



The Strategic Application of e-Intelligence

The Strategic Application of e-Intelligence

Tim Coltman

*Australian Graduate School of Management
University of New South Wales*

Timothy M. Devinney

*Australian Graduate School of Management
University of New South Wales*

David F. Midgley

*INSEAD
Fontainebleau France*

Research Brief

RB 007

The Strategic Application of e-Intelligence

Tim Coltman, Timothy M. Devinney,
David F. Midgley

Research Brief RB 007 2001

Centre for Corporate Change
Australian Graduate School of Management
The University of New South Wales
Australia

Phone: (61 2) 9931 9500 Fax: (61 2) 9663 4672

The AGSM is a School of both
The University of New South Wales and The University of Sydney

The CCC was established under the Australian
Research Council's Research Centres Program

© **Centre for Corporate Change**

The material contained herein is subject to copyright. No part of this document may be
Reproduced or transmitted in any form or by any means without the express written
permission of the Centre for Corporate Change.

Table of Contents

Preface

Internet Reality
The Research Plan
Important Questions
Who was Studied?
Report Outline
Acknowledgements

Chapter 1 The e-Business Strategic Picture

Strategic Impact
Degree of Implementation
e-Business Investment
Competitive Standing
Profit Performance
General Implications

Case 1: Citibank

Chapter 2 Developing an e-Intelligence Infrastructure

Customer Relationships and e-Intelligence
Use of IT Tools
What are Firms Doing with Data
Data Currency and Accuracy
Value Chain Transactions
Human Aspects of e-Intelligence
Multi-Channel Integration
Customer Loyalty Programs
Organisation Practice Issues
e-Intelligence Benefits
Summary—Cost Today, Tailoring Tomorrow

Case 2: Cable and Wireless

Chapter 3 The e-Intelligence Implementation Challenge

Nirvana of Information Usage
Implementation Difficulties
Direct System Costs of Implementation
Indirect System Costs of Implementation
Business Risks
Managerial Beliefs and Organisation Culture
e-Intelligence is Inevitable
Change Inertia

Case 3: X-Store

Chapter 4 Building an e-Intelligence Company

The e-Intelligence Challenge
Breaking the Constraints
Horses for Courses
Intelligence First 'e' Second

Preface

Internet Reality

The Internet phenomenon has generated more press over the past several years than any other business topic. Dramatically reduced transaction costs, targeted access to buyers and sellers, and a whole new array of sophisticated customer analysis methods mean that companies, whether they are acting as sellers, buyers, have substantial interest in electronic-business.¹ This interest can manifest itself in a host of questions:

How can e-business enhance my business?

Is e-business a threat to my organisation's sheer existence?

Do I need a new 'business model' to accommodate the changes or can I bolt an e-business appendage onto my current operations?

How might I use the new technology intelligently?

When is the appropriate time to invest in the necessary technology?

The consistent theme seen in these questions is an emphasis on new e-business orientations and the role that e-business might play as a market maker and destroyer of value. This creates stress for many executives as it places them in a world that is alien and unrecognizable, a world remote from the day-to-day reality of actually managing and implementing complex operational marketing systems.

Indeed the speed with which the e-business revolution has succumbed to the counter-revolution of financial reality highlights an important shift in managerial thinking. Strategic choice is no longer motivated by the fear of missing an opportunity or of being perceived as old fashioned.

Organizations today place greater emphasis on conventional marketing wisdom and profit making outcomes. In such a world, a company's existing profitable

customers are the key to future success.

Consequently one of the most important issues facing managers today is the decision on how data captured as a byproduct of existing online systems, can be intelligently utilized to support relationship exchange, what we call *e-intelligence*.

e-Intelligence is the adding of intelligence to electronic data. It represents the creation of knowledge from the information flowing into the firm from its web-based and traditional systems. e-Intelligence is an overarching concept that allows companies to customize and enhance personalized relationships with customers and suppliers and improve the effectiveness and profitability of business processes and operations via the Internet and traditional channels.

¹ e-Business is defined as the complex synthesis of business processes, enterprise applications, and organizational structure. It encompasses e-commerce—the buying and selling over the Internet—but in addition includes any business exchange that is conducted, in whole or in part, through a digital infrastructure. We do not distinguish between Intranet, Extranet or Internet applications as these boundaries are no longer clear, and we have chosen to encapsulate both business-to-business and business-to-consumer applications within this definition.

The purpose of this study is to examine the extent to which firms are successful in using, in an intelligent way, electronically sourced information to enhance their relationships with exchange partners (e.g., suppliers and customers), to increase the efficiency of their billing and procurement systems, and to capitalize on other aspects of customer interaction. In this way, we hope to gain a deeper understanding of how and why firms are implementing sophisticated systems to capture and exploit electronic data in all its various forms.

The Research Plan

To investigate how the competitive landscape is changing, the Australian Graduate School of Management and INSEAD—the premier business schools in Europe and Asia—joined forces with the SAS Institute, a prominent provider of data analysis software, to examine the application of e-intelligence. The research project was lead by Professor Timothy Devinney, Director, Centre for Corporate Change at the AGSM, Tim Coltman, AGSM Research Assistant, and David Midgley, Professor of Marketing at INSEAD.

The result is a groundbreaking study into the strategic use of e-intelligence. Our report is unlike other research in three key ways. Specifically we:

- Target a wide cross section of people in the organization charged with developing and implementing strategic e-intelligence initiatives, ensuring responses are not subject to ‘senior management bias’;

- Provide insight into the range and depth of e-intelligence activities being developed by companies within six broad industry sectors—financial services, retail, government, utilities, manufacturing, and IT and communications; and,

- Identify the risks and opportunity costs to business in leveraging the huge amount of data flowing to and from the organisation.

Important Questions

Although much is known about the means by which customer and supplier information can be collected and its application to improved customisation, very little is known about how senior executives around Australia plan to incorporate these technologies into their corporate strategies. For this reason the AGSM/INSEAD team set out to explore three essential issues:

- Does corporate Australia believe that data captured as a byproduct of on-line activity represents a highly valuable strategic asset and, if so, why?

- Why have certain organizations been successful in exploiting electronically sourced data, while others remain hesitant or unable to change?

- How do e-intelligence strategies vary by company and industry?

Who was Studied?

To ensure rigor in our research, the team employed a combination of qualitative and quantitative approaches. We conducted in-depth interviews with senior managers at more than 50 companies to learn first hand how e-intelligence activities are being used to drive a new customer focused strategy. This qualitative research is woven into the case studies that appear throughout this report and was vital in helping the team understand the important quantitative trends.

Surveys were sent to 4,000 senior managers across six broad industry categories: government, retail, utilities, financial services, manufacturing, and information technology and communications. The *response rate* for the survey was 15 percent, which is within acceptable norms for this type of study. More detailed dissection of the industries represented is given in Figure P.1.

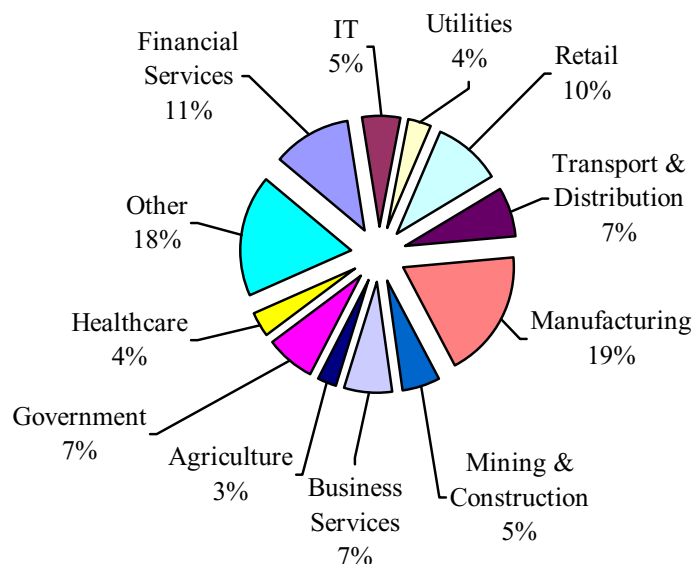


Figure P.1: Breakdown of survey respondents by industry

The median firm had approximately 675 employees in its Australian operations with the range being 13 to 16,000. 40 per cent of firms had less than 250 employees and 14 percent had more than 2,500 employees.

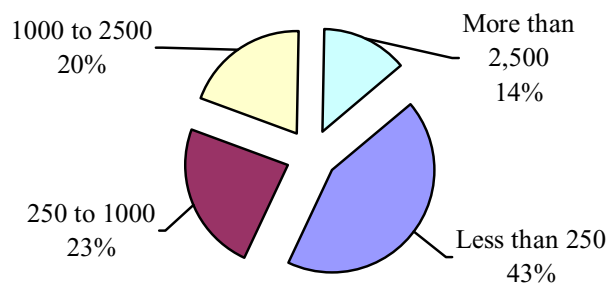


Figure P.2: Breakdown of survey respondents by firm size

The firms studied spanned business-to-consumer (B2C), business-to-business (B2B) and government-to-business, business-to-government and government-to-government (GVT) e-business operations. Slightly over 50 per cent of firms engaged in both B2B and B2C operations and slightly over 20 per cent operated in all three sectors. Clearly the dominant model is B2B (88 per cent of all firms) with a mixed B2B/B2C operation coming in second.

The largest firms (> 2,500 employees) were more likely to engage in both B2B and B2C operations (77 per cent of the largest firms did both) but below this size there was no appreciable difference in the propensity to be orientated one way or another (50 per cent did both and 50 per cent concentrated on a single area of business). Smaller firms, if they were exclusively concentrated in one area tended toward B2B operations.

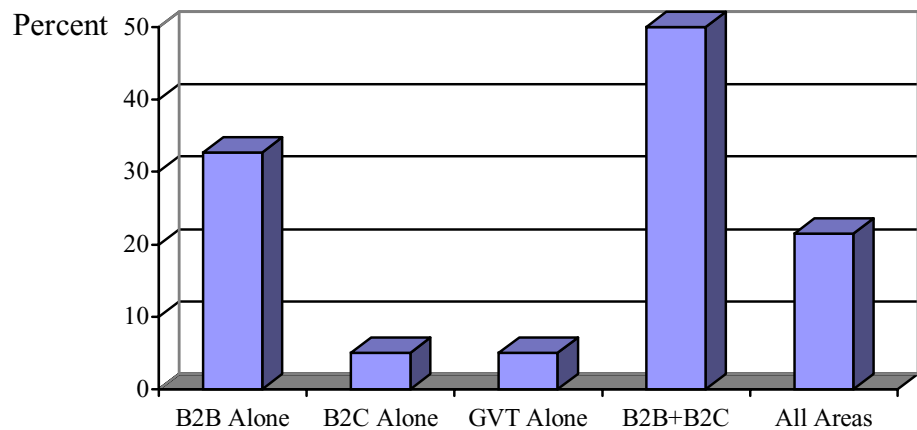


Figure P.3: Distribution of e-business operations by type

Over 60 per cent of our respondents were employed by a division of a multinational firm—either Australian or foreign. Few were from dot.com startups (less than 2 per cent) and over 20 per cent were local independent companies. The remainder included government or quasi-government entities (e.g., hospitals, universities, etc.).

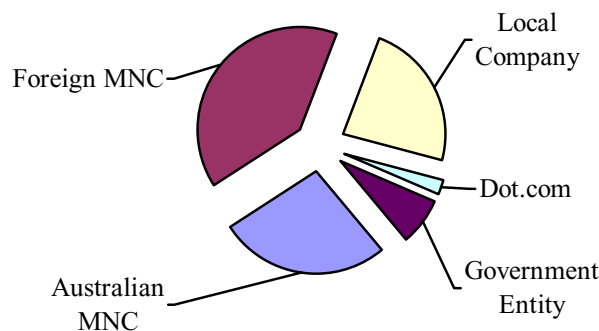


Figure P.4: Breakdown of survey respondents by company type

The individual respondents worked in three main areas: IT, marketing and strategy. The mean length of employment in the firm was slightly more

than 7 years and the mean time in their current position was approximately 4 years.

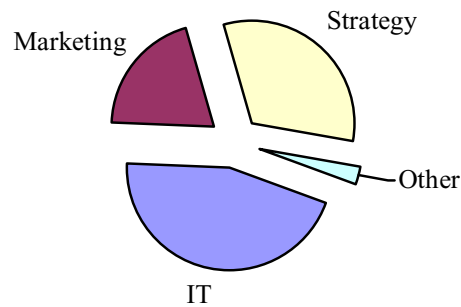


Figure P.5: Respondents by area of responsibility

*Report
Outline*

This report has been written as a thought provoking strategy paper for senior managers considering the use of sophisticated technologies to better manage the electronic interactions between themselves, their customers and their strategic partners.

Chapter 1 identifies the way changing strategic pressures are influencing strategic e-business initiatives more generally in organizations.

Chapter 2 explores the willingness by senior managers to embrace the changes required to develop a better understanding of customer buying behaviour and manage interfirm relationships in new ways. It also covers the ways in which firms are using data and the extent to which new technology has been implemented to serve customers more effectively.

Chapter 3 presents an overview of the organizational and technological constraints, both perceived and real, that are keeping companies from fully exploiting the potential of intelligent data systems.

Chapter 4 provides some concluding comments on how to become a more intelligent user of Internet-generated data and what some of the general implications of our study are for businesses considering e-intelligence initiatives.

Acknowledgements

We wish to thank See Yee-Ming, Zhou Qian and Praveen Goyal for assistance in both interviewing executives and executing the survey. Fran Prior provided diligent secretarial assistances and Anne Fitzsimmons aided us in her capacity as the business manager of the Centre for Corporate Change.

We would also like to express our sincere thanks to the numerous senior managers from companies who generously gave their time to this research project.

Chapter 1: The e-Business Strategic Picture

Managers are acutely aware of the need to execute an e-business strategy to complement existing business models however the extent to which they have been successful is varied. The general picture is one where managers know that there are profound implications from their e-business activities but exactly how these will play out in reality is uncertain.

Strategic Impact

It has been widely proclaimed that electronic business promises to deliver many strategic advantages. Indeed, much evidence suggests that senior executives believe that sophisticated network and information-based technologies will transform corporate strategy within the next one to three years. Our study supports this general conviction with 68 percent of managers expecting that the application and development of Web-based systems will have a revolutionary impact or near revolutionary impact on their industry over the next two years. This opinion is unaffected by the size or type of firm within which the respondent works.

