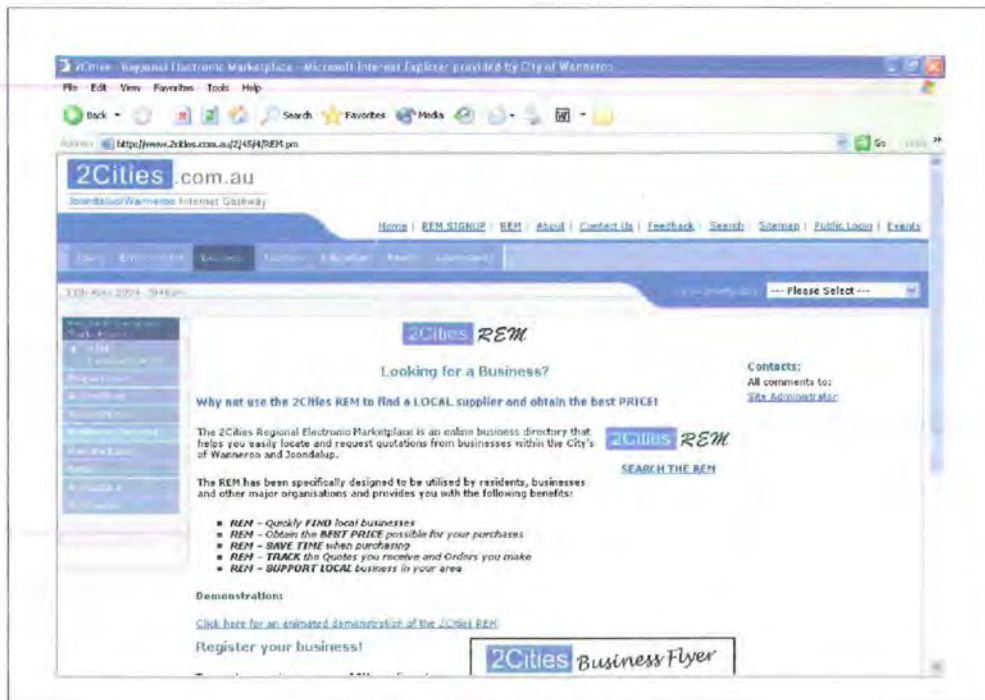


Figure 3.2: 2Cities REM launch page

In addition, once located, the buyer can request a quote from the registered SMEs. The request for quote (RFQ) will be delivered to the SME through either email, FAX, SMS (via mobile phone). These options were built into the custom software of 2Cities in recognition of the fact that many Wanneroo and Joondalup SMEs do not have a website, or cannot always get to a computer to check if they have received a quote. This exclusive function allows all SMEs to register and participate in this local buying solution. It is expected, that over time, most, if not all SMEs will be using a computer to advertise their business.

Key features of the REM include:

- A convenient tool for locating SMEs in the 2Cities area (purchasers)

- Time-saving way to gather quotations from many SMEs in one process (purchasers)
- Cost-effective method for SMEs to promote themselves in the local area (particularly to government purchasers and other SMEs)
- Greater accessibility to major purchasers - CoW, CoJ, ECU, TAFE, Mindarie Regional Council (suppliers)

For a more detailed understanding of the workings of the REM, refer to Appendix B.

3.3 Research Philosophy

3.3.1 Paradigm Base

A number of paradigm models categorise various approaches to research. This study can be examined within the context of the Burrell and Morgan (1979) paradigm framework. Within its framework, there are four distinct areas.

The 2x2 matrix is composed of the four different research paradigms: functionalism, interpretivism, radical structuralism, and radical humanism. (Figure 3.2).

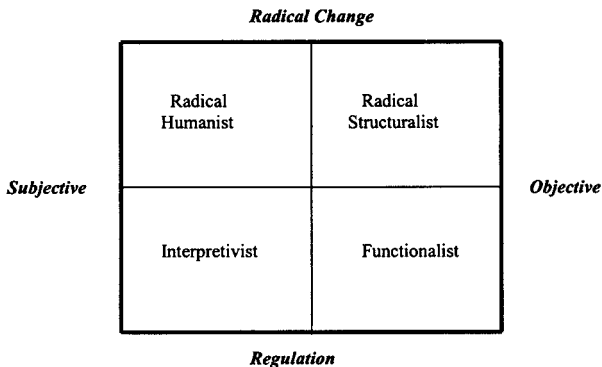


Figure 3.3 Burrell and Morgan's Four Paradigms (1979)

3.3.1.1 Functionalist Paradigm

The Functionalist Paradigm provides explanations of social order, social integration, consensus, need satisfaction, and rational choice. It seeks to explain how individual elements of social systems interact to form an integrated whole. Functionalists adopt realist ontology within the assumption that facts exist and are awaiting discovery (Burrell & Morgan, 1979).

3.3.1.2 Interpretivist Paradigm

The Interpretivist Paradigm seeks explanation within the realm of individual consciousness and subjectivity. The Interpretive Paradigm interprets the meanings of social actions. Interpretivists set out to better understand social systems by investigating what meanings people attribute to both their own and others' actions (Schultz and Hatch, 1996). Despite setting out to look for details about preferences, motivations and actions, interpretive work seeks to combine those details into systems of belief whose manifestations are specific to a case (Lin, 1998). Interpretive work can assist in asking the right questions, giving additional confidence to the conclusions reached.

3.3.1.3 Radical Structuralist Paradigm

The Radical Structuralist Paradigm views society and organisations with the emphasis on the need to overthrow or transcend the limitations placed on existing social and organisational arrangements. It focuses primarily on the structure and analysis of economic power relationships (Kavous, 2003).

3.3.1.4 Radical Humanist Paradigm

The Radical Humanist Paradigm seeks radical change and emancipation and stresses the role that different social and organizational forces play in understanding change (Kamoche, 1991; Burrell & Morgan, 1979). It focuses on all forms of barriers to emancipation; in particular, ideology, power and psychological compulsions and social constraints; and seeks ways to overcome them.

3.4 Interpretivist Approach

This paradigm is the most appropriate method for the purposes of this study due to its investigation of preferences, motivations and actions leading to the development of a specific case to study. The qualitative approach is particularly suitable for studying phenomena in which little previous research has been conducted and is therefore not supported by a strong theoretical base (Benbasat et al., 1987; Walsham, 1995).

An Interpretivist approach employing qualitative research methods is used in this methodology, namely a case study. Practitioners can usually better relate to interpretive research as it involves actual case studies, real people in real situations, and is undertaken in real world settings (Walsham, 1995).

The results offer new insights, and are more translatable into the ways people actually work in organisations. The objective of interpretive research is to piece together people's words, observations, documents and actions into a coherent picture expressed through the voices of the participants. The Interpretivist approach does not seek to identify or test variables but to draw meaning from social contexts (Hirschheim, 2001).

There are several types of research methods useful in Interpretivist studies, including Action Research, Grounded Theory, Ethnography and Case Studies. By reviewing each of these methods, it becomes evident that the most appropriate vehicle for this analysis is the case study.

3.4.1 Action Research

Action Research is used to solve specific problems in organisational settings. The main premise of this type of research is that the participants are actively involved in the research process and the researcher produces results that may be implemented in the organisation studied (Lau, 1997). Information systems researchers are encouraged to consider and use Action Research as a research approach due to its potential close investigation of specific organisational problems

(West et al., 1995). While there appears to be some confusion amongst researchers as to how to apply Action Research principles (Lau, 1997), the approach is seen by some as merely an external consultancy that briefly comes in-house (Avison, 1993).

McKay and Marshall (2001) try to overcome the objections to the validity of Action Research by offering a model aimed at identifying and distinguishing between the researcher's problem-solving interests and responsibilities, and the researcher's research interests and responsibilities. They stress the potential benefits of being able to resolve problems where the researcher's results can affect the organisation. This study does not intend to change or intervene in the 2Cities project. Therefore an Action Research method is not considered appropriate.

3.4.2 Grounded Theory

Grounded Theory refers to an inductive process of generating theory from the data and implies a lack of pre-existing concepts and knowledge of the phenomena to be studied (Strauss & Corbin, 1990). Grounded Theory is an inductive, discovery methodology that allows the researcher to develop a theoretical account of the general features of a topic while simultaneously grounding the account in empirical observations or data (Glasser & Strauss, 1967). Grounded Theory has been eliminated as a method for this study as there are pre-existing concepts and knowledge to be used.

3.4.3 Ethnography

Ethnographic research is characterised by extended periods of fieldwork (Barley, 1990). Traditionally, ethnographic research has been associated with anthropology, sociology and the study of culture. In recent years, it has become more popular among the business disciplines, including Information Systems (Fetterman, 1989). Ethnographic research was not considered a suitable approach, as extensive periods of fieldwork were not undertaken.

3.4.4 Case Study

When participants are questioned in their natural setting and the researcher is able to employ multiple methods of data collection to gather information, the case study approach is used. Within this, the researcher has limited a priori knowledge of

what the variables of interest will be, and their significance in relation to one another (Benbasat, et al., 1987).

Walsham (1995) suggests that the case study method is preferred when investigating the use of information technology in a social context and can yield rich insight. The case study methodology lends itself to a concentrated focus on a topic, accommodating several data-gathering techniques. The strength of the case study approach is the degree of breadth and depth obtainable in complex real-world situations (Galliers, 1991). According to Avison (1993) the strength of the case study approach is that it uses natural situations and provides an opportunity for deep and comprehensive analysis. It enables the researcher to ask penetrating questions and capture the richness of organisational behaviour (Gable, 1994).

The approach is recommended when there is a desire to gain insight into emerging topics but there is no need to control behavioural events or variables (Benbasat et al., 1987). Yin (1994) suggests the validity of this type of research increases when different research methods are pitted against each other in order to cross-check data and interpretations. It is suggested that different methodologies, such as questionnaires and interviews, should be used when possible. Case study researchers collect intensive data about particular instances of a phenomenon and seek to understand each on its own terms and in its own context (Yin, 1994).

A case study allows for face-to-face contact, as well as the use of field notes, written documents and archives to support the understanding of the context. A case study is confined to one or a few subjects or cases. There is usually a broad focus on the types and quantities of variables studied (Merriam, 1988; Yin, 1994). The approach tends to be in-depth and comprehensive. Since a case study includes only one or very few cases, it can afford to deal with all relevant information or aspects of the cases or situations. The 2Cities B2G research was a single case study, and only information relevant to the 2Cities B2G portal was investigated. No other business-to-government portals were researched.

3.4.4.1 Single Case Study

It should be noted that the entire 2Cities portal project was not examined for the purposes of this study, but only the business component of the portal, namely the B2G section. Therefore, this single case study is only dealing with SME adoption of the B2G component of the 2Cities portal.

The single case study approach gives the best possibility for quality data, as the subjects are SMEs within the 2Cities catchment of Wanneroo and Joondalup. A person who works on and within the business for a majority of their day is likely to respond better within their natural workplace or other familiar environments. Interviewing within this context allows a greater freedom of expression and feeling of safety. This may have assisted with their answers, as they felt it related to their small business operation.

3.4.4.2 Case Study Characteristics

Since the focus was on a single case, the case study method has a major problem with generalisation. In addition, bias may manifest itself in the SMEs selected for the study. It is acknowledged that the investigator can influence the nature of the case under study.

Benbasat et al. (1987) list eleven key characteristics of case studies, which are of particular interest for this study:

Technology use to allow focus on other activities	
1	Phenomenon is examined in a natural setting;
2	Data are collected by multiple means.
3	One or a few entities are examined;
4	The complexity of the unit is studied intensively;
5	Case studies are more suitable for the exploration, classification and hypothesis development stages of the knowledge building process; the investigator should have a receptive attitude towards explorations;
6	No experimental controls or manipulation are involved;
7	The investigator does not necessarily specify all independent and dependent variables in advance;
8	The results derived depend heavily on the integrative powers of the investigator;
9	Changes in data collection methods could take place as the investigator develops new hypotheses.
10	Case research is addressing "why" and "how" questions ... rather than frequency or incidence;
11	The focus is on contemporary events

This study has incorporated all of the steps identified by Benbasat et al., (1987).

Characteristic 1

The data collected for this study has been obtained at the business premises (their natural setting). The majority of interviews were conducted at the SME's premises.

Characteristic 2

The data was collected using a variety of means including:

- Content analysis of secondary data sources; and
- Interviews.

Characteristic 3

The owners within each SME (40) were interviewed.

Characteristic 4

The answers were analysed within the overall structure and context of the questions asked, and not examined in isolation.

Characteristic 5

Investigation of whether or not SMEs actually experience the effects of the facilitators and inhibitors identified in the literature.

Characteristic 6

No experimental controls or manipulation were involved in this study.

Characteristic 7

The researcher specified a set of independent and dependent variables that are not considered to be exhaustive, and will be added to as a result of the data collection and analysis.

Characteristic 8

The results were derived based on the integrative powers of the researcher who analysed multiple data sources within and across the cases.

Characteristic 9

The data collection approach, whilst not radically altered, did commence with interviews, which formed the focus groups, all supplemented by extensive secondary data analysis.

Characteristic 10

This study addressed the "why" and "how" questions, rather than frequency or incidence counts.

Characteristic 11

This study is focussed on a contemporary project relating to a small business focussed Business- to-Government (B2G) portal.

Reliability, Validity and Transferability

A qualitative study should respond to concerns that the researcher's natural subjectivity will shape the research. The researcher must gain an understanding of the research participants in order to gain entry to their world. Once achieved, questions surrounding validity, reliability and transferability need to be addressed.

Questions of reliability refer to accuracy problems of the measuring device, and the ability to either establish causal relationships (internal validity) or domains within which a study's findings can be generalised (external validity). This research is interested in the external reliability of findings for the wider Wanneroo and Joondalup SME community.

Questions of validity refer to the appropriateness of the measuring device. The concept of validity concerns the pursuit of an ideal state, but not necessarily achieving it (Yin, 1994). If it is assumed that individual businesses are willing and capable of talking to researchers, and that requested information is supplied honestly, then the interviews can be considered both highly reliable and valid.

Lincoln & Guba (1985) propose constructs to reflect the assumptions of qualitative studies. These constructs are:

1. **Credibility** – the goal is to demonstrate that the inquiry was conducted in such a manner as to ensure that the subject was accurately identified and described.

The strength of the qualitative study, which aims to explore a problem or describe a social group or a pattern of interaction, will be its validity. An in-depth description showing the complexities of variables and interactions is so embedded in

the data derived from the setting that its validity is credible. Within the parameters of that specific population and theoretical framework, the research is valid.

2. Transferability – the burden of demonstrating the applicability of one set of findings to another context rests more with the investigator making that transfer than with the original investigator. The researcher is allowed to generalise the findings about a particular sample to the population from which that sample was drawn.

3.5 Interviewing and Generalisation

Schwartz and Jacobs (1979) commented on the general purpose of interviews. When interviewing is used to reconstruct the reality of a social group, individual participants are treated as sources of general information.

‘They are asked to speak on behalf of people other than themselves and to give information about social processes and cultural conventions that transcend their personal lives. In an interview setting, the participant is called upon to assume the identity of a member of his group in formulating responses’ (Schwartz and Jacobs, 1979, p.38).

An interpretation of the individual’s responses can then throw light on general attitudes, situations and patterns. Value has different meaning for each of the three stages of the research process. The third stage of the methodological domain explores the robust nature of the findings and generalisability. This external validity is where the current study hopes to allow a comparative use between what held true for small businesses within the Wanneroo and Joondalup context and what may be true for small businesses outside this region.

According to Brinberg and McGrath (1985), in this study as with any other qualitative study, the research always wants to maximise three mutually incompatible desires

- A. Generalisability – with respect to the populations (small business in this case) to which the information applies

B Precision – with respect to the measurement and control of the behaviour variables involved

C. Realism – with respect to the context, to which that information is intended to apply

Research strategies providing the opportunity to maximise any one of these at the same time virtually guarantee low levels of both the other two. The intent for this research was to maximise criterion C (realism of context). Attempting to be unobtrusive, the researcher had relatively little precision with respect to the measurement and control of variables. This led to a criterion B deficiency. Therefore, it was found that there was relatively low generalisability to populations beyond the specific Wanneroo and Joondalup setting.

Brinberg and McGrath (1985) point out that these are not limitations based on the preferences of the researcher, nor on the scarcity of resources. They are inherent in the research process itself, and cannot be avoided in a single study. The limitations need to be overcome by conducting multiple studies, and the use of different strategies for the same problem.

Brinberg and McGrath (1985) present three issues worth considering when assessing the generalisability of a finding:

1. If the study were repeated, would the same findings occur? Would the findings be replicated?
2. If the study were repeated with a change in certain variables (eg, type of SME questioned), would the findings triangulate? Would the findings show convergence across these differences?
3. Under what conditions will the findings not hold? What are the boundaries, or limits associated with the findings?

The present study paid careful attention to interviewing a fair and even distribution of typical business types across the Australia New Zealand Standard Industry Classification (ANZSIC) codes in the Wanneroo and Joondalup area. Thus, if the study were repeated, similar findings could be expected. It is acknowledged

that if a different type of SME were questioned, slight differences in answer types may be noticeable. However, these answers would not considerably alter the total picture painted by the interview and focus groups participants. The findings would still triangulate. Unless the structure and composition of the participants changed dramatically, a similar study would produce similar generalisations.

3.6 Calculating an Adequate Sample Size

Researchers need to consider the purpose of their study, design, data collection method and type of population available to the research being investigated. The more homogeneous the population under study, the smaller the sample needs to be to accurately reflect the characteristics of that population (Adams & Schvaneveldt, 1991; Yin, 1994).

The City of Wanneroo and City of Joondalup business catchment is characterised by a diverse range of SME activities. The interview sample size of forty businesses was distributed among thirteen of the sixteen ANZSIC codes. It was felt that these codes best represented an even distribution of business types within the region who make up the 2Cities B2G target market. The figure of forty interviews was chosen to fit above the minimum number needed (thirty) to make the sample valid (Blaloch, 1961).

3.7 SME Target Population

This study was able to capture an even distribution of businesses represented under the ANZSIC classification system.

Industry groupings chosen and interviewed were: agriculture (4%), mining (1%); manufacturing (8%); construction (17%); wholesale trade (5%); retail trade (17%); accommodation, cafes & restaurants (2%); transport & storage (6%); communications services (2%); finance & insurance (2%); property and business services (19%); cultural & recreational services (3%) and personal & other services (7%) (Australia on Disc, May 2001).

Note: The percentages (in brackets) show the particular industry as a proportion of all industries. For example, property and business services (19%) represents nearly 1 in every 5 small businesses in Australia.

There are approximately 7,200 small businesses in the Wanneroo and Joondalup region of Perth, Western Australia (Australia on Disc, May 2001). From these broad industry groupings, the Australia on Disc database was used to randomly select businesses.

Table 3.2: Australian New Zealand Standard Industrial Classification Codes (ANZSIC)

	Number of businesses originally aimed to target	Number of SMEs actually interviewed
Agriculture, Forestry, Fishing and Hunting	3	3
Mining	3	2
Manufacturing	3	4
Construction	3	3
Wholesale Trade	3	3
Retail Trade	4	4
Accommodation, Café's & Restaurants	3	3
Transport & Storage	3	4
Communications Services	3	2
Finance & Insurance	3	3
Property & Business Services	3	3
Cultural & Recreational Services	3	2
Personal & Other Services	3	4
Total	40	40

The large sample chosen ensured that SMEs were represented in sufficiently large numbers to allow analysis. Blalock (1961) indicates that in terms of statistics an n of 50 is a minimum size; Champion (cited in Howard, 1985), for the same reason, notes that 30 are the very minimum. These sample sizes are chosen so the researcher

can control certain variables. In order to support any generalisations, the sample should also reasonably mirror the population under study.

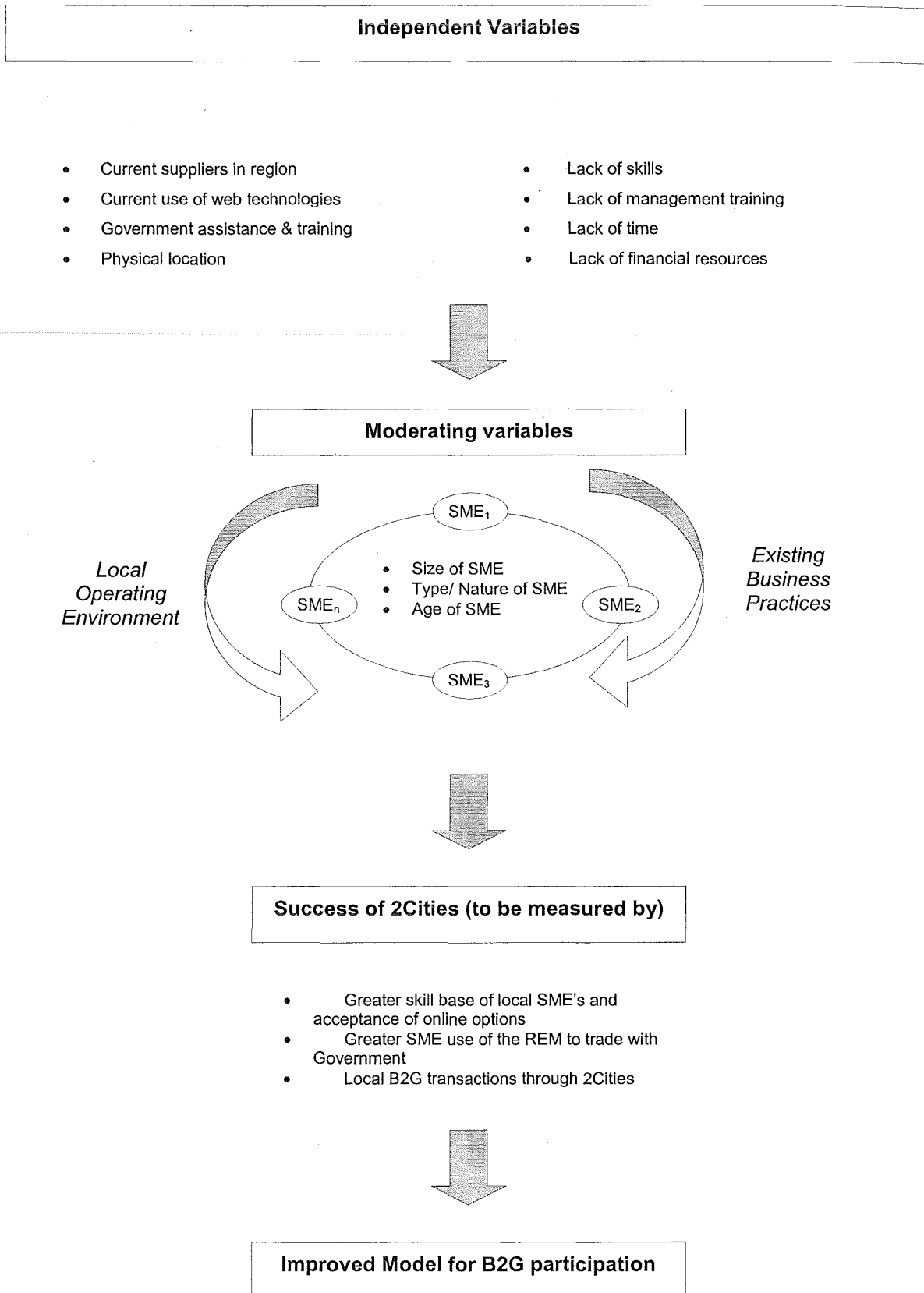
3.7.1 Operationalising the Variables

Once the number of observations (40) was deemed a sufficient generalisation to the Wanneroo & Joondalup small business population, the next step was to define the variables used.

Saslow (1982) offers researchers an understanding of how to define a variable. It is put forward that to operationally define variables involves another person interpreting the variable in the same way. Variables, whose levels are determined ahead of time by the researcher, are called Independent Variables (IV's). Variables representing the output of the research process are Dependent Variables (DV's), where the actual measurements obtained are dependent on the responses of the participants (in this case small business owners) and are known only after the completion of the interviewing.

Burnstein & Simon (1985) show the dependent variable as a quantity or aspect of nature whose change or different states the researcher wants to understand or predict. The example is given of the relationship between smoking and the weight of a baby. If the research wants to investigate whether there is any relationship between a mother's smoking of cigarettes and the weight of her baby, then cigarette smoking is the independent variable. The researcher is trying to understand the effect of the independent variable upon the dependent variable (Walker, 1985). In this study, the facilitators and inhibitors to SMEs using the 2Cities portal including lack of skills, lack of time, current uses of Web technologies are the independent variables. The dependent variable is SME use of the 2Cities B2G portal.

The research was not conducted at or between times when any adverse media broadcast positive or negative publicity about computer use, IT or SMEs, privacy issues, Internet use or risks associated with use. In this case, no historical event (Nachmias & Nachmias, 1992), such as either positive or negative media, coincided with the introduction of the independent variables. The research model is portrayed in Figure 3.4.



Note: SME₁ – SME_n equals Small to Medium Enterprise participant 1 to Small to Medium Enterprise participant n

Figure 3.4: Graphical representation of variables within the 2Cities Case Study

3.8 Research Methods

The first half of this chapter reviews the theoretical basis for choosing the case study approach. The second half of this chapter concentrates on the practical usage of the theory, focussing on the interview and focus group procedure and material. Before this, an understanding of the epistemology of the researcher helps to frame the interview procedure for the reader.

3.8.1 Views of the Researcher

The researchers' ontological position suggests that people's knowledge, interpretations, experiences, and interactions are meaningful properties of the social reality that the research questions are designed to explore.

The researchers' epistemological position suggests that a legitimate way to generate data on these ontological properties is to interact with people, to talk to them, to listen to them, and to gain access to their accounts and articulations (Mason, 1996). The researcher has been working in the field of business development and economic development for over ten years, and has a sound understanding of the SME world. Interaction through conversation is a vital part of dealing with business people. This can be achieved through interviewing people about certain aspects of their daily business life.

3.9 Ethics Clearance

The reliability and validity of the interview method are dependent on the language used by participants. One way to improve the information exchange during the interview is to make language more precise. An Ethics Clearance is intended for this purpose. One of the main objectives of an Ethics Clearance is to overcome any ambiguities of language used (see Appendix C for submission to the Ethics Committee Edith Cowan University).

The 2Cities interview questions went through several revisions before finally being submitted and accepted by the Ethics Committee. An attempt was made for the standardisation of the interview schedule allowing no discrepancy of question content or sequence between participants. The interview was introduced with a

standardised greeting and explanation of its purpose. Both a letter of introduction and a disclaimer about the privacy of information to be gathered was read and understood by participants.

The wording and sequence of questions remained fixed and unaltered. When the participant seemed unsure of any question, they were repeated as written without rephrasing or adding of emphasis. Piloting the interview questions to a small number of SMEs allowed the researcher to alter the question structure where needed. This aided participant understanding, helping to minimise the need to re-ask questions using alternative wording.

3.10 Benefits of Background Knowledge

Sensitivity to context underscores the need for interviewers to be at least minimally aware of the cultural and ethnographic background within which interviews are embedded. Knowing the local setting can assist the formation of relevant questions and help interpret the meanings of answers (Mason, 1996). The interviewer's background knowledge can sometimes be an invaluable resource for assisting participants to explore and describe their circumstances, actions and feelings.

Interviewing takes advantage of the growing stockpile of background knowledge that the interviewer collects in prior interviews to explore facets of participants' circumstances that would not otherwise be known or probed (Yin, 1994).

Participants' reactions to the researcher in this study were greatly influenced by their predetermined notion of the role and responsibility of the office held by the researcher as part of their economic development position within the local area.

Business association and non-business association members had visible differences in their ease of comprehending the questions. SME owners' previous level of experience with technology-related issues also influenced their level of ease with the

questions. Confirmed notions of government and its role in supporting technology initiatives in the local area also influenced responses.

3.11 The Interview Method

The interview method coupled with small focus groups was chosen for this study. Sitting down with SMEs in a non-threatening environment and listening to their answers about aspects of their business can generate rich qualitative data. The researcher chose a semi-structured open-ended conversation with the individual interviews and with the focus groups. Both approaches complement each other as they investigate the same research problem. Interviews are now a well-established means of data collection in the field of information systems (Myers, 1999).

3.12 Interview Schedule

Jones' (1985) interview schedule model was followed for the purposes of this research. A structured question pattern was adopted during the 2Cities interviews, including question order. The need for comparability between answers was important, as well as asking all participants all questions.

Table 3.3: Jones (1985) Interview Schedule Model

1.	A list of questions asked more or less verbatim
2.	Instructions on when and what probes and prompts to use. Probes are additional questions and procedures designed to encourage the participant to provide a missing answer or to clarify and enlarge on a given one
3.	Directions for recording responses. Significant phrases offered by the participant were captured. These were later sought when entering data into the N*Vivo software. Body language and other expressions were not captured
4.	No prior specifications for dealing with anticipated problems in fitting participants answers into categories were used

Table 3.3 (adapted from Jones, 1985) gives the researcher a framework guiding data collection. This table assists the objectives of the collection, emphasising simplicity, originality of responses without prompts and anonymity of participants.

Table 3.4: Question Framework

	Interviews about facilitators and inhibitors to small business use of Portal	Effects on Questions
Purpose	Identify causes of use/non-use to guide focus of Internet initiatives	Questions are about use
Participants	SME owners/operators	Questions posed are for owner/managers across most ANZSIC categories
Surveyor	Interviewer uses in-person technique	Questions must be worded so that they can be understood orally
Responses	Questions rely on the participant's own words	Analysis of participants word answers
Timing	Interview takes approximately 45 minutes	Time is allocated for reading and interpreting participants' answers
Resources	Interviewer is guided through University practices/Research methods coursework	Expertise is needed in English language only
Privacy	All responses will be confidential (all originals destroyed – no company names recorded, only ANZSIC category	Generic questions used, so that no trace of participant type to business category is possible or probable

Before commencing work on any of the chosen methodological approaches, the Adams and Schvaneveldt (1991) model for researchers and consumers provided a guide to structure the pilot questions and likely outcomes for all participants. It is argued that because *data* (ideas, facts, knowledge) are generated using *research methodology* (tools for obtaining useful information), the quality of the output (information) is strongly defined by the techniques used to gather it.

3.13 Pilot Test

During the pilot test interviews, held in September 2002, general comments were noted by the researcher including such factors as participant receptiveness, facial expressions and the overall understanding of questions. Three businesses, all members of the local business associations and with whom the researcher had easy

access to, agreed help pilot test the questions. During the pilot testing of the interview questions to the SMEs, two questions caused misunderstanding. This resulted in the revision of those questions and a simplification of language.

3.14 Interview Setting & Questions

The interviewer comes to a situation with certain goals and objectives, and with questions to accomplish these. Targeted information is sought on an area experienced by the participant. The outputs from this purposeful conversation can vary depending on the degree the interview is structured beforehand and on the amount of latitude the participant is granted when responding to the questions. The researcher is informed about, and knowledgeable on the focus of the interview (Howard, 1985). This enables the interviewer to guide, direct, and interpret the process to achieve the express purpose of the interview, which is to focus research attention on the background and experience of the participant as related to the objective of the study.

If the setting is appropriate, the participant motivated and willing, the interviewer skilled, and the instrument well prepared, the interview has the potential to be an extremely accurate device for the acquisition of reliable and valid data. Robson & Foster (1989) found most people are more willing to talk and verbally react than to write responses to questions. Due to time and cost factors, the mailed questionnaire is often chosen above the interview (Adams & Schvaneveldt, 1991). Previous small business studies of the Wangara Industrial Estate confirming SME needs, have indicated greatest SME response to questions when live interaction and connections were made (Fink & Venkatesan, 2001).

The interview period lasted a total of seven months, as scheduling and cancellation issues occurred. The busy schedule of the SME has been noted in the literature and the length of the interview process was factored into the completion schedule of the study (Bordner, 2002; Shetcliffe, 2002).

For the present research, a two-way conversation approach was deemed more appropriate than a more formal, structured interview. Of importance to this technique

is the participant's framing and structure of responses. A fundamental assumption to qualitative research is the view of the participant unfolding and not that of the researcher (Mason, 1996; Marshall & Rossman, 1995; Schwartz & Jacobs, 1979). An important aspect of the interview approach is to convey the idea that the participant's information is acceptable and valuable.

3.14.1 Advantages of Interviewing

The interview setting, skill and training of the interviewer, openness and frame of mind of the participant, the subject under study and a host of other mood-situational factors enter data collection process via the interview. The presence of the interviewer and possible interactional effects can influence both the quality as well as the quantity of the participants' response (Howard, 1985).

Since the participant supplies the necessary information orally to the investigator, a number of factors influence the face-to-face interchange. These include the manner of speech, dress, grooming, age, sex, race and personality-interaction skills (Marshall & Rossman, 1995).

As a data-gathering device, the advantages of interviewing were digested (prior) and adhered to (during) the process. The essence of the model is captured in Table 3.5.

Table 3.5: Advantages Of Interviewing (Adapted from Marshall & Rossman, 1995; Walker, 1985)

Explanation	The main advantage of an interview is the ability for the interviewer to explain the purpose of the study at the rate and pace of understanding of the participant. A non-threatening environment helps with the quality of answers received
Co-operation Rate	The participation rate of the interview method clearly overshadows the typical low return rate of the mailed questionnaire.
Quality of Data	A skilled interviewer can assess what is needed and what is lacking in the process because they are physically present. The ability to 'read' people and adjust to each particular interview is valuable. This can be in the form of probing for more detail, clarifying answers and seeking additional information
Communication Process	There is good evidence that people enjoy talking (Brindberg & McGrath, 1985) Prepared with questions to ask, the interviewer can influence the frame of mind of the participant and their response to those questions.

A sensitive and skilled practitioner can make it easier for participants to use communication as a rewarding process through directed conversation (see Table 3.5).

3.14.2 Minimising the Limitations of Interviewing

As the interview technique involves personal interaction, a limitation and weakness exists in that subjects may not be willing or able to share all the information requested. Caplow, Mishler and Shapiro (cited in Marshall & Rossman, 1995, p.63) express the following concerns with in-depth interviewing:

1. Questions may not be appropriate
2. Questions may be difficult to understand
3. Answers to questions may not be properly comprehended by the researcher
4. Interviewees may not always be truthful
5. Volumes of data may be obtained and be difficult to manipulate

These factors considered, a pilot testing phase was used for this particular research to delete some questions from the initial draft deemed inappropriate (concern #1). Wording of questions was adjusted if they were not easy to understand (concern #2). Concern #3 was minimised using recordings that were later reviewed and transcribed for accuracy. This was again reviewed during the coding process as

data was entered into the software. Concern #4 is difficult to minimise and is noted. All effort was made to make participants feel that their comments were valuable and would be used in the write up of results. Concern #5 was alleviated with interviews limited to forty, and focus groups to two.

3.14.3 Lack of Anonymity

An interview lacks the anonymity of other forms such as a mail-out questionnaire. Often the interviewer knows some of the participants (or at least their name, address & telephone number). The participant may feel intimidated by some questions and this accordingly affects the answers given (Walker, 1985). Acknowledging this concern, informal talk was made at the beginning of the interview to allow the participant to get comfortable before the formal recorded interview took place. There appeared to be a smooth transition into the interview questions due to this icebreaking process.

3.14.4 Interviewer Neutrality

Survey research methodology holds that interviewers must be active, but within reasonably strict limits. Interviewers are instructed to skilfully solicit answers, but to predetermined questions, under constraints designed to keep them from contaminating that which lies within the answer set of the passive participant. Restraint is the key to standardised interviewing (Gubrium & Holstein, 1995).

Fowler & Mangione (1990) purport that the interviewer communicates a neutral, non-judgemental stance with respect to the substance of the answers. The interviewer should not provide any personal information that might imply any particular values or preference with respect to topics covered in the interview, nor should the interviewer provide any feedback to participants, positive or negative, with respect to the specific content of the answers they provide.

The pressure of conducting a neutral inquiry within the context of a conversation is one of the toughest roles to reconcile (Gubrium & Holstein, 1995). Within the 2Cities research, the SME often looked to engage the researcher in conversation dialogue each question, introducing the danger of tangential

conversations with limited relevance. This potential sidetracking was avoided in all cases. All questions were asked and answered in each interview.

3.15 Conducting an Interview

There is a high level of sophistication associated with the mechanics of how to ask questions, the order in which to ask them, questions not to ask, and the ways to avoid saying the wrong thing that may spoil the data (Gubrium & Holstein, 1995; Fowler & Mangione, 1990). The question construction of this study was particularly critical, as SMEs do not enjoy being put down or treated as guinea pigs in what they may consider as a formal and bureaucratic process. The ethics clearance process and submission of questions assisted with this.

Gubrium & Holstein (1995) present that both parties to the interview are necessarily and unavoidably active. This view sees participants “not as repositories of knowledge that await the intellectual shovel” (Gubrium & Holstein, 1995, p.234), but rather as constructors of knowledge in collaboration with interviewers.

The desire for the interviewer to be liked or accepted can sometimes cloud the professionalism of the task (Douglas, 1985; Jones, 1985). Contamination of the interview process occurs when there is a blurring of casual and professional conduct. A quality interview allows the participant to absorb, react, answer, give opinions and respond without intervention from the interviewer (Jones, 1985).

The contact with each individual business occurred in a repetitive fashion and is recorded as follows:

1. Phone call to SME by interviewer to inquire about possible interest in being involved in short interview
2. Arrangement of time and place to hold interview. Over 90% were conducted on the premises of the business.

With respect to the principles of Kirk and Miller (1986) and maintaining a high level of interaction, the researcher conducted the interviews and led the focus groups. This allowed a more intimate insight into the SMEs being questioned.

“Qualitative research is a particular tradition in social science that fundamentally depends on watching people in their own territory and interacting with them in their own language. Qualitative research is socially concerned, cosmopolitan, and, above all, objective.” (Kirk & Miller, 1986,p.9)

Sessions were audiotaped and later transcribed. Field notes were taken while the interview was being conducted. They were brief as excessive writing would have been disruptive. SMEs frequently like to express their views in a non-threatening environment. Any apparent bureaucratic procedural-type approach often finds them unwilling to participate fully.

3.15.1 Use of Open-ended Questions & Interviewer Contamination

The actions of the interviewer should be mindfully similar and replicable across each interview situation. Conformity reduces the “interviewer effect”, which can be the largest source of error in survey work (Oppenheim, 1992, p.238). Relatively uncontaminated data was a primary goal in the 2Cities research.

Open-ended questions were used to allow participants to give individual answers. It also allowed SMEs to describe their perception of the world, rather than how the interviewer saw it.

Some answers made the interpretation of various responses to the same question difficult to catalogue. For example, two similar sounding answers to Question 3 about dealing with local suppliers yielded these responses;

“Always try to give business to locals”, and

“Good – deal local where possible”

Fink (1995) provides a checklist in support of the decision to use open-ended questions.

Table 3.6: The Use of Open-ended questioning (Adapted from Fink, 1995)

	Open Question Use	2Cities Interview
Purpose	Participants' own words are essential (to allow participant feeling of being taken seriously; to obtain quotes)	SMEs enjoyed the opportunity to have their opinions heard and recorded
Participants' Characteristics	Participants are capable of providing answers in their own words	The subject of company growth, the use of IT and local networks provided the SME with much to talk about
Asking the Question	Participants are willing to provide answers in their own words Preference is given to asking the open question because the choices are unknown	The range of answers proved that no one participant was being corralled to any particular answer set
Analysing the Results	Researcher has the skill to analyse participants' comments even though answers may vary considerably	The range of answers, though different, did allow relatively easy categorisation.
Reporting the Results	Researcher will provide individual or grouped verbal responses	Methodological approach gave the ability to group verbal responses.

3.16 Transcripts of Interviews

Transcription can be done in many ways. Practice varies from the production of short reports and notes to complete transcripts of the tapes. This research study favoured shorter, impressionistic reports from taped interviews. The thoroughness and accuracy of the transcript reflected the essence of details given by participants. The researcher transcribed all of the interviews individually and within five days of each event. This allowed the researcher to 'look at the data again' (Robson & Foster 1989, p.56) to determine whether the ideas and discussions were recorded accurately. Listening to tapes within a reasonable time frame allowed for the determination of pattern emergence in the responses. This assisted in devising a suitable framework for analysis and interpretation of the data.

3.17 Secondary Sources of Information

Secondary data was relied upon to contextually verify the linkages between historic and contemporary data on the subject. These linkages were useful in the development and design of appropriate frameworks and sampling plans (Stewart & Kamins, 1993). A thorough understanding of secondary source material is the basis for developing new primary research (Cooper & Rosenthal, 1980). In the case of the 2Cities investigation, it was necessary to carry out new primary research because existing information was inadequate for the types of investigative questions to be asked.

The examination of secondary sources provided insight into what was and was not known, the limitations of previous research, the shortcomings of methodologies employed and the generalisability of conclusions.

Consultation of secondary sources provided a means for increasing the efficiency of the research resources by targeting real gaps and oversights in knowledge. Cooper & Rosenthal (1980) point out that bias may be caused by an imprecise weighting of the conclusions from various sources. It is acknowledged that the secondary data had been collected for different purposes and under different conditions. The same reasoning and justification for certain questions cannot be simply brought forward and assumed for this study.

The sources used in the secondary data collection process were:

- “Moving into the New Economy: Strategies for SMEs in the Wangara Industrial Park” Fink & Venkatesan (2001)
- North Metro Business Grow Final Report July 2001
- Home-based Businesses in the City of Wanneroo June 2002
- Joondalup Business Survey August 2001

3.18 Strength of Using the Triangulation Method

The term triangulation is the principle applied to land surveying where the bearings of two landmarks can be taken to locate the surveyor at the intersection (Campbell & Fiske, 1959). The usual emphasis is on combining methods and a series of complementary methods of testing. When diverse kinds of data support the same conclusion, confidence in it increases. Triangulation is not the combination of different types of data, but an attempt to relate different types of data in such a way as to counteract various possible threats to the validity of the analysis (Cronbach, 1982).

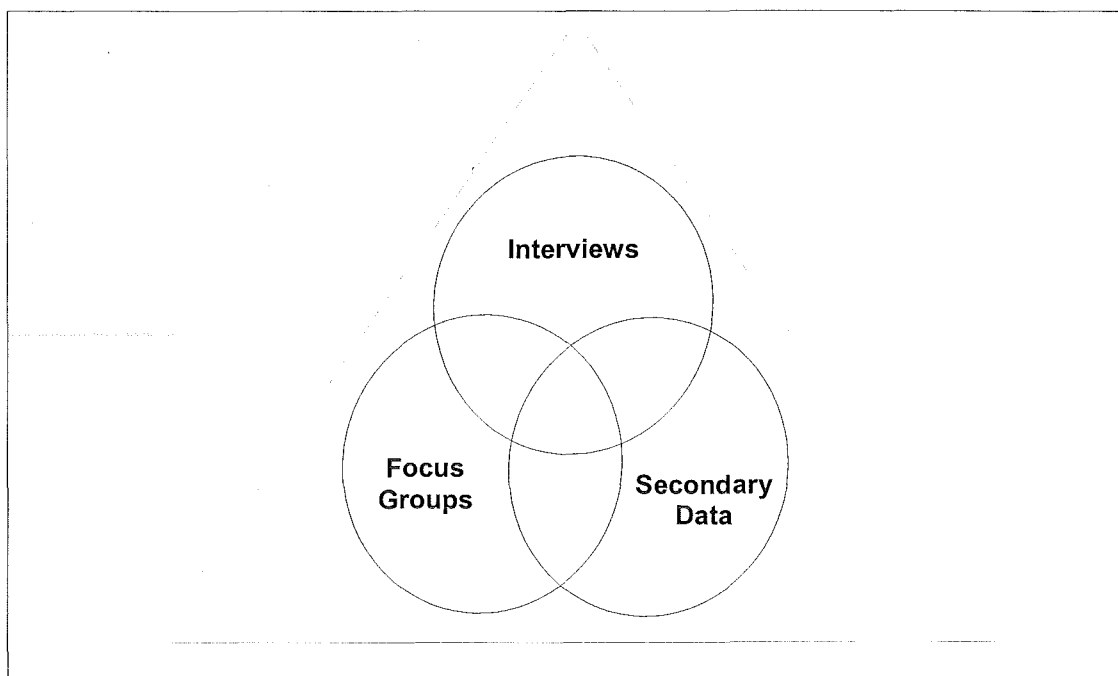


Figure 3.5: Triangulation of research methods

Triangulation asserts that we gain confidence in a research finding by eliminating threats to the validity of that finding. This convergence is strengthened only when there is agreement of outcomes derived from the use of different and independent models, methods and occasions (Popper, 1959; Brinberg & McGrath, 1985).

Triangulation is a strategic choice that can enhance a study's generalisability. The act of bringing more than one source of data to bear on a single point can assist with corroboration, elaboration, and illumination of the research in question (Cronbach, 1982).

Campbell (cited in Brinberg & McGrath, 1985) regards triangulation as the method of choice for reducing certain sources of potential invalidity in the measurement and manipulation of variables. Diversity of approaches will increase confidence in a set of findings if the findings converge. The weakness of any one strategy or design can be offset with the other methods. The use of interviews, secondary data and focus groups increase the ability to reduce uncertainty in any set of empirical findings.

The flexibility of research dealing with human subjects attracts accusations that such work is impressionistic, biased and subjective. Triangulation, or the multiple strategy approach, is no guarantee of internal and external validity. The real target for such efforts in quality control is the researcher. Qualitative researchers resort to their own estimation of the strength of the cited data or interpretation (Fielding & Fielding, 1986). Triangulation puts the researcher in the frame of mind to regard his or her own material critically, to test it, to identify its weaknesses and to identify where to test further.

3.19 Focus Groups

Using focus groups in qualitative research can enhance projects that are largely based on individual interviews. One way to triangulate focus groups with individual interviews is to conduct the groups as a follow-up to interviews (Morgan, 1988). In the 2Cities case, the researcher was able to explore issues that appeared only after the completion of, and during the analysis of, the interviews. The goal of triangulation is to strengthen the total research project, regardless of which method is the primary means of data collection (Morgan, 1988).

3.19.1 Focus Group Participants and Choice of Participants

Gubrium & Holstein (1995) offer an introduction to group interviewing. They elaborate on how big a group needs to be to satisfy the goals of conducting focus groups. The quality of the session can suffer with a large number of participants. A focus group is usually composed of five to ten participants with the guidance of a

moderator. There is usually a strong case for keeping numbers down to six or seven participants, normally considered the optimum size.

Converse and Schuman (cited in Gubrium & Holstein, 1995) contend that the minimum number of focus groups needed to complement interviews is two. For the time and size constraint of this study, the two focus groups undertaken satisfied this minimum.

The study employed several methods to locate participants. First, the Wanneroo Business Association, the Joondalup Business Association and the North West Metro Business Enterprise Centre assisted in introducing SMEs interested in either participating in one-on-one interviews or being involved in the focus groups. This introduction yielded over half of the 40 businesses interviewed, and over half of the focus group participants. Second, a post office box drop was organised for Wanneroo and Joondalup SMEs. Four hundred random letters of invitation to participate in the study were sent to business boxes.

The letters to potential participants stated that all information obtained would be strictly confidential, and that no publication of results would reveal the identity of any business or business owner. This mailing also provided information on the study goals and the lack of previous research on the topic. Participants were also made aware of the consent form to complete, as a condition of receiving the Ethics Clearance (see Appendix C).

Interviews were conducted in a variety of locations that were chosen to be comfortable for participants. Locations included the participants' offices, coffee shops and other neutral locations. Whenever possible, an artificial laboratory-like environment was avoided. Participants were assured that a lack of prior research in this area meant that no answer was correct or incorrect.

3.20 Chapter Summary

The research methods used in the conduct of this study were built upon the foundations of the research philosophies discussed. Data was triangulated so that the sum of the parts (interviews, focus groups, secondary data) added strength to the research process and outcomes.

Chapter 4 presents the findings of the interviews and focus groups and a brief overview of the qualitative software used to input the collected data.

CHAPTER 4: ANALYSIS AND FINDINGS

Chapter 4 presents the results of the data analysis of the interviews and focus groups. The rationale for using qualitative software to analyse the data is outlined, including the functionality of the N*Vivo product. Each question asked in the interviews and focus groups is presented, including key highlights of the findings. Finally, the quality control of response ratings is shown through the Inter-Rater Reliability (Miles & Huberman, 1994), through the independently coded answers of another academic researcher. This independent coding was carried out to ensure resolution to discrepancies and differences. In the final chapter, the research findings are discussed, and the initial research questions answered.

4.1 N*Vivo Data Analysis Tool

A computer-based qualitative data analysis software package was used. The advantages and capabilities of qualitative data analysis software include being freed from manual and clerical tasks, saving time, being able to handle and process large amounts of qualitative data, increased flexibility and improvements in the validity of the qualitative research (St. John & Johnson, 2000). Electronic data handling is useful for manipulating data, making the researcher's work more efficient. The benefits of rigour, speed, consistency and access to analytic methods are greater than manual processing techniques (Tesch, 1990).

Concerns were raised about the time and energy it takes to learn computer packages and the increased pressure to focus on volume and breadth over depth and meaning. In the early development of qualitative software packages, there were other certain disadvantages in the format restrictions of transcripts and data volume (Hong Tak et al., 1999).

The recommendations of St. John & Johnson (2000) advise researchers to match the suitability of the software package to their research type and their own computer literacy. Anderson (1998) stresses the benefits of using enhancements such

as voice recognition software as a transcribing tool. Speaking directly into a computer and having the text simultaneously appear on the screen is one way researchers overcome the time-wasting and frustration associated with poor keyboard skills. Voice recognition software was not used for this study to transcribe data. Reliance was on manual data entry techniques, despite the trial of a voice recognition product for a period of one month. Time constraints were a major factor in the decision not to learn another program.

Richards (1998) relays the importance for qualitative researchers getting both close to the data, and maintaining enough distance to see the subject, in order to analyse it clearly. The computer itself was criticised in the early 1990s for distancing the researcher from the data. It is argued that qualitative software such as the Nudist Vivo (N*Vivo) product can overcome the problem of data being stripped of its richness and vitality in the coding process (Richards, 1999).

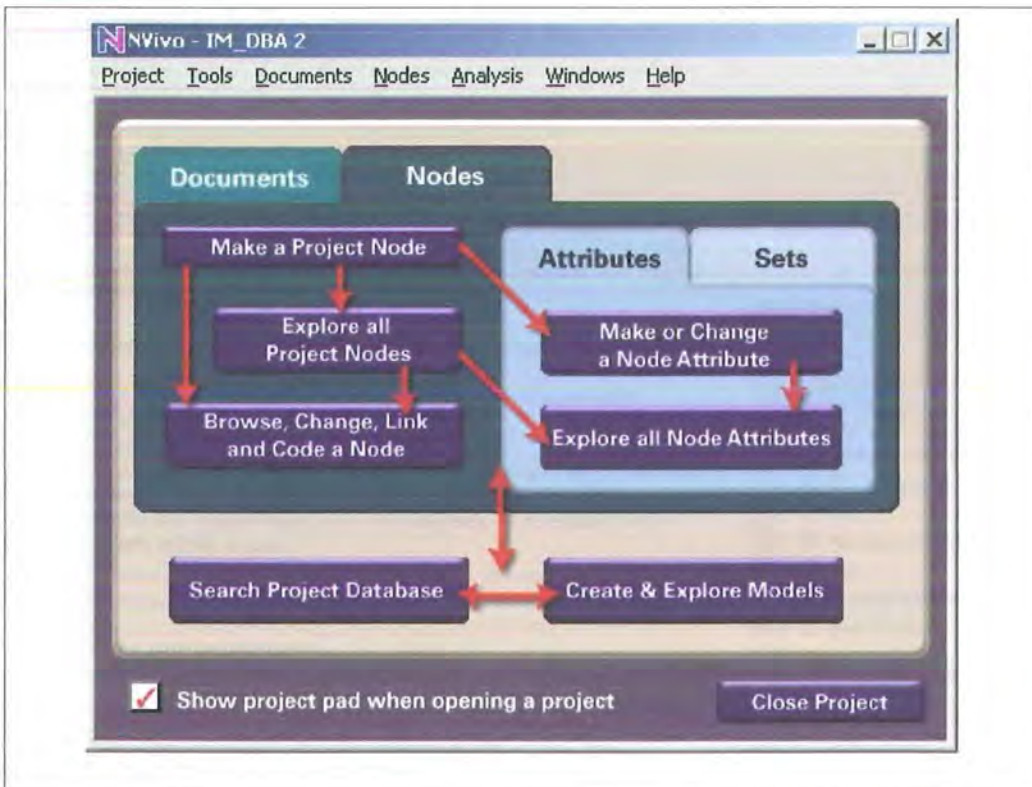


Figure 4.1: N*Vivo control console

N*Vivo was developed to allow the researcher to explore and make connections within the nodes that they create themselves. This may help to preserve

the richness of the data (Figure 4.1 demonstrates its ability to create, browse and explore nodes).

4.1.1 Functions of N*Vivo

This section discusses the functions of the N*Vivo qualitative software tool used in the data coding, cross searching and analysis of findings. It should be noted that the decision to automate the data component was made after comparing the needs of the research and the desired outcomes. The objective being to produce a better overall quality of analysis.

There are two options for data codification. The researcher can choose to mechanically document the findings, and rely on their own development of a storage and retrieval system. The analysis is reliant on the logical set-up of the system. The same principles apply to the use of software. The system must be set up with logical consistency to support the researcher's aim of extracting important and relevant data.

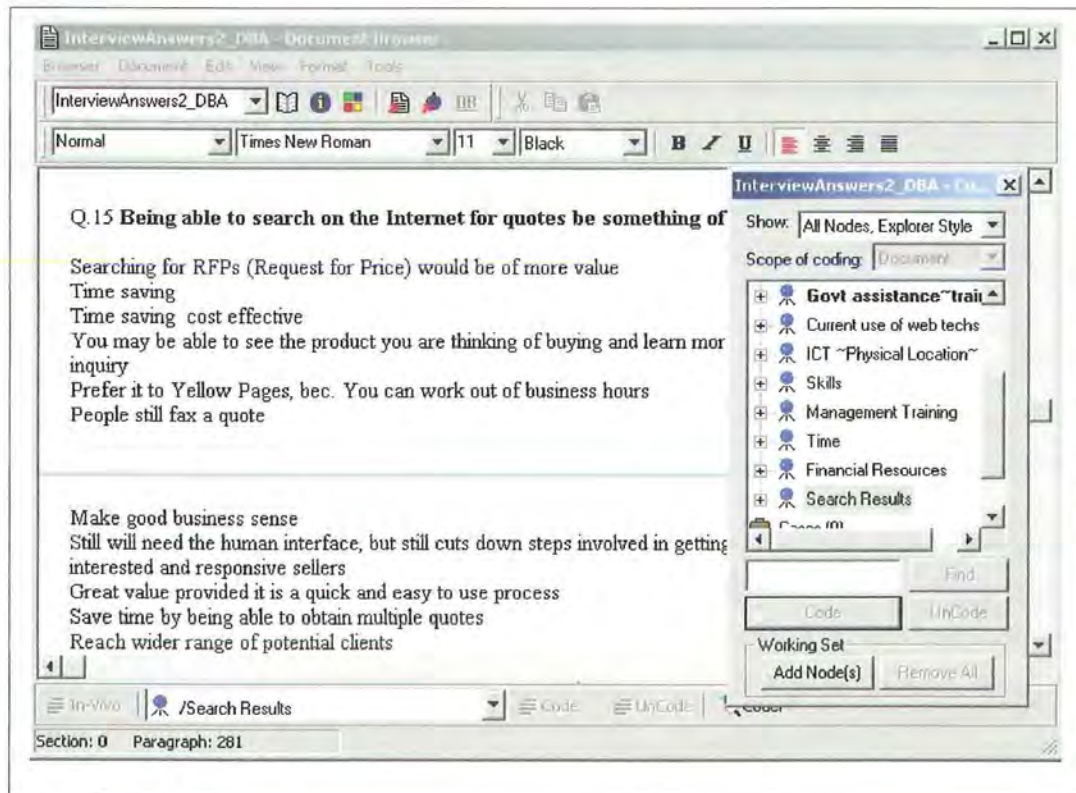


Figure 4.2: 2Cities Interview transcript in N*Vivo

N*Vivo uses logical coding schema to break the data into categories for future ease of use. There are main coding nodes, such as "Lack of Skills", which are then broken down into several sub nodes. The coding follows a parent-sibling approach as well as main node/sub node categorisation. Therefore, nodes can be created that are interrelated and organised in a hierarchy. The software also allows data to be coded by word, sentence, partial sentence and paragraph or partial paragraph.

Each interview and focus group transcript was coded individually and stored in the N*Vivo database. The ability to store large amounts of data in a simple storage and retrieval system gave the advantage of being able to search across data sets. Richards (1999) sees the advantage of such a system in its ability to organise, re-organise and merge different coded items. Its convenience and ease of use aid in the identification of themes and patterns in the data. Richards clearly outlines the benefits (Richards, 1999, p.413);

"NVivo supports code-based inquiry, searching, and theorizing combined with ability to annotate and edit documents. NVivo is designed for researchers who wish to display and develop rich data in dynamic documents. Documents can be imported and edited in rich text with hyperlinks to sound, image, and other files, but they also can be coded as finely as needed and the results of coding displayed, explored, and modeled."

Subsequently, using these discoveries, the software generates a coding report to be printed, digested and analysed.

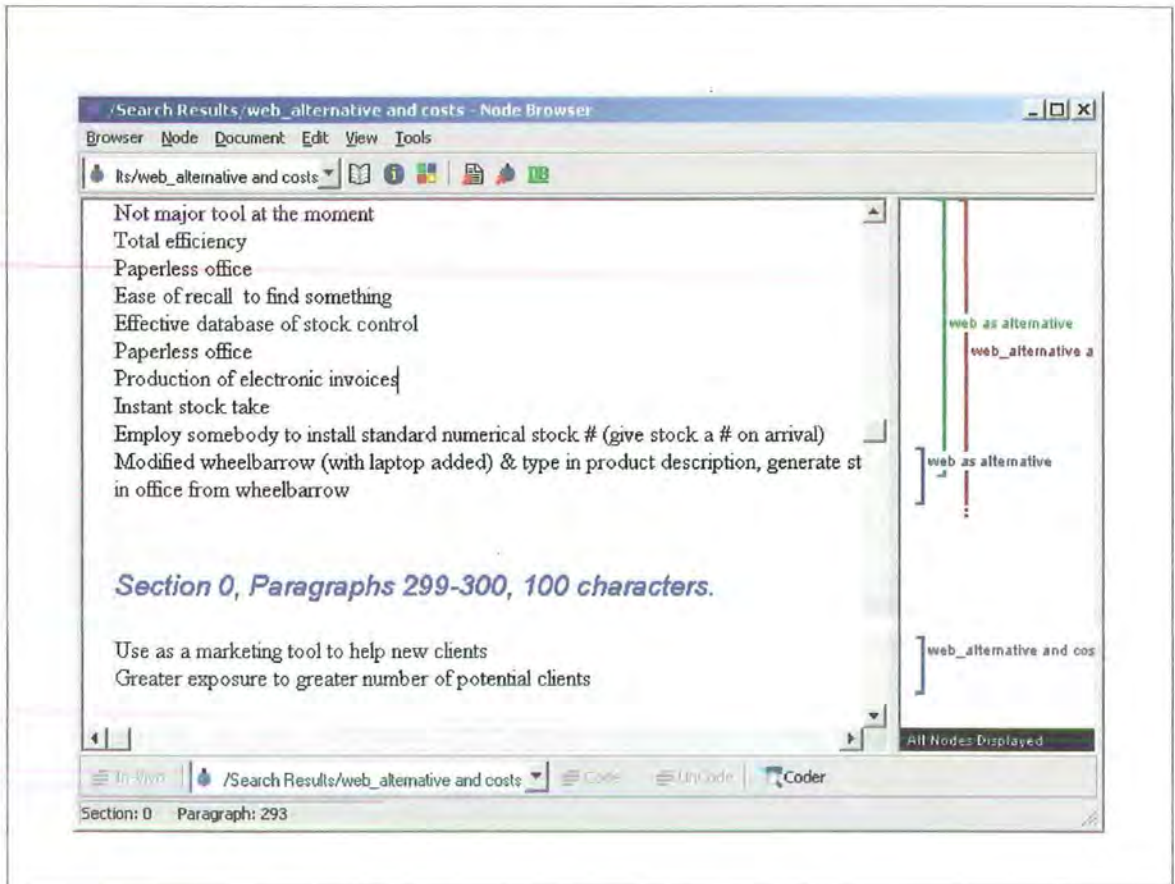


Figure 4.3: Coded transcript with coding nodes in N*Vivo

4.2 Descriptive Analysis

Descriptive statistics were collated to clearly understand the data and the nature of the SME population. The mean average method was used to calculate percentages. The quotient percentage divides the number of responses by the total number of responses for each answer set. This is multiplied by 100 and displayed as a percentage.

4.3 SME Interview Results

The interviews were analysed corresponding to the steps prescribed by Robson & Foster (1989, p.14-16);

1. Transcription

Interviews were transcribed straight into electronic format and entered into the database. The process included revision and editing.

2. Individual Analysis

Each interview was analysed separately.

3. Generalisations

Differences and similarities between the interviews were identified and a series of themes and patterns emerged. These were grouped according to their correspondence to the Literature Review.

4. Control

Information was checked for quality by referring to the original transcripts. The researcher was aware of the danger of taking responses out of context. The interview data produced a range of themes corresponding to those identified in the literature.

As mentioned, responses to each question are presented, in the order in which it was asked in the interview. Participant responses to the questions have been grouped according to frequency using the N*Vivo software.

Interview questions are given in the title of each of the following tables. The left column shows the answers to the questions. The right column shows the frequency of each answer.

Table 4.1: What is your opinion of dealing with local suppliers?

Dealing with local suppliers	Percentage (%)
Always	27.5
Yes – price factor/quality of supply	12.5
Good (e.g. if they can't deliver, I pick up)	12.5
As much as possible	10
Fine (if they begin to know you)	7.5
Helps local economy/convenience	7.5
Don't deal/some don't try	5
Wholesalers in other regions	2.5
Other (positive)	15
TOTAL	100

The question tried to ascertain the value SMEs place on local supply networks.

SMEs overwhelmingly acknowledged the importance of local networks to them. Local supply was favoured by the majority (92.5%), with many citing that reciprocal relationships build lasting partnerships and mutual trade opportunities. While price was not a determinant for most, some acknowledged a trade off between paying a higher price and shorter, guaranteed delivery times.

Two participants commented that, on occasion, sensitivity to price had forced them out of the area, when local suppliers could not compete on price.

“Generally good – some are very expensive.”

Another underlying theme for buying locally was the hope that business would be returned.

“If we deal with them, they will begin to deal with us”

“It makes other businesses aware of your existence in their area.”

Such comments strongly point to the willingness to establish relationships locally. SMEs also hope to learn about and acknowledge other local business through their purchasing. It seems that some have already determined their own psychological and geographic boundaries.

“Strong network of local suppliers within 20km radius.”

“Good, because if they cannot deliver, I can get it myself.”

This concern is addressed in other questions, as delivery frontiers are determined by companies refusing to deliver past certain points north of the Perth central business district (CBD), and past certain times. This may be because many courier home bases are located in or around the Perth CBD.

Locally based and developed relationships are also of some importance to the small businesses.

“Essential - fosters local employment. Reciprocal relationships building strong and lasting partnerships.”

Table 4.2: How would the use of IT improve your customer service?

IT improving customer service	Percentage (%)
Enhancement & assistance to sales	25
Ease of communications	15
New systems (eg. Accounting)	15
Help with basics	10
Pointless keeping up with technology	7.5
Website (of low value)	7.5
Integral part of operations – used daily	7.5
Other	12.5
TOTAL	100

This question aimed at provoking thought on IT use and its practical advantages as part of business processes and systems. SME customer service traditionally relied on personal communications with a lower mechanical component. This question explores how contemporary SMEs in fast-paced environments keep ahead of customer service expectations.

The key themes to emerge are the ease of communications (15%) such as better service provision through order tracking, electronic invoicing, and other customer-driven services such as receiving orders through electronic fax.

A greater focus on service to bigger spending customers was noticeable.

“More service to bigger spenders: the 80/20 rule of small business has to be remembered. The 20% is your bread and butter customer base.”

“Could allow me to focus on higher ‘dollar value’ customers.”

The acquisition and use of new systems (15%) impacting on customer service included the purchase and installation of new database driven systems and the integration of new accounting packages such as MYOB, human resources payroll systems and email databases.

Not surprisingly, numerous comments were made on sales enhancement and assistance (25%). Answers ranged between the speeding up of the sales process, to

the enhancement of branding efforts, and to the sourcing and sending of quick responses to sales inquiries.

The potential benefits were summed up succinctly by:

“Huge potential – file notes on customers; refunds and customer preference.”

Contrary to those who regarded ICT as an integral part of their daily business operations, some showed reluctance in learning how new applications could enhance their business. Others were wary about the sales pitch to us: Websites as positive advertising tools. Disappointments were voiced with a low number of hits, the expense of launching, maintaining and promoting. One SME explained how business Websites once considered state of the art, are now seen as backward and in need of rejuvenation. This highlights problems with Websites in disrepair and the impact on customer service.

Table 4.3: In your opinion, is there a need for electronic business within manufacturing and distribution?

Electronic business within manufacturing and distribution	Percentage (%)
Yes/Absolutely	65
Fully automated/instant response/suppliers already online	7.5
Don't know	12.5
Use traditional – paper-based/fax	5
Too many options – who to trust	5
SME – need not be that progressive	5
TOTAL	100

This question strongly correlated with the significant proportion of manufacturing businesses clustered in the area under study. The aim was evaluate the perception that the adoption of electronic business added significant value across industry classification.

Responses to this question were grouped into two categories. The first being those who felt that electronic business did add significant value, and the second being those who did not.

The first category (answers 1 and 2) yielded the majority (72.5%) who agreed that the electronic listing of items, the ability to quote and order, getting background information and pricing were necessary.

Within this strong majority, there were many reasons given. Some of these were:

- efficiency in ordering
- the processing of orders
- competitive advantage
- the early adoption being acknowledged as a reason for gaining and maintaining market share
- future networks increasingly relying on this type of system
- the ability to search out and receive further information, allowing businesses to be more knowledgeable
- the sourcing and ordering of products/services
- the improvements in competitive quoting and new possibilities (i.e. Systems)

The second category (27.5%) felt the number of options overwhelming, often turning to traditional means suiting their situation. This included face-to-face exchanges and follow-ups with traditional communication methods, through either fax or other paper-based forms.

Some SMEs considered themselves too small to overcome prohibitive set-up costs. 75% of those who viewed automation within manufacturing and distribution unnecessary felt that traditional face-to-face meetings still suited their business.

Some respondents felt comfortable with a combination of traditional and electronic forms of business in manufacturing and distribution;

“Even if I get an email request for a quote, I will pick up the phone. I will still require a written (paper-based) confirmation. Many customers would still like to see that a real person has signed the quotation request, and not a robot.”

The above statement indicates the level technology is integrated in to business processes.

For those who think that technology-dependent systems come at a price, there is the argument raised for better connectivity;

“Don’t use it because of poor telecommunications connection.”

Table 4.4: How would government support through training assistance help business become interested in learning about the internet & its applications?

Government Assistance through training helping business interest	Percentage (%)
Reduced Price/Vouchers/Discounted	22.5
Business self motivation/to pay/to find	15
Need more delivery points	12.5
No time/not good idea	12.5
Shows government commitment/research	10
Yes	10
Wouldn't know of service	2.5
Other	15
TOTAL	100

This question attempted to learn how SMEs saw the role of the government in managing their transition into the New Economy. Government as facilitator, regulator and investor all appear within the literature. SMEs were asked to comment on these claims.

The majority of comments focussed on government service at a reduced fee, with businesses liking the idea of discounted training. There were suggestions of “refer a friend” discounts. The underlying theme was:

“Give us heavily subsidised courses.”

Most small businesses were aware of the \$200 Training vouchers previously issued by government through business enterprise centres.

Business self-motivation rated highly, feeling that part of the onus was on the SME to seek out and pay for services, or embark on learning, whether it is government offered or privately run.

“People need to be self-motivated and resourceful. Government assistance can help if training is targeted and well developed.”

Greater delivery options and outlets were called for, including workshops and in-house seminars and more training people available en masse.

“Wide availability of government subsidised training, relevant to SMEs, may catalyse interest.”

“Public forums and at business premises where it is convenient for small business.”

“Need people on the ground similar to when Tax Office sent tax consultants into field.” (To help with new tax system)

Some SMEs appeared indifferent and disinterested in the possibilities, while others seemed to be encouraged by government support.

“Government has still a long way to go. Got to work on their delivery.”

“Don’t have time to source training.”

The final quote bears mention. The provoking question of the role of government and how far it should go into an arena that is possibly out of their realm of service:

“Government has to be careful not to enter into training area and its service delivery. This is a private sector role.”

Table 4.5: How could small business development centres help your learning about e-business?

Small Business Development Centres	Percentage (%)
Offer training advice/workshops/assistance	22.5
Need advertising/market as service	15
Need to offer relevant courses/flexible	10
No time/waste of time/has to be worth time	10
No help/not convinced/not govt. role	10
Offer mentoring	5
New technology help/re-training	5
Other	22.5
TOTAL	100

The intention of this question was to directly lead on from the previous question regarding the role of government. SMEs were asked to comment on the role and value of skill development centres and the services that may be of value within that environment.

There was little mention of discounted services. The majority of answers (22.5%) were concerned with the type of assistance SMEs felt would be of value. This included the small business development centre offering relevant training advice, workshops and assistance.

Some answers focussed on the logistics and practicalities of such centres:

“Small business can always benefit from cut in travel time. Parking should be ample. (They should) be centrally located.”

The government and its rationale to provide such a service to business provided some heated discussion points. Though only 10% were not convinced government had a role in the provision of small business development centres, there were definite calls for justification from a business point of view:

“Treat the government service exactly the same as a business in its own right. Market the small business centre as a service with flyers/telemarketing/telephone cold calling.”

“Small business development centres do not help small businesses. Look at these centres and show me a success.”

The comments show intolerance for wastage and feel-good exercises:

“Need to be careful in small business of wastage - in terms of how you spend your time. Improvements and perceived improvements have to be worth it, from a return of at least 2 times.”

Other comments included the desire for courses to be selective and specific (5%), but it is possible that more advanced or sophisticated users may find limited value in centres that cater for the beginner to intermediate skill level and user ability. Users with industry-specific needs or more advanced training demands are better served paying for specialist advice and training from a private provider or consultant.

Table 4.6: How could the Web offer your business a better alternative to traditional means of doing business?

Web offering alternative business method	Percentage (%)
Search & select suppliers	20
Control/flexibility/information access	15
Yellow pages just as good/face to face	15
24 hour contact	7.5
Future enhancement possibilities	7.5
Reach more	7.5
Not sure	7.5
Combination print + electronic	7.5
Other	12.5
TOTAL	100

This question dealt with the supply-side of how to source goods and services. Comments were solicited regarding the Web offering an alternative to sourcing and selecting suppliers.

Responses can be grouped into three. The first was represented by the response favouring traditional means of communicating. The handful of comments included the yellow pages (15%) as an equal or greater source of information and the Web as simply a glorified brochure. They valued the face-to-face interaction once basic information was sourced.

The second response set included those favouring a combination approach (7.5%) that blended traditional means of communicating (including print) with the Web. The recognition here is that different customer types gravitate to different stimuli:

“We combine both - both are trusted and used by different “customer bases.”

“Inserts into newspapers with fax back response and a pointer to our Web.”

The third response represents the cautiously optimistic with the each-way bet:

“Need both traditional and Web. As interactivity increases on the Web and better business penetration, we will invest more in this.”

The third group (answers 1,2,4,5,6) acknowledged and embraced the benefits of search functions and capabilities and the ability to source and select suppliers. This group was in the majority at 57.5%. Comments include: the instant access to information, information access and retrieval, control issues, flexibility in delivering timely information, as well as 24-hour contact with buyers and suppliers.

One trial by a manufactured parts distributor and reseller is an instant stock-take and upload of product information to their Website.

“We employ somebody to install a standard numerical stock number and give stock a number on arrival. We use a modified wheelbarrow (with laptop added) and type in product description, generate stock number, and upload this information in our office from the wheelbarrow.”

Future enhancement possibilities included; greater development in the connection to consumer markets and SMEs as well as virtual tours of businesses. The latter suggestion hints at inadequate bandwidth and connection speeds, and encompasses the comment regarding the sending of larger data files and images that require substantial connection rates between peers in a network.

Exposure to new partners and distributors were important as SMEs saw the benefits (10%). New partners and new demands also attracted possible negative comments in exposure to worldwide demands and customers. It seems that often the

return on a customer must be evaluated by the amount of time needed to satisfy that global customer:

“People use the Web to search for options. (They) locate a product, decide that they want it, and because people source products internationally, they demand that we sell it. There are different standards, sizes, types, voltages, regulations to USA product, and that can be a problem.”

The comment from one business that “Greater exposure to a greater number of potential clients”, does not necessarily guarantee a sales and marketing nirvana.

Table 4.7: Do you feel that spending money on ICT is a luxury rather than a necessity?

Spending on IT as Luxury or Necessity	Percentage (%)
Not luxury	82.5
Limited value	17.5
TOTAL	100

The simplicity of this question gauged the importance of ICT to the individual SME. The bi-polar nature of the responses was expected.

There was a simple dichotomy of answers. Those who felt varying degrees of ICT as a necessity (82.5%) and those who felt that it offered limited value for SMEs (17.5%).

Of those who considered ICT as a necessity, answers ranged from:

“It is a part of doing business, who doesn’t have a computer?” to

“Any small business (including subcontractors) who don’t take it up will lose money.”

Within this range, emerging themes broadly covered time saving, reliance on internal systems, Internet connection and use, greater online exchange with other SMEs, large file transfer and order fulfilment requirements.

The responses generated by the second group seem to be due to negative experiences on their business. Overall, the upgrading of equipment was the most annoying, with measurements of return on investment (ROI) not meeting expectations in some cases. Another comment focussed on the loss of time and productivity while computer systems were being repaired, proving costly. Dissatisfaction with consultants and their solutions were also noted:

“Consultants offering whiz bang systems can get (you) into luxury mode. We upgraded hardware on one machine 18 months ago for \$2500, and it doesn’t run any better.”

To pre-empt the installation of mismatched equipment and systems to a small business’ needs comes this advice:

“Depends on the quality of advice that you first receive for your business needs. Maybe this is where small business centres can assist.”

Table 4.8: What is your opinion about the cost of setting up and maintaining an IT network for your business?

Cost of setting up and maintaining IT	Percentage (%)
Expensive	27.5
Not high	22.5
Essential	12.5
Don't know what systems they want	12.5
Call out assistance and repairs	7.5
Computers not networked	5
Must be reasonable	2.5
Other	10
TOTAL	100

The previous question elicited a response of IT systems as either essential to business or not. This question asked participants comment on investments in purchasing systems and their maintenance at suitable performance levels.

Two strong answer sets emerged. 22.5% did not consider the cost of setting up a network high. This included comments regarding self-training, costs being built into the business budget, running of basic systems and small costs for support and maintenance.

A slightly greater number (27.5%) were wary of initial set-up costs and unknown costs for repairs and upgrade. As in the previous question about IT luxury versus necessity, SMEs were alert to the importance of having an IT plan. There are several ways to tailor a package and system to suit individual needs. The common 'expensive, but necessary' comment was combated by:

"Expensive – but lucky enough to have an employee with a high level of technical skill to support and upgrade, and repair almost immediately when things crash."

Certain businesses acknowledged that systems are expensive to fix and maintain at an optimum working level. Others found the expense was incurred when business was expanded. Three businesses complained expense occurs due to frequent technology changes, and the often-heavy price tag associated with the latest technology. Value for money was questioned when associated with these "exaggerated prices."

Understandably, larger companies running many workstations and housing servers onsite commented on the cost factor. SMEs commented on the high prices paid to trying to achieve better systems integration:

"System maintenance is the scary variable."

Another cluster of answers centred on SME lack of expertise and background knowledge (12.5%) in setting up a network. This points to a lack of knowing their objectives rather than specific requirements. Concern was expressed at the vulnerability to software consultants and experts:

"Constantly being told that need to upgrade to S/W versions that are specific to our industry."

One owner saw results as difficult to measure, but added that:

“...Need thick-headed MD (managing director) to push the value of the innovation.”

This gives hope that innovation is company-wide, not just driven from the shop floor.

Computer repair was regarded as either a value-for-money option or a hidden expense.

“Call out – time spent and downtime is very costly.”

“Always call up computer repair (out of area) to fix it if things bust. This is part of life.”

Table 4.9: How could the use of IT open up other regional markets to your business?

IT open up other regional markets	Percentage (%)
Stay local priority	12.5
Cost effective/direct marketing tool	10
Expand contracts (international)	7.5
Global opportunities (unspecified)	7.5
Not really	7.5
Email orders (international)	5
Brand exposure	5
Connection to worldwide agents	5
Other	40
TOTAL	100

Given that the majority of businesses had some form of IT system in place, the question evoked businesses to evaluate their markets, as well as possible new markets.

There was mixed reaction to this question, with 12.5% of participants stating that their market focus is local. Of those indicating an interstate or international focus (25%), the majority pointed to IT as assisting in the expansion of contract possibilities. The global market did not have a pronounced appeal despite its recognition. Some cited the need for help to connect to worldwide agents and product distributors and licensing agents.

The quote:

“Opportunities are good if you have the right thing to sell at the right time,”

suggests that a targeted approach may make more sense than the following comment:

“The potential is worldwide. The potential is endless.”

The comment of one home-based business, acting as an International consultancy was emphatic:

“It already does for my business. I work globally.”

Despite concerns about responding to time-wasting requests offering little chance of sales, a handful agreed it could be a cost-effective, direct marketing tool.

Table 4.10: How would a better telecommunications network (i.e. Telstra) affect your decision to use the Internet for business?

Better Telecommunications Network	Percentage (%)
ADSL is good to have, but service is poor	17.5
No problems – access is fine	17.5
Telstra – service inadequacies	15
Need reliable broadband	12.5
Would be great	10
Little impact	5
Unknown –what does better include?	2.5
Use applications like Internet Banking	2.5
Other	17.5
TOTAL	100

This topical and controversial question asked businesses to evaluate their own needs and business requirements of a service considered critical by some. It was designed to test the assumption that physical location minimally affects the provision of infrastructure services in the New Economy.

Answers to this question divided businesses into sub categories. Of those happy with their current service (17.5%), nearly half indicated their business was

within the relatively new Joondalup business district, which is known for its access to high-speed telecommunications services. Comments included: "Joondalup CBD is wired. We are happy"; "Mostly OK fast high-speed connection in Joondalup central (fibre reticulation)."

The comments emphasise that service quality levels are location dependent. Wangara Industrial Park, located in the City of Wanneroo, was developed in the 1980's. Businesses from that location gave different responses. These ranged from frustrated to vitriol:

"It is appalling at present narrowband gives shocking service"

"I just paid \$3000 to get ADSL, it is fantastic, but the price tag was a joke, and the service was worse"

"Cannot believe that Telstra has such customer dis-service within itself"

"Wangara area is appalling for Telco. We have heard that there is a petition into government lobbying for better quality service"

"Takes 13/14 minutes (in Wanneroo Central business district location) to log into banking page to use Internet banking facility online"

A common complaint (15%) was that the service level provided by the incumbent carrier ranged in quality:

"Tried to follow the steps to get ADSL connected, and gave up after many frustrating attempts of talking to the Telstra representative who insisted that I could simply complete everything online, submit the form and it would be taken care of. Too many complicated jargon terms and technical questions that I did not know the answer to, and I gave up."

"Shockingly slow response to questions";

"No straight answers from multiple customer service representatives who all appear to have different retention of service level training."

Other responses clearly showed an irritation with services promised and not delivered (17.5%).

"Cannot believe that Telstra has such customer dis-service within itself."

“If the services they advertised were available, that would be brilliant.”

SMEs seem to be looking to the future to satisfy their business needs, but have not found a happy medium between service offering and service delivery. The elasticity of demand for the Telstra broadband service, ADSL, is influenced less by price sensitivities than service quality sensitivities.

One answer worth noting asks to clarify the definition of “better”.

“Unknown – unsure of what “better” would include.”

Table 4.11: How would improved communications help overcome being located in a remote business location?

Improve communications/Overcoming remote business location	Percentage (%)
Better Internet	12.5
Not so much	12.5
Not remote (anymore)	10
Improve business processes	10
More competitive	10
Delivery – no problems	5
Better mobile coverage (range)	5
Improve co-ordination of delivery	5
Lose less business opportunities	5
Better access to world (non-local)	5
Other	20
TOTAL	100

This question ascertains whether rapid urban development occurring early in this new century would affect the way SMEs viewed their location and their access to infrastructure services.

Two main responses emerged. Three quarters of all participants commented on their access to communications or on their physical location. A sizeable proportion of those did not feel they were located in a remote area, or that this disadvantaged them greatly. A number of causes emerged, including rapid growth of the urban development frontier. Business viewed their location as more acceptable to both consumers and delivery people.

“Due to (the) development frontier, households are stretching much farther north than Joondalup, and we can get better service from delivery. Cost of getting a courier to deliver is decreasing constantly (per unit).”

The suggestion that changes to frontier mindsets have changed is encapsulated in the following:

“Even 3 years ago, couriers would only ever make Friday afternoon runs, and only to a certain point. We used to have to overcome the problem of delivery with overnight bags. Does delivering something within Perth metropolitan have to be that laborious?”

Comments were still noted for the need for constant improvement to a situation that does not only include the physical barriers:

“Faster IT networks can actually create new demands/ new needs.” Need better Telco because of the time it takes to download drivers.” “It would be a welcome improvement; our business relies more and more on shifting large data files including video images and complex diagrams.”

In terms of wanting to be more competitive, SMEs felt that certain minimum criteria for service obligations are universal.

“It would be a welcome improvement; our business relies more and more on shifting large data files including video images and complex diagrams. The service for high bandwidth demanding clients is pathetic.”

Thus, SMEs wanted communications to aid and improve their business processes, and to project their planning and business potential into the future.

“Ability to source quotes, place orders & process debtors/creditors payments online.”

“Faster IT networks can actually create new demands/ new needs.”

Table 4.12: In what ways would learning Web technologies increase business-earning potential?

Learning Web technologies/increase business-earning potential	Percentage (%)
Marketing tool	15
Poor knowledge/stressful	15
Speed up sales process	10
Promotional tool	10
Traditional + Internet	7.5
Not sure (possibly limited value)	7.5
Research tool	5
Other	30
TOTAL	100

This question asked participants to directly think about the value their business is deriving from the current service offerings. The dichotomy of responses to this question is also noteworthy.

A quarter of participants viewed the Web's function to provide marketing and promotions tools for their business. A further 10% felt the acquisition of Web technology skills could help speed up sales processes and efficiencies.

“By making advertising and exposure a more cost effective option. Enormous benefits as a marketing agent (tool)”

“Enable to promote my business more professionally”

Reinforcement of a combination of both traditional and New Economy processes was encouraging. Some SMEs seem to have ventured into learning about new technologies and its benefits, but at the same time are cognizant of the inevitable mistakes.

“Have to combine traditional means of advertising cleverly with Internet. We are still learning and making mistakes.”

Five participants felt that their poor knowledge of the function and use of the medium rendered the Internet useless to them.

“Stressful, steep learning curve, time consuming” encapsulated a frustration of a reasonable minority (15%) who decide not to learn about its benefits. This statistic offers an opportunity for service offerings with basic Internet provision training to the profit and non-profit sectors.

Despite the high levels of computer use among reported SMEs, there appear to be laggards who feel that use will not derive any business benefits (Telstra Small Business Index, 2000). Other comments, interpreted as mild forms of frustration, could also assist in the forming of training assistance:

“Barrier that stops me using Web technologies is my typing speed and accuracy. Voice activated software is one option for me.”

This question attracted some less surprising comments agreeing that technology assistance would aid their business bottom line. This group were consistently unclear on the form such assistance would take within their business.

“Unlimited on first impression. Not sure exactly how.”

“The ability for all business to promote their services within all locations worldwide.”

Table 4.13: How would being able to search on the Internet for quotes be something that would be of value to you?

Searching on Internet for Quotes/Value	Percentage (%)
Yes – of value	12.5
Time Saving/cost effective	10
Waste of time	10
Internet – unreliable	10
Useful to check delivery/availability	7.5
Learn more/product analysis	7.5
Knowing where to search/promote tool	7.5
Quoting is only the first step/price 1 st step	5.0
Other	30
TOTAL	100

This question directly relates to the proposal to business buyers and sellers of the 2Cities innovative model. The system allows businesses to quote to government (and other businesses) in a real-time environment through any of three means: mobile phone (cellular), facsimile (FAX), or email (electronic mail).

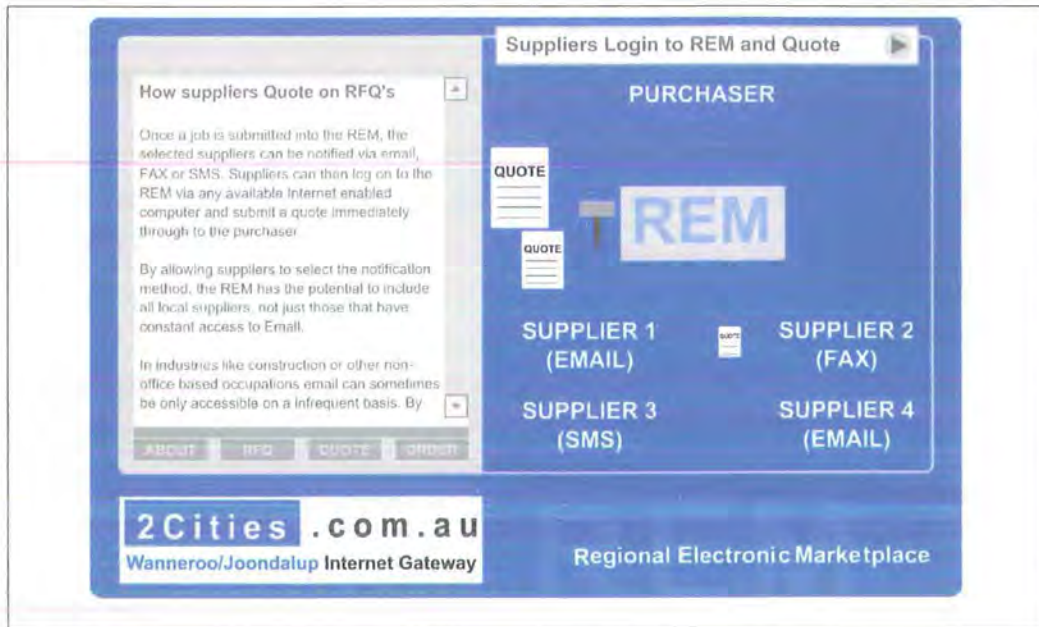


Figure 4.4: 2Cities Regional Business-to-Government portal (REM) procurement demonstration

The method of delivery of this real-time quote mechanism is shown in Figure 4.4 above. The diagram demonstrates to the supplier (business) how purchasers enter the system; locate the businesses able to supply a particular good or service, and then send a request through the system.

The question of being able to search the Internet for quotes attracted broad and varied responses, not represented by any dominant answer set. There were those who thought that searching for quotes was of value (12.5%):

“Good to comparison shop in a local environment.”

Another recurrent theme that inhibited proper usage was the Internet platform itself (10%). Comments regarding the unreliability of the telecommunications service were emphatic and pointed.

“The Internet is too unreliable for us – we will wait until we have a better connection – my assistant still gets booted off the ISP when she is logged on to Internet banking.”

“Depends on the connection – some things are painful.”

Some were highly sceptical of the whole quoting concept and its practicality, considering it a waste of time (10%):

“Beware tyre kickers. If people are shopping around, it can waste time of people responding to quotes.”

“If people are shopping around, it can waste time of people responding to quotes.”

“Could become like SPAM.”

The demand-side of the purchase equation was represented by the response:

“Save time by being able to obtain multiple quotes.”

This may well indicate the benefits for the ‘tyre-kicker’ or comparison shopper.

There were also those who saw it as a time saver that could prove to be cost effective if populated, managed and controlled. (10%)

“Needs to be populated and controlled – otherwise users will lose confidence in the system.”

Those questioning usage rates and take-up were also critical of the numbers needed to give the system a critical mass and minimum usage. Fifteen percent argued that promotion was the key to informing business where to search for products and services.

“It still takes 3 days to find something, because information is still not found in one complete source in one area.”

A mechanism allowing business customers and regular customers to learn more about products and comparison shop was applauded. This functioned as a way to give more people access to information (15%). However, there is no connection made between searching for information, lodging a quote, and converting that quote into a sale.

“You may be able to see the product you are thinking of buying and learn more about it through your inquiry.”

Several provoking points were raised concerning the limitations in market reach and the common sense value of quoting online.

“Depends if your business is the type that can easily quote on easy to understand products or services.”

One small group reasoned that giving a quote was similar to making it to first base in baseball:

“Quoting is only the first step to a sale for me – my skill is in the upsell or onsell.”

“Price unfortunately is only 20-30% of the reason why people purchase.”

There were also those responses offering an insight into new applications that may be demanded in the future. Checking delivery availability, delivery times and delivery/service fulfilment (through mobile phone) were all possible service offerings. The Federal Express ‘Track Shipments’ option (www.fedex.com) allows customer order tracking of packages through the Internet or to a customer call centre 1-800 number in the United States.

Table 4.14: What do you think about the need to constantly upgrade computer skills to keep up with the market?

Upgrade computer skills to keep up	Percentage (%)
Self-teaching is sufficient	15
Yes – need to (time/money restrictions)	15
Essential to growth & competitiveness	10
To keep up to date	10
Learn enough to get by	7.5
Appreciate government assistance	5
Too expensive to keep up	5
Don't need to/too painful	5
Already missed the boat	5
Other	22.5
TOTAL	100

SMEs are often a jack-of-all-trades, unable to rely on having various people in positions of narrowly focussed expertise. This question gauged SME receptiveness in considering their computer skill and competency levels. The perception is that they are doers and not administrators.

This question produced many pragmatic answers. These included self-efficacy solutions (15%), with businesses certain they could conquer the need to continually upgrade skills. A majority of these may have had basic core skills that afforded them such do-it-yourself confidence. Equally, a high percentage (in aggregate) thought that their skill levels needed continual updating, but lamented time restrictions.

“Try to use new software. It comes with teaching programs and self-help tutorials if you have time.”

“Haven’t got any computer skills. Had to become self-taught.”

“Learning continuously is important but probably rely on self-teaching.”

“If you are using computers constantly, you can teach yourself.”

One response showed some out-of-box thinking. What is not clear is the long-term wisdom of the decision.

“Put Win98 (old version) on brand new system so that I didn’t have to upgrade skills and learn about the new system.”

Some pragmatists analysed the question in business returns and concluded that computer competencies can be mapped to business growth and competitiveness. Agreeing strongly with the value of skill upgrade at the ground level, they acknowledged leadership comes from the director and managing director positions.

“In order to drive the business forward you need to be proactive, otherwise subordinate staff will sit on their hands and nothing will progress.”

Keeping up-to-date caused feelings of anxiety and intimidation. However, there appeared a willingness to take up the challenge.

“Too expensive to keep up with everything that is new and exciting.”

“Important if you have the desire/inclination. There is so much that you can do - learn about new equipment, and the power of new programs.”

Those preferring to outsource skills upgrade arrangements also thought in terms of business returns and return on investment.

“Many tasks can be outsourced. Let others in the business do this, I will stick to making the strategic decisions.”

The realists felt that they learn enough to get by (7.5%) and this satisfied their needs.

“You usually learn as much as is required to get by. Living is learning.”

Government assistance received two types of comment, those applauding for and those protesting over apparent inertia and lack of help.

“Some government assistance would be appreciated.” and

“Small business employs enough and drives the Australian economy. Government does not recognise this enough and could help in the computer literacy and skills upgrade.”

One final word of caution:

“The greatest danger is making assumptions that skills are OK.”

Table 4.15: Would there be any value in offering business managers opportunities for short courses to promote wider use of new technologies?

Short courses to promote new technology use	Percentage (%)
Yes	27.5
Concentrated & targeted	12.5
Coincide skills with equipment upgrade	10
On the Job Training (at small business)	7.5
No time/ little interest	7.5
Better to send staff	5
Learn at home	5
Cynical of value	5
Other	20
TOTAL	100

The question tried to obtain an understanding of how SMEs viewed their individual business and their coping strategies for staying in touch with contemporary technology options.

Aside from a “Yes” in 27.5% of cases, responses were less concentrated than in previous questions in any one particular response set. Certain answers were easy to group and code. For example, those (12.5%) who agreed targeted short courses are beneficial, particularly if there were good notes and handouts.

“Very effective user friendly notes should be produced for reference.”

On-The-Job-Training (10%) was a moderately popular solution, contrasting to those who saw no value in daytime learning and preferred at-home learning. Some had no time and little interest (7.5%). Of these, two-thirds were cynical of the value of short courses. The following demonstrates indifference came out in the following:

“Where would they be – my place at midnight?”

There were mixed responses from those participating in some form of short training regarding value and cost.

“Some government courses are worthwhile attending – some private companies tout that they are offering some skill advancement and are just over-priced rip-offs”, and

“Over \$2000 for a 2 day workshop – no way that small business can afford this – my book-keeper has a \$1600 computer system!”

Another point of contention was whether it is more beneficial to send staff or managers. The answers were divided equally between either first sending the managing director first to evaluate company value and benefits, or sending staff most likely to be affected and have a greater need for the practical application of the courses.

It is worth noting that skills upgrade coincided with equipment upgrades (10%). More specifically, this is when skill development was tied to hardware and software, rather than upgrading generic computer skills. Giving business managers one-off training on the specific use of equipment was seen as beneficial. Then:

“Once equipment is working properly, they do not need training.”

Table 4.16: How could the use of technology speed up business for customers and allow you to focus on other activities?

Technology use to allow focus on other activities	Percentage (%)
Receive email orders/product information	20
Quicker/faster outcomes & response times	15
Can lead to time wasting	10
Greater organisational ability	10
Could mean more work	7.5
Superior information recall	5
Time savings (business effectiveness)	5
Reduce time consuming telephone calls	5
Other	22.5
TOTAL	100

Here, SMEs were encouraged to evaluate whether technology was an application assisting or hindering business. Nearly one quarter of responses were negative, indicating concerns about the creation of extra work, the need for extra

staff resources to tame and manage the technology, the chances of technology unreliability and the possibility of corporate time wasting. However, a three quarter majority saw positive benefits and opportunities.

Many were impressed that requests, orders and other inquiries could all be conducted by email (20%), and considered the ability to post brief or detailed product information a valuable asset.

“Quick, easy access to my product information. Greater information to products online 24 hrs/day for customers.”

“By going to any of our Websites, they can get as much background information that they can absorb. This allows them to ask much more sophisticated questions.”

Quicker, faster outcomes for customers (15%) were also mentioned as beneficial.

“Information speed to market is improved.”

SMEs can achieve greater organisation, as software is used to organise and control. For example, Microsoft Outlook was one specific tool SMEs use to keep track of appointments, customer information and reminders. These details, if managed ineffectively, can cause chaos for a business.

“Our objective is organisational organising.”

One fear was that technology caused more work for the overworked SME (7.5%). Some identified the problem as an increase in technology (availability, functions and features) leading to a decrease in overall effectiveness. Another major concern pointed to technology causing time wasting.

“Tend to waste time the more I am using technology. There is a great temptation of being sidetracked from your work.”

“More technology means less time to do business. This is the small business paradox.”

Contrary to this, (5%) felt that technology improved their business processes through effective time management strategies.

Despite being an infrequent comment, the following encapsulates some of the small business reluctance to embrace technology and its applications.

“Technology when it works is great. However, there are too many pieces to the puzzle. It often goes horribly wrong and clunky.”

Table 4.17: What is your view on the use of a computer as an electronic assistant?

Computer as an electronic assistant	Percentage (%)
Good tool	17.5
Invaluable	12.5
Versatility/portability/ease of repair	12.5
Garbage In – Garbage Out	10
Integrate equipment with business	7.5
Orderly systems	7.5
Fast & timely	7.5
Not so useful	7.5
Changing the nature of how we work	5
Other	12.5
TOTAL	100

The question falls within the “Lack of Time” category of the interview schedule. It gauged the acceptance of a computer as either a welcome member of staff, or a hindrance to business processes.

12.5% felt that the computer was invaluable and 17.5% saw it as a good tool in their particular business. They were also unaware of other alternatives.

“Vital to business need to be tracking work flow, appointments, products, opportunities everything!

“It IS my business. ALL content is stored in this information hub.”

Some systems afford a versatility (12.5%) that allows businesses to manage regardless of the circumstance. Flexibility is vital in minimising the impact of negative external impacts.

“We have 4 work computers, all networked on LAN. If one breaks down, I simply move the contents to another and continue work. To have a back-up is critical, cannot afford down time.”

10% viewed the quality of outputs correlating strongly with the quality of what inputs. Some of the imaginative responses of the Garbage-In/Garbage-Out followers are:

“Like lungs that need air, and high quality air!”

“It’s only as good as the data you put into it. Apologies for tired cliché.”

Integrating the computer into the business (7.5%) was argued to be sensitive to the skill of the small business attempting to make people and computers work together.

“Unless the equipment becomes part of your business workings and processes, it is of limited use.”

Several commented that the computer possibly impacted more than being just an electronic assistant.

“Changes the nature of how we work and our tasks.”

“Person that loses job in one area can now do more productive things (eg. Talking to customers/making sales/onselling/upselling) instead of doing repetitive data input.”

Table 4.18: What do you think about the perception that there is a high cost associated with using the Internet?

High cost associated with using the Internet	Percentage (%)
Not high	50
High	20
ISP charges are high	5
Hard to quantify	5
Destruction of equipment	2.5
Other	17.5
TOTAL	100

The question was in a series of three evaluating whether the costs of entering the New Economy and using new technology applications were a cost considered by SMEs.

Exactly half felt that using the Internet was a natural, essential and relatively inexpensive cost of doing business. Considered as a business' operational cost, it was acknowledged that expensive initial set-up costs are outweighed by long-term savings. Cost-effectiveness was the main theme in many responses.

"High is a relative word. In the accepted sense, this is not true. It is a reasonable part of small business' operational cost."

"If system is customised and running at an optimal level for our business requirements, it is worth the capital investment"

"ROI (return on investment) in terms of access to information/services makes it cost effective."

Some comments suggested future SME use would increase to such a level that cost discussions would diminish:

"Depends on your business, but for us it is part of life, and is set to increase to an even greater level."

On the other hand, 27.5% considered the cost of the Internet high. The various responses took into account the cost of hardware, Web page design and development. Prohibitive ISP (Internet Service Providers) charges connecting small businesses to the Internet on typically monthly billing cycles were also mentioned.

A few responses caution that self-education and awareness is often efficacious:

“There is (high cost) if the wrong advice is listened to. It is best to shop around and hear different opinions.”

One comment from a rural-based business, told of the cost of power fluctuations causing their equipment to fail or be destroyed. Despite its insignificant frequency, this response holds lessons in understanding unique inhibitors.

“Cost to us is the destruction of sophisticated equipment due to power fluctuations.”

Though difficult to categorise, one final interesting thought:

“Like the benefits of working on a desk with proper lighting than on the top of a box.”

This statement suggests that there is no substitute for reliable equipment or services to enhance an SME’s operation.

Table 4.19: How would you measure whether or not this business tool (the Internet) has been a success for you?

Measuring this business tool (the Internet) has been a success for SME	Percentage (%)
Business turnover (increase sales)	15
Increase family time	12.5
Just need it	10
Communications (level & speed)	10
Time savings (to do more)	7.5
Can't measure – difficult	7.5
Build market share (long term)	5
Tracking new inquiries	5
Other	27.5
TOTAL	100

Here, how businesses viewed their use of the Internet as a business tool, and their satisfaction with the decision to use it, is examined.

A popular response was to benchmark increases in business turnover against sales generated (15%). However, there were no detailed discussions on exactly how these increased sales were to be achieved.

One non-business related topic was that the Internet and technology provided increased family time (12.5%). Thus, technology allowed SMEs to convert benefits to non-business pursuits.

Some felt the level and speed of communications (10%), coupled with better response times were critical to business improvements. The time created for other pursuits (7.5%), including other business-related activities was an important yardstick. Systems audits of how to track new enquiries may also prove valuable:

“Audit how much use the system gets and gauge the part of business that does not rely on technology. We would find that no section escapes.”

Some acknowledged (7.5%), it is difficult to measure benefits accrued from Internet usage in business, agreeing that measurements, are at best crude.

Some longer-term players (5%) did not consider the immediate need for increased sales important.

“Current sales is immediate and fine to know and record, but building market share is more important to us.”

Minority comments included taking the customer point of view.

“Real measure level of satisfaction of customers. The ability to service more customers will therefore generate greater profits and create jobs.”

For others, the pride associated with mastering new technology was how they measured the success of using the Internet.

“To be able to adopt and demonstrate the use of cutting edge technology in our trade. To be considered as being at the cutting edge drives for continual improvement.”

“Level of satisfaction in the mind of the owner/operator that the business is running as efficiently as it can be with the resource input.”

Table 4.20: What are your views on 24 hour/day, 7-day/week customer support demanding unjustifiable resources from your business?

Views on 24/7 support demanding unjustifiable resources from business	Percentage (%)
Stick to office hours	12.5
Helps workflow/helps organise	12.5
Don't need/Pain	10
People will wait: traditional is adequate	10
It is expected (customers)	7.5
After hours queries are not that serious	7.5
If compensated adequately	7.5
Opportunity - gives appearance of big	5
If it suits the business to do this	5
People want human interaction	5
Figure out balance between work/family	5
Other	12.5
TOTAL	100

This question explored the new expectations of SMEs and how the Internet and communications has expanded their 'shop' to global enquiries working outside of traditional 9-to-5 work schedules.

The varieties of opinions were sorted into a number of categories.

1. Those who did not see 24-hour support fitting in with either their business or their mindset.

2. The middle ground, those having a strong understanding of their own business model and supply base, who felt their business practices were acceptable to their network and supply base.

3. Finally, those who embraced the New Economy of 'always contactable businesses' as an opportunity to consolidate their position of providing superior service.

Organisational assistance is possible (12.5%) by developing systems to prioritise work received electronically.

“Email receipts allow us to determine part of work flow for the day, tracking of staff requirements. Tracking of orders/cancellations received overnight.”

Some argued strongly that traditional business and customer servicing practices are acceptable (10%).

“Expect that people know that they can expect service the next business day. If orders come, they can queue until we get to them.”

“Cannot see the orders until I turn the computer on. So this is a good feature to have.”

“Emails wait for you. You can respond as required.”

“We have a good understanding of our customer/supplier base. Random enquiries and information seekers are a lower priority. These can be handled the next day of business at the earliest.”

The importance of a customer focus prevails in some comments (7.5%):

“If you fail to see that customer need is real, then they would go elsewhere.”

“(The) Customer dictates to you. The market dictates to you!”

After-hours customers may not be as genuine as business-hours enquiries (7.5%).

“Big orders will always wait. Most after-hours queries are not serious business interests anyway.”

Only a few (5%) argue that human contact makes the sale.

“People still want a human. The final connection still needs to be with a person.”

Those viewing future technologies as important were rare. However, their comments provide an interesting insight into the SME desire to be contactable anywhere, anytime:

“Use CDMA phone to log into your Website to get messages from anywhere you are. Future efficient use of mobile technologies will allow for greater service to customers.”

4.4 Interview Summary

The interviews highlighted a number of areas SMEs viewed as adding to, or detracting from, their ability to do business in the New Economy. ICT and Web enablement are critical to most, regardless of competency levels, and have the possibility of making a major contribution to their small business success in the short to medium term.

The findings can be broken up into five main areas. No particular weighting has been applied.

- Computer Competency - was considered as vital, and has links to point two (below). ICT skills were commonly viewed as a necessity, and SMEs craved a greater knowledge of ICT/Web enabled equipment/systems, leading them to cost effective solutions to their business need.
- Resources – SMEs see government as offering the opportunity to enhance their business’ through a number of ways. The first is through the offer of training and assistance, which includes tailoring individual solutions to fit SMEs. This customisation may be to an individual business or to an industry grouping. Second, government can enhance SMEs through greater points of presence, where services can be delivered. This may include SME Skill Centres and Business Grow one-stop-shops.
- Supply - SMEs saw great value in increasing the quality of local supply arrangements. This point can form a subset of point 1 (above) as points of presence can facilitate this. Staying local was highly rated among SMEs, and they believe that ICT can assist this in the first

instance, but can similarly provide a means to a greater external focus (interstate and international).

- Critical infrastructure (telecommunications) - was also pivotal in overcoming competition barriers, with broadband demand fuelling the desire to compete in the open marketplace. Infrastructure efficiencies could also overcome remote business location.
- Sales - SMEs saw ICT and the Web as powerful tools able to enhance their sales, marketing and service offerings. Many also saw a greater connection between Web use/systems and manufacturing. This could have implications for advanced manufacturing potential, particularly in Wanneroo, which has a manufacturing predominance.

4.5 Focus Group Results

Discussion of the previous sections focussed the responses of individual business owners in one-on-one interviews. Here, the use of focus groups in this study in order to strengthen the conclusions of the secondary data and interviews is explored.

The aim of using focus groups (Blackburn & Stokes, 2000, p.44) is

“...to inform other researchers of the suitability of the approach for investigations involving owner-managers and its potential for generating additional and alternative data to our existing knowledge base.”

The December 2001 proposal submitted for this research drew a number of comments from senior academic staff of the University. They included the use of focus groups to triangulate the data.

Triangulation can be a strategic decision made allowing a study to be generalised (Brinberg & McGrath, 1985). The use of multiple methods can help overcome the weakness of any one strategy or design.

Scott & Rosa (cited in Blackburn & Stokes, 2000) feel it necessary to undertake more qualitative research to investigate how SMEs deal with process issues. The interview questions chosen within this study attempted to shift power from the researcher to the small business owner/manager (Holliday, cited in Blackburn & Stokes, 2000). To do this, the questions asked businesses to comment on their own particular frustrations and methods of dealing with situations.

The questions attempted to examine key themes in an open forum, which rigorously followed the interview framework.

Two focus group sessions were conducted in December 2002 commencing Monday 9th. The author moderated both sessions. Australia Post distributed random letters of invitation in private business boxes within the City of Joondalup and the City of Wanneroo. Six businesses were invited to participate in a session.

Twelve separate businesses took part in the two sessions detailed in Table 4.21 below.

Session	
Session 1	
Date	December 10, 2002
Duration	72 minutes
Participants	6 businesses
ANZSIC categories	Manufacturing/Wholesale/Retail Trade/Accommodation-Cafes-Restaurants/Personal-Other Services
Session 2	
Date	December 11, 2002
Duration	65 minutes
Participants	6 businesses
ANZSIC categories	Agriculture/Retail/Communication Services/Finance & Insurance (2)/Personal Services

The format for the focus groups consisted of open-ended questions and a general discussion on ICT uptake and electronic commerce. The discussion centred around three main questions. All sessions were unprompted, with no mediation apparent to participants. The main arguments were recorded and edited for documentation purposes. The themes produced by the two sessions have been joined.

Question	Main Subject Area: Derived from Interview Question Sections
Question 1	
How do you see your business' uptake of new technologies and skills?	<ol style="list-style-type: none"> 1. Current use of Web technologies 2. Lack of skills 3. Lack of financial resources
Question 2	
Would exposure to a local market through electronic means be beneficial?	<ol style="list-style-type: none"> 1. Suppliers 2. Government assistance & training
Question 3	
What frustrations and challenges do you have in your business (emphasis on information technology, business practices and tools)	<ol style="list-style-type: none"> 1. Physical location 2. Government assistance & training 3. Current use of Web technologies

4.4.1 Q1: “How do you see your business’ uptake of new technologies and skills?”

This question encouraged SMEs to assess current and future use of technology to advance their business.

In terms of skill development, most admitted their in-house skills were inadequate to deal with problems. Some members of the group suggested that training might be beneficial in certain critical areas.

“I have had a lot of problems over the past few years with reliable systems, this can dampen your enthusiasm even though you know that you can’t live without it all.”

Discussion turned to the pros and cons of having IT-savvy in-house staff and the value of external people to solve IT problems.

“We use external people to help us with software upgrades and repairs. Not cheap, and the service is not that reliable. These people appear busy, and it comes down to timing and scheduling issues.”

Two noteworthy comments debated the value of either investing in privately run courses or utilising government training.

“Some government courses are worthwhile attending. Some private companies tout that they are offering some skill advancement and are just over-priced rip-offs. We paid over \$2000 for a 2-day workshop. (There is) no way that small business can afford this. My book-keeper only has a \$1600 computer system.”

4.4.2 Q2: “Would exposure to a local market through electronic means be beneficial?”

This question ascertained the level of interest in buying locally.

Some saw the benefits of a local system where government was the major driving force of a local system facilitating purchasing choices through easy-to-use electronic mediums. None of the business' were concerned with technology, but rather operational elements. There was positive feedback with the suggestion that government can source local businesses through local listings.

"The government-type people who may buy through such a medium - it will be good for. They don't care as much if they don't get a discounted service, but they do care for it being there on time, or being completed in reasonable time."

"They are a great market to have buy from you if their bosses are telling them to look at (Wangara) businesses first."

Other businesses were doubtful that major government purchasers of the region would actually use an electronic procurement system. Such comments reinforce the scepticism that government workers having have a disregard of the benefits for business. Such concerns question government culture.

"A lot of what government (local) says they have no intention of actually doing. It looks good in the local rag, and every time a bigwig says something at a business breakfast. They say that they have been working on this stuff forever. Keeps their job safe. Internally, their culture is not one to take this stuff seriously. The little black book that their purchasing people have will kill any initiative if they don't understand why they should look locally."

"No good for governments to talk about. They have to actually do it before businesses will believe the hype."

Some businesses commented that they were content with their current supply situations.

"There has been a lot of talk about buying locally and its benefits. We have an established supply network, and over half of that is further than 30 minutes away - Osborne Park."

“Buying locally means someone that is within reasonable proximity that can supply.”

The local will to actually supply locally was met with mixed reactions. The strongest feelings were summarised by:

“Would be better for us (retail) if local suppliers were competitive. Some are and some aren't. We use locally when we can. It comes down to the fact that if people are getting enough work, they won't be in a hurry to get back to you. If they are too small, they won't get back to you because they may be too busy. If they are over-priced, you won't use them. It doesn't really matter where they are from if the service is reliable and priced well.”

4.4.3 Q3: “What frustrations and challenges do you have in your business (emphasis on ICT, business practices and tools)?”

The discussion involved several factors, such as physical location, government assistance & training and SME's current use of Web technologies.

Telecommunications infrastructure and the role it plays in determining the quality of service businesses provide, emerged as a focal point. SMEs, particularly from Wanneroo, spoke of poor telecommunications services to their businesses. Strong comments detailed experiences with various levels of service.

“Telecommunications quality is the worst for us. We are suffering in a new estate with large data files to transfer, and the technology is not doing what is supposed to do. All of the promises we have had about service levels are rubbish.”

The cynicism of some linked service to profit motives.

“Our business pays a lot to be on a premium service. We think that the carrier is not interested in anything we have to say about their appalling service. There is no profit in it for them to even pretend to be responsive.”

More pragmatic responses, though agreeing with a discomfort in service levels, decided that advancement was the best option:

“We try to use information technology to our advantage. Some days are better than others are obviously, but we try to get on with things. If we didn't there would be many sleepless nights spent thinking about email servers crashing, denial of service problems, consultant fees to fix the damn stuff, ISP outages, busted printers, virus attacks etc. We still feel however that it is worth it to be in the game. Otherwise others will pass us and we will cease to be.”

The current use of Web technologies and managing ICT frustrations was seen as having a positive effect on small business service levels. Some saw internal IT staff as invaluable assets in the New Economy.

“Some of our people just love the stuff (computers and information technology). Our advice is finding about 10-20% of them within your current workforce and keep them there. They are more value than you may realise. The others - send them to SBDC or TAFE training courses.”

Certain emerging business processes, such as business banking, were embraced. The final discussion centred on the role of government in facilitating small business' technology use and the business growth cycle. The consensus being that government should review its role and provide meaningful assistance to build business networks. There was no suggestion as to which tier of government should be responsible:

“The government has a big role to play here. They talk about helping small businesses. Australia will remain competitive as long as its small businesses carry the flag of commerce within their 2 and 3 person teams. “

“That's right! Those 2 and 3 person teams often work closely with other small businesses and in effect then become 15, 20, and 25 people very quickly. The crippling effect comes when there is no assistance from government to keep these networks healthy.”

4.5 Focus Group Summary

As to be expected, many of the focus group themes aligned with the views of the interview participants. The development of in-house skill levels to deal with, and use, Web technologies was the first similarity. The development of government training and assistance programs delivered to small groups at skills centres was also a priority. It appeared that a lack of knowledge of basic Web skills made some SMEs feel vulnerable to expensive courses (private) which promise a lot and deliver little.

Similarly, having an electronic connection to local suppliers was considered a benefit, with a particular focus on local government purchasers being made aware of the expertise of local businesses.

The price sensitivity of government purchasers was considered secondary to their time and quality requirements. Within this, SMEs seemed satisfied, that if they were allowed to quote they could deliver on all three conditions; price, quality and timeliness of delivery. What was dubious to them was the actual will of local government purchasers to incorporate electronic quote requests and purchasing into their long-established buying procedures.

The perception of government talking a lot and acting minimally was a topic of conversation. The pragmatists argued that local suppliers need to be competitive in all aspects of supplying a quote for their product or service.

The third point of agreement between the focus groups and the interviews was the role of telecommunications as a business facilitator. Despite acknowledgements of the various experiences of SMEs, many agreed their role was to manage their own ICT frustrations and difficulties. The alternative of losing out to competitors was considered far worse. The computer competency of staff was acknowledged as vital in overcoming the Web and assorted technology frustrations. Staff motivation and Web skill levels were considered as keys to SME success over technology and its shortcomings.

SMEs, despite typically being made up of two and three person teams are often part of a network that quickly multiplies into the hundreds. Government was asked to consider this aggregating power when trying to form partnerships with SMEs.

4.5.1 Inter-Rater Reliability

After the interview transcripts were coded, another university academic researcher, knowledgeable in the field of qualitative research, independently coded 20% of the transcripts. A set of instructions was given to the academic with sufficient examples of the coded text. The procedure of inter-rater reliability was followed.

After receiving the transcripts, coding categories and descriptions, the researcher independently coded an interview transcript and partial focus group transcript. Coding categories were then compared. Solutions were found after discussing discrepancies and differences. The relevant changes were made.

The Miles and Huberman (1984) inter-rater reliability formula was used, where reliability equalled the number of agreements divided by the sum of agreements and disagreements.

$$\text{Inter-rater reliability} = \frac{\# \text{ of agreements}}{\text{total} \# \text{ agreements} + \text{disagreements}}$$

The accuracy of the coding scheme is ensured with the recommended agreement rate of initially, at least 80% and 90% overall. The 86% agreement rate achieved between the two coders safely surpassed the Miles & Huberman benchmark of 80%. This indicates that there were no significant differences between the coder and the researcher. Thus, the coding schema was clear and understandable to the independent coder. This strengthens the reliability of the results.

The final chapter will analyse the findings, and outline the components of the improved model of B2G participation.

CHAPTER 5 - DISCUSSION AND CONCLUSION

This chapter summarises the findings with regard to the question of whether B2G Portals can be effective in stimulating online business in SMEs. Discussion on the interpretation of the research findings follows. Implications for researchers and practitioners are raised, including limitations of the study. Finally, there are suggestions for possible future studies based on this research.

5.1 Summary of the main findings

This thesis set out to address four specific research questions:

- Q1.** What are the facilitators that encourage SMEs to trade through a business-to-government portal?
- Q2.** What are the inhibitors that discourage SMEs to trade through a business-to-government portal?
- Q3.** What are the moderating influences on facilitators and inhibitors to trading through a business-to-government portal such as size, age, and type/nature of SME?
- Q4.** How can these form the basis for an improved model of B2G participation for SMEs?

These questions have been explored through a review of relevant literature and a qualitative study involving prospective users of the 2Cities B2G portal. The proceeding section discusses each research question in detail and indicates the extent to which this study met the initial objectives identified in chapter one.

5.2 Dependent Variables Acting as Inhibitors or Facilitators

The model presented in the proposal (see Figure 3.3) showed the separation of the independent variables, namely facilitators, inhibitors and moderating variables. Analysis of the data revealed that some variables act as facilitators, inhibitors, or both.

5.2.1 Q1. What are the facilitators that encourage SMEs to trade through a business-to-government portal?

SME opinions to supply within their local market provided overwhelming support for the use of local networks. The synergies associated with using local suppliers culminated in numerous participants citing lasting reciprocal and mutual relationships. Though price was seen as a determining factor in selecting whom to deal with, it later proved to be less of a contributing factor.

Local delivery was a major consideration, with business enjoying the benefits of shorter distances and time savings. With many businesses in outer metropolitan regions perceiving a geographic disadvantage, guarantees of timely delivery were paramount. As stated in the literature, local trading communities take advantage of the cost savings and streamlined business processes when they use internal networks (Roadcap, et al., 2002). A substantial number of interview responses concurred with this.

The literature also suggests that focusing on improving customer service within local supply chains leads to greater efficiency in distribution (Mullins, 2002). The SMERC (2002) data indicates that home-based businesses in the Wanneroo local government area are yet to show signs of this understanding. Low rates of local business association and professional association memberships (less than 20%) indicate these home-operated micro-businesses suffer from isolation and poor local networks (SMERC, 2002). This is reinforced by data showing that a little over 10% of their customer base is within Wanneroo and nearly 40% in other locations throughout metropolitan Perth.

The Wangara Industrial Park study also showed a poor conversion to the theory of local economies of scale (Fink & Venkatesan, 2001). From a business park of nearly 1000 businesses, very few of the SMEs did reciprocal business or dealt with their own local government. The study also highlighted the comparatively low

SME knowledge about the Internet, most having only basic search and retrieval skills.

It emerged from the interviews that SMEs hoped others would reciprocate and try their product or service. Portal membership is one method to reverse the effect of poor local supply networks, as local information and buy-side options are offered to businesses unaware of local suppliers who suit their needs (Essig & Arnold, 2001).

The statement, “If we deal with them, they will begin to deal with us” – SME #7, summarises the aims and objectives of facilitating better local supply networks. The majority (72.5%) of participants concluded that electronic business was beneficial within manufacturing and distribution industries.

The literature again points to efficiency gains in the critical path of distribution (Mattingly Jr., 2001) as order placement, checking and tracking often underpins the success or failure of a distribution and logistics system. Wanneroo has a disproportionately high share of manufacturing businesses (41%) in the entire Wangara Industrial Estate, compared to the national average of less than 10% in normal business park distributions (Fink & Venkatesan, 2001). Couple this with moderate to high computer use (greater than 80%), and reasonable computer literacy, there is a real opportunity to target and increase electronic business within manufacturing and distribution.

Integrating public sector facilitation increases the use of local supply networks and enhances electronic business opportunities. Government support, through training assistance, helps businesses become more interested in learning about the Internet and its applications. The majority of interview participants agree that government can help bridge SME knowledge and the use of Internet applications supports this.

Discounted training was popular, particularly in the form of heavily discounted courses, ‘refer-a-friend’ discounts, and vouchers. The Small Business Development Corporation (SBDC) ‘Small Business, Smart Business’ training

vouchers were mentioned as a positive catalyst in promoting the awareness in the value of short training courses. Government training assistance was applauded as a positive commitment to SME growth with greater success possibilities when aided by better delivery options. This includes on-site workshops and seminars at business premises or other convenient locations. Widespread knowledge of such services may assist with the greater marketing and promotion of locations, programs and offers.

Small business development centres were seen to offer broad relevant training advice, workshops and generic assistance. Training and retraining could be provided through relevant and flexible course options. The literature points out that training should be seen as a partnership (Wood, 1999). Government and SMEs must both realise the importance of their individual inputs. If success is defined and measured through the quality of advice sought and given, then it is important for both to work together to design the right solutions to fit business needs.

The Wangara study found that 75% of the SME employees' surveyed received on-the-job training, with a further 22% of these already trained when they joined the business (Fink & Venkatesan, 2001). There are many opportunities as the use of external training consultants is negligible. Flexible delivery for appropriate courses has a high probability of take-up; retraining demand also attracts strong interest. The private sector also has the opportunity to offer 'next-stage' training services, stimulated by public sector programs.

Lee & Runge (2001) argue that the small business owners' positive perception of the relative advantage of using information technology determines its use. It is reasonable to assume that if an SME exhibits a higher level of competency in ICT ability and aptitude, there will be a sense of its usefulness. There is an opportunity to bridge the gap between Internet access and the use of the Internet as a business tool. This is reinforced through the assertions of the Wangara study:

"Most businesses, even small ones have Internet access, but very few (almost none) trade on the net – conventional methods such as phone and fax are common." (Fink & Venkatesan, 2001, p.168)

The data gathered in this study confirm that SMEs are more comfortable with traditional means of communicating. Some views suggested that the Yellow Pages are an equal or greater source of information, and that face-to-face contact is highly valuable once basic information is sourced.

The Web offers a better business alternative (35%) to those who wish to source and select suppliers, and control how they access information. Interestingly, the global reach and 24-hour contact and access arguments were not dominant, perhaps due to the unattractiveness of the Web option as marketed in the late 1990's.

The majority of business participants (57.5%) acknowledged and embraced the benefits of search functions and capabilities, and the ability to source information on suppliers. Information access appears to have great appeal to SMEs, and is the undisputed strength of Web technology. Lee and Runge (2001) support the view that the role of ICT has elevated from business support to business lead in terms of strategy development. The tools of record and analysis are powerful objects used to strategic advantage. IT as a necessity (82.5%) within the contemporary small business' framework, allows operational and strategic business to occur from the same desktop and workspace. From the data emerge all aspects of running a small business and forecasting its future.

Therefore in Research Question One, there is clear evidence for the synergies binding certain elements of SMEs trading through a B2G portal. The willingness of local SMEs to enhance their local supply networks is evident through the strong feeling of the benefits of dealing locally.

Pragmatically, other major issues include timesavings and convenience. It is worth noting that, *ceteris paribus*, cost could be outweighed if there are other benefits. Strategically, SMEs gave high consideration and priority to the positive establishment of lasting business partnerships, relationships and networks. The findings highlighted the need to continue strengthening the local supply chain. This can be achieved as there is a heavy emphasis on manufacturing, particularly in Wanneroo, and a consensus from SMEs that electronic business has a role within this sector.

To achieve the desired outcomes, government needs to play a role in catalysing the strength of the local economy, for example, through the provision of subsidised and targeted short courses. Delivering such courses within a flexible environment can assist SMEs to access training in central locations or on-site at the work premise. Mindful not to infringe on the realm of the private sector, services should either compliment or initiate customised private sector offerings. There is merit in the strategic location of business development or small business skills centres. At present, this is catered for through the Small Business Development Corporation support of metropolitan business enterprise centres (BECs).

Government facilitation can elevate the Web as an alternative to traditional business methods. Once SMEs are introduced to the benefits of using information technology, it can build on that knowledge by accessing options specific to its needs for further advancement. The data confirms many are looking to further their capabilities. This group needs encouragement to continue its journey of business improvement and enhancement.

5.2.2 Q2. What are the inhibitors that discourage SMEs to trade through a business-to-government portal?

The inhibitors to SMEs using a B2G portal include telecommunications issues, Internet access and availability, the remote location of some businesses, poor knowledge of Web technologies, low skill levels, the lack of targeted short courses, lack of time and motivation.

The data reflects strong opinions regarding the current telecommunications options and facilities available to SMEs. This frequent frustration of business applies mainly to the Wanneroo region, known for its older infrastructure.

Over one third of participants commented on poor service quality levels. Recently, SMEs have been invited to comment on the quality of telecommunications services they experience. There is a willingness to pursue all avenues in an attempt to obtain better representation and service.

“We have been part of the Telstra Senate Enquiry and made a submission on ADSL/Telstra service in the Wangara/Wanneroo region; they have an atrocious record in the business park area” – SME #14

Researchers concur that many regions in the world are demanding greater broadband access (Sanders, 2002). This is a challenge for many regions where infrastructures are not built-out or implementation begun.

Despite this, common complaints of telecommunications service varied from inexcusably long waits to access services such as Internet banking to poor responses from customer service representatives. Fischer (1999) states that a company’s Internet connection is now the lifeblood of its commercial operations, regardless of industry.

For SMEs relying on the size of the telecommunications pipe (connection speed and data transfer ability) to shunt documents back and forth to clients and suppliers, the advertised technology is falling short of expectations. Fast, reliable, constantly connected services are in highest demand. However, many participants feel the incumbent service providers are profit driven and deficient in service. The majority of Wangara businesses experiencing problems with the Internet pointed to telecommunications problems as the source (Fink & Venkatesan, 2001). Such problems ranged from disconnections, limited bandwidth supplied by the Internet Service Provider (ISP), dropouts caused by the poor quality of installed phone cables, server provider downtime, sluggish connection speeds and downloading capacities.

Only a quarter of the participants in the Suncity Technology Access Centre survey were comfortable paying bills over the Internet with approximately half experiencing problems when doing so (SMERC, 2001). Less than 10% of participants always used the computer in business, and less than a quarter felt that their level of knowledge in using the Internet was either good or very good. This figure was only slightly higher in the Wangara study where less than one third of

businesses felt that they had a good grasp of using the Internet (Fink & Venkatesan, 2001).

Another inhibiting factor is the remote location of a business. In such cases, many advocated better communications overcomes geographical separations from a market. Some believed that faster IT networks actually stimulates and drives demand, creating new needs. Van Wart et al., (2000) believe there is a fundamental failure in private sector investment to deliver high-quality, low-cost services in critical economic areas, such as remote or geographically separated businesses.

Poor knowledge of Web technologies and their applications for SMEs can prove to be stressful. A significant proportion of businesses felt their poor knowledge of the function and use of the Internet made it useless to them. It was described as time consuming, stressful and as having a steep learning curve. Many of the participants made the decision not to learn about the benefits of using the Web. Other barriers included personal frustrations such as typing speed and accuracy.

Waller (2000) makes the point that some workers upgrade their equipment faster than their skills. Certain occupations depend on technology to conduct their jobs more efficiently and effectively, and as such this lack of skill produces a frustration needing to be managed. Nearly three quarters of the Wangara SMEs' staff received on the job training, and less than 4% accessed external training courses (Fink & Venkatesan, 2001). Thus, there is probably little use of either government training assistance programs or external consultants by those needing skills upgrades or retraining. Several SMEs registered their dissatisfaction with government offers of assistance.

“Small business employs enough and drives the Australian economy. Government does not recognise this enough and could help in the computer literacy and skills upgrade.” – SME #30

Despite an apparent willingness of SMEs to take advantage of courses, there is a problem with how to structure them. The responses ranged from arguments about

courses offering no intrinsic value to lack of time complaints. Affordability and difficulties in attending regularly led some to a sense of apathy.

Blackburn & Athayde (2000) argue that if time-poor SMEs are to enhance and maintain competitiveness, they need to decide, usually with limited understanding, whether or not there is a positive return for them in a training investment. Government is beginning to assume the role of assisting reluctant SMEs to look at training options.

This is influenced by the SMEs' attitude and acceptance of business aids. Carrier (1999) alludes to the dominance of personal attitudes in the SME decision to take up ICT/Web training. A small number of participants, cynical of the motivation behind training offers and the likely outcomes, had pre-determined their involvement in such courses. Perhaps, as Shetcliffe (2002) argues, self-awareness and self-determination have different meanings for different businesses. The Wangara study reports only 11% of businesses felt they had any immediate training needs. Of those, only four responses concerned computer package training or other ICT-related courses (Fink & Venkatesan, 2001).

Time, and the lack of it, is well known in the SME world. One quarter of those interviewed felt technology did not enable their business to become more efficient and have greater productivity. Technology was felt to be the cause of extra work when unreliable, which was the cause of time wastages. This group of participants talked of the stress caused to staff. This is reinforced by Bordner (2002) who states that technology can cause a distraction likely to reduce an SMEs capacity to work. These increased costs are ultimately passed on to the client in the form of higher prices.

The value of the computer as an electronic assistant stresses the importance higher quality inputs have in producing higher quality outputs. Computers have a limited use if not integrated into the SMEs' workings and processes. Begin & Boisvert (2002) comment that some of the main financial constraints are in the prohibitive costs of computer systems, both in their set-up and maintenance.

Over a quarter of the participants felt that installation and running costs were overpriced and not a valuable investment. Williams (2002) agrees that while investment in information technology and web enablement is costly, it is a necessity.

When expertise is low, applications like Web page design and development, as well as ISP charges were prohibitive expenses. The Wangara study showed that despite nearly 60% of businesses using the Internet, nearly half of those felt that the Internet did not help their business at all (Fink & Venkatesan, 2001). This can be seen as an opportunity rather than a threat, as the goal is to educate SMEs on the value of ICT/Web as a tool.

5.2.3 Q3. What are the moderating influences on facilitators and inhibitors to trading through a business-to-government portal such as the size, age and type/nature of SME?

This question highlights some moderating influences balancing the inhibitors and facilitators to an SME joining the 2Cities B2G portal. Dividing the section into two categories enabled the data to be digested and discussed. SMEs were organised according to their size and type. The size of SME was further broken down into; number of years in business (age), capacity of the company, and IT/Internet usage and experience.

Table 5.1: ANZSIC Categories and relevant statistics

Classification (ANZSIC)	Full Time Employees (Aggregate)	Part Time/Casual (Aggregate)	# of years in business (Aggregate)	Turnover (\$M estimated) (Aggregate)
Agriculture (3)	13	55	63	5.1
Mining (2)	67	25	36	46.0
Manufacturing (4)	52	19	40	6.4
Construction (3)	28	12	27	3.9
Wholesale (3)	23	6	21	1.6
Retail (4)	49	8	35	2.1
Accommodation/Cafes & Restaurants (3)	12	13	12	0.65
Transport/Storage (4)	53	30	20	11.4
Communications (2)	7	4	11	0.85
Finance/Insurance (3)	18	4	26	3.1
Property/Business Services (3)	23	29	28	6.1
Cultural/Recreational Services (2)	9	4	5	1.0
Personal Services (4)	7	2	20	0.88

The size of the business determines how ICT/Web systems are used throughout the company. This is supported by previous research showing that size affects SME behaviour and reactions, company ideology and aggression in adopting new systems and approaches and the company ability to absorb market demand (Dymi, 2003; Rutherford et al, 2001; Sekhar, 2001).

Barbagallo (2003) discusses the size of an SME and its role in its trading capacity. The Internet allows almost any good or service to be bought and sold, independent of location. This enables the SME to act as a much larger business. Barbagallo reflects that the size of the business need not be the limiting factor impeding the building of relationships.

Mittelstaedt et al., (2003) extrapolate that the size of an SME is a natural barrier to certain forms of trading. Lack of capital, economies of scale, labour intensity and brand recognition can limit attempts to break into new markets and produce larger quantities to satisfy larger buyers. Optimism prevails in the work of Sherman (2002) where SMEs often prove better at controlling costs. SMEs can build

volume orders over time by providing a more personalised service to larger purchasers through Internet dealings. Sherman argues that larger companies are not structured to take advantage of Web-based relationships with suppliers and buyers.

For the purposes of Question three, similar industries were grouped together using the ANZSIC codes. There were four groups formed: mining and agriculture; manufacturing, transportation and storage and construction; wholesale and retail; and the remainder predominantly services.

Businesses in mining and agriculture were all classed as medium businesses as agricultural businesses have a substantial number of part-time or casual employees. Mining businesses involved in quarrying, commented on expansion considerations as Wanneroo has vast limestone reserves that will last for many years. Despite both mining and agricultural ventures having long periods of establishment, ICT/Web systems and usage were minimal. The markets for the majority of these businesses were outside local regions, and as such had strong external networks. In this particular localised study of Wanneroo and Joondalup, mining and agricultural industries are less likely to participate in the 2Cities B2G portal as it is not suited to their business, nor does it provide the required networks.

The remainder of the groups displayed a greater propensity to use the portal, as local supply networks increase their economies of scale and scope. There will be beneficial cost savings and time efficiencies by expanding within the local area due to the population projections for the northwest corridor. The City of Wanneroo is expected to see an increase in population from 85,000 to over 350,000 in the next 30 years (ABS, 2002). Development in both the retail and construction industries is heavily dependent on population rates. Wholesale trade displays a weaker correlation to population increases.

As the northwest metropolitan corridor population increases, SMEs in the dominant services sector will benefit from greater contact with government and other businesses in the region. Customers of SMEs prefer more, rather than less information about a company's products and services (Shepherd & Zacharakis, 2003).

Different industry sectors experience different usage of ICT because of the type of industry they are in (Locke & Cave, 2002). This may account for lower ICT/Web usage within the storage and construction sectors as opposed to the heavier reliance within wholesaling and financial service businesses.

The supporting evidence in this section clearly demonstrates that moderating factors such as the size and type of business can affect an SMEs' decision to use the 2Cities B2G portal.

5.2.4 Q4. How can these form the basis for an improved model of B2G participation for SMEs?

This question combines elements of the first three questions into a model for B2G participation for SMEs (see Figure 5.1).

Model for B2G Participation

Factors Affecting Use of 2Cities Portal

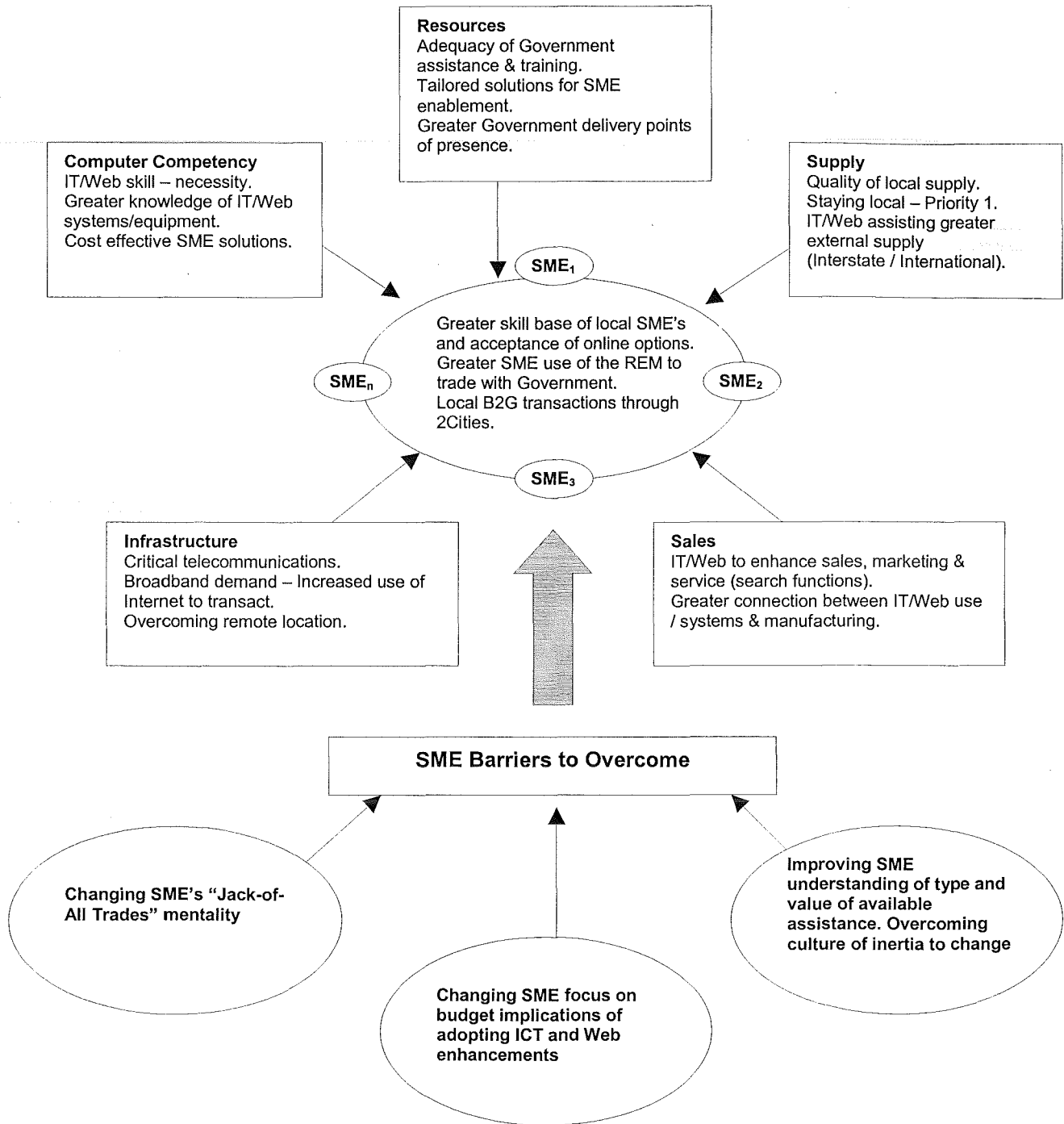


Figure 5.1: Enhancement Mechanisms for SME's

The study sought to research and analyse three distinct elements, inhibitors, facilitators and moderators to B2G participation in the 2Cities portal (see Figure 3.3). The outcome was an improved model for SMEs looking to participate in this type of Web-enabled relationship.

The improved model is cognizant of the factors affecting SME use of the portal, which all impact on the three outcomes they cause, culminating in local B2G transactions through the 2Cities portal. The inputs include resources, computer competency, supply, infrastructure and sales. These are discussed individually.

5.2.4.1 Computer Competency

One of the critical components enabling SMEs to trade on the 2Cities B2G portal is computer competency level. SMEs expressed a desire to be able to grasp fundamental IT/Web skills, which would open up the world of business options relating to ICT and the Web. They felt that they would then have the confidence to seek cost-effective and tailored solutions to their own business. Government support was welcomed at a reduced price through the use of vouchers, discounts and other incentives.

Any assistance to help overcome the computer skill level deficiencies was considered as the governments' show of commitment to SMEs. For those not appearing to believe in training benefits, their answers seemed to be contradictory (see Table 4.6 – benefits of Web trade for SME; Table 4.7 – ICT as a necessity; 4.12 – business-earning potential) where they strongly confirmed use of the Web as being favourable to their business.

Overcoming the minority SME perception of training as bad medicine might require some thought on the part of government. The marketing to SMEs of all they agree with; Web offering search/select capabilities, control, flexibility and information access, reliable contact point, time savings, increase in Internet dealings with other SMEs, needs to be active. Overcoming the culture of resistance to change

will be overcome with a demonstration of the benefits. Government may seek to employ the use of SME mentors to engage and convert cynical SMEs.

It should be noted that an improved model for B2G participation naturally relies on certain triggers, the first of which is ICT/Web competency levels.

5.2.4.2 Resources

Government was considered a key player in assisting SMEs with training and other specialised services such as business enterprise centres and skills centres. This assistance could take the form of assisting small groups to tailoring and customising individual solutions. Government could also take a lead role in strategically locating this type of assistance.

5.2.4.3 Supply

As stated in 5.2.1, local supply was also considered a critical factor affecting use of the 2Cities portal. This included supply arrangements, the quality of supply, local supply chain networks and relationships (creating and/or preserving), and supply options to government. Greater IT/Web enablement was seen as means to greater out-of-area supply opportunities.

5.2.4.4 Sales

The fourth input affecting SME use of the B2G portal was sales. Participants were interested in leveraging skills to enhance sales and marketing possibilities. They saw the Internet as a powerful converter of potential customers into a new sales channel. SMEs also saw the potential of the manufacturing industry converting local contracts from manual into electronic relationships.

5.2.4.5 Infrastructure

Another variable known for its ability to act both as a facilitator and an inhibitor is infrastructure, particularly telecommunications. Broadband demand continues to increase in the SME sector, though while relatively price sensitive, is also conscious of the return on investment through added sales. The delivery of critical infrastructure was considered as necessary to overcome remote location disadvantages.

5.2.5 Derived Outputs

The five inputs have created three underlying conditions needing to be satisfied for the model to work. Each of these flows logically into the other. The first output is a greater skill base of local SMEs and an acceptance of Web options. Once this is achieved, there will be a greater interest in Internet/Web options as SMEs look for complimentary technology options to suit their needs and expertise. This can result in a greater awareness of, and desire to, trade with government. The Regional Electronic Marketplace (REM) gives them that option. The final output of the model will be B2G transactions through the 2Cities REM.

5.2.6 SME Barriers to Overcome

There are several key barriers to overcome leading to an improved model for B2G participation within the local context. SME acceptance to a new environment is gauged through their take-up rate of a new idea or solution to their needs. This principle applies universally to manual and electronic revelations to SMEs.

Barriers to overcome include changing the SME mentality of being responsible for knowing everything about every task it performs. SMEs have a tendency to value all they do equally. This applies across strategic and operational tasks, and includes strategic planning and conceptual development at the high end, right down to paying bills, connecting phones, chasing debtors, waiting for other trades to install utilities, picking up or delivering orders themselves, attending seminars, learning accounting packages, organizing receipts. The list is endless.

Due to their size, many have the 'Jack-of-All-Trades' mentality, meaning there is no demarcation between higher dollar-value activities and low dollar value activities. 2Cities needs to slowly change this attitude and prove that a focus on the 'smarter' aspects of running their operation will more than adequately cover their membership to the REM through increased sales. The SME can then work on increasing the dollar value of those sales as their trade network also increases. 2Cities has to prove that it can open up new markets and customers to SMEs.

The SME fixation on the cost of being a part of the ICT revolution has been documented in this study. The second significant barrier to overcome is the SME lament over ICT technology enhancements as being necessary versus optional. Some SMEs clearly believed they had no choice in terms of being in the game, and using ICT as a tool, but yet remained indecisive as to how the tool would be used. From the interviews and focus groups, the message was very clear that SMEs always evaluate new alternatives and methods in terms of whether they need them. The budget implications of new ICT/Web equipment and training have to be in their favour, that is, increase the bottom line.

Once overcome, this barrier feeds into the improved model for B2G participation, as it will give SMEs with a greater understanding of the ICT tool. There is a clear role here for 2Cities to demonstrate the simplicity of the value of participation in the New Economy.

The final barrier to overcome is SME understanding of the type and value of available assistance and changing the culture of inertia. The worst outcomes for any enhancement in the New Economy are ignorance and fear. Inertia is not caused by an unwillingness to change, but reluctance to acknowledge better ways of doing things. The cultural issues internal to the SME culture, despite being dispelled in the majority by this study, still exist. As stated, the skill of the government to demonstrate the benefits of trading in the New Economy by using the Web should be marketed. Continual use of 'SME success stories' will slowly migrate those resistant to change.

If a process or method has been successful for an SME to date, chances are that it will not be scrutinized to make it even better. This is not necessarily a case of lethargy or indifference, but often a matter of time constraints. For an SME to examine internal workflows is considered a luxury. The task of incorporating new ideas to expand the current 'shop' and accommodate new business opportunities and methods is daunting. The paradox of accommodating new opportunities is to be open to new types of available assistance.

The improved model for B2G participation can work if the barriers outlined above are understood and counteracted. All partners in this new model have a part to play in ensuring development toward the common goal. This is to transact in the New Economy within the context of projects such as the 2Cities portal.

5.2.7 Next Steps

In order to activate the Improved Model for B2G Participation, identification of roles and responsibilities is vital. Below is a breakdown of these, and possible actions for the different groups.

Government has to follow through in a number of areas including training and assistance support, and a highly visible campaign of marketing to convince all SMEs of the benefits of ICT to their business. This can take the form of investing money and resources into sponsoring short courses, building skill centres or joint venture partnering in small business assistance programs to employ facilitators and SME mentors. These agents can deliver specific courses on-demand and through flexible and location-independent methods. The results of this study indicate that these types of assistance are welcomed by SMEs interested in taking advantage of ICT applications.

Government can also influence public and private sector delivery on physical infrastructure such as telecommunications. As the study has clearly raised dissatisfaction toward current telecommunications provision, government at all three levels; local, state and federal can work together toward a common goal of improving telecommunications service to outer metropolitan areas, in this case

Wanneroo and Joondalup. Local & State government can aggregate the views of their constituent SMEs as their collective lobby to raise the federal urgency and prioritisation of the issue. To date, the City of Wanneroo, in concert with the Wanneroo Business Association has been able to draw attention to the telecommunications deficiencies in Wanneroo. This lobby led to over \$1.5M of telephone exchanges upgrades, resulting in greater broadband services for Wanneroo SMEs (Wanneroo Times, 2003b).

Finally, at the ground level, local government can assist in requiring greater local supply opportunities be offered to local SMEs through its purchasing. As mentioned, the discretionary and everyday purchasing of local governments can be quite significant, and easily accumulate into millions of dollars. Local government has the ability to affect policy changes requesting its staff look to mechanisms such as the 2Cities REM when needing to purchase goods and services to the value of \$50,000 or less. Quotes above this dollar amount require a public tender to be advertised and statewide expressions sought. The result of greater government requests to be supplied with quotes will gradually increase the use of local SME supply options.

Local business associations can also affect the take-up and use the 2Cities REM. Their role, as well as being on the board of the project, can be to encourage their growing membership to sign-up to, and become an active part of 2Cities. To date, the efforts of the Wanneroo Business Association (WBA) and Joondalup Business Association (JBA) have been encouraging, through numerous marketing efforts to raise awareness and support. They could integrate the 2Cities REM memberships into their standard annual membership renewals as a vote of complete support of the concept, thereby guaranteeing local memberships. This membership base could then begin to offer a variety of referral incentives and other lead generating rewards to non-members.

Sales support is not limited to not-for-profit organisations and government, however. All regions have medium and large businesses that can act to support local initiatives. The Joondalup Learning City initiative includes many large businesses including West Coast College of TAFE, Edith Cowan University, Joondalup Health

Campus, and The West Australian Police Academy among others. All have discretionary buying requirements similar to local government, and can affect small internal changes to create purchasing through the REM in support of local SMEs. The list can also extend to state and private schools, primary and secondary; Arena Joondalup, the region's main sporting facility and to organisations such as Mindarie Regional Council, already a sponsor of 2Cities environmental section.

As indicated above, development of the B2G component of 2Cities will help raise local awareness about the benefits of supporting local SMEs. Once critical mass is achieved, other non-government purchasers are drawn into the model as it is proven in the initial stages. This second and later stage development can develop the business-to-business (B2B) component of 2Cities, further strengthening the REM and its local value. What is needed for this to occur is the publication and marketing of success stories from the initial launch period of 2Cities. This type of campaign will reinforce the confidence in the concept of the early adopters (B2G), and lure SMEs to begin trading with one another. The conundrum for the 2Cities board would then be to manage the maintenance costs and increased cost of sales. The needs of a growing SME membership base places different administration burdens and requirements on the management team.

As and when the portal grows, different coping mechanisms need to be identified and planned for. These would become much broader than those outlined (see Figure 5.1), which focused on the needs and deficiencies of the 2Cities primary target market, SMEs. An expanded model would have to take into account B2B requirements and add the further business-to-consumer (B2C) dimension. With these comes an even greater complexity and set of needs to allow 2Cities to achieve sustainability. At every turn, the SME culture of resistance to the New Economy will delete as they realise direct benefits to their business.

5.3 Limitations of the study

Any research has limitations. The field of a B2G business relationship is relatively new. Despite a general understanding of the functions of a business portal, electronic dependencies are less clearly understood.

The case study approach has limitations within itself. It relies on the objectiveness of the researcher and attempts to minimise data contamination. The use of a software product, N*Vivo, could affect the reliability of the data. This is due to the researcher interpreting the data, coding it into categories, and then entering it into the software.

The use of further secondary data could have been used to strengthen and confirm some of the claims and findings.

The research investigated the impact of certain independent variables found in the literature such as; lack of skills, current use of Web technologies, and financial resources. There may also be other variables specific to business segments and industry types not investigated. Further investigation could possibly include local area networks, in-house support and other specialised services.

The government view concerning SME trade within the B2G portal was not investigated due to time and sample size constraints. The government view, incorporating existing government policies and services documentation could have balanced the view of the value of trading within the 2Cities portal.

The focus groups could have been presented within a more structured framework to discover SME views. Conducting such research in two stages may prove useful. Firstly, an exploratory stage to test a wide range of topics may have helped increase the scope of the variables. Secondly, a deeper examination of some of the key themes to emerge from the first stage focus groups could have been pursued. As previously stated, time limitations restricted the development of a more

detailed exploratory framework, to include analysis and testing of comparative antecedent models.

It is worth noting that heterogeneity is achieved despite the use of broad industry- type ANZSIC codification of businesses. The variance between business types, sizes, capitalisation and growth can vary widely. Therefore, attempting to fit a framework across a spectrum of generalised SMEs can be problematic. Though difficult to control, it is acknowledged that SME answers may have had an emotional tone, possibly detracting from the overall objectivity of the exercise.

Limitations are also found in the level of comfort business may have in discussing the topic of technology and applications of it. Each SME's conceptual awareness of the questions influenced their answers. These answers may have in turn been influenced by the owner's own historical undertakings, rather than an objective, third person view.

Despite taking a representative sample across 13 industry types of the 16 industry classification codes, time constraints caused an initial reliance on the local business association networks. SMEs who join local chambers of commerce or local business associations are inherently seen as being pro-active and receptive to new ideas and innovation.

Further, there may be a limitation in the research instrument, as the constructed interview framework is not known to have been previously used or tested in the SME context.

5.4 Recommendations for further study

On its own, the outcome of a single study does not contribute to the body of knowledge. However, by comparing the results of this study with other studies of the same focus, knowledge can increase on the subject.

Further study into the facilitators and inhibitors to SME acceptance of local portals will question the boundaries and strength of the current research.

The recommendations for future research:

:

1. A more thorough investigation of the independent variables, and discovery of other variables not researched and tested here
2. The model needs to be tested in other metropolitan or regional areas of Western Australia operating similar B2G portals with similar SME objectives
3. An evaluation of the benefits for SMEs joining the 2Cities B2G portal could be undertaken, with particular focus on its impacts on the member SMEs
4. A recurring theme to emerge from the data was the significant role government should play in assisting SMEs in the New Economy. If such leadership responsibility is assumed, more information sessions, practical workshops and short courses could be introduced through public sector-led skill development programs. Further study into the mechanics of such possibilities could be undertaken, with particular awareness and sensitivity to broad business classifications.

5. Investigation into the facilitators and inhibitors to government acceptance of B2G portals. This viewpoint would balance what was found within this study, providing a case of comparison.

REFERENCES

- Adams, G., & Schvaneveldt, J (1991). *Understanding Research Methods*, 2nd Edition
Longman Publishing Group, London
- Alcaly, R. (2003) *The New Economy: What It Is, How It Happened, and Why It Is Likely To Last* [Electronic Version]. Farrar, Straus & Giroux. New York
- Alende, A. (2003) *What's really new about the New Economy* [Electronic Version]. *Latin Trade*. (11)10, 74. New York
- Allardice, L. (2001). *Free ISPs* [Electronic Version]. *Link – up*, 18(2), 20.
- Anckar, B., & Walden, P. *Introducing Web technology in a small peripheral hospitality organization* [Electronic Version]. *International Journal of Contemporary Hospitality Management*. (13) 4-5, 241-251.
- Anderson, J. (1998). *Transcribing with voice recognition software: A new tool for qualitative researchers* [Electronic Version]. *Qualitative Health Research*, 8(5), 718-723.
- Australia On Disc (May, 2001) *Australia's Ultimate Electronic Phone Book*. Released by Dependable Database Data Pty. Ltd
- Australian Bureau of Statistics (2002) *Census Data 2001*, Sydney, Australia.
- Avison, D. (1993), " *Research in information systems development and the discipline of information systems*", *Proceedings of the 4th Australian Conference on Information Systems*, Brisbane, 28-30 September, pp. 1-27.
- Barbagallo, P. (2003). *Small office/home office* [Electronic Version]. *Target Marketing*, 26(3), 79-81.

- Barlas, D. (2001). E-business gets local: Cincinnati Chamber of Commerce paves the way for companies, suppliers and technology vendors [Electronic Version]. *Line 56 (24)*
- Barley, S. (1990) Images of imaging: notes on doing longitudinal field work [Electronic Version]. *Organization Science 1(3)* 220-247.
- Barua, A., Konana, P., Whinston, A., & Yin, F. (2001). Driving E-business excellence [Electronic Version]. *MIT Sloan Management Review, 43(1)*, 36-44.
- Begin, L., & Boisvert, H. (2002). The internal factors that can make or break e-commerce implementation. *CMA Management, 76(2)*, Canada
- Benbasat, I., Goldstein, D. and Mead, M. (1987), "The case research strategy in studies of information systems", *MIS Quarterly*, September, pp. 369-86.
- Benbasat, I., & Weber, R. (1996). Research commentary: Rethinking "diversity" in information systems research. *Information Systems Research, 7(4)*, 389 - 399.
- Blackburn, R., & Athayde, R. (2000). Making the connection: The effectiveness of Internet training in small businesses [Electronic Version]. *Education & Training, 42(4/5)*, 289-299.
- Blackburn, R., & Stokes, D. (2000). Breaking down the barriers: Using focus groups to research small and medium-sized enterprises [Electronic Version]. *International Small Business Journal. 19(1)*. London
- Blalock, H. (1961). Causal inferences in non-experimental research. Norton, New York.

- Bloch, H., Madden, G., Coble-Neal, G., & Savage, S. (2001). The cost structure of Australian telecommunications [Electronic Version]. *Economic Record*, 77(239), 338-350.
- Bordner, J. (2002). Time's a-wasting [Electronic Version]. *Keyboard*, 28(5), 14.
- Bridge, J., & Peel, M. (1999). Research note: A study of computer usage and strategic planning in the SME sector [Electronic Version]. *International Small Business Journal*, 17(4), 82-87.
- Brinberg, D., & McGrath, J. (1985). *Validity and the Research Process*, SAGE Publications, Beverly Hills
- Burn, J., & Tetteh, E. (2001) Global Strategies for SME-business: applying the SMALL framework [Electronic Version]. *Logistics Information Management*. 14(1/2), 171
- Burnstein, P., & Simon, J. (1985) *Basic Research Methods in Social Science*. 3rd Edition. McGraw-Hill Publishing Company, New York
- Burrell, G. and Morgan, G. (1979) *Sociological Paradigms and Organisational Analysis*. London: Heinemann Educational Books.
- Campbell D., and Fiske, D. (1959) Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 56, 81-105.
- Carrier, C. (1999) The training and development needs of owner-managers of small businesses with export potential. *Journal of Small Business Management*. 37(4), 30-41
- Choi, B., & Graham, J. (2001). Answering the call of the wild Web [Electronic Version]. *Journal of Property Management*, 66(2), 26-32.

- Chrisman, J., & McMullan, W. (2002). Some additional comments on the sources and measurement of the benefits of small business assistance programs [Electronic Version]. *Journal of Small Business Management*, 40 (1), 43-50.
- City of Wanneroo (2002) City of Wanneroo Strategic Plan 2002-2005. Perth, Western Australia: Local Government
- City of Wanneroo (2003) Special Council Meeting Budget July 18. Retrieved January 24, 2004 from <http://www.wanneroo.wa.gov.au/council/agenmin/agenda/2003/18JulyBudget/18July.pdf>, Perth, Australia
- City of Wanneroo (2004) Population and Household Forecasts. Retrieved April 11, 2004 from <http://www.id.com.au/wanneroo/forecastid>, Perth, Australia
- Cooper, H., & Rosenthal, R. (1980). Statistical procedures for summarizing research findings. *Psychological Bulletin*, 87, 442-449
- Craig, M. (2000). Help employees learn. *Veterinary Economics*, 41(4), 72-75.
- Creswell, J. (1994). *Research Design Qualitative & Quantitative Approaches*, SAGE Publications, Thousand Oaks
- Cronbach, L., et al. (1972). *The dependability of behavioural measurement*. John Wiley Books, New York.
- Cronbach, L. (1982). *Designing evaluation of educational programs*. Jossey-Bass, San Francisco
- D'Alessandro, J. (2003) Committed to Small Business –The Commerce Department shores up its program to ensure that small really means small [Electronic Version]. *VARbusiness*, pg. G3

- Dandridge, T., & Levenburg, N. (2000). High-tech potential? An exploratory study of very small firms' usage of the Internet [Electronic Version]. *International Small Business Journal*, 18(2), 81-91.
- Davenport, T. (1995) The Fad That Forgot People Available Online: <http://www.fastcompany.com/online/01/reengin.html>. Accessed 19.04.03
- Dawson, E. (2000). Universal service high-cost subsidy reform: Hindering cable-telephony and other technological advancements in rural and insular regions *Federal Communications Law Journal*, 53(1), 117-135.
- Dean, J. (2000). E-government evolves. *Government Executive* 32(13), 3-18
- DeZoysa, S. (2001). SMEs - Not just a number [Electronic Version]. *Telecommunications*, 35(10), 27-30.
- Douglas, J., (1985). *Creative Interviewing* Sage Publications, Beverly Hills
- Dresner, M., Yao, Y., & Palmer, J. (2001). Internet technology use across the food industry supply chain [Electronic Version]. *Transportation Journal*, 40(4), 14-26.
- Dymi, A. (2003). Growing A Small Business; Knowing how and when to expand, or if to expand at all, can be a tricky matter [Electronic Version]. *Broker Magazine*, 5(2), 54-57.
- Essig, M., & Arnold, U. (2001). Electronic procurement in Supply Chain Management: An information economics-based analysis of electronic markets. *Journal of Supply Chain Management*, 37(4), 43-49.
- Fetterman, D. (1989). *Ethnography: Step by step*. SAGE Publications, Newbury Park, California

- Fielding, N., & Fielding, J. (1986). *Linking Data: Qualitative Research Methods Series*, SAGE Publications, Beverly Hills
- Fink, A (1995). *How to ask survey questions*, SAGE Publications, Thousand Oaks
- Fink, D. (1998) Guidelines for the successful adoption of information technology in small and medium enterprises [Electronic Version]. *International Journal of Information Management*. 18(4), 243-253
- Fink, D., & Venkatesan, V. (2001) *Moving into the New Economy: Strategies for SMEs in the Wangara Industrial Park*. Report by the Small Medium Enterprise Research Centre for the City of Wanneroo
- Fink, D., & Laupase, R. (2000) Perceptions of Web site characteristics: a Malaysian/Australian comparison [Electronic Version]. *Internet Research* 10(1), 44
- Fischer, J. (1999). Are you in the loop? *Communications News*, 36(10), 46-49.
- Fowler, F., & Mangione, T. (1990). *Standardised Survey Interviewing: Minimising Interviewer-Related Error*. Applied Social Research Methods Series, Vol. 18, SAGE Publications, Newbury Park
- Gable, G. (1994) "Integrating Case Study and Survey Research Methods: An Example in Information Systems," *European Journal of Information Systems*, 3(2), 112-126.
- Galliers, R.D. (1985), "In search of a paradigm for information systems research", in Mumford, E., Hirschheim, R.A., Fitzgerald, G. and Wood-Harper, A.T. (Eds), *Research Methods in Information Systems*, North Holland, Amsterdam.
- Galliers, R.D. (1991), " Choosing appropriate information systems research methods", in Nissen, H.-E., Klein, H.K. and Hirschheim, R., *Information*

Systems Research: Contemporary Approaches and Emergent Traditions,
North Holland, Amsterdam .

Glasser, B., & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago: Aldine

GEM (2003) 50,000 purchases for Gem. Available Online: <http://www.gem.wa.gov.au/Gem/News/2003/50News> Accessed October 26, 2003. Perth, Australia.

Gruber, E. (2001). 3D online catalogs [Electronic Version]. *Modern Machine Shop*, 74(5), 187.

Gubrium, J., & Holstein, J. (1995). *The Active Interview*. Qualitative Research Methods Series 37. SAGE Publications, Thousand Oaks

Habermas, J. (1988). *On the Logic of the Social Sciences*. The MIT Press. Cambridge, Massachusetts.

Harkness, P. (2001). E-volution [Electronic Version]. *Governing* 14(4), 4.

Hirscheim, R. (2001). Relevance versus Rigour in Research. Lecture slides and notes, February 2001. Perth, Australia.

Home-based businesses in the City of Wanneroo (2002) Small Medium Enterprise Research Centre Report, Perth Australia

Hong Tak, S., Nield, M., & Becker, H. (1999). Use of a computer software program for qualitative analyses--part 2: Advantages and disadvantages *Western Journal of Nursing Research*, 21(3), 436-439.

Howard, G., (1985). *Basic Research Methods in the Social Sciences*, Scott, Foresman & Company, Illinois

- Huleatt, R. (2002). Dialup: All dressed up and no place to go [Electronic Version]. *Information Intelligence Online Newsletter*, 23(12), 4.
- Jainschigg, J. (2003) New new rules for the new New Economy [Electronic Version]. *Communications Convergence*. 11(10), 6
- Jensen, K., & Pompelli, G. (2002). Manufacturing site location preferences of small agribusiness firms [Electronic Version]. *Journal of Small Business Management*, 40(3), 204-218.
- Joondalup Business Survey (August 2001) Small Medium Enterprise Centre Research Report, Perth, Australia.
- Jones, R (1985). *Research Methods in the Social and Behavioural Sciences* Sinauer Associates Inc. Publishers, Massachusetts
- Jordan, J., & Gruber, E. (2001). Manufacturer embraces e-business technology [Electronic Version]. *Modern Machine Shop*, 74(5), 144.
- Kamoche, K. (1991). Human Resource Management: A Multiparadigmatic Analysis. *Personnel Review*. 20(4) 3-12. Farnborough
- Karkoviata, L (2001). SMEs reluctance to go online. *Asian Business* [Electronic Version]. 37(4), 79
- Kavous, A. (2003). Theories and controversies in finance: A paradigmatic overview. *International Journal of Social Economics*. 30(1/2), 99 Bradford
- Kelly, S. (2000). Small business switch to DSL. *Communications News*, 37(8), 10.
- Kelly, S. (2001). Internet gateway meets cabling challenge *Communications News*, 38(11), 32-36.

- Kirk, J., & Miller, M. (1986). Reliability and validity in qualitative research. London: Sage
- Krugman, P (1999). The Return of Demand-Side Economics Available WWW: <http://www.geocities.com/ecocorner/intelarea/pk1.html> Accessed 13.04.03
- Lambert, P. (2001). Impact of the digital economy. *Collections & Credit Risk*, 6(11), 61.
- Lau, F. (1997). A review of action research in information systems studies. *Information Systems and Qualitative Research* 16(2), 45-49
- Lee, J., & Runge, J. (2001). Adoption of information technology in small business: Testing drivers of adoption for entrepreneurs [Electronic Version]. *The Journal of Computer Information Systems*, 42(1), 44-57.
- Lee, S., Yen, D., Havelka, D., & Koh, S. (2001). Evolution of IS professionals' competency: An exploratory study [Electronic Version]. *The Journal of Computer Information Systems*, 41(4), 21-30.
- Lin, C. (1998) Bringing positivist and interpretivist approaches to qualitative methods [Electronic Version]. *Policy Studies Journal*. 26(1), 162-181.
- Lincoln, Y., & Guba, E. (1985). *Naturalistic inquiry*. Newbury Park, California: Sage.
- Locke, S., & Cave, J. (2002). Information communication technology in New Zealand SMEs [Electronic Version]. *Journal of American Academy of Business*, 2(1), 235-240.
- Luchetti, R., & Sterlacchini, A. (2004). The Adoption of ICT among SMEs: Evidence from an Italian Survey [Electronic Version]. *Small Business Economics*, 23(2), 151.

- Madden, G., & Coble-Neal, G. (2002). Internet economics and policy: An Australian perspective. *Economic Record*, 78(242), 343-357.
- Marshall, C., & Rossman, G. (1995). *Designing Qualitative Research*, SAGE Publications, Newbury Park
- Martinus, I. (2001). Business and community gateways: the challenge of developing a sustainable model *BITWORLD International Conference*, Cairo, Egypt, June 4-6
- Mason, J. (1996). *Qualitative Researching*, SAGE Publications, London
- Matlay, H. (2000). Organisational learning in small learning organisations: An empirical overview. *Education & Training*, 42(4/5), 202-211.
- Matthews, W. (2000). Poll reveals Americans' e-government agenda [Electronic Version]. *Federal Computer Week*, 14(35), 9
- Mattingly Jr, J. (2001). E-business/E-commerce information/transportation [Electronic Version]. *Defense Transportation Journal*, 57(6), 3.
- McGinnis, M., & Vallopra, R. (2001). Managing supplier involvement in process improvement in manufacturing [Electronic Version]. *Journal of Supply Chain Management*, 37(3), 48-52.
- McKay, J., & Marshall, P. (2001) The dual imperatives of action research. *Information Technology & People*. 14(1), 46-59.
- Merriam, S. (1988). *Case study research in education: A qualitative approach*. San Francisco, Jossey- Bass
- Miles, M., & Huberman, A. (1984) *Qualitative Data Analysis: An Expanded Sourcebook* Thousand Oaks, CA: Sage Publications

- Mirchandani, D., & Motwani, J. (2001). Understanding small business electronic commerce adoption: An empirical analysis [Electronic Version]. *The Journal of Computer Information Systems*, 41(3), 70.
- Mitra, J. (2000). Making connections: Innovation and collective learning in small businesses [Electronic Version]. *Education & Training*, 42(4/5), 228-237.
- Morgan, D. (1988) Focus Groups As Qualitative Research. Qualitative Research Method Series 16. SAGE Publications, Newbury Park, California
- Mower, M (2001). Cyber citizens: The electronic evolution in local government. *Management Services*, 45(4), 18-19.
- Mullins, R. (2002). Taking IT to the next level. *Chemical Week*, 164(9), 33-35.
- Myers, M (1999). "Qualitative Techniques for Data Collection" *Qualitative Research in Information Systems*, ISWorld Net. <http://www.qual.auckland.ac.nz>, accessed 29 March, 2004.
- Nachmias, C., & Nachmias, D. (1992). Research Methods in the Social Sciences. 4th Edition. Edward Arnold, London.
- Neeley, D. (2000). White House wants an e-Vote as well as e-Government [Electronic Version]. *Security Management*, 44(3), 32.
- NOIE (2004) E-government strategies and implementation. Retrieved January, 24, 2004 from <http://www.noie.gov.au/projects/egovernment/index.htm>, Perth, Australia
- North Metro Business Grow (July 2001) Final Report, Perth, Australia
- North, D., & Smallbone, D. (2000). The innovativeness and growth of rural SMEs during the 1990s [Electronic Version]. *Regional Studies*, 34(2), 145-157.

- Ohlson, K. (2001). B2B marketplaces frustrate suppliers [Electronic Version]. *Network World*, 18(39), 14.
- O' Leary, M. (2001). Business site-seeing: Vortals target business info needs [Electronic Version]. *Link-up*, 18(1), 9-10.
- O'Leary, M. (2000). Business site-seeing: The buzz on business portals. *Link-up*, 17(6), 11-12.
- Oppenheim, A. (1992). Questionnaire Design, Interviewing and Attitude Measurement, Pinter Publishers, London
- Parker, D (2003). SME clusters within community-portal constellations. *Management Services*. Enfield
- Patel, D. (2001). Location, location, location [Electronic Version]. *HRMagazine*, 46(11), 168.
- Patton, D., Marlow, S., & Hannon, P. (2000). The relationship between training and small firm performance; research frameworks and lost quests. *International Small Business Journal*, 19(1), 11-27.
- Philips, M. (1998). Successful E-Commerce: 10 Case Studies to Show Small Business How to Profit From Online Commerce. Melbourne
- Piatt, B (2000). Defining e-government [Electronic Version]. *Federal Computer Week*, 14 (14), 38.
- Pollock, T. (2002). Time management tips [Electronic Version]. *Automotive Design & Production*, 114(4), 12.
- Popper, K. (1959). The logic of scientific discovery. Basic Books, New York

- Premkumar, G., & Roberts, M. (1999). Adoption of new information technologies in rural small businesses [Electronic Version]. *Omega*, 27(4), 467-484.
- Prince, C. (2000). The long and winding road to e-government [Electronic Version]. *Chief Executive*, 155, 10-12.
- Puentes, J., & Rothenberg, P. (2001). 10 essential contract terms for broadband service agreements [Electronic Version]. *Journal of Property Management*, 66(6), 42-45.
- Pulley, M., Sessa, V., & Malloy, M. (2002). E-leadership: A two-pronged idea [Electronic Version] *T + D*, 56(3), 34-47.
- Reyes, P., Raisinghani, M., & Singh, M. (2002). Global supply chain management in the telecommunications industry: The role of information technology in integration of supply chain entities. *Journal of Global Information Technology Management*, 5(2), 48-67.
- Richards, L. (1998). Closeness to data: The changing goals of qualitative data handling [Electronic Version]. *Qualitative Health Research*, 8(3), 319-328.
- Richards, L. (1999). Data alive! The thinking behind NVivo [Electronic Version]. *Qualitative Health Research*, 9(3), 412-418.
- Roadcap, C., Smith, P., & Michael, J. (2002). Internet technologies in the homecenter industry [Electronic Version]. *Forest Products Journal*, 52(1), 32-37.
- Robson, P., & Bennett, R. (1999). Central Government supports to SMEs compared to business link, business connect and business shop and the prospects for the small business service [Electronic Version]. *Regional Studies*, 33(8), 779-787.

- Robson, S., & Foster, A. (1989). *Qualitative Research in Action*. Edward Arnold, London
- Roche, J. (2001). Are you ready for e-procurement? [Electronic Version] *Strategic Finance*, 83(1), 56-59.
- Rooks, G., & Snijders, C (2001). The purchase of information technology products by Dutch SMEs: Problem Resolution [Electronic Version]. *Journal of Supply Chain Management*, 37(4), 34-42.
- Rossetto, S. (2004) 2Cities Sales and Marketing Report March 29-April 4. [Electronic Version].
- Said, A. (2000) Helping small firms trade effectively with the Internet [Electronic Version]. *International Trade Forum Geneva*. 3. 16-19
- Sanders, S. (2002). Cable modems take care of business [Electronic Version]. *America's Network*, 106(7), 38.
- Sarkis, J., & Talluri, S. (2002). A model for strategic supplier selection [Electronic Version]. *Journal of Supply Chain Management*, 38(1), 18.
- Saslow, C (1982). *Basic Research Methods*, Addison-Wesley Publishing Company, Massachusetts
- Schultz, M., & Hatch, M. (1996) Living with multiple paradigms: The case of paradigm interplay in organizational culture studies [Electronic Version]. *Academy of Management. The Academy of Management Review*. 21(2), pp. 529-558.
- Schwartz, H., & Jacobs, J. (1979). *Qualitative Sociology: A method to the madness*. New York; Free Press

- Shetcliff, J. (2002). Time management [Electronic Version]. *Insurance Brokers' Monthly and Insurance Adviser*, 52(4), 26-27.
- Simes, J. (2001). Farmers can sell produce on exchange via cell phones [Electronic Version]. *Computerworld* 4(12), 1
- Slywotsky, A., & Morrison, D. (2001) How Digital Is Your Business? [Electronic Version]. Crown, New York
- SMERC Research Report (December 2001) Suncity Access Centre Yanchep-Two Rocks Community Survey Report for City of Wanneroo, Perth, Australia
- Sood, R. (2001). E-Gov Initiatives Aim To Empower Citizens: Savvy solution providers can play a critical role in government's transition online. *VARbusiness*, 1702, (91)
- Spiegel, R. (2001). Fervently following the ten commandments of B2B [Electronic Version], *Electronic News*, 47(42), 28-30.
- Starr, P. (2002). The great telecom implosion [Electronic Version]. *The American Prospect*, 13(16), 20-24.
- Strauss, A., & Corbin, J. (1990). Basics of qualitative research: Grounded theory procedures and techniques. London: Sage Publications
- Stewart, D & Kamins, M. (1993). Secondary Research Information Sources and Methods 2nd Edition Applied Social Research Method Series Volume 4, SAGE publications, Newbury Park
- St. John, W., & Johnson, P. (2000). The pros and cons of data analysis software for qualitative research. *Journal of Nursing Scholarship*, 32(4), 393.
- Symonds, M. (2000a). Government and the Internet: Island site. *The Economist*, 355(8176), 17-23

- Symonds, M. (2000b). Government and the Internet: A tool for learning [Electronic Version]. *The Economist*, 355(8176), 23-27
- Swatman, P. (2000). Internet for SMEs: A new Skill Road [Electronic Version]. *International Trade Forum* 14(3), 22-24.
- Taft, D. (2000). The next e-target: Uncle Sam [Electronic Version]. *Computer Reseller News*, 89(1), 1-10.
- Tarley, M. (2002). Leadership development for small organizations [Electronic Version]. *T + D*, 56(3), 52-55.
- Telstra Small Business Index (2000) Survey of Computer Technology and E-Commerce in Australian Small and Medium Business. Available: http://www.noie.gov.au/publications/NOIE/SME/yellowpages_index.pdf. Accessed 19.04.03
- Tesch, R. (1990) *Qualitative Research Analysis Types and Software Tools*. Farmer Press, Basingstoke, Hampshire
- Thibodeau, P. (2000). 'E-government' spending to soar through 2005 [Electronic Version]. *Computerworld*, 34(17), 12.
- Underhill, G. (2001). Productivity in small and medium enterprises [Electronic Version]. *Management Services*, 45(4), 8-12.
- Van Wart, M., Rahm, D., & Sanders, S. (2000) Economic development and public enterprise: The case of rural Iowa's telecommunications utilities [Electronic Version]. *Economic Development Quarterly* Thousand Oaks, 14(2), 131-145.

- Venner, S. (2000). Help for small and medium-size businesses: A clear path online through the telecommunications maze [Electronic Version]. *Business Credit*, 102(9), 36-38.
- WA Business News (2003) Wanneroo encourages home-based operators, February 27. p.14-15, Perth, Australia
- Wales, O. (2002) The Impact on Communications [Electronic Version]. *Communication News* 9(14), 44-49.
- Walker, R. (1985). Applied Qualitative Research. Gower Publishing Company Limited. Aldershot
- Waller, B. (2000). A survey of the technology astuteness of the appraisal industry [Electronic Version]. *The Appraisal Journal*, 68(4), 469-473.
- Wanneroo Business Association (2002) Annual General Meeting President's Report. March 18, 2002, p.1, Perth, Australia
- Wanneroo Business News (2000) 2Cities.com.au, March 2000, Perth, Australia
- Wanneroo Business News (2000a) Telstra responds to Wanneroo Business Association questions. January 15, Perth, Australia
- Wanneroo Business News (2001) President's Report. Perth, Australia.
- Wanneroo Times (2003) Internet Favoured. December 2, 2003. p.57, Perth, Australia
- Wanneroo Times (2003b) High-speed Internet arrives. December 9, 2003. p.35, Perth, Australia
- Watad, M., & DiSanzo, F. (2000). Case study: The synergism of telecommuting and office automation [Electronic Version]. *Sloan Management Review*, 41(2), 85-96.

- Walsham, G. (1995). Interpretive Case-Studies in IS Research - Nature and Method [Electronic Version]. *European Journal of Information Systems*, 4(2), 74-81.
- West, D., Stowell, F.A. and Stansfield, M.H. (1995), "Action research and information systems research", in Ellis, K. (Eds), *Critical Issues in Systems Theory and Practice*, Plenum Press, New York, NY.
- Westervelt, R. (2002). Seeking greater supply chain efficiency through collaboration [Electronic Version]. *Chemical Week*, 164(16), 27.
- Whitten, G., Casey, K., & Ellis, T. (2000). Electronic economies of scope: Investigating synergies from procuring and selling on the Web [Electronic Version]. *The Journal of Computer Information Systems*, 41(1), 61.
- Williams, T. (2002) IT investments can add business value [Electronic Version]. *Healthcare Financial Management*. 56(5), 34-38
- Wittig, W. (2000). Improving SME access to public procurement [Electronic Version]. *International Trade Forum* 1(4), 15-16
- Wood, R. (2000). Modern approaches to understanding and managing organizations: At the portals of the age of e-commerce [Electronic Version]. *Futurics*, 24(1/2), 15-24.
- Wood, W. (1999) Benefit measurement for small business assistance: A further note on research and data collection [Electronic Version]. *Journal of Small Business Management*. 37(1), 75-78
- World IT Report (2003) China launches agricultural Website. London p.1
- Yin, R (1994), *Case Study Research, Design and Methods*, Sage Publications, London

Zawada, A. (2004) National Economy is Set for Gains, Expert Tells Lakeland, Fla. Chamber [Electronic Version]. Knight Rider Tribune Business News, Washington, Jan 16, 2004. p.1

Zinger, J., LeBrasseur, R., & Zanibbi, L. (2001) Factors influencing early stage performance in Canadian microenterprises [Electronic Version]. *Journal of Developmental Entrepreneurship*, 6(2), 129-151.

APPENDIX A – INTERVIEW

QUESTIONS

Your Business

1. What is your business? (e.g. printer, cabinet make, tyre retailer please be as specific as possible)

2. Are you a member of any local business associations, i.e. Chamber of Commerce, Wanneroo or Joondalup Business Association?

yes no (if yes which association/s)

Suppliers

3. What is your opinion of dealing with local suppliers?

4. How would the use of IT improve your customer service?

5. In your opinion is there a need for electronic business within manufacturing and distribution?

Government Assistance & Training

6. How would government support through training assistance help business become interested in learning about the Internet and its applications?

7. How could small business development centres help your learning about e-business?

Current Use of Web Technologies

8. How could the Web offer your business a better alternative to traditional means of doing business?

9. Do you feel that spending money on computers and ICT is a luxury rather than a necessity?

10. What is your opinion about the cost of setting up and maintaining an IT network for your business?

Physical Location

11. How could the use of IT open up other regional markets to your business?

12. How would a better telecommunications network (i.e. Telstra) affect your decision to use the Internet for business?

13. How would improved communications help overcome being located in a remote business location?

Lack of Skills

14. In what ways would learning Web technologies increase business-earning potential?

15. How would being able to search on the Internet for quotes be something that would be of value to you?

16. What do you think about the need to constantly upgrade computer skills to keep up with the market?

Lack of Management Training

17. Would there be any value in offering business managers opportunities of short courses to promote wider use of new technologies?

Lack of Time

18. How could the use of technology speed up business for customers and allow you to focus on other activities?

19. What is your view on the use of a computer as an electronic assistant?

Lack of Financial Resources

20. What do you think about the perception that there is a high cost associated with using the Internet?

21. How would you measure whether or not this business tool (the Internet) has been a success for you?

22. What are your views on 24 hour/day, 7 day/week customer support demanding unjustifiable resources from your business?

APPENDIX B – REGIONAL BUSINESS-TO-GOVERNMENT PORTAL PROJECT OVERVIEW

2Cities *Community*

2Cities Community Pages

These pages are areas within the community verticals (Education, Sporting, Tourism etc.) run exclusively by a group, club or not-for-profit organisations. These pages are located under a vertical sub-homepage and the owner of this page is given access to tools allowing them to build their pages. These groups can also add, update items to their own events calendar. They can also add items directly into the 2Cities employment register, which can also be displayed on their pages if they wish. Groups can also including features such as mailing lists and online voting polls.

2Cities *Business Flyer*

Business flyer pages

Business flyer pages are single Web pages within 2Cities allowing SMEs to showcase their products and service. As with Community pages, Business flyer pages are actually areas contained within a vertical sub-homepage. For example, an accountant could have a flyer page located within Business services (within the business vertical).

Businesses can update this page as required but are limited to one single page. In addition, none of the extra features such as events and news are available to them unless activated by 2Cities. This service is designed to compliment a business listing within the REM as it allows SMEs to provide more information and demonstrate this with illustrations and other graphics.

2Cities REM

Regional Business-to-Government portal (REM)

The 2Cities portal provides an online business directory exclusively for SMEs located within the Cities of Wanneroo and Joondalup. The REM is designed to allow SMEs, local residents, households, and other organisations to purchase from locally based suppliers. The REM operates as a search facility allowing people to locate a specific type of SME listed in the REM. For example, if a person wishes to locate a plumber or a printer, and there are a number of these SMEs registered with the REM, they will be listed in the search.

In addition, once located, the buyer can request a quote from the registered SMEs. The request for quote (RFQ) will be delivered to the SME through either email, FAX, SMS (via mobile phone). These options were built into the custom software of 2Cities in recognition of the fact that many Wanneroo and Joondalup SMEs do not have a website, or cannot always get to a computer to check if they have received a quote. This exclusive function allows all SMEs to register and participate in this local buying solution. It is expected, that over time, most, if not all SMEs will be using a computer to advertise their business.

Key features of the REM include:

- A convenient tool for locating SMEs in the 2Cities area (purchasers)
- Time-saving way to gather quotations from many SMEs in one process (purchasers)
- Cost-effective method for SMEs to promote themselves in the local area (particularly to government purchasers and other SMEs)
- Greater accessibility to major purchasers - CoW, CoJ, ECU, TAFE, Mindarie Regional Council (suppliers)

Regional Electronic Marketplace (REM) Detailed Description

Specific description

The 2Cities Regional Electronic Marketplace (REM) is an e-procurement tool specifically designed to aggregate local suppliers and streamlines the process of procurement from them. In a matter of minutes, a purchaser can request a quote or distribute a Tender to any number of registered suppliers within the local area. Essentially the REM provides business infrastructure that facilitates trade between purchasers and locally based suppliers. Not only does the REM streamline the often-laborious request for quotation (RFQ) processes, but it also allows suppliers to submit Quotation and Tender responses directly through the system just as easily.

So how does the REM actually work?

In an operational sense, the REM allows purchasers to search a database of suppliers, qualified by either business category or location or by keywords assigned to a particular SME. Once a purchaser returns a list of suitable suppliers, they select the specific businesses they wish to obtain a quote from and complete a simple quotation request form. The REM then distributes an individual RFQ notice out to each of the selected suppliers who can then decline to either quote or submit a quote via a Quotation form. On receipt of all desired quotes or at the Tender closure date (as specified in the REM), the purchaser can then submit an order directly through the REM.

An online demonstration is available on the 2Cities Website illustrating the REM process (animated version).

A Tool for Purchasers

Benefits to Purchasers

From the purchaser's perspective, the greatest asset of the REM is its ability to streamline the procurement process. By using the REM, it is no longer necessary to contact each supplier individually in order to request a quote. By using the REM, users are able to outsource this process to the marketplace. Once a request is submitted,

Purchaser Benefits:

- A convenient tool to locate local businesses
- A streamlined procurement process that reduces the human resource cost of any purchase
- Access to a procurement management tool for request for quotes (RFQ' s) outward, quotes inward and orders outward
- Access to more competitively priced goods and services
- The ability to support the locally economy

notification of the quote request is distributed to each supplier via their preferred method of Fax, email or SMS. The hidden administration overhead associated with buying is often a forgotten factor, however the REM reduces this significantly.

Low cost 'Purchasing System' for organisations

The REM can also perform the function of a traditional purchasing system as it can specify what users can do. Within the REM, purchasers can request a quote and send an order. For the same organisation, the majority of users may only be able to request quotations through the REM. However, authorised employees can also order through the REM by contracting a supplier on behalf of their organisation.

Working within the constraints of existing purchasing systems

(City of Joondalup, City of Wanneroo, Edith Cowan University, TAFE, etc)

By allowing people to Order through the REM, existing purchasing systems are potentially circumvented. Traditionally a purchasing system is a centralised management tool responsible for coordinating organisational procurement and handling issues such as personnel purchasing rights, budgetary implications and existing supplier contracts. In the standard form, the 2Cities REM allows all users to gather quotes and to order, potentially circumventing an existing purchasing system.

The REM has the ability to completely restrict access to the Order function and can differentiate between businesses/organisations required to 'purchase' (order) through separate systems such as Oracle or Maximo. In this form, the REM becomes purely a quote request system gathering and providing an archive of inward quotes.

A Tool for Suppliers

Benefits to Suppliers

The REM allows SMEs in the City's of Wanneroo and Joondalup to cost-effectively promote their business.

One of the greatest incentives for Suppliers within the 2Cities REM will be that they automatically have exposure to major regional purchasers. In many cases, these purchasers would have been considered outside their market reach. In addition, due to the rapid population & development in Wanneroo and Joondalup, the REM provides an ideal medium for SMEs migrating to the area to gain immediate exposure within the local market. Importantly as soon as a business is added to the REM, it is considered in every search thereafter. This significantly reduces the traditional lead times involved in paper-based publications or through word of mouth promotion.

The following major organisations have indicated their intention to use the REM as part of their procurement:

- City of Wanneroo,
- City of Joondalup,
- Edith Cowan University,
- Mandara Regional Council,
- West Coast College of TAFE,
- Joondalup Health Campus

Market penetration of the REM

As 2Cities is still in the initial stages of operation, market acceptance is still difficult to gauge. However, feedback from existing users who have already participated in the REM is encouraging and strong support has been indicated. There are currently over 150 registered

suppliers and purchasers within the marketplace, from a market catchment of over 7500 businesses within the 2Cities area. This number is growing by approximately 30 SMEs per month (Rossetto, 2004). To ensure there is sufficient value within the marketplace and an adequate representation of the SME market, a benchmark of 10% has been set, equating to about 750 SMEs to be listed on the REM.

In terms of support, the 2Cities Internet Gateway is working closely with major purchasers and suppliers in the area to ensure the successful integration of the REM into their procurement process. In addition to this 2Cities is also seeking funding to provide training for REM participants. This will provide eBusiness awareness, a REM user helpdesk and specific hands-on training for the REM.

Administration and monitoring

Statistical reporting

The 2Cities Regional B2G portal has a comprehensive reporting system allowing the administrators of the system to determine the level of usage from a number of viewpoints.

The table below summarises the available statistics for these purposes:

System evaluation

Number of Suppliers (Total Count, Registered * (Paid up), % Registered)

Number of Registered purchasers (Total Count; % of Purchasers also Registered Suppliers)

Purchaser review

RFQs sent for

Total Count of all RFQ's sent, Total Count per month

Count sent per Purchaser per month/ in total

Count sent per purchaser - Specific users/Divisions per month *

Supplier review

RFQ received

Count received per Supplier (Total, Per month)

Unregistered businesses are listed only by business name and location. Registered businesses can have their details accessed and have a quote requested from them through the system. In addition, a registered business can assign keywords to their business making them easier to locate in the REM search. These SMEs can also be assigned to multiple business categories within the REM to again increase the chance of being located by all REM users.

In the case of a major business with more than one user, the statistics can show who much a particular purchaser is using the system. For example, the REM statistics can show how many RFQ's the Economic Development department within the City of Wanneroo is sending in total or for a specific period.

Management of REM Purchasers and Suppliers

The administration of the REM is handled through a secure area within the administration of the 2Cities Web site. This allows administrators of the REM to add, edit and delete purchasers and suppliers within the service.

In order to streamline the registration process for new suppliers/purchasers within the REM, the 2Cities Web site contains a registration form that automating the process of adding them to the system. Once a new SME registers from the public side of the 2Cities Web site, their details are automatically entered into the REM but are disabled pending activation from a 2Cities administrator. This two-stage process is to ensure that SMEs are suitably vetted and paid up prior to placement on the REM.

Summary

The REM is one of the first e-Procurement marketplaces allowing true accessibility to all levels of business, in particular SMEs. The REM provides a crucial business infrastructure to encourage the adoption of eCommerce and to foster buying locally. The key success factor of the REM is its ability to deliver results to both suppliers and purchasers in the local marketplace.

2Cities Project Timeline and Major Events (1999- 2003)

- E-Brisbane - the Brisbane City Council and Dow Digital partnership developed one of the first major community portals in Australia (QLD). 2Cities used this example as a benchmark in Australian Portal development to commence its feasibility.
- 1999 - Eugene Echols (Coordinator City of Joondalup Internet) developed the 'Regional Web' concept - (including an implementation plan from a technical/logistical point of view)

- 1999-2000 Ian Martinus/Eugene Echols and Allan Birrell developed the concept further and the City of Wanneroo came onboard to establish the Wanneroo Joondalup Regional Online Steering Group.
- In 2000, Ian Martinus (Manager, Economic Development City of Wanneroo) successfully applied for a Department of Employment, Workplace Relations and Small Business grant under their 'Regional Assistance Program' (RAP). This was to fund a Business Development Manager to conduct a feasibility study for the 2Cities project.
- April 2000 – Presentation by Kath White (CEO – City of Wanneroo)/Lindsay Delahaunty (CEO – City of Joondalup) to the 'Regional State Government Cabinet Meeting' held at the Bridgeleigh Reception Centre in Wanneroo (Premier Richard Court present)
- Late 2000/Early 2001 – DEWRSB – RAP funding of \$100,000 approved to appoint project manager (Allan Birrell successful)
- Early 2001 - Information Technology On Line (ITOL) funding applied for to fund portal construction (unsuccessful)
- 28 March 2001 - Incorporation as the North Metro Community On-line Association Inc.
- April 2001 - The former Department of Commerce and Trade funded the 2Cities demonstration Web site and the development of a business plan for the NMCOA (\$20,000).
- May 2001 - Small Business Development Corporation funding for a Small business trainer to upskill local businesses in the region in relation to computer skills, Internet, email and e-Commerce. (\$100,000) - Trevor Watkinson successful
- City of Wanneroo/ City of Joondalup/ Edith Cowan University seed funded 2Cities (~\$110,000) to develop the current Web site. Expressions of Interest (EOI) were sort and Internet Business Corporation (IBC) contracted to construct the main 2Cities Web site in late 2001
- Feb 2002 Allan Birrell ceased employment as Business Development Manager
- Feb 2002 June 2002 Allan Birrell remained as a paid consultant to the project
- Feb 2002 - May 2002 - Jodie Barton appointed as Business Development Manager
- Aug 2002 June 2003 James Ridgway appointed as Business Development Manager responsible for development of the Web site and project outcomes.

- Aug 2002 – December 2002 – Several issues established with software after rigorous testing and evaluation. This resulted in an protracted timeline for delivery/operationalisation of site.
- February 2003 – Major purchasers request update to the REM to be compatible with existing purchasing systems
- March 2003 - Issues raised with vendor (IBC) regarding slow performance and continued errors. Special meeting held with vendor management to resolve. Upgrade required to address site-speed issues.
- October 2003 – Board appoints Sharon Rossetto to the position of Sales and Marketing Manager. The role has two main objectives. The first is to build up the number of businesses registered as suppliers within the system. The second is to raise awareness of the people working within the local governments of Wanneroo and Joondalup that their options for discretionary purchasing should include viewing the REM within 2Cities and sending out quote opportunities to local SMEs.

APPENDIX C – ETHICS CLEARANCE (EDITED VERSION)

EDITH COWAN UNIVERSITY

COMMITTEE FOR THE CONDUCT OF ETHICAL RESEARCH

**APPLICATION TO UNDERTAKE RESEARCH
INVOLVING HUMAN SUBJECTS**

**THIS FORM IS TO BE COMPLETED FOR ALL RESEARCH INVOLVING
HUMAN SUBJECTS**

**APPLICATION TO UNDERTAKE RESEARCH
INVOLVING HUMAN SUBJECTS
(To be completed for all research involving human subjects)**

1. TITLE OF PROJECT:

Investigating the facilitators and inhibitors to small businesses using the 2Cities Business to Government portal

2. RESEARCHER/S

NAME/S	DESIGNATION Ma/PhD student Staff	FACULTY/DEPARTMENT
Ian Martinus	DBA student	School of Management Information Systems

3. EXPECTED DURATION OF PROJECT

FROM: May 2002	TO: June 2003
----------------	---------------

4. FUNDING. Is this project the subject of a grant?

NO

5. REVIEW OF ETHICAL CONSIDERATIONS

Has the research proposal previously been submitted to the Committee for the Conduct of Ethical Research, or to the Ethics Committee of any other Institution?

NO

6. AIMS OF THE PROJECT

Please give a concise description of the aims of the project using LAY TERMS.

The project will investigate the factors that influence small business, both positively or negatively in pursuing membership in business-to-government (B2G) portals. The thorough exploration of these factors will produce a valuable research framework that can be used by either policy makers, SMEs, small business facilitators and academic who are either involved in designing programs or projects that attempt to pull the two groups of business and government together.

7. RESEARCH QUESTION(S)

State clearly in lay terms your research question(s).

Q.1 What are the facilitators that encourage small business to trade through the 2Cities business to government portal?

Q.2 What are the inhibitors that discourage small business to trade through the 2Cities business to government portal?

Q.3 What are the moderating influences on facilitators and inhibitors to trading through the 2Cities business to government portal such as the size, type of small business, IT/Internet experience and usage?

8. SUBJECT GROUP

Please specify any relevant details about the participants . Include the number to be included and whether minors, mentally ill individuals, persons in dependent relationships, or from different cultural groups will be used. (Please see Section 2.2 in the Policy Document)

After running a pilot interview session for 2 or 3 businesses, 40 businesses (owner/managers) will be interviewed by the researcher. Following on from this, 2 focus groups containing up to 6 businesses in each will be conducted to explore in more depth the outcomes of the interviews.

Please state from where and how the subjects are to be recruited.

This number will be made up wholly by small businesses selected within the City of Wanneroo and City of Joondalup local government boundaries. They will be selected randomly, and be representative of the applicable ANZSIC (Australia New Zealand Industry Classification) codes. The subjects will be recruited by phone and also through a simple mail out letter.

9. FORM/S OF DISCLOSURE AND INFORMED CONSENT

a. *All research should obtain written consent from each participant to protect the researcher and this institution. Please attach a copy of the form/s of disclosure and informed consent which will be given to and signed by all participants. This form should describe in clear, simple terms, the procedures proposed, the*

anticipated benefits, and any possible risks. (Please see Appendix for guidelines).

b. If you do not intend to use a consent form please explain why.

10. DETAILS OF RESEARCH PROCEDURES

Please describe briefly the procedures to which humans will be subjected with emphasis on procedures with possible adverse consequences.

Note: A copy of any questionnaire or interview schedule must be provided.

An interview procedure will be followed with one-on-one interviews with small business. These are expected to be about an hour in duration.

The focus groups could last up to 2 hours each. It is expected that the type of question should not cause any discomfort to the participant, and each participant will have the option not to answer any question, or parts thereof.

Interview Schedule

Questions will cover two sections.

Section 1: Informants to state type of business they are (service/ product), and the industry they are in (e.g. light manufacturing/fabrication/parts distribution/specialised equipment) Questions will cover their number of years in business, capacity of business, number of employees,

Section 2: Will explore in more depth the business' transaction capabilities on the Internet. This will be divided into financial and information transactional exchange. The types of questions will include: computer usage and proficiencies, current transactions in local area, interest in using technology to increase local market transactions.

In this section, the facilitators and inhibitors to using the localised portal structure will be examined.

Focus groups

Participants will be gathered through the telephone and mail out methods. The schedule will be largely determined from the results gathered and analysed from the interview section. At this stage, it is foreseen that the groups will be asked to explain in depth their understanding of the types of facilitators and inhibitors to their membership to the 2Cities portal. Focussed discussion will occur because of the analysis that has occurred through the Interview stage. The stage is therefore dependent on the first being completed and highlighting areas to concentrate on.

11. CONFIDENTIALITY OF RECORDS

Records are required to be preserved for a minimum of five (5) years.

a. How will the confidentiality of records be maintained during the study?

Confidentiality will be assured, because the researcher will guarantee to the participants that no other person or body will have access once the information is gathered. All material gathered will be stored in a locked filing cabinet, and information/results stored in a database will be password protected.

b. How will the confidentiality of the records (primary or original data) be protected during the period of their preservation?

Records will only be in the possession of the researcher, and will not be shared via any means, mechanical or electronic.

c. How will the original materials be destroyed after the study is completed?

Transcripts will be shredded, and the magnetic tapes of the interviews and focus groups will be shredded.

- d. *Who else will have access to confidential materials (e.g. transcribers)? How will these people be included in the assurance of confidentiality?*

The researcher intends to transcribe the work, and therefore will not need any other assistance.

12. ETHICAL ISSUES

- a. *Have you read the policy document?*

YES

Please indicate what in your view are the ethical issues involved in this research. The following is a checklist of possible ethical issues.

- b. *Is any financial remuneration or other reward being offered to subjects for participation in the study?*

NO

- c. *Is any information to be withheld from the participants?*

NO

- d. *Will material which identifies subjects be recorded eg. photographs, video recordings or any sound recordings?*

NO

- e. *If interviews are to be conducted will they be tape-recorded?*

YES

- f. *Will participants be asked to commit any acts which might diminish self-respect or cause them to experience shame, embarrassment or regret?*

NO

- g. *Does the research involve any stimuli, tasks, investigation or procedures which may be experienced by subjects as stressful or unpleasant?*

NO

- h. *Will the research involve the use of no-treatment or placebo control conditions?*

NO

- i. *Will the conduct of the research disturb or influence in a negative way the working relationship of the subjects and other groups of participants in their settings?*

	NO
--	----

- j. *Are there in your opinion any other ethical issues involved in the research?*

	NO
--	----

If the answer to any of the questions from 'b' to 'j' is 'yes', please amplify below.

The interviews will be tape recorded with prior permission to do so from the participants. These will later be transcribed. The copies of the tapes will not be available to any person other than the investigator and will not be used for any other purpose but for the intentions stated to participating businesses when their consent is requested.

13. POTENTIAL RISKS AND BENEFITS

- a. *What in your view are the possible risks of this research to the participants?*

In my view, the risks are actually minimal, given that the research will not need to identify participants by name or any other markings. The only identification will be in the form of the use of generic industry classifications. Further, the types of questions being pursued in the interview and focus group sections have not been designed to cause any discomfort. Their purpose is to merely investigate attitudes and beliefs on the subject, and not be a risk to them in any way.

Outline briefly any management plans which have been made in the event of this risk occurring.

If participants are not completely satisfied with the safeguards mentioned above, they are free at any time to withdraw their compliance to participation, and will not be judged on that decision. The researcher will not pursue them on their reasons to withdraw.

b. What are the possible benefits of this research?

(i) To the subject?

The subject will, through participation, help with the economic development of the local government region where they are located. Strategies and policies effected thereafter may deliver a positive benefit to them indirectly through new and innovative industry and government collaboration and spin-off projects.

Through participation, they are also helping raise awareness of the important place that small business holds within micro-economies. Greater chance of funding opportunities might eventuate with direct and indirect benefits possible for participants and non-participants alike

(ii) To humanity generally?

With a greater understanding of the needs, demands and pains of small business, there is a greater chance at achieving economic success on a macro level. When more is uncovered and brought to the public realm about the concerns and wishes of an important group, in this case SMEs: new strategies, policies, programs and projects can be designed and implemented with the objective of increasing economic assistance and wealth creation for all.

DECLARATION

- (i) I have read and agree to abide by the conditions and constraints set out in the Policy Statements on Ethical Research; and**
- (ii) I agree to address any ethical issues which may arise from evolving change in procedures and to notify the undersigned of such changes.**

APPLICANT:

Name:

Signature:

Date: