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A Survey of Current e-Business Development Practices in Australia

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Abstract

The Internet is a dynamic part of the business scene and there have been many examples of success and failures of e-commerce and e-business ventures. A survey was administered to asking questions about industries understanding of current e-business practices in Australia. The object of the survey was to provide a benchmark of current practice. The results of this survey could have a major impact on academic curricula. The survey was sent to 671 Australian Businesses and was addressed to the Chief Information Officer. Only twenty four usable questionnaires were returned and while it is accepted that this is a limited sample, disturbing trends have appeared with respect to the lack of strategic planning for information technology use particularly in medium sized businesses in Australia.

Keywords

Electronic Business, Current e-business practices, Internet

Introduction

In the last two decades of the 20th century, the affordable and powerful computer hardware and software along with the advanced telecommunication technology have laid a solid foundation for the emerging and popularity of the Internet. Individuals as well as organisations have quickly adopted the Internet as a communication tool for data transmission and the provision of information and services. The Internet is fast, simple, and convenient without the limitation of distance and time. It is a dynamic part of the business scene and there have been many examples of success and failures of e-commerce and e-business ventures. In the past, the US has been leading the world in the use of the Internet for business activities. As such, much of the research conducted into e-commerce and e-business has been centred in the US, but it is timely for studies to be done in other parts of the world. This survey was conducted in Australia and provides an overview of attitudes to overall organisational goals of e-business and the methods and hardware infrastructure available.

This paper begins with an overview of the world's e-readiness and how organisations have adopted the Internet for business transactions. Next, the research that was undertaken is described. Findings are presented in the third section, where the extent and manner of organisational adoption of e-business is reported. The final section provides a discussion of these results.

Internet Usage

Substantial proportions of individuals and organisations in developed countries are online or at least have Internet access. Current research conducted by the Economist Intelligence Unit (EIU) on the e-readiness of the world's largest economies is published in its most recent white paper (EIU, 2007). The definition of e-readiness used by the EIU is "*that each country possesses an interconnected set of infrastructural, political, commercial, legal and social attributes that, when combined effectively, help the economy grow and government and society improve*" (pg 2). In this latest report, EIU has made some changes to how it assesses e-readiness, with some consequential movements among the rankings. The EIU research shows the US holding its second place behind Denmark; a place it now shares with Sweden. Australia was ranked ninth out of 69 countries; one place down from the previous year but still one place ahead of the 2005 rankings. Nine of the top ten countries from the previous year still remain so although the rankings have changed. The net affect is that while e-readiness is progressing around the world, its achievement is becoming more complex. The EIU research has developed a score that relates to a country's e-commerce readiness. This score is out of 10 and is derived from six factors

measuring social, political, economic and technological development. Nonetheless, the differential between the top 20 countries, with an average score of 8.4, and the bottom 20 countries, whose score is 4.1, is diminishing. Overall, the world's e-readiness is improving as many developing countries are committing significant resources to developing their digital economy.

The Department of Communications, Information Technology and the Arts present, in their 2005 report (DCITA, 2005), the situation in Australia. DCITA reports that 62% of households and 74% of all businesses had Internet access. Further, 25% of businesses had Web sites. Of those businesses that are online, 50% still used Dial-up connections while 41% used broadband and the remaining 9% used ISDN. With respect to broadband, the vast majority of business used either DSL (67%) or cable (28%) technologies. The entry level costs for broadband had increased marginally (less than 1%) from the previous year, while the entry level access for cable decreased by slightly more than 7%. The report went on to say that Australia remains one of the countries with the lowest entry level prices for broadband and cable access.

DCITA also reported on the online activities of all businesses within Australia. The majority on line businesses used the Internet to place orders for goods and services (42%); and lodge electronic payments (28%) and taxation forms (26%). Most small to medium enterprises (SMEs) are active in e-commerce/e-business activities. While the majority of these activities such as paying for (62%); receiving payments for (50%), and taking orders for (41%) goods and/or services increased from the previous year, placing orders for goods and/or services decreased slightly (53%). Internet banking remaining the most used activity (70%). The report contained an estimate for business Internet income of $33 billion, which was $8.7 billion up from the previous year. This total business income figure was equivalent to 2% of total business income for the surveyed firms and 4% of Gross Domestic Product. These figures can be considered as a moderate achievement, however, they are well below the conservative forecasts of 15% of the late 1990s (Markham, 1998).