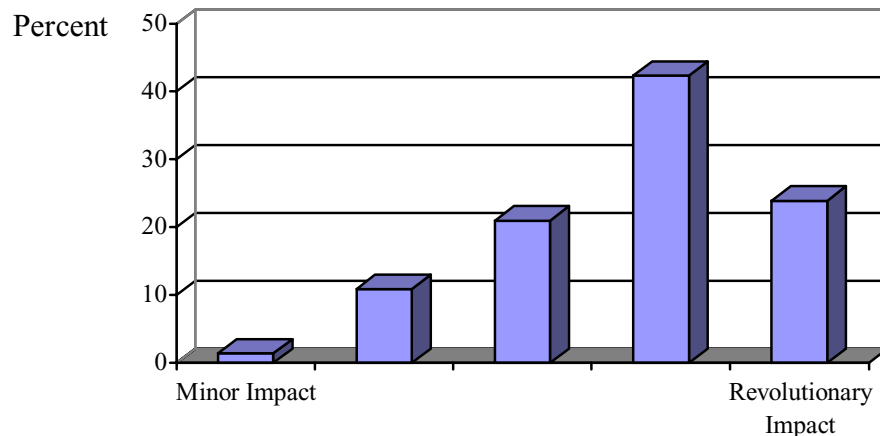


Figure 1.1: In the next two years it is my expectation that the application and development of Web-based systems in my firm will have a revolutionary strategic impact

These findings should come as no surprise. Most managers attend industry conferences, read the trade press and are generally aware of well-publicised e-business success and failure stories and hence have a good assessment of the impact that e-business is having on their own organisations. What is more interesting is the way in which firms and their managers act on what is *espoused* (what they say about the technology)—i.e., how they implement and use the technology.

This last point is reinforced by the large amount of business activity that is occurring over the internet. Figure 1.2 provides the distribution of business activity on-line in the main line of the survey respondent's business. Although, on average less B2C activity is online, we find that 25 percent of firms surveyed had more than 50 per cent of their business activity done on-line. The worst performer overall was in the arena of government business

with very little on-line activity relative to its bricks & mortar operations.

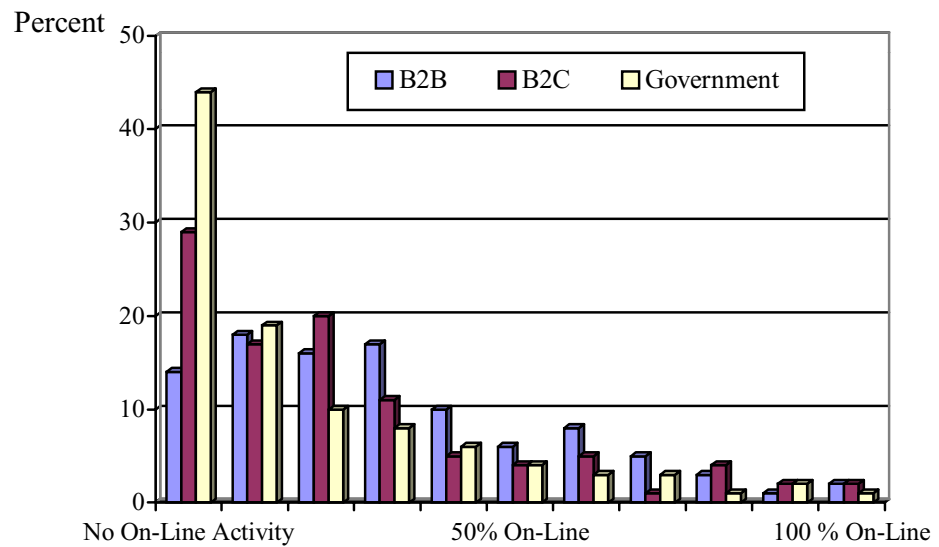


Figure 1.2: The degree of business activity on-line by activity

Degree of Implementation

Figure 1.3 shows that we see an evolution of implementation with a small group of firms (20 per cent) having completed implementation of e-business systems but most still in the phase of development and rollout. More than 50 per cent of firms are still piloting projects and an additional 21 per cent are uncertain about the success of their implementation efforts. It is also interesting that these statistics are not dependent on industry or size with the one exception that the very largest of firms (those with more than 2,500 employees) are slightly more likely to still be in the pilot stage of development. Although 61 per cent of these firms are in the pilot stage they are no less likely to have successfully implemented e-business programs.

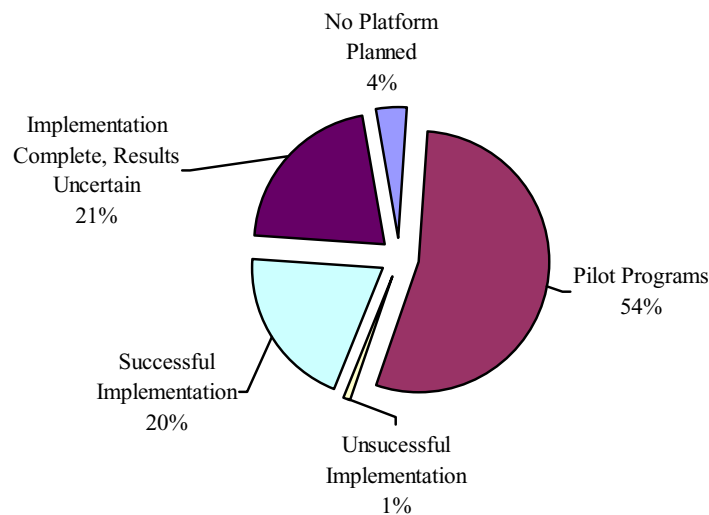


Figure 1.3: Firms' current e-business strategic implementation

e-Business Investment

Similarly, we find that in spite of the dot.com meltdown of the last year, virtually all the firms we surveyed were going to increase or maintain their level of e-business investment (see Figure 1.4). This investment represents less a decrease in firm's bricks & mortar activity but very heavy external market pressure toward more on-line products and services. This is highlighted by the finding shown in Figure 1.5 that 80 per cent of respondents feel that they are under strong or very strong pressure to offer more on-line products or services versus less than 20 per cent expressing the same sentiment about bricks & mortar products and services.

“We will keep expanding. We want to develop a more sophisticated system, so we are spending a lot of money on it at the moment to try and grow our return channel and work more fully alongside all our product distribution.”
 Senior Executive, Financial Services

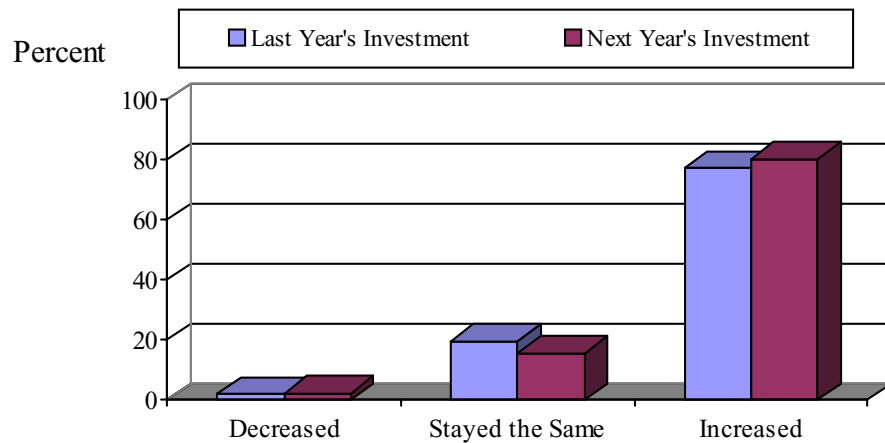


Figure 1.4: Last year and next year did/will your e-business investment increase, decrease or stay the same

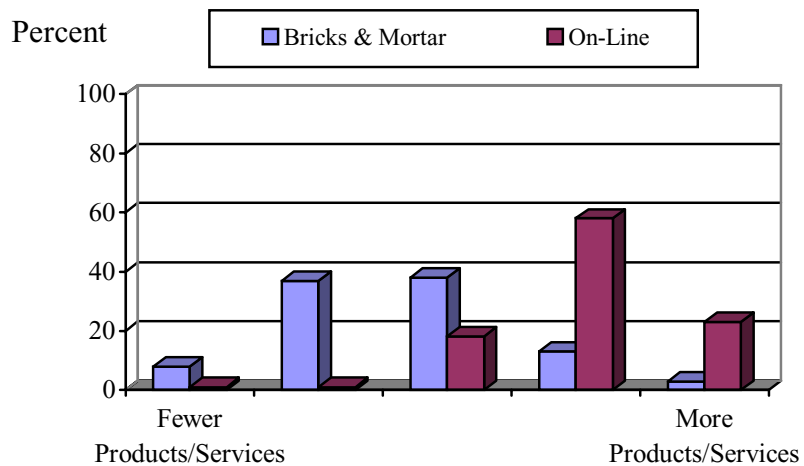


Figure 1.5: We are under pressure to offer fewer/more on-line/brick & mortar products and services

Competitive Standing

Ultimately the bottom line is whether or not new systems and strategies are helping firms increase their competitive standing and performance—and here we get a decidedly mixed answer that is no doubt related to the degree to which firms have implemented their strategies or are still evolving their strategic posture (see Figure 1.6). There is no indication that this sentiment is related to industry or organization size with a minor caveat—the very smallest firms (less than 500 employees) are less likely to think that the Internet has increased their competitive standing (46 per cent versus 33 per cent for all other firms).

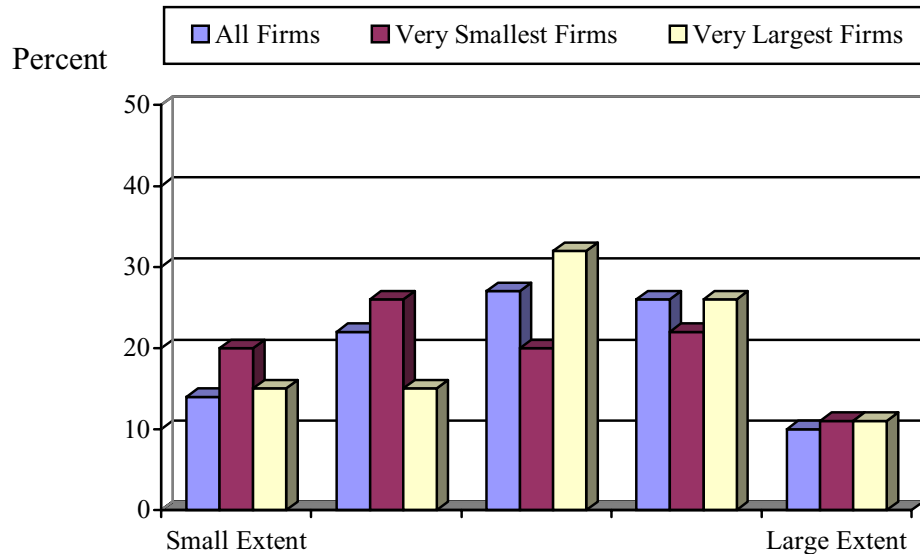


Figure 1.6: To what extent is the Internet improving the competitive standing of your firm

If we push this logic further we can show that those who are further down the development curve in terms of implementation of e-business strategy are more likely to believe that it enhances their competitive standing, irrespective of whether or not the implementation has been confirmed as successful. For example, almost 45 per cent of firms still engaging in pilot programs think that the Internet is having a very small or small impact on their competitive standing while only around 20 per cent of those in the implementation stage feel so (see Figure 1.7). If we look at those who believe that the Internet is having a large or very large impact on their

“The success of e-intelligence in our company has been moderate, but it’s early days. We have our static website— along with everybody else— and a degree of interaction, but it is all low level. Looking to the immediate future, to the short-term future, it’s going to be different. We have initiatives in place, which will be rolled out in the next 3 months, which will probably catapult us to the leading bunch and within 12 months beyond the leading bunch. So I think looking back it’s been fairly moderate to poor. Short-term it’s going to be great and in the long-term it’s going to be revolutionary.”

Managing Director, Utilities Sector

competitive standing we get the opposite opinion. Approximately 45 per cent of the implementers feel strongly positive about the impact the Internet is having on their competitive standing while only 25 per cent of those currently piloting programs feel so.

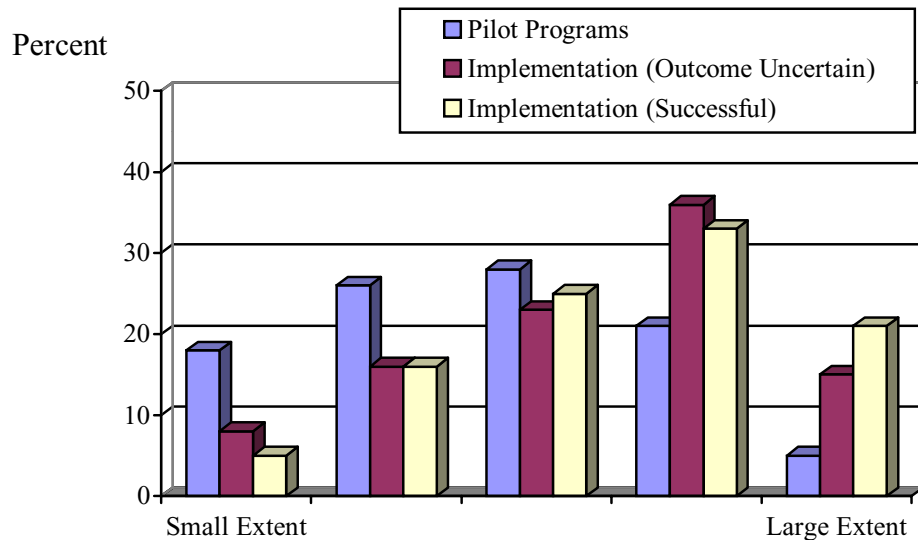


Figure 1.7: To what extent is the Internet improving the competitive standing of your firm—based on e-business strategy implementation

Profit Performance

Although there are positive signs in terms of strategic implications of e-business, the profit performance is clearly an area where there are concerns and missed expectations. A vast majority of firms surveyed indicated that they were not getting either the level of profitability or having their expectations met when it came to the intelligent use of Web-based systems. Only 15 per cent could definitively agree that their profit performance had been increased by the intelligent use of data while 39 per cent felt it definitely did not (see Figure 1.8).

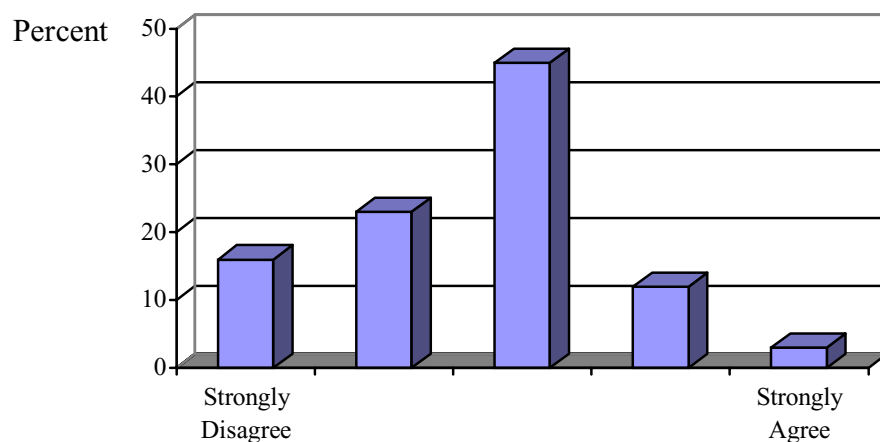


Figure 1.8: e-Intelligence activities have increased the profits in my business unit

A similar tone is expressed when we examine whether managers' expectations about their e-business activity performance is being met on a number of criteria—ROI, production cost reduction, market share, turnover, reduction in transaction costs, and growth in sales (see Figure 1.9).

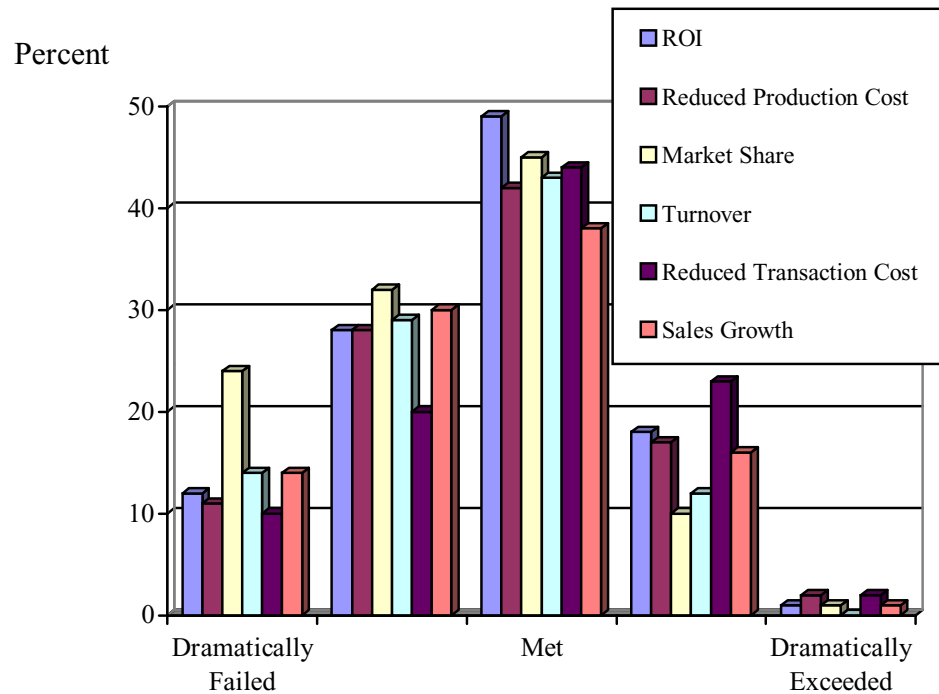


Figure 1.9: To what extent have your business unit's e-business operations performed to expectations over the last two years?

If there is a silver lining in these statistics it is in the fact that those who are pushing ahead with implementation are doing much better than those who are laggards and still in the pilot stage of development. If we revisit Figure 1.8 but examine e-intelligence profit impact based on the extent to which firms have moved down the learning curve we see a far different picture. Of those who feel they have 'successfully' completed their implementation only 15 per cent were disappointed and 37 per cent felt there was a noticeable improvement in profit performance (see Figure 1.10).

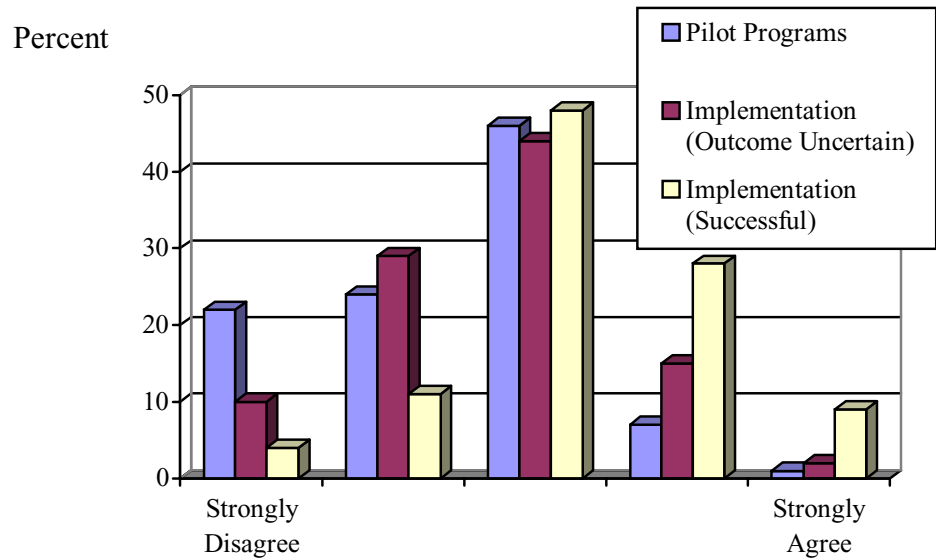


Figure 1.10: e-Intelligence activities have increased the profits in my business unit—based on e-business strategy implementation

We can see this in the degree to which performance expectations were met. Figure 1.11 provides a comparison of the mean scores on the performance expectation measures based on the degree

“The only measure of success I could offer is that we have been reasonably successful. I think people understand that once they get it, but it takes them a while to get it, so once they do they then actually appreciate that it makes their job a lot more efficient and a lot better—actually I would say it has been successful”.

Managing Director, IT sector

of implementation of strategic e-business programs (note the scale is 1—dramatically failed to meet expectations—to 3—met expectations—to 5—dramatically exceeded expectations). Those either in the pilot stage or uncertain about the outcome of their implementation efforts are less than sanguine about performance. However, those that have successfully completed implementation are generally finding their expectations met or exceeded, particularly in the areas of transaction cost reduction and sales growth. As a final note it should be pointed out that none of these statistics vary by industry or firm size.

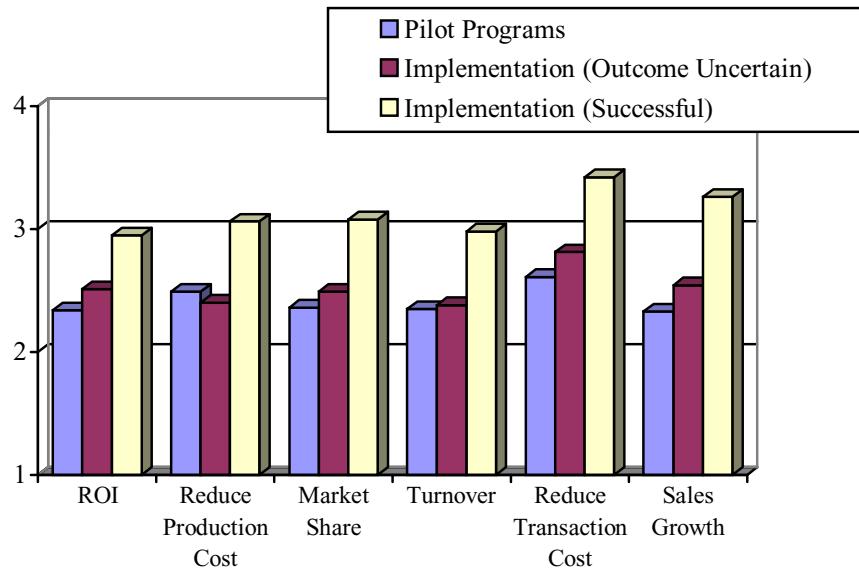


Figure 1.11: The extent to which e-business operations performed to expectations over the last two years—based on e-business strategy implementation

General Implications

The picture we see is one of rapid evolution. Firms are concerned about limited performance criteria—reduction of production and transaction cost—in the near term with expectations of both strategic and profit performance to follow. To a great degree managers are behaving quite rationally given that current realities are not necessarily relevant as predictors of future success. This viewpoint was put to use quite lucidly by the Executive Program Manager of a large IT firm:

“In terms of our e-intelligence activity success, I would say we’re in a maturity curve where we’ve gone from the crawling stage and where we’ve stumbling around is the best way to describe it. I don’t think anyone’s really got it down pat. There are some companies who do very well but the companies who tend to do that well are companies who provide fairly simple products. Cisco is a fantastic example. They came out with a web site years ago that was by far and away a leading age thing and it is still one of the leading web sites. From an e-commerce point of view, I believe that even today, this success is because they have kept it very simple—but it was a commodity. Like I want to buy this router and these are the things that go with it, it’s very easy to do.”

Executive Program Manager, IT Sector

Citibank

- ▶ Delivering transactional convenience over the Web
- ▶ Reducing operational costs and poor decisions
- ▶ Data analytics and e-intelligence are greatest challenge

Citibank: Using technology to redefine banking

Changing customer and competitive pressures have had a significant impact on the banking industry. One of the brightest lights emerging from the pack is Citibank a new player with a business philosophy based heavily on technological advantages. Across the enterprise, Citibank (also known as the ‘consumer bank’) has sought to implement state-of-the-art technology in an effort to deliver unique value to a highly mobile customer base. The firm is at the forefront of e-intelligence development and actively uses a range of technologies to design and develop products, better serve remote customers, improve managerial decision-making and lower operating costs. Although Citibank is not the only financial institution pushing the limits of e-intelligence it is a fine example of just what can be achieved.

Changing Strategic Pressures

Senior management at Citibank understand that they must embrace technology to remain competitive in a market characterized by rapid technological innovation, continual pressures for cost containment and high demands for customer transaction convenience. Customer pressures for remote global access on a 7 * 24 basis are particularly salient as apparent in Citibank’s slogan “The City Never Sleeps”. According to Ron Bunker, managing director for consumer banking, there is a natural pressure in the industry to employ e-business as a better way to support increasingly mobile customers who find little satisfaction in an over the counter exchange. In such a world, technology becomes instrumental to future success.

New Opportunities for Information Integration

Although the way individual institutions react to these pressures differ, this variance opens up enormous opportunities for managerial discretion concerning what will and will not work. Bunker no longer needs convincing and is resolute in his conviction that benefits exist—“opportunities to achieve massive cost breakthroughs exist, they just don’t come along very often”. To capitalise on these opportunities Citibank has embarked on a clear strategy to manage institutional information flows more effectively and thereby support remote relationships and improve the quality of managerial decisions. Improved information flow at Citibank has many dimensions, but is characterised mainly by: (1) a holistic view of customer interactions, (2) the management of transactional relationships, and (3) a variety of value chain exchange activities. Their objective is simple, multi

channel information integration makes for more intelligent decision making around the products and services offered. e-Intelligence to Citibank is not an option, it is an absolute necessity.

*Using
Electronic
Data
Intelligently*

Two fundamental business imperatives are driving the collection of huge amounts of data at Citibank, the need to collect data on customer creditworthiness and the need to maintain long-term customer relations with valuable clients.

As a financial institution that lends money to people—sometimes in an unsecured fashion—the bank goes to great lengths to collect as much data as possible concerning consumer behaviour. This data is then stored, analysed and modelled to identify patterns of risk and consumer behaviour. According to Bunker, “there is much to be gained by customer segmentation analytics on buying behaviour and we’ll continue to drill down and look at the sub-segments”.

If Citibank is going to add value to its relationship with a specific customer, then it needs to know whether that person has a mortgage with the bank, the type of credit card(s) held, and whether other investments or overseas relationships. Dynamically available information on data exchange activities across all the various client contact points is needed to get a total picture of the specific relationship with that customer. This information will not only assist the bank, but will benefit clients as well. For example, Citibank will soon deliver an aggregation capability that enables customers to view their entire financial portfolio not just with the bank but other financial institutions as well.

The Challenge

Despite a long history of successful technological innovation—e.g., Citibank was the first bank to introduce ATMs and online credit transactions—the road to e-intelligence success can still be a challenge. The easy part for Citibank was to embrace the e-intelligence concept; the hard part has been to translate this concept into deliverable value. In many cases, implementation difficulties arose either because of low customer receptivity to new technologies, difficult process re-engineering requirements or staff reluctance to think laterally and use e-intelligence to its full capability. Getting staff to think outside of the business as usual model was, and continues to be, the greatest challenge to e-intelligence. In an industry characterized by deeply rooted institutions and entrenched managerial beliefs change can be difficult and Citibank is no different in this respect than its competitors.

*Making it
Happen*

Despite the inertial challenges to change, Citibank remains on track to deliver an effective e-intelligence capability based largely on the value of its architecture. This architecture represents a written set of guidelines that connected information technology with real customer value propositions, enabling the bank to continually re-invent itself and overcome problems associated with constantly changing technologies. By driving an overarching architecture the bank has been able to present something tangible that could communicate future goals to the whole organization and give staff a sense of direction as opposed to a

piecemeal strategy.

*Future
Challenges*

Further evolution of technology at Citibank will be instrumental to its future success. As Bunker stated, “if you’re going to have a business strategy based on virtual customer relationships, where most of your customers interact remotely, then you’re going to need all of the necessary technological capabilities that support the customer relationship.”

Data analytics represent an area where most of the interesting challenges for Citibank lie. For the first time the institution has the capability to capture and deliver to managers, staff and customers a comprehensive picture of exchange activity across the entire enterprise. Actually training the organisation to deal with this information intelligently, as opposed to becoming consumed by the data, will be the bank’s greatest challenge. There is a real paradigm shift going on at Citibank that represents significant risk for those who choose not to follow.

Chapter 2: Developing an e-Intelligence Infrastructure

Companies are aware of the need to develop an infrastructure—both technical and human—to better utilize customer information flowing into their organization. However, at this point in time, e-intelligence strategies based on the sophisticated use of customer information are still being developed

Customer Relationships and e-Intelligence

Research tells us that it costs up to 10 times more to recapture a customer relationship than to maintain an existing one. We also know that greater company responsiveness to customer needs leads to greater customer satisfaction and loyalty, which, in turn, leads to future sales through repeat purchase and increased future profits. This is not just a reactive statement either. Companies that proactively respond to customers *before* they demand responsiveness show not just a greater concern for their customers' welfare but sophistication in their understanding of basic customer needs and the ability to align their company's operations to these in advance.

The way organisations approach this task varies from company-to-company but successful firms typically have in place an e-intelligence infrastructure, both technical and human, that is capable of supporting effective transfer of information throughout the firm. On the technical-side this relates to the way Web-based and traditional systems are used to manage transactional data along three key dimensions—accuracy, currency and timeliness of data transfer. On the human-side it is associated with initiatives that promote supportive and collaborative cultures, are capable of fostering information sharing, lead to improved customer service and more intelligent decisions.

“We’ve never been a high customer service company; we’re the help yourself type of store Over the last year or so, we have very specifically and tangibly increased our customer knowledge. Experienced service staff who are there to do nothing but help the customer are now used in all stores. They’re not there to fill shelves, they’re not there to unload trucks, they’re not there to work the cash registers; they’re just there to help the customer and we’ve seen a very tangible response both in terms of sales and in terms of customer feedback. We’re spending more on the warm relationship stuff like what are customers saying to us and how can we help them. As a result we’ve noticed a very clear difference in customer repeat purchase.”

Managing Director, Retail Sector

The most successful customer-oriented organisations are using an extensive range of electronic technologies to improve service and promote loyalty—email, ERP systems, Intranet applications, Internet applications, EDI systems, call centres, and mobile communications (e.g., WAP) (see Figure 2.1). Email remains the most important means of online customer contact (96 per cent usage) but a large number of organisations report extensive use of internet applications (50 per cent) and ERP systems (53 per cent). On a more personal level, call centres are used extensively in 46 per cent of firms surveyed. This does not vary very much with the size of firm, with the exception that large firms are more likely to make use of call centres, a not unsurprising fact given the large setup cost associated with such facilities (see Figure 2.2).

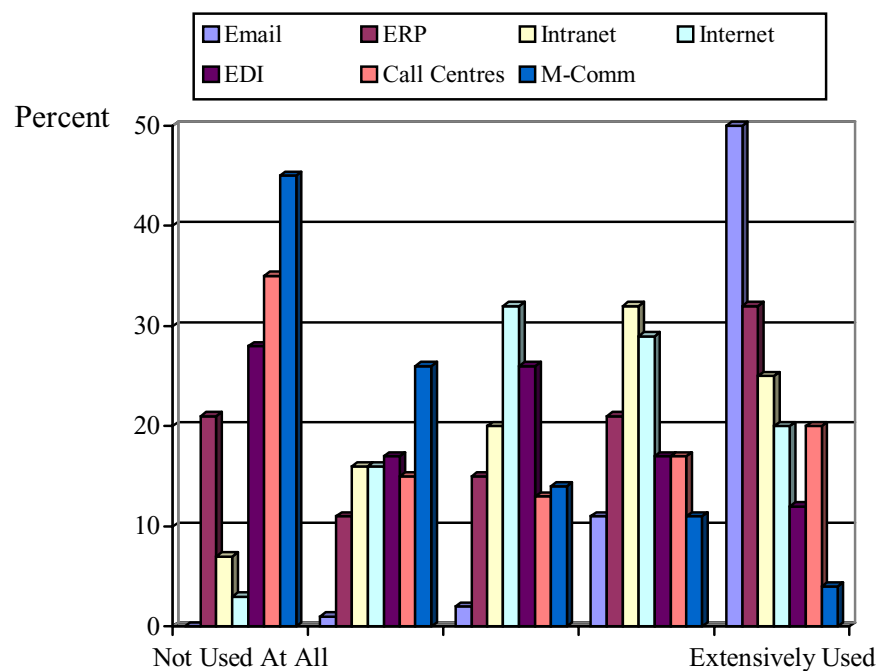


Figure 2.1: Extent of usage of IT tools

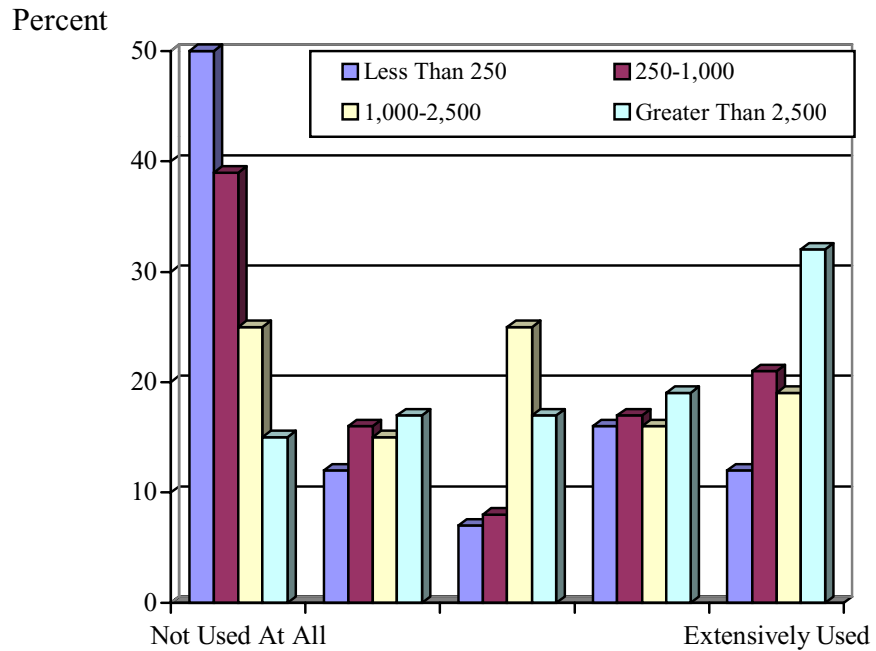


Figure 2.2: Use of call centres by firm size

The level of use of sophisticated IT tools is not, however, a *de facto* indicator of whether or not a company is intelligently using the systems or meeting customer needs. For example, providing timely responses to customer emails can be a daunting prospect for many organisations. Figure 2.3 indicates that approximately 43 per cent of those surveyed indicated that their firm turned around 75 per cent of customer email inquiries within 24 hours. However, close to 14 per cent of respondents had extremely poor turnaround rates, taking longer than 24 hours to respond in over than 90 per cent of cases. What is even more interesting about these statistics is that they are unrelated to the level of usage of IT tools. Firms that have the heaviest and broadest usage over the seven IT tools noted are no more or less likely to be quick at responding to customer emails, with one exception, the extent of call centre usage and even this difference is minor.

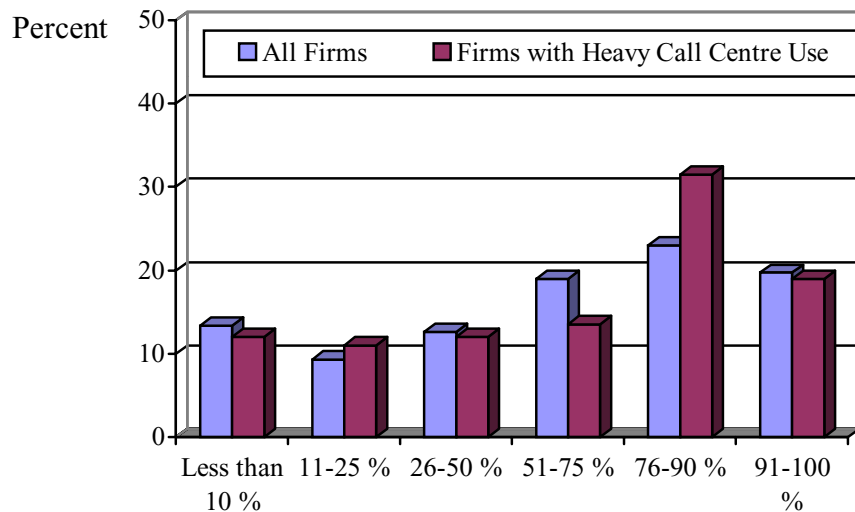


Figure 2.3: The percentage of customer/partner email queries that are handled within 24 hours—by call centre usage

Many Web sites today are so inundated with email that they no longer even post a customer service email address. But the situation is changing as new advances in software are being applied. Today frequently asked questions (FAQS) can be answered by a computer using sophisticated decision support systems requiring little, if any, human intervention. However, as evidenced by Figure 2.4, those surveyed rely more on brute force than sophisticated software to deal with customer queries.

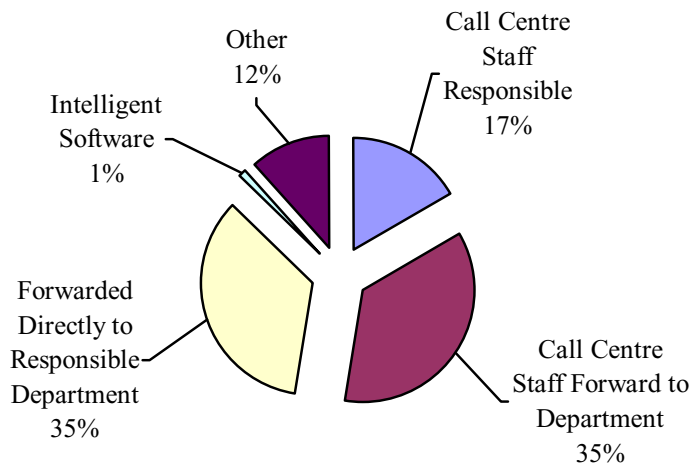


Figure 2.4: When email queries come into the firm from a customer/partner how are they handled?

Very few (1 per cent) inquiries were handled automatically by intelligent software, with most emails being dealt with by call centre staff (52 per cent) or forwarded directly to the responsible department (35 per cent). Poor usage rates of intelligent software to aid in the redistribution of email, may be a reflection of high

costs or the unsuitability of available software to meet the functionality requirements of organisations.

“We did a trial with a client of ours in Canada using a control group where certain business rules were triggered but no intervention from a live agent was made. We had another group where, similarly, the business rules were triggered and a live intervention was made; can I give you assistance; do you need more product information; yes, we have it in green, etc. In the case where no intervention was made, no sales were affected. In the case where intervention was made, 70 per cent of interventions resulted in sales. So it’s a small example, but if you devote more to personalising the customer interface customers are happier and profits will go up.”

Chief Executive Office, IT & Communication Sector

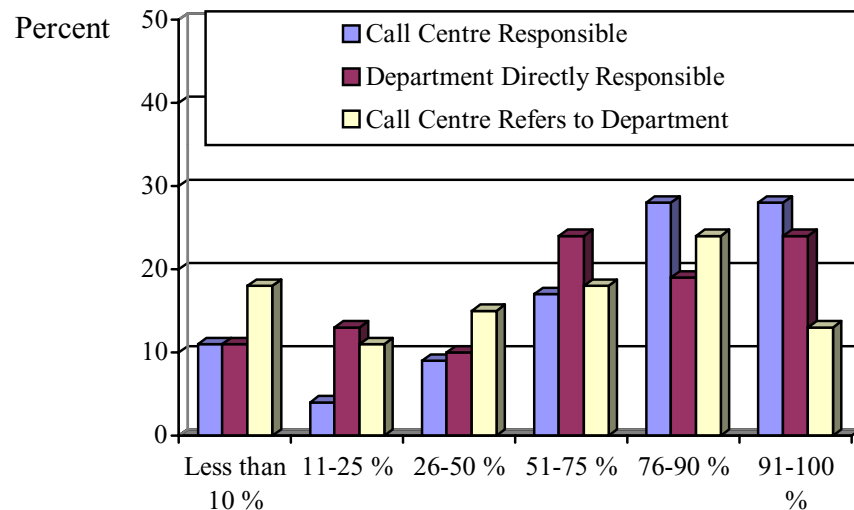


Figure 2.5: The percentage of customer/partner email queries are handled within 24 hours—adjusted for how inquiries are handled

We can link this with our prior discussion by noting that the companies with the best response to customer email inquiries are those who give responsibility directly to the receiver of the email (either the call centre or the department). Adding an additional link, where the call centre refers the inquiry to what they consider to be the relevant department, leads to a dramatic decline in the ability to meet customer inquiries expeditiously.

What are Firms Doing with Data

The essence of a sound e-intelligence strategy is dependent upon what organizations do with the various forms of transactional data flowing into the firm.

“Senior managers in our organization are very keen to make e-intelligence work. We think it is very important thing to have alongside our traditional business.”

Senior Manager, Financial Services Sector

This data can be used for sales and market segment forecasting from which supply chain and financial forecasts are derived, it can be used to implement, track and monitor promotions, campaigns and other events, or perform detailed analysis of competitor movements and activities. When all these uses are considered it is not hard to understand why the maintenance and dissemination of transactional data has taken on new importance. Almost 100 per cent of managers interviewed indicated that senior managers

within their organization’s were both committed to making e-intelligence work and believed strongly that benefits exist by knowing more about the information flowing into the firm.

“Our managers have been fed data for years and years and years and it has largely just been closeted. Now for the first time they are able to get it in an accurate real time format, I think it’s become a very powerful tool.”

Director Finance, Legal Services

As expected, our study detected widely differing levels of IT sophistication across industry sectors. To assist in evaluating these differences respondents were first asked to identify the type of data received for managerial reporting and decision-making.

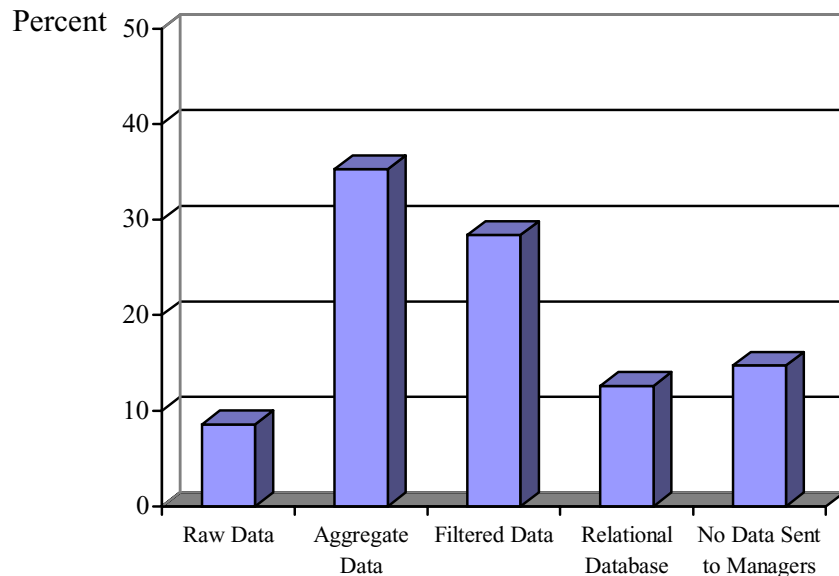


Figure 2.6: How is customer/partner-related transactional data typically sent to managers?

Figure 2.6 reveals that in 63 per cent of cases managers receive pre-analysed data. This ranges from simple aggregation of data by sales region or customer segment (36 per cent), to more targeted analysis where data is filtered and synthesized for specific purposes (28 per cent). In 15 per cent of cases managers did not directly receive any form of data, placing questions over the level of IT sophistication in these organizations.

*Data
Currency &
Accuracy*

Another goal of an effective e-intelligence strategy is to drive consistency across all channels. To achieve this firms need access to timely and accurate data. We asked respondents to identify the characteristics of customer/partner-related transactional data used within each business unit. Currency of information—an important indicator of e-intelligence sophistication—is extremely important and whilst many firms (40 per cent) were content with periodic updates (overnight batch or weekly updates) an equally high percentage of companies (40 per cent) were delivering real time updates to managers and operational staff. Such real time updating can be done very intelligently—i.e., with the customer interacting with the system alone (which occurs in around 20 per cent of cases)—or semi-intelligently with the customer interacting with a firm designated agent (as occurs in approximately 10 per cent of cases).

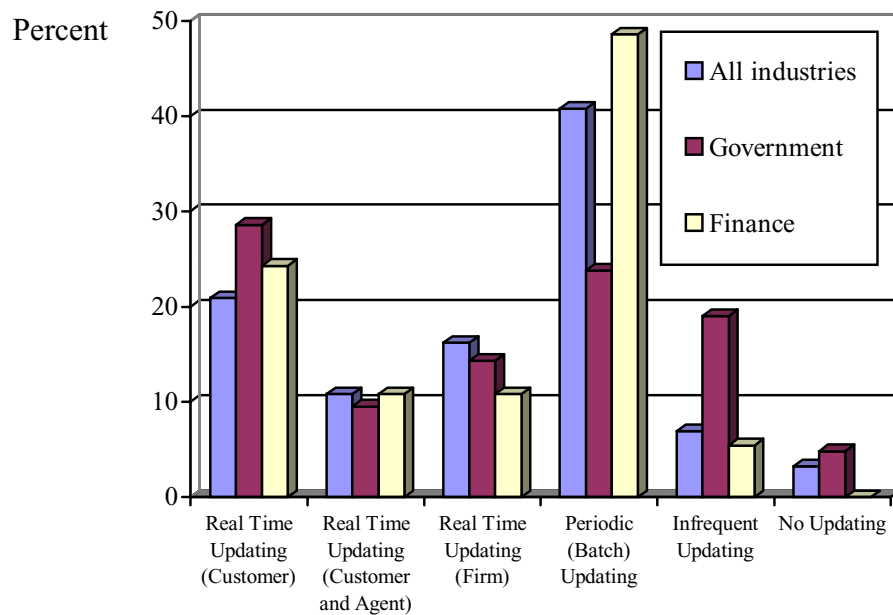


Figure 2.7: The nature and frequency of customer/partner-related transactional data updating

As shown in Figure 2.7, respondents within financial services and government sectors were more advanced in the way transactional data has been collected and utilised. In the case of government agencies, 53 per cent indicated that the customers themselves

update transactional data in real time or with or through designated agents (e.g., with an agent while on the phone). Financial service firms indicate a smaller although still significant level of sophistication with 50 per cent of updates in real time, although there is quite heavy reliance on batch processing.

Collecting information in a timely manner is one thing, using information for purposeful activities is another. Approximately 50 per cent of respondents indicated they use transactional data for high-level strategic decision making, market customization and segmentation strategies (see Figure 2.8). One third of respondents use the data for additional reasons such as improvements to channel effectiveness, support for customized product and service design. This suggests that organizational managers are comfortable with the accuracy of information received.

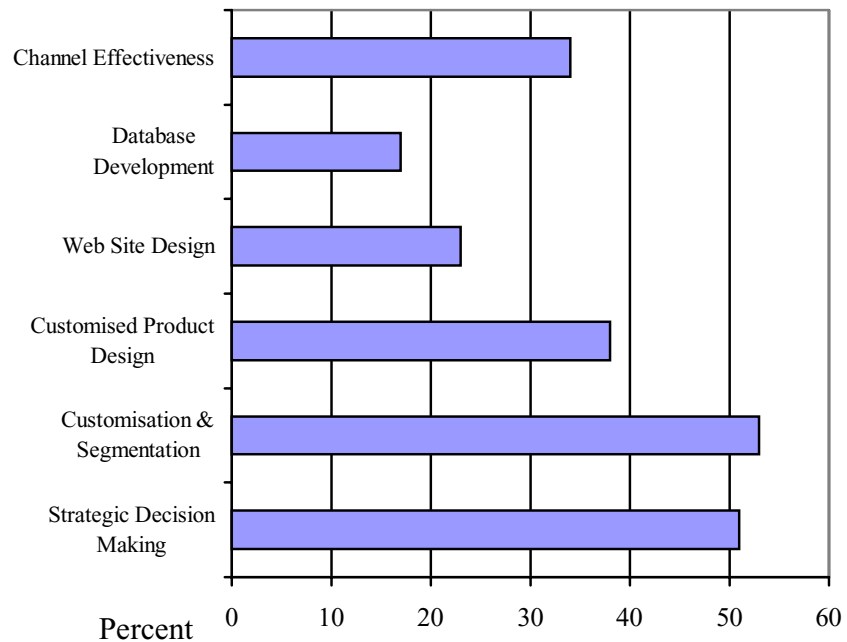


Figure 2.8: Customer/partner e-intelligence data is used to support (percent saying yes)

All of this indicates that, although many companies are on the right track in terms of utilising their systems and data intelligently, there is quite a lot of room for improvement. This is strengthened by the extent to which interactive real time communications media are used for critical tasks.

One would expect that data needs differ at different stages in a firm's value chain—e.g., procurement, production, marketing, after sales service, etc. Differences in the transactional nature of value-adding activities were examined to identify possible opportunities for e-intelligence activities (see Figure 2.9)

Non-interactive media—letters, faxes and memos, etc.—are clearly no longer the communications mode of choice for procurement order taking—e.g., only 9 per cent use it for submission and fulfillment notification—but remain a critical component of the other parts of the firm's value chain of activities. Similarly, interpretative—i.e. face-to-face—interaction remains the strongly dominant mode of choice when it comes to customer/partner negotiation and sales (over 50 per cent of respondents). Partially interactive media—emails and static Internet interactions—now dominates order taking but a large group of firms (34 per cent) also use real time interactive media.

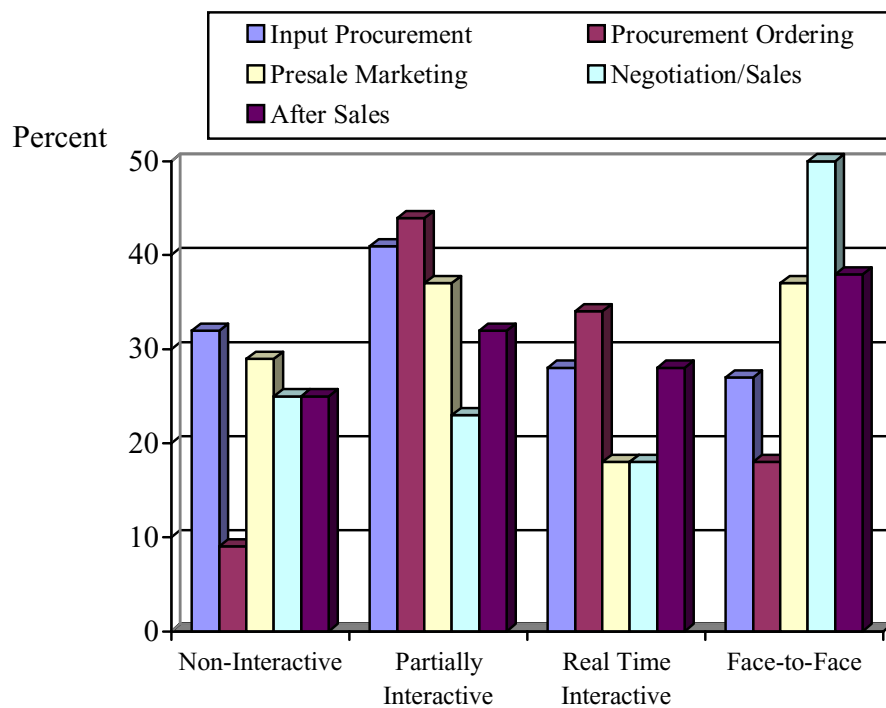


Figure 2.9: The nature and frequency of customer/partner-related transactional data updating

This information indicates a wealth of opportunity for the development and application of interactive approaches to procurement, presales marketing.

“I know our service providers, for example, our fulfilment company, use interactive technology to lower costs and provide the great service while still making money in a difficult margin business.”

Manager, Retail Sector

negotiations and sales and after sales customer/partner interactions.

*Human
Aspects of e-
Intelligence*

When confronted with a problem that appears to have a technology- based solution, we often find that the root cause runs much deeper and the more important issues are embedded in the way the company and its employees interact. Organisational issues have been widely reported in the literature as a main retardant to technology adoption. To evaluate the impact of these issues on the effectiveness of e-intelligence initiatives, we asked respondents to tell us about aspects of their corporate culture and organisational practices.

There is less than sanguine evidence for the existence of a healthy organisational infrastructure capable of supporting e-intelligence. As shown in Figure 2.10 incentive schemes are absent and staff skill sets are only moderately aligned with the nature of interactive media.

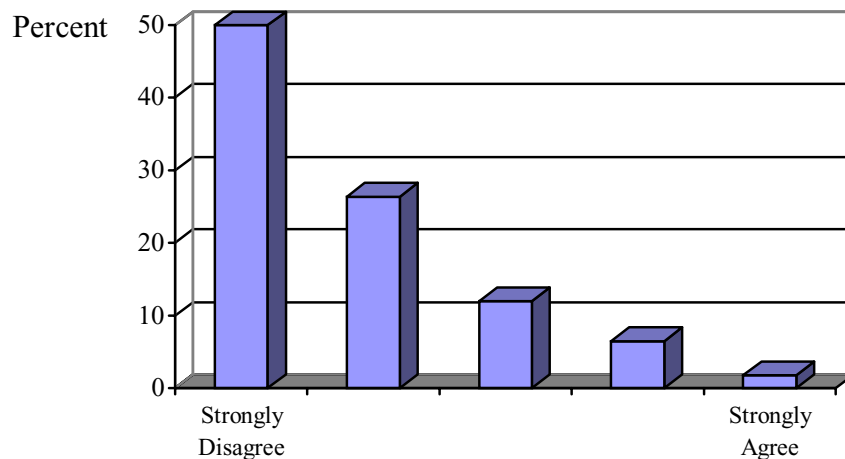


Figure 2.10: Incentive schemes exist to reward customer/partner information sharing across several departments in my firm

Close to 80 per cent of respondents felt that their firms did not have incentive schemes in place to support information sharing in an e-intelligence environment.

In the case of staff skills in interactive media there was a more even distribution as shown in figure 2.11. Apart from the IT and Communication sector, where there is

“I believe that we’ve been successful because of our ability to relate to our customers through some use of the technology but I would suspect that the most positive relationship is between the people that we’ve got and our customers—not particularly because of the technology.”

Managing Director, IT Sector

a high representation of well qualified staff, there were no significant differences in the skills possessed by staff to deal with interactive issues across industries.

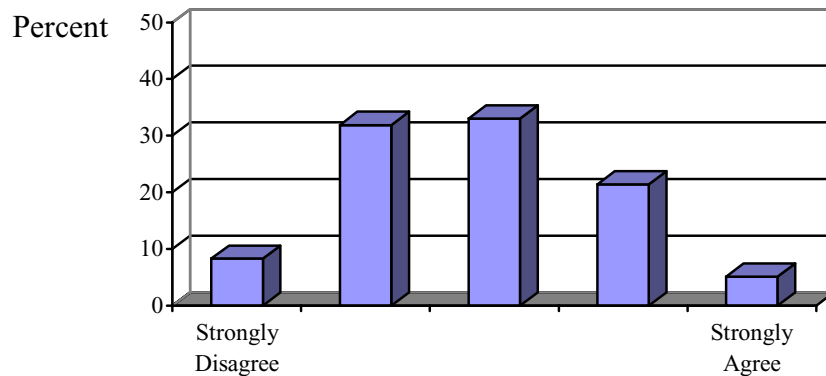


Figure 2.11: Customer relationship staff in my organisation understand the nature of interactive media

*Multi
Channel
Integration*

Many technology-enabled e-intelligence devices—data warehouses, sophisticated extranets and customer relationship management systems—are well developed and have been available for some time. Yet when asked, many respondents indicated that they still did not have a fully integrated customer database. This is surprising since respondents did not believe that problems would be experienced, sharing information across other departments. Over 80 per cent of respondents either disagree or strongly disagree with the question in Figure 2.12.

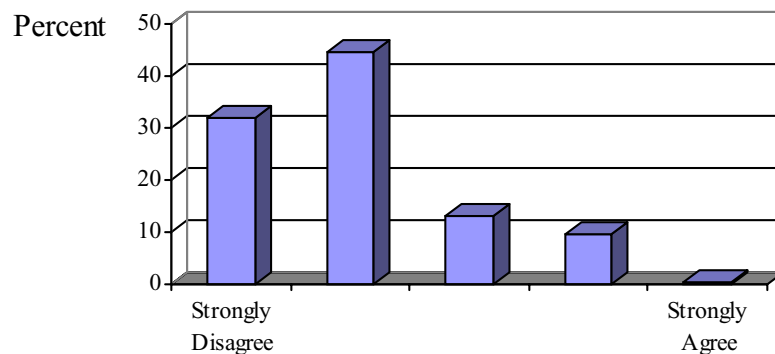


Figure 2.12: An e-intelligence strategy that shares data across my organisation is unlikely to be supported by managers in other departments

Although these results suggest that managers have become increasingly aware of problems with ‘islands of information’, the more important issue concerns the extent to which systems are in place to deliver consistent customer information across multi channel interfaces. We asked respondents in our interviews to describe the extent to which they were successful in delivering consistent customer information across various interfaces. In

more than half the cases there was no capability in place to support this function. However many interviewees indicated that projects are currently underway that will rectify this problem.

“A weakness in my view is that we do not have in place data coverage that is as good as I would like, each sales channel tends to operate as a separate business unit and as a result they wouldn’t necessarily share the same information.”

Executive Program Manager, IT Sector

Customer Loyalty Programs

If there is one area where we would think there has been a reasonable degree of experience in the intelligent use of electronic data it is in the realm of customer loyalty programs. Twenty six percent of those surveyed had a customer loyalty program with 75 percent having been instituted after 1990. The oldest dates back to 1960. The experience of these programs is telling. Figure 2.13 shows that there is reasonably good strategic and operational success but nothing outstanding.



Figure 2.13: Our customer loyalty program is meeting its strategic and operational goals

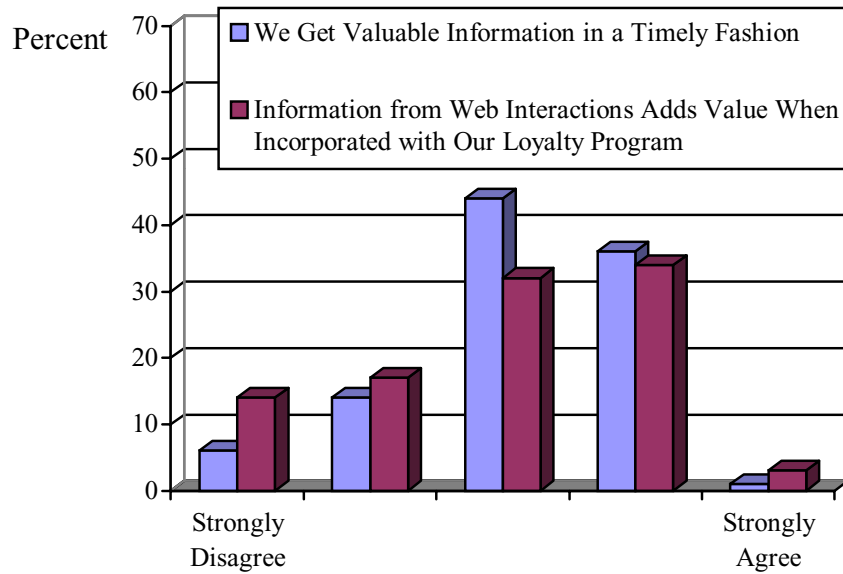


Figure 2.14: Our customer loyalty program is provides us with valuable information and adds value when integrated with Web-based data

If we examine the data driven aspects of these programs we get a decidedly mixed picture. Managers are dissatisfied in general with the timeliness, value and efficiency with which information is collected from their loyalty programs (only 37 per cent are positive or strongly positive on this item). They are even less satisfied when it comes to the integration of Web-sourced data with the loyalty program. Although about the same percentage of respondents are positive (36 per cent) a much larger percentage are outright negative.

If we compare this satisfaction with the degree to which the programs are achieving their strategic or operational goals we discover that this is related directly to the timeliness of the information being acquired from the program but not its incorporation with Web-based data integration. Figure 2.15 presents on such analysis. The vertical axis is the average score on a 1 to 5 scale where 5 is best. The horizontal axis is the score received on the “Meeting Strategic Goals” question. This is also on a 5-point scale but the two bottom points are excluded due to a small number of people indicating strong dissatisfaction with their attainment of strategic goals (this can be seen by looking at Figure 2.13). Firms whose loyalty programs strongly meet their goals (those scoring a 5) on average rate the value of the information from the program as 3.5. Those ambivalent about their loyalty programs meeting its strategic goals (those scoring a 3) rate the value of the information extracted as 2.75 (a significant difference).

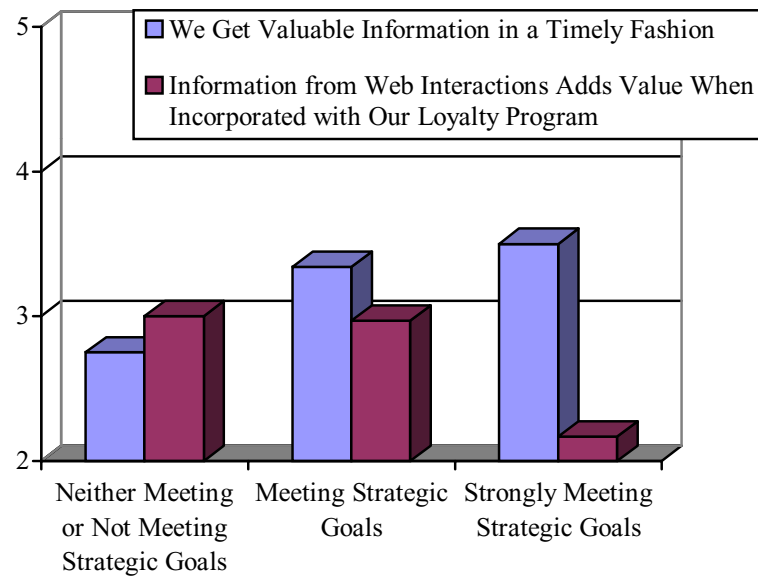


Figure 2.15: Our customer loyalty program is provides us with valuable information and adds value when integrated with Web-based data—adjusted for meeting strategic goals

It is quite interesting to note that there is no relationship between the age of the loyalty program and any of the above points. A thirty year old program is just as likely to be meeting its goals and satisfying or dissatisfying its managers expectations about the quality of the data being retrieved from the program.

*Organisation
Practice
Issues*

When we look at where the critical issues reside surrounding the implementation of an e-intelligence strategy, we find that technology has less to do with it than organisational practices and perceived financial constraints (see Figures 2.16 and 2.17). We earlier spoke about the extent to which e-business returns were not meeting expectations and this certainly has something to do with this opinion. What this means is that the successful implementation will need to address not just issues of appropriate technology but how the strategy can work within the company’s organisational and financial limitations. These results support the findings typically reported in academic and practitioner journals pertaining to the barriers to strategic change.

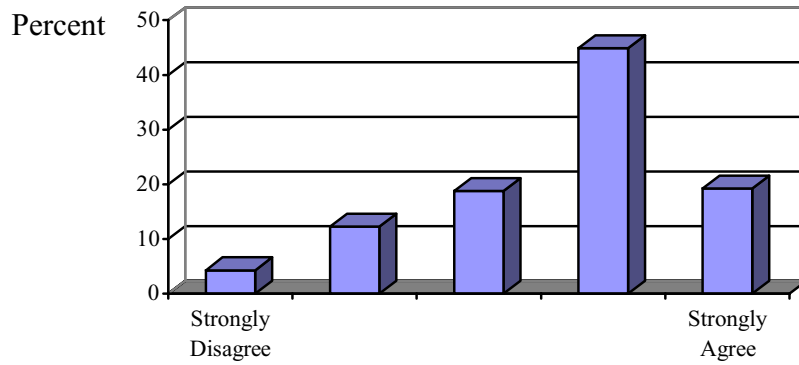


Figure 2.16: The major constraint in implementing a future e-intelligence strategy will be organisational not technological

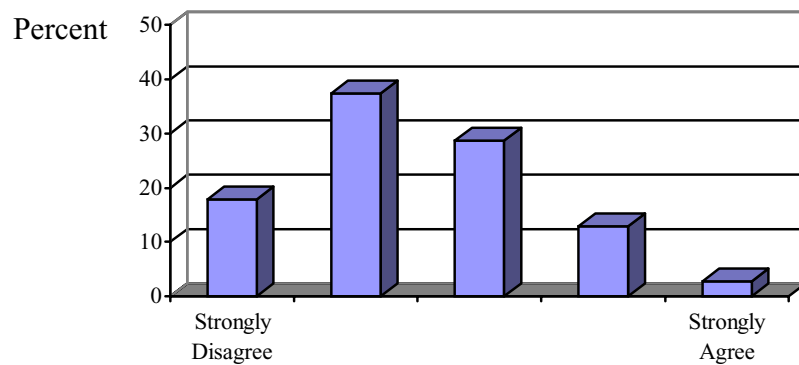


Figure 2.17: The major constraint in implementing a future e-intelligence strategy will be technological not financial

e-Intelligence Benefits

Although the ultimate bottom line of any system is the additional profitability it generates this is sometimes difficult to assess given the multifaceted uses to which many systems are put and also to the stage of the lifecycle in which a specific system resides. In such an environment one way of assessing the benefits from new systems is the degree to which they meet specific operational and strategic needs. Figures 2.18–2.20 indicate the extent to which intelligent Internet applications have delivered on seven key criteria.

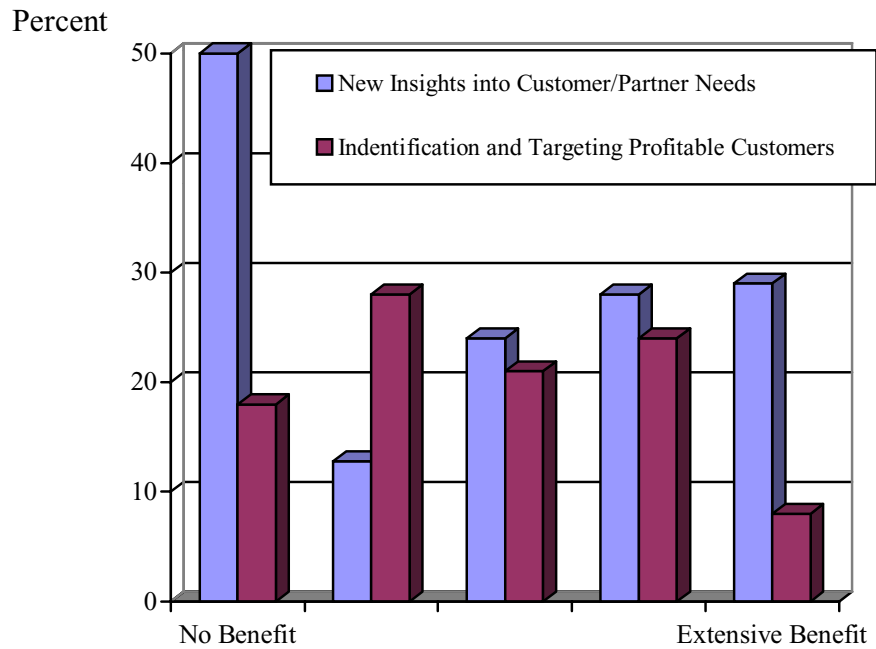


Figure 2.18: Extent of Internet application benefits—customer/partner identification

Figure 2.18 shows mixed opinion of the benefit of new insights into customer needs and the returns to targeting. An interesting question is whether this is due to the inability of the systems that are available to provide such benefits or the manager’s lack of understanding of what the systems can provide. Figure 2.19 provides some more positive insights. Where there are quite strongly perceived benefits is around the cost of servicing customers and the ability to tailor products and services. Taken in conjunction with the information from Figure 2.18 we are left with a picture whereby firms are using more traditional means of determining customer value and looking to the internet as a better way of delivery. This clearly reflects a failure to understand how the systems themselves can be used to develop insight.

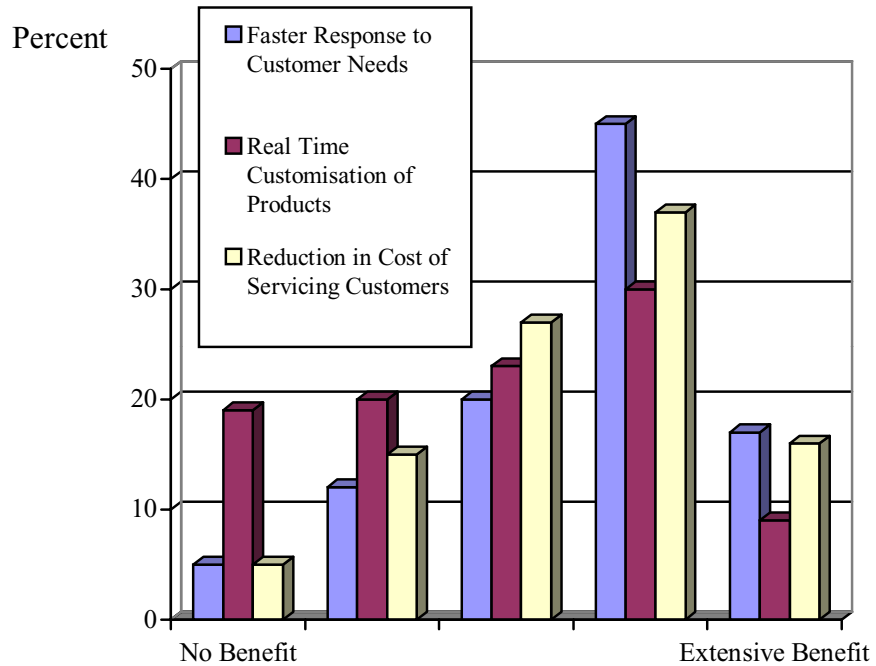


Figure 2.19: Extent of Internet application benefits—servicing customers/partners

The final benefits of e-intelligence relate to the use of data efficiently. Figure 2.20 reveals that there is some benefit from global access and integration of data but that this is viewed as a less extensive benefit.

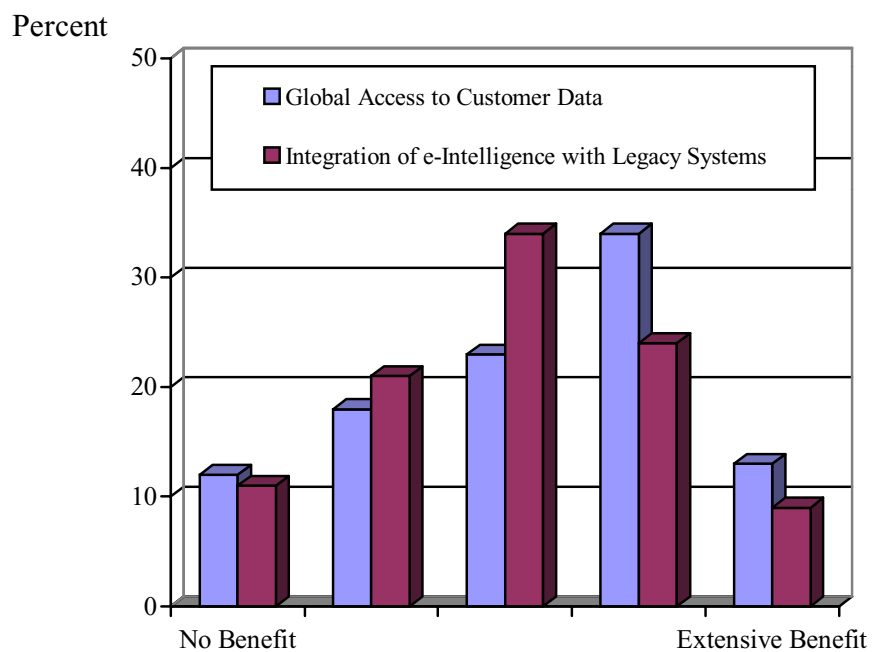


Figure 2.20: Extent of Internet application benefits—data use and integration

*Summary—
Cost Today,
Tailoring
Tomorrow*

Data collected by Web-based and traditional systems provides a foundation for improving an organisation's ability to serve customers more effectively. This represents a key competence that will influence competitive advantage in the future. However

“That’s actually one of our biggest issues because we’re not integrating information across our various touch points. I mean, some of our largest customers will have up to half a dozen of our staff interacting with them at any point and they’re quite free to call any of them. How we integrate that information internally so that we all have exactly the same view as the customers is one of our largest issues that we have to address. That’s one thing we’re looking at; trying to work out some way to do so.”

Technical Services Director, IT Sector

simply adding the Web as a channel is insufficient for success and organizations have yet to put in place the full range of customer interaction interfaces across all touch points—face-to-face, analogue and digital. According to our data the critical benefits being delivered by the intelligent use of Internet applications is in the reduction of the cost of servicing customers (24 per cent rated it the most important benefit) through more rapid response (32 per cent rated it the most important benefit) (see Figure 2.21).

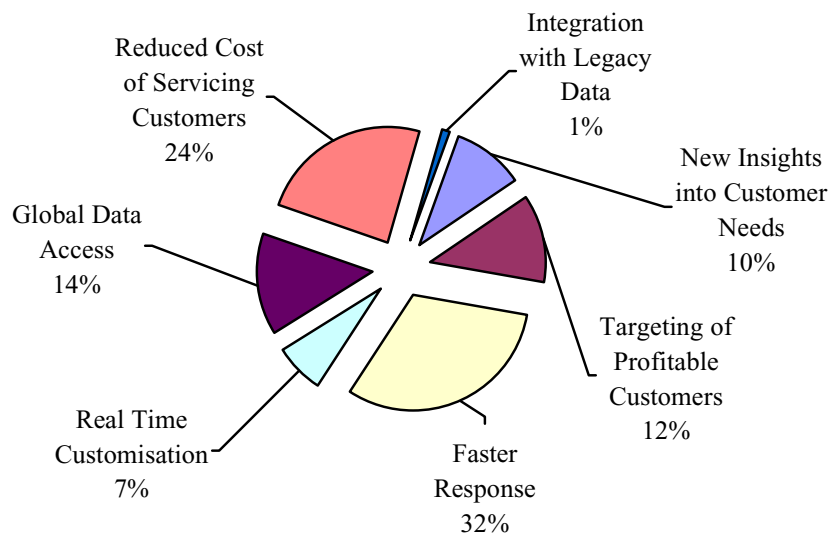


Figure 2.21: Percent indicating the perceived benefit as the most important

However, this will change as Internet creates greater and greater avenues for more personalized and cooperative exchange between firms and their customers and partners (See Figure 2.22).

Figure 2.22: The near term impact of the Internet will be to foster which type of exchange

Cable & Wireless

- New strategic vision = e-intelligence opportunity
- Supporting partnerships through multifaceted IT systems

Cable & Wireless: From bandwidth supplier to relationship provider

Background

From its origins as the Eastern Telegraph Company—the nerve centre of the British empire—Cable & Wireless (C&W) has grown to be the most global of telecommunications firms. Operating in seventy countries with 51,000 + employees, C&W handles nearly one third of the world's Internet traffic through its infrastructure—including 1 in 10 of all emails and a significant proportion of the world's corporate data.

A new strategic focus developed in the late 1990s has seen this revered enterprise dispose of most of its non-Internet and consumer businesses, in the UK, France, Japan and most recently its 52 per cent share in C&W Australia. Cable & Wireless's new vision is to work alongside partners, to provide web software, computing hardware and supporting communications networks that will enable business customers to outsource many of their applications completely—effectively remaking C&W from a telecommunications bandwidth provider to an application service provider (ASP). As this venerable IT institution embarks on a period of profound change, powerful insights emerge concerning the role that e-intelligence will play in supporting business partnerships.

Using Electronic Data Intelligently

Building intelligent infrastructure is the essence of what a communications company like C&W does and the company has teams of people focussed on Web-based innovation. Externally, electronic systems provide extensive functionality to customers in the form of general support systems and customised on-line programs. For example, 'thumb-print', an online network maintenance product, trawls individual client sites to provide dynamic network layout and fault detection graphics. Extracting data from client networks, customising information and eliminating the need to navigate several different screens represent important value propositions to C&W clients. Internally the company has developed a range of systems that capture real-time data from web-based and traditional systems. This data is then analysed to identify patterns of client behaviour that support the management of important client relationships. C&W is clearly skilled at leveraging technology to support long-term partnerships and deliver customer value.

Complementing customer analysis is an ability to utilise an extensive knowledge warehouse to draw on work undertaken previously. The ability to reshape 'prior insight' into customised solutions offers

important efficiencies to professional service firms like C&W that may repeat the same value added service many times over. There is a virtual myriad of e-intelligence activity going on within C&W and these examples provide a snap shot only of an organization that in many respects is light years ahead of the pack.

The Challenge Although the effective use of e-intelligence at C&W may be highly advanced, several impediments remain. Of primary concern according to David Stokes McKeon, director of e-solutions, is a tendency for people to focus on the stuff discussed in seminars. As a result, too much management attention is devoted to the “wow, can you do that sort of stuff” and not enough on testing the market’s propensity to purchase these products or services. As McKeon notes, “there are plenty of examples emerging where you would have to say customers are fairly coy about the prospect of having information selectively pulled out and used almost against them.”

Even across an advanced communications company like C&W doubts remain amongst senior management concerning the extent of change from traditional models of IT expenditure. According to McKeon, “to suggest to senior management that e-intelligence represents a completely new dimension that must be embraced will most likely not get a lot of support unless clear cost reduction or competitive positioning can be identified. One of the constants in the industry at the moment is that no one is prepared to come along and say okay you can stop spending on this stuff and start spending on this stuff. It is usually, well, no we think you should keep spending all that money on all that IT and database stuff and by the way, you should also buy this stuff. To a large extent I think to some senior management is pretty unhappy with it all.” Decades of elusive IT based productivity gains have created scepticism at C&W and the challenge for e-intelligence is to clearly show how it can be integrated into the commercial value equation.

Making it Happen The combination of direct senior management involvement and an element of stealth have been responsible for effective implementation of Web enabled systems at C&W. Senior management resolve plays a fundamental role in overcoming barriers to implementation and delivering e-intelligence in a well-planned manner. Directives from the top in terms of “we are going to do this” have proven necessary to ensure that projects do not wither on the vine. In a rapidly changing industry like IT, there are many reasons for people to let concepts like e-intelligence die if allowed. Just as important to achieving effective transformation has been stealth driven change. For example, purchasing and integrating supply chain management basically means the loss of jobs in certain areas of the business and such change will most likely be resisted.

Future Challenges As digital technologies continue to converge, new channel and partnership opportunities are expanding for C&W. The most important future challenge is the continued utilisation of technology in ways that support effective long-term partnerships. Currently, C&W is attempting to balance the risk associated with losing intimacy—by becoming too

electronic—with the efficiency lost in failing to capture information electronically at each contact point with the customer. As far as Paul Blancquart, managing consultant at C&W, is concerned e-intelligence benefits are found in the background systems and not at the selling interface—since the selling component of the business often requires close and intimate communication. Sharp background systems play a vital role in supporting quality relationships and it is in this area that C&W are developing their most innovative e-intelligence capabilities. A big push towards deploying CRM technology is currently going on at the company in an effort to capture information about clients and share that information across the enterprise more effectively. For a global company like C&W there are enormous opportunities to utilise sophisticated e-intelligence systems that support customers in new ways.

Chapter 3: The e-Intelligence Implementation Challenge

Implementation issues are shown to be critical to the success of any e-intelligence initiative. This sounds simple but a mix of technological, organisational and financial work to limit the effectiveness and speed with which value can be extracted from electronic data. A nirvana of information usage exists but is unachievable due to mainly managerial and organisational limitations.

Nirvana of Information Usage

In our interviews, we asked managers to describe the ideal data usage scenario for their company if there were no technological or managerial barriers (a sort of 'nirvana' of information usage). The ability to use technology more effectively to the point where it was able to "permeate everything we do" was a commonly expressed desire. This would then enable managers to monitor a wide cross section of data in real time and aggressively intervene where necessary.

"[T]o run real time systems that monitor operating parameters (e.g., how many agents are talking for how long, how productive are they, what's their efficiency level, what's our daily revenue, what's our daily profit, etcetera, etcetera), and then use these real time systems to help us manage our business and I guess enable us to aggressively intervene on the back of that data."

Manager, Information Technology Sector

"[W]e would have an interchange across all the companies— everything from accounts to sales. We would have a maximum interchange of data and a larger relationship with our business partners and their customers. We're working on a large development now to address these issues."

Managing Director, Retail Sector

Additionally many interviewees thought a fully functional CRM system without any financial impediments would be ideal.

"Okay, well, in a nirvana circumstance a full CRM system would be nice to have we could use it to varying degrees; an electronic ordering system; electronic information to sell almost everything you could think of."

Manager, Retail Sector

Lastly, the way data was used by employees once captured was also considered an important ideal. In such a world information captured by various technological devices would be used maximally by all staff with appropriate access.

“I think the issue is not so much the technological barrier but how we are going to use the information and given our distribution at the moment, this is a big priority, but one where we need to develop some basic skills. We are a product manufacturer and administrator that generally deals with an intermediary, and while our business remains like that, we won't invest too much in this area.”

Manager, Financial Services Sector

These responses are reflective of the four main constraints stifling the implementation of a successful e-intelligence strategy, (1) financial limitations and expectations, (2) organisational and cultural barriers, (3) resource and skill constraints and (4) technological limitations. The general issue of implementation problems is discussed below as well as each of the above detailed problems.

Implementation Difficulties

Implementing the type of e-intelligence strategies sought by managers requires intra and inter-business integration that most firms find extraordinarily difficult to achieve. All the issues associated with the management of change management end up being played out on a grand scale. Our interviews and survey reveal many reasons why it is so difficult to implement an effective e-intelligence strategy. Some of the most salient issues discovered in our study include:

- Managers fully recognize that large costs are often associated with integrating data throughout the enterprise;
- Legacy systems constrain and restrict access to e-intelligence opportunities;
- Prior structures often do not facilitate the level of customer integration required today; and
- General organizational resistance still dominates managerial thinking.

Hence, we can look on the limitations to implementation as being made up of both mortar and mind. Although the mortar is a more substantial excuse for failed implementation or even never attempting implementation, managerial and organisational beliefs about what will work and what won't are many times the more salient reason for the lack of action or success.

Direct System Costs of Implementation

Although the costs of both software and its configuration are generally declining as companies make increasing use of open system architectures, there are still widely differing concerns over budgetary issues. The impact of direct costs of implementation was seen as a major constraint. Respondents indicated varying degrees of concern with 28 per cent of respondents

believing that the cost of IT infrastructure is only a small constraint on implementation (see Figure 3.1).

“[Our biggest constraint is] probably finance—the high cost of technology. There is also the uncertainty and risks associated with trying to justify through a business planning model exactly what the returns will be.”

Finance Director, Legal Services

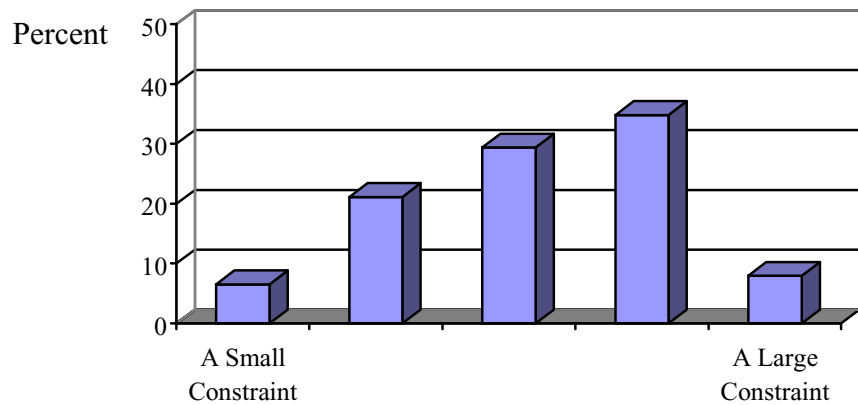


Figure 3.1: To what extent do IT infrastructure costs constrain your organisation’s ability to develop an integrated approach to customer data management and customer web interaction?

Respondents from government entities are more likely to be spooked by the direct costs of IT. Government organisations viewed direct costs as a large or very large constraint in 54 per cent of cases, while 59 per cent of those from retail establishments expressed the same level of concern. Respondents from the manufacturing sector were less concerned with direct costs, with 37 per cent indicating that costs were a small constraint. When compared to firm size, our data did not indicate any significant difference between small firms and large organisations.

*Indirect System
Cost of
Implementation*

The full impact of cost constraints is a function of not only direct costs, but indirect costs as well. There are three areas where these indirect costs arise, the cost and availability of skilled workers, legacy system interaction, and the useable lifetime of the systems relative to the time to develop it.

The cost and availability of skilled staff to manage complex e-intelligence projects is a frequent cause of concern. Respondents echo this view with slightly over 50 per cent believing that the shortage in acquiring skilled managers to strategically manage the system implementation is a major constraint and slightly less than 50 per cent worrying about the cost of acquiring such people (see Figure 3.2). This is completely independent of industry or firm size.

“[T]he lack of skilled people is a major problem that severely constrains our ability to effectively develop strategies based on e-intelligence initiatives.”

Manager, IT and Communication sector

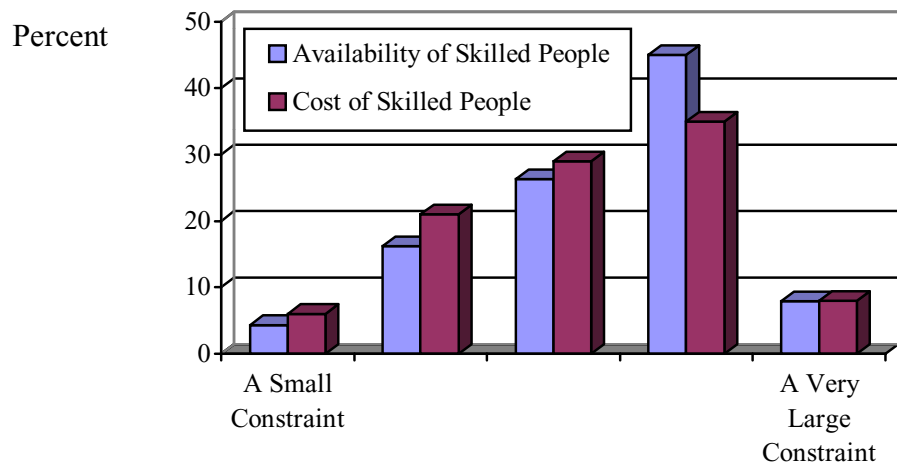


Figure 3.2: To what extent do the cost and availability of IT professionals constrain your organisation’s ability to develop an integrated approach to customer data management and customer web interaction?

The pragmatic difficulty of interfacing new e-intelligence applications in complex legacy systems is a difficult and time-consuming task. Respondents in our study clearly appreciate the difficulties in interfacing with legacy systems (see Figures 3.3 and 3.4). Fifty three per cent of respondents strongly disagreed with the statement that back-end business systems can be easily adapted to meet the needs of e-intelligence initiatives. Similarly, when questioned about the degree to which disparate customer and partner data throughout the company could be integrated they were even less encouraging. Few thought the process would be easy and more than 55 per cent looked on it as extremely or very difficult. Those from larger firms—no doubt reflecting their greater diversity of data—were slightly more concerned about integration of diverse systems.

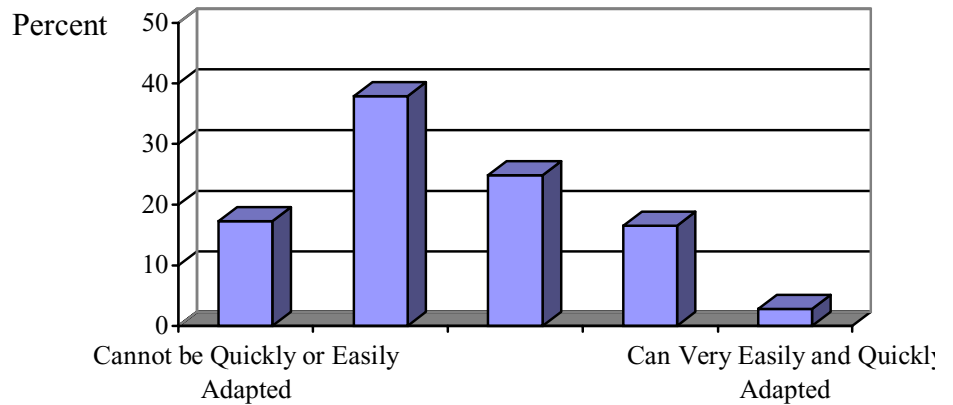


Figure 3.3: The extent to which my company’s internal business systems can be easily and quickly adapted to meet the needs of new e-intelligence initiatives

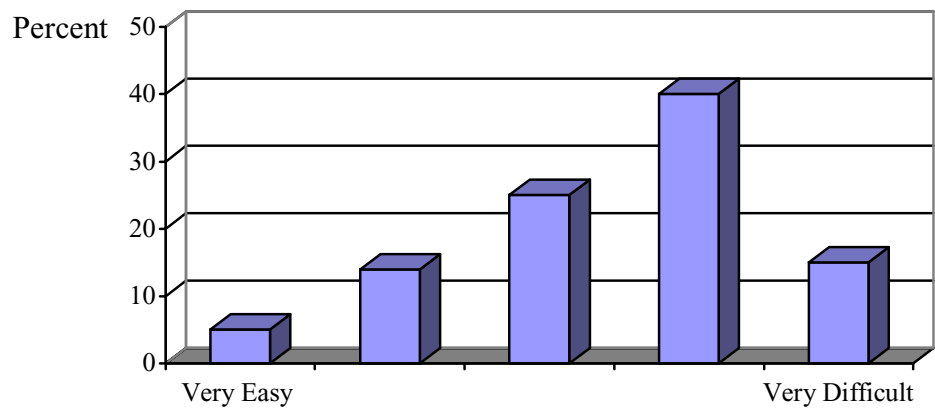


Figure 3.4: The ease with which the various sources of customer/partner data throughout my organisation can be integrated

The time taken to develop operational systems capable of integrating data throughout the enterprise is a significant source of concern (see Figure 3.5). Over 50 per cent of respondents believed that time constraints were a large impediment to implementation, although significantly less were concerned about obsolescence.

“Gosh, nirvana for me would be achieved if we could just get the stuff up and running a little quicker.”
 Manager, Financial Services Sector

“Nothing is ever smooth. The biggest problem we have in the bank is implementing, you know, just getting the people to develop the systems is basically a pain in the backside. It just takes so long and we have been trying to get a new net system going for this all financial services type offering. We have gone around in circles the last two months, we still haven't got there and I think we are pretty frustrated by it all.”
 Director, Financial Services

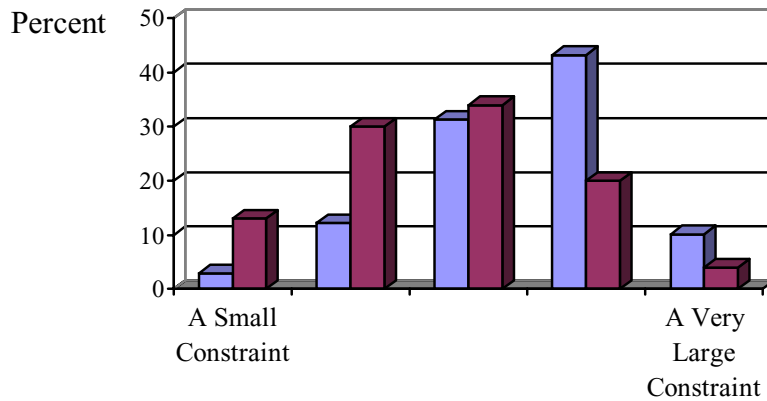


Figure 3.5: The extent to which the speed of development and potential for obsolescence constrains my company’s internal business systems to develop new e-intelligence initiatives

Business Risks

System and business risks also loom as a potential issue constraining implementation although there is considerable difference of opinion as to their importance. We examined four sets of risks: network performance, system security, brand integrity and customer privacy.

Figure 3.6 presents the degree to which firms feel that system security and network performance are a hindrance to implementation. Although, respondents are concerned about these issues there is no indication that any one group is overly concerned, perhaps because they are looked upon as a necessary cost of doing electronic business.

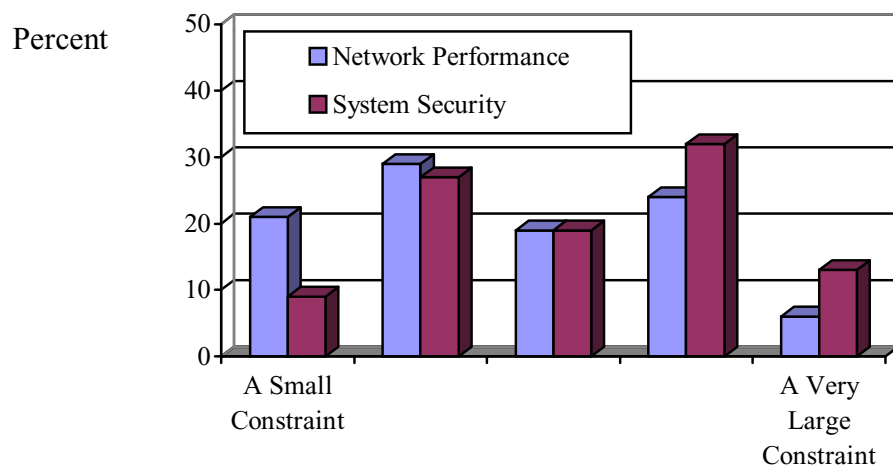


Figure 3.6: To what extent do system security and network performance concerns limit your organisation’s ability to develop an integrated approach to customer data management and customer web interaction?

We see a similar pattern when it comes to issues of brand integrity and customer privacy, perhaps because like the prior areas these are necessities of the business and there has been significant strengthening of the legal and technological regime surrounding both privacy and security. However, even so over 45 per cent of respondents across all industries and types of firms

were somewhat to seriously concerned about privacy issues (see Figure 3.7).

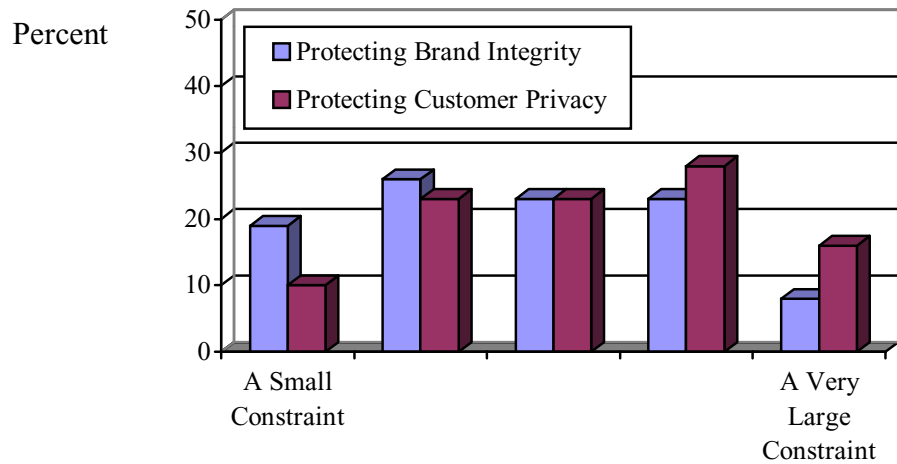


Figure 3.7: Our organisation's ability to develop an integrated approach to customer data management and customer web interaction?

Managerial Beliefs and Organisation Culture

By virtue of their personal characteristics, managers differ in the degree to which they are aware of the various e-business orientations available to them. Some managers see alternatives that others do not. Others are able to capitalise on skills of persuasion and politicking to achieve results that others cannot. These managers also operate in the social milieu of their organisation's culture. The interaction of the beliefs of the managers, the incentives they face and their interaction with colleagues and business partners can be a powerful force both for and against the implementation of any new system or idea.

We asked a series of questions aimed at tapping both the manager's belief about what they considered appropriate and important and how they felt their organisational culture and human systems affected the successful implementation of an e-intelligence strategy. The results show that managers are convinced that more intelligent systems are the way to go but that their organisation's culture is a real constraining factor. Below we

“Probably the biggest impediment to e-intelligence so far has been serious doubts by the Managing Director in particular and other senior managers about the value of e-business. Some of them think this is really a flash in the pan, they spend a lot of money then find out it's just a passing phase and then why did we bother to spend all that money and waste all that time with it.”

Managing Director, Retail Sector

discuss the negatives then turn to manager's more positive views. Figures 3.8 and 3.9 show that two of the most difficult hurdles to overcome in the implementation of radical new strategies such as e-intelligence is gaining consensus from a management team that is concerned with managing for present profitability. Slightly more than 45 per cent of those surveyed viewed lining up the relevant corporate interests behind a new e-intelligence strategy as a significant hurdle and this was more difficult the larger the firm

However, the more vexing proposition is dealing with a bias toward current cash flow. Figure 3.9 shows that more than 50 per cent of managers find it difficult to get their head around e-intelligence initiatives since there is pressure to focus on activities with immediate, or more immediate, cash flow and profit implications.

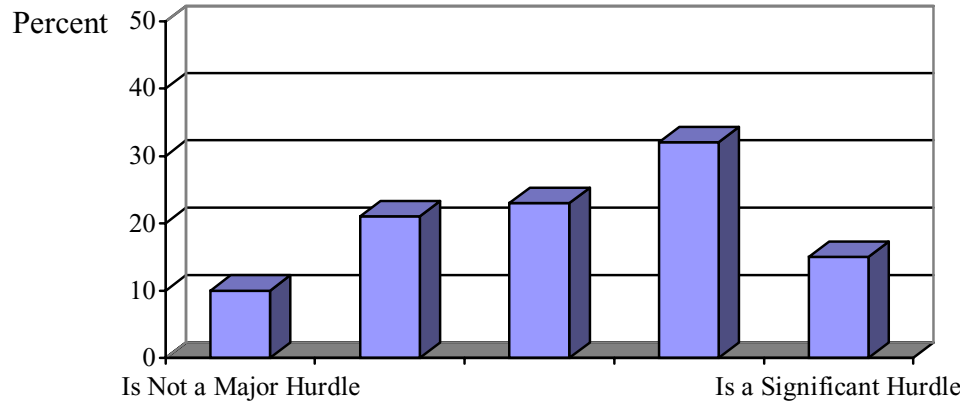


Figure 3.10: To what extent is gaining consensus among key decision makers in my organization a hurdle to new business strategies

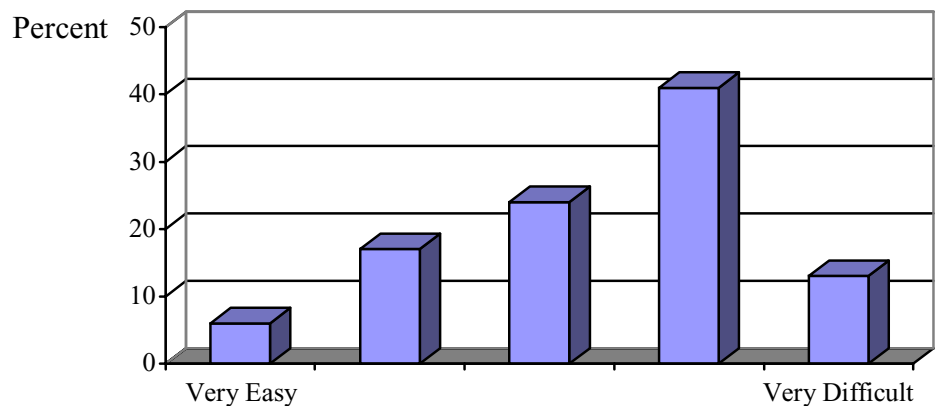


Figure 3.11: To what extent is it possible to get managers to pay more than cursory attention to e-intelligence initiatives because they are concerned with areas generating immediate cash flow and profitability

“In hindsight the biggest challenge for me was convincing our people to get on board. Not because they didn't believe in e-business it was because it meant a lot of work, because as I said we had to re-engineer the business. That was the biggest challenge because people all knew this was going to take a lot more work.”

Vice President Asia Pacific, Retail Sector

A majority of those surveyed felt