Neither the EIU report nor the DCITA report provides information on how e-business has been incorporated into organisations. The most significant challenge organisations are currently facing is how to incorporate information and Internet technologies into their business activities so that an overall improvement in effectiveness and efficiency is achieved, and so influence the strategic positioning of the organisation. This paper seeks to identify how organisations are incorporating e-business into their business activities and identify the resources used to achieve this. Further, this paper identifies the objectives behind the e-business initiatives and the benefits that are realised.

Methods

An extensive eight-page questionnaire was developed to survey organisations about their e-business initiatives and development practices. The object of the survey was to provide a benchmark of current practice. The survey instrument contained five sections. The first section sought information about organisational characteristics, how they classified their e-business goals and what objectives they wanted to achieve with their initiatives. The second section sought information on the key decision makers and other participants to the decision-making process. The IT infrastructure was the focus of the third section of the instrument. The physical components that make up the IT infrastructure were sought along with tools used for data mining and communications; the information management functions performed within the organisation and functions that were outsourced. The section also required the identification of areas impacted by the implementation of e-business initiatives. The fourth section focused on network usage, particularly the use of the Internet, extranets and intranets by the organisation. Information on the benefits realised from these initiatives and how performance or outcomes were measured were also sought. The final section asked for name and address details on the organisation as well as the name and title of the person completing the questionnaire. The final part of the section provided the respondent with a space where they could write any comments they believed were relevant to the study.

Questionnaires were sent to the top level information management staff, both in the private and public sectors, throughout the Australia. The list of organisations was obtained from a commercial company specializing in mailing lists. Ethical clearance was requested and obtained from the University before the questionnaires were sent out. The target population for the survey was the chief information officer of state government offices, local government offices, and corporations throughout Australia. A total of 671 questionnaires were sent out to organisations via the Australian Postal Service.

Results

The survey was divided into five sections, namely, organisational characteristics, the personnel involved in decision making,, the information infrastructure, network usage and contact details of participating organisations. This section provides details of responses to questions for all but the last section of the survey.

Details on the participating organisations are not provided to maintain anonymity of the respondents. Although only twenty-four valid responses were returned, resulting in a response rate of 3.58%, this is considered reasonable considering the target audience were very busy top level executives (Chief Information Officer).

Organisational Details

The first four questions asked about organisational characteristics including, gross revenue, number of employees and whether the employees were involved in IT or e-business development. The Australian Bureau of Statistics provides a classification scheme for organisations based on the number of employees: small - where the number of employees are below 20, medium - were the number of employees are between 21 and 200; and large - where the number of employees is above 200 (ABS, 2005, pg 11). Participating organisations were classified accordingly; however, only two categories were evident – medium-sized and large-sized. Table One shows the average of these variables across the two categories as well as the range of values. The gross revenue of the companies involved varied from $3 million to $500 million and the number of staff ranged from 30 to 2600. Annual gross revenue was not reported by two respondents.

Table 1: Characteristics of the participating organisations ($AUD)

Characteristic	Medium-sized		Large-sized	
	Average	Range	Average	Range
Annual Gross Revenue (millions)	8.2	3 - 18	303.0	40 - 1500
Total Employees	50.8	0 - 83	1059.0	215 - 2600
IT Employees (percentage of total employees)	13.4	30 - 87	11.0	.01 - 70
E-business Employees (percentage of IT employees)	6.9	0 - 40	9.5	0 - 30
Number of participating organisations	9		15	

The responding organisations were split with respect to their business activities; half were involved in government at the state or local level; while the remaining organisations were involved in private enterprise. The range of activities for those organisations involved in private enterprise included: health, energy retailing, manufacturing, printing, real estate, import and/or distribution, design, consulting, plant maintenance, and timber milling. The respondents were split equally with respect to whether they had a written three-year strategic technology plan.

When the respondents were asked to categorize their e-business goals as described by Ward and Peppard (2002, pg42). They categorised systems in terms of their role in the organisation as shown below:

- Strategic – applications that are critical to achieving future business strategy

- Key operational – applications that the organisation currently depends on for success

- High potential – applications that might be important in achieving future business success

- Support – applications that are valuable but not critical to business success

The majority of respondents classified their systems as strategic (46%). Other classifications were high potential (25%), key operational (25%) and support systems (33%). Respondents were able to select more than one category. In classifying their e-business goals, seven of the large-sized organisations reported their application portfolios as being strategic, one as a combination of strategic and high potential, three as high potential only, three as support systems and two as key operation systems. The medium-sized organisations classified their e-business goals as strategic and key operational (four each), five as support systems and two as high potential. Of these, two respondents used more than one category to describe their e-business goals; one combined strategic with key operational and the other used all four categories. Medium-sized organisations tended to classify their e-business goals as being either key operational or support systems more often than large-sized organisations that used strategic and high potential categories more often.

The final question in the organisational section related to the objectives for the IT infrastructure. These are shown in Table Two. A Likert-type scale was used for the rating; from 1 - not important to 5 - very important. The final column in the table provides a comparative raking of the objectives, from least (1) to most (9) important. The most important aspects were reliability, integrity, security, availability and user friendliness, while instantaneous response and portability were ranked least important.

Table 2: Objectives for IT infrastructure

Objectives	Average Rating	Relative Importance
Adaptability	3.7	3
Availability	4.4	7
Flexibility	3.7	3
Functionality	4.3	6
Manageability	3.8	4
Maintainability	3.9	5
Instantaneous Response	3.5	2
Integrity	4.6	8
Portability	2.9	1
Reliability	4.7	9
Scalability	3.7	3
Security	4.6	8
User-Friendly	4.4	7

Personnel

The second section of the questionnaire contained two questions designed to identify which personnel were involved in their organisation's e-business strategic planning. Respondents could select more than one option for both questions. The first question focused on the key management decision makers. Respondents named the Chief Executive officer as the primary decision maker (75.0%), followed by the Chief Financial officer (45.8%), and the Chief Information officer (12.5%). The second question focused on the key participants in the design and implementation aspects of their organisation's e-business strategic planning other than traditional system development personnel. The respondents named external IT specialists (58.3%) and external business consultants (41.7%) as the main participants, followed by information security officers (29.2%) and legal consultants (16.7%).

IT Infrastructure

The third section of the questionnaire focused on the information technology infrastructure. Six questions made up this section. Again, respondents could select more than one option in each case. The first question related to the physical components that make up the e-business infrastructure. There were three components to this question: hardware, software and database structure. The percentages of respondents with each component are shown in Table Three. The vast majority of hardware components were used by almost all respondents; one respondent did not provide any information on this question and two others did not provide a response to the software or database structure elements. Applications servers and database servers were used by all who responded and printer servers by just over half of the respondents. Server support applications were the primary software components followed by Web server support applications. The relational database structure was selected by just over half of the respondents with the network database the second most common structure used.

Table 3: Physical components of the e-business infrastructure

Hardware Component	Percentage of respondents with component
Application Server(s)	95.8
Database Server(s)	95.8
E-mail Server(s)	83.3
Backup Server(s)	87.5
Printer Server(s)	54.2
Storage Server(s)	58.3
Firewall(s)	87.5
Routers/Switches	75.0
Web Server(s)	79.2
Software Component	Percentage of respondents with component
Server support applications	62.5
Middleware	16.7
Web server support applications	50.0
Database Structure	Percentage of respondents with component
Relational	91.7
Network	66.7
Hierarchical	12.5
Object-Oriented	16.7
Other	12.5

The next two questions related to the use of data mining tools for e-business and the primary method of communication with their online customers. Table Four shows the responses to the questions. One responding organisation did not provide information on either of these questions. Most respondents employed data mining tools for combined customer/product/service purposes. Email and Web pages were the primary forms of communications with online customers. Call centres were the least selected option for communications with online customers.

Table 4: Use of data mining tools for e-business and primary forms of communication with online customers

Purpose of using data mining tools	Percentage of respondents
Customer Focus	45.8
Product Focus	4.2
Service Oriented	37.5
Customer/Product/Service	62.5
None	8.3
Forms of communication with online customers	Percentage of respondents
Call Centre	8.3
E-Mail	58.3
Telephone	29.2
Web Page	58.3
None	0.0

The next two questions in the survey focused on the types of information management functions undertaken within the organisation and which functions were outsourced. Responses to the questions are shown in Table Five. One respondent did not provide information on the types of information management functions undertaken, while four sis not provide a response to functions outsourced. Content management, contingency management and security management were the three most commonly selected functions. Emerging technology management was selected by only three of the respondents. Outsourcing in one form or another was undertaken by most of the participating organisations. Traditional systems maintenance, system integration, and database management were outsourced most, while customer relationship management was not selected at all. E-business development was outsourced by 37.5% of respondents, while e-business maintenance was undertaken by only 25.0% of respondents.

Table 5: Information management functions performed within the organisation and business functions that have been outsourced

Information management function performed	Percentage of respondents
Content management	91.7
Contingency management	70.8
Customer relations	58.3
Knowledge management	45.8
Development management	29.2
Documentation management	58.3
Emerging technology management	12.5
Inventory management	58.3
Integration management	20.8
Performance management	50.0
Security management	62.5
Vendor management	54.2
Business functions outsourced	**Percentage of respondents**
Traditional systems maintenance	62.5
Off-the-shelf program evaluation	37.5
Systems evaluation	33.3
System integration	58.3
Contractor solicitations	16.7
Contractor management	8.3
Call centre	8.3
Customer relationship management	0.0
E-business development	37.5
E-business maintenance	25.0
E-mail system management	20.8
Database management	41.7
Data warehouse/data mining	20.8
Network management	29.2
Internal end user support	12.5

The final question is the section identified which areas were impacted by the implementation of e-business systems within the organisation. Results are shown in Table Six. The main areas impacted were IT infrastructure, business processes and resources, while management decisions was least affected by e-business initiatives.

Table 6: Areas impacted by implementing e-business within the organisation

Areas impacted by implementing e-business	Percentage of respondents
Strategic planning	50.0
Management decisions	37.5
IT infrastructure	75.0
Operation processes	54.2
Business processes	70.8
Resources	70.8

Network Usage

The fourth section of the questionnaire focused on network usage. There were five questions in this section. Respondents could select more than one option for the first three questions and the last one; while the fourth question required the respondent to rate the benefits of its e-business initiatives. The first question asked about the organisation's reasons for using the Internet. The responses are shown in Table Seven.

Table 7: Reasons for Internet usage within organisations

Internet usage	Percentage of respondents
Web page presence	87.5
Marketing and advertising	58.3
Business-to-business	41.7
Business-to-consumer	65.5
Customer-to-customer	12.5
E-education	25.0
E-government	37.5
E-mail	91.7
Management driven	16.7

The goals associated with the organisation's use of Extranets were the focus of the next question. Table Eight shows the responses. The most commonly selected goal by far was customer service and support, whereas production and inventory control between business partners was the least selected goal.

Table 8: Goals of the organisation's use of Extranets

Extranet usage within the organisation	Percentage of respondents
Customer service and support	75.0
Products/services catalog information	41.7
Publish information among business partners	12.5
Post electronic forms	45.8
Collaboration between business partners	16.7
Production and inventory control between business partners	0.0
Electronic data interchange	29.2
Electronic funds transfer	37.5
Portal	25.0
Sales	16.7
Marketing and advertising	25.0

The next question related to the objectives associated with the organisation's use of Intranets. Table Nine shows the responses. The Intranet was primarily used to broadcast information. Software distribution and management and inbound logistic systems were the least selected objectives of the intranet.

Table 9: Objectives of the organisation's use of Intranets

Intranet usage within the organisation	Percentage of respondents
Inbound logistic system	20.8
Education and training	54.2
Broadcast information	79.2
Post electronic forms	62.5
Team collaboration	41.7
Software distribution and management	8.3
Document management	54.2

The fourth question required the respondents to rate the importance of the benefits realised from their Extranet, Intranet and Internet initiatives. A Likert-type scale was used for to rate the benefits; from 1 - not important to 5 - very important. The final column in the table provides a comparative raking of the benefits, from least (1) to most (9) important. Table Ten provides the results. The most important benefits were increased productivity, efficiency, enhanced communications and increased sales and marketing efforts. The least important benefits were supply chain coordination, competitive advantage and industry leadership.

Table 10: Goals and objectives of the organisation's use of Extranets and Intranets

Objectives	Average Rating	Relative Importance
Increased productivity	4.22	11
Increased profitability	3.18	5
Efficiency	4.13	10
Competitive advantage	2.72	2
Industry leader	2.91	3
Supply chain coordination	2.22	1
Customer satisfaction	4.00	8
Customer retention/loyalty	2.95	4
Cost reduction	3.32	6
Enhanced communication	4.09	9
Better decision making abilities	3.55	7
Increased Sales and marketing efforts	4.09	9

The final question focused on how the organisations measured the performance or outcomes of their e-business initiatives. One organisation did not provide a response to this question. Productivity was selected by the majority of respondents (66.7%), while Profit and Cost was selected least; 20.5% and 25 % respectively. One respondent indicated that this could not be measured by them.

Discussion

This section provides a discussion of the results presented in the previous section. Of the responding organisations, 15 were classified as large and 9 as medium. All of the large-sized organisations had some dedicated IT staff and all but one had staff working on their e-business development. All of the medium-sized organisations had IT staff and five had e-business development staff. Having written three-year strategic technology plans were reported for 73 percent (n=11) of the large-sized organisations and 11 percent (n=1) of the medium-sized organisations.

It is surprising that while all of the large-sized organisations employ IT staff and have staff working on their e-business development (with one exception) that they do not all have strategic technology plans. Further, while medium-sized organisations all have dedicated IT staff, only one has a written strategic technology plan. In addition, when the dataset is divided into firms with less than 300 employees, only two out of 12 have a written strategic IT plan. This appears inconsistent with larger companies who, in the main all have written IT plans.

The importance of strategic IT plans needs to be stressed to Australian companies, for example McKay and Marshall (2004) suggest that a strategic level, a shared vision of purpose, goals and objectives is imperative and that a strategic plan should be an ongoing activity that is essential to ensure effective IT/business alignment. It appears from this research that many medium to large organisations need to think about planning the implementation of their IT resources at a strategic level. The literature is specific in the recommendation that strategic IT plans are essential for effective management of resources and it appears that further education and research is needed to encourage Australian businesses to seriously consider how their IT resources should be allocated. This is essential to ensure IT/business alignment and this lack of alignment is a well recognised management problem within many companies (Roepke, Agarwal and Ferratt 2000).

The lack of alignment is also a major criticism of IT and one of the major aspects that Nicolas Carr considered in relation to the failure of IT to provide competitive advantage (Carr 2003). The research appears to confirm Carr's contention that IT is treated as an infrastructural technology[1] (at least by many Australian companies) and that in many cases business is guilty of assuming that the opportunities for gaining competitive advantage will be available indefinitely and without the necessary planning. The fundamental concern with Carr's thesis is that if IT is treated as an infrastructural technology, the promises of competitive advantage will not flow through, in other words, just because a company has the technology, it doesn't mean that it will benefit from it unless it has a well thought out plan that will ensure IT is used to its maximum competitive advantage and not

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[1] Carr defines IT as an infrastructural technology in that it needs to be shared and can not be used in isolation. In the early stages, infrastructural technology is restricted and therefore provides the user some competitive advantage, however as the previously scarce resource becomes more available, it loses its competitive advantage and becomes ubiquitous and eventually a commodity that everyone has and hence offers little if any competitive advantage (much like electricity is provided as a service)

just as a commodity. It is our contention that a strategic IT plan should be completed if for no other reason than to ensure that IT is not treated as an infrastructural technology providing nothing more than a communication technology or service with no real scope for developing competitive advantage.

The authors believe that IT is more than simply an infrastructural technology, unlike the railway and electricity examples outlined by Carr (2003); IT doesn't just work by plugging an appliance in or running a locomotive along a railway line. Other important human factors need to be considered and while these same factors were of concern with the introduction of railways and electricity, the technology was far less complex. For example, the improvements in decision making that accrue from the use of decision support systems are far more abstract and intangible than the use of an electrical appliance, facilitated through plugging into an electrical circuit.   The development of an IT strategic plan is an essential aspect in ensuring that the technology can deliver the much promised strategic and competitive advantage that has been promised by much of the information systems literature. If Australian businesses wish to remain competitive in world markets, they need to adopt world's best practice with respect to e-business strategies. This research has highlighted various gaps with some companies not even having very basic planning such as a strategic IT plan.

In the area of application portfolios, the majority of large organisations were classed a strategic, inferring that the applications were critical to achieving future business success. The mix of application portfolios can allow some categorisation of business approaches with Hirschheim and Sabberwal (2001) suggesting that organisations can be placed in one of three business stances. These stances are (1) Prospector where the company takes a somewhat aggressive, entrepreneurial stance to their business dealings or (2) Defender where the company establishes itself in a niche market and is usually resistant to change, the third stance is the (3) Analyser and this is midway between the two with a cautious approach to risk but with a more entrepreneurial approach to business dealings than the defender stance. The research conducted here could indicate that the majority of large companies have a prospector stance to their business dealings (n=7). With only a few (n=3) having a conservative, defender stance as indicated by their categorisation of their portfolio as support. The remainder (n=5) appear to have the analyser stance to their business dealings. Smaller companies appear to be more conservative with the majority appearing to sway towards the Defender stance with the majority (n=5) categorising their application portfolios as supporting (valuable but not critical to business success). These categories of business stances are interesting in that it appears that larger firms are prepared to take greater risks than smaller companies. This stands to reason as larger firms could have deeper pockets with respect to being able to take risks.

Decision making tended to be undertaken by chief executive officer, chief financial office and the chief information officer. There was no evident pattern across the two categories of organisations and this appears to be consistent with the cavalier approach to IT resources outlined above; that is, a lack of a strategic IT plan and a prospector stance to business dealings. The respondent companies appeared to be more concerned with the technical aspects of implementation with low ratings given to management decisions with respect to areas impacted by implementing e-business within the organisation. This technical slant is consistent with the authors' experience with IT departments in organisations, that is, IT departments in many companies having a great deal of say in the way e-business initiatives are handled and management having less of a say, mainly because they are not fully aware of the capabilities of the technology and not having a clear understanding of what is possible.

Conclusion

It is hoped that this research can provide a benchmark for future investigations into e-business in Australia; however an obvious limitation of this research is the small response rate and subsequent small sample size. Future studies will need to be much better resourced and have strategies to allow for follow up letters to be sent to respondents.

The apparent cavalier approach to IT planning in the companies that did respond to the survey is of concern to Australia's future with respect to an effective and world class e-business future. This research suggests that Australian companies need to understand the need and value in developing strategic IT plans, especially in medium-sized firms. The IT departments still appear to have a great deal of say in e-business implementations and there still appears to be a lack of IT/business alignment in this cross-section of Australian companies.

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Appendix 1

The Survey Instrument

A SURVEY OF CURRENT E-BUSINESS (E-GOVERNMENT) DEVELOPMENT PRACTICES

Description. The objective of this survey is to gain a better understanding of current e-business (or e-government) practices. This survey will allow us to see what changes have occurred in this information age. The results may have a major impact on academic curricula throughout the country.

Confidentiality. Your responses will be kept confidential, and your identity recorded anonymously.

I.   *ORGANISATION*

What is the approximate annual gross revenue of your organisation?   _____ [1-1]

Approximately how many employees work in your organisation?   _____ [1-2]

Of those employees, approximately what percentage work in information technology (IT)? _____% [1-3]

Of those in IT, approximately what percentage work on e-business (or e-government) development?_____% 1-4]

Indicate the primary business activity of your company. _____[1-5]

Does your company have a written three-year strategic technology plan?
         Yes [1-6-1] ☐   No [1-6-2] ☐

From these categories, how would you classify your e-business (or e-government) goals?
         High Potential System   [1-7-1]   ☐
         Strategic System   [1-7-2]   ☐
         Key Operational System   [1-7-3]   ☐
         Support System   [1-7-4]   ☐

On a scale of 1 to 5, with 5 being the most important and 1 being the least important, please rate the following e-business (or e-government) objectives for your IT infrastructure.

Objectives		Not Important				Very Important
Adaptability	[1-8-1]	1	2	3	4	5
Availability	[1-8-2]	1	2	3	4	5
Flexibility	[1-8-3]	1	2	3	4	5
Functionality	[1-8-4]	1	2	3	4	5
Manageability	[1-8-5]	1	2	3	4	5
Maintainability	[1-8-6]	1	2	3	4	5
Instantaneous Response	[1-8-7]	1	2	3	4	5
Integrity	[1-8-8]	1	2	3	4	5
Portability	[1-8-9]	1	2	3	4	5
Reliability	[1-8-10]	1	2	3	4	5
Scalability	[1-8-11]	1	2	3	4	5
Security	[1-8-12]	1	2	3	4	5
User-Friendly	[1-8-13]	1	2	3	4	5

II.   PERSONNEL

For the strategic planning of your organisation's e-business (or e-government) processes, who are the key management decision makers? (Please check all that apply.)

Chief Executive Officer	[2-1-1]	☐
Chief Financial Officer	[2-1-2]	☐
Chief Security Officer	[2-1-3]	☐
Information Security Officer	[2-1-4]	☐
Privacy Officer	[2-1-5]	☐
Other (please specify) [2-1-6] _____		

For the design and implementation of your organisation's e-business (or e-government) processes, other than traditional system development personnel, who are the key participants? (Please check all that apply.)

Legal Consultant	[2-2-1]	☐
Information Security Officer	[2-2-2]	☐
Sociologist	[2-2-3]	☐
Psychologist	[2-2-4]	☐
External IT Specialist	[2-2-5]	☐
External Business Consultants	[2-2-6]	☐

III.   IT INFRASTRUCTURE

For your e-business (or e-government) initiatives, what are the physical components that make up your IT infrastructure? (Please check all that apply.)

Hardware

Application Server(s)	[3-1-1]	☐
Database Server(s)	[3-1-2]	☐
E-mail Server(s)	[3-1-3]	☐
Backup Server(s)	[3-1-4]	☐
Printer Server(s)	[3-1-5]	☐
Storage Server(s)	[3-1-6]	☐
Firewall(s)	[3-1-7]	☐
Routers/Switches	[3-1-8]	☐
Web Server(s)	[3-1-9]	☐

Software

Server support applications	[3-2-1]	☐
Middleware	[3-2-2]	☐
Web server support applications	[3-2-3]	☐

Database Structure

Relational	[3-3-1]	☐
Network	[3-3-2]	☐
Hierarchical	[3-3-3]	☐

Object-Oriented	[3-3-4]	☐
Other	[3-3-5]	☐

What is the purpose of utilizing data mining tools for e-business (or e-government)? (Please check all that apply.)

Customer Focus	[3-4-1]	☐
Product Focus	[3-4-2]	☐
Service Oriented	[3-4-3]	☐
Customer/Product/Service	[3-4-4]	☐
None	[3-4-5]	☐

What is the main form of communication with your online customers?

Call Centre	[3-5-1]	☐
E-Mail	[3-5-2]	☐
Telephone	[3-5-3]	☐
Web Page	[3-5-4]	☐
None	[3-5-5]	☐

Does your organisation perform the following information management functions? (Please check all that apply.)

Content management	[3-6-1]	☐
Contingency management	[3-6-2]	☐
Customer relations	[3-6-3]	☐
Knowledge management	[3-6-4]	☐
Development management	[3-6-5]	☐
Documentation management	[3-6-6]	☐
Emerging technology management	[3-6-7]	☐
Inventory management	[3-6-8]	☐
Integration management	[3-6-9]	☐
Performance management	[3-6-10]	☐
Security management	[3-6-11]	☐
Vendor management	[3-6-12]	☐

Does your organisation outsource the following functions? (Please check all that apply.)

Traditional systems development

Traditional systems maintenance	[3-7-1]	☐
Off-the-shelf program evaluation	[3-7-2]	☐
Systems evaluation	[3-7-3]	☐
System integration	[3-7-4]	☐
Contractor solicitations	[3-7-5]	☐
Contractor management	[3-7-6]	☐
Call centre	[3-7-7]	☐
Customer relationship management	[3-7-8]	☐
E-business development	[3-7-9]	☐
E-business maintenance	[3-7-10]	☐
E-mail system management	[3-7-11]	☐
Database management	[3-7-12]	☐
Data warehouse/data mining	[3-7-13]	☐
Network management	[3-7-14]	☐
Internal end user support	[3-7-15]	☐

Of the following areas, which ones are impacted by implementing e-business (or e-government) on your organisation? (Please check all that apply.)

Strategic planning	[3-8-1]	☐
Management decisions	[3-8-2]	☐
IT infrastructure	[3-8-3]	☐
Operation processes	[3-8-4]	☐
Business processes	[3-8-5]	☐
Resources	[3-8-6]	☐

IV. NETWORK USAGE

Please indicate the reason(s) for Internet usage within your organisation. (Please check all that apply.)

Web page presence	[4-1-1]	☐
Marketing and advertising	[4-1-2]	☐
Business-to-business	[4-1-3]	☐
Business-to-consumer	[4-1-4]	☐
Customer-to-customer	[4-1-5]	☐
E-education	[4-1-6]	☐
E-government	[4-1-7]	☐
E-mail	[4-1-8]	☐
Management driven	[4-1-9]	☐

Please indicate the goal(s) of the organisation's utilization of an Extranet. (Please check all that apply.)

Customer service and support	[4-2-1]	☐
Products/services catalog information	[4-2-2]	☐
Publish information among business partners	[4-2-3]	☐
Post electronic forms	[4-2-4]	☐
Collaboration between business partners	[4-2-5]	☐
Production and inventory control between business partners	[4-2-6]	☐
Electronic data interchange	[4-2-7]	☐
Electronic funds transfer	[4-2-8]	☐
Portal	[4-2-9]	☐
Sales	[4-2-10]	☐
Marketing and advertising	[4-2-11]	☐

Please indicate the objectives(s) of the organisation's utilization of an Intranet. (Please check all that apply.)

Inbound logistic system	[4-3-1]	☐
Education and training	[4-3-2]	☐
Broadcast information	[4-3-3]	☐
Post electronic forms	[4-3-4]	☐
Team collaboration	[4-3-5]	☐
Software distribution and management	[4-3-6]	☐
Document management	[4-3-7]	☐

On a scale of 1 to 5, with 5 being the most important and 1 being of least importance, please rate the following benefits your organisation realizes from its Extranet, Intranet, or Internet initiatives.

Objectives		Not Important				Very Important
Increased productivity	[4-4-1]	1	2	3	4	5
Increased profitability	[4-4-2]	1	2	3	4	5
Efficiency	[4-4-3]	1	2	3	4	5
Competitive advantage	[4-4-4]	1	2	3	4	5
Industry leader	[4-4-5]	1	2	3	4	5
Supply chain coordination	[4-4-6]	1	2	3	4	5
Customer satisfaction	[4-4-7]	1	2	3	4	5
Customer retention/loyalty	[4-4-8]	1	2	3	4	5
Cost reduction	[4-4-9]	1	2	3	4	5
Enhanced communication	[4-4-10]	1	2	3	4	5
Better decision making abilities	[4-4-11]	1	2	3	4	5
Increased Sales and marketing efforts	[4-4-12]	1	2	3	4	5

How does your organisation measure the performance or outcome of its e-business (or e-government) initiatives?

         Profit [4-5-1] ☐   Cost [4-5-2] ☐   Productivity [4-5-3] ☐

V. PARTICIPANT

Name of Organisation:_____ [5-1]

Name of Department:_____ [5-2]

Address: _____ [5-3]

Name of Person Completing the Survey:_____ [5-4]

Title of Person Completing the Survey: _____ [5-5]

☐ Check here if you would like a copy of the preliminary results.

Thank you for your participation!
Your comments are greatly appreciated. [5-6]

_____
_____
_____

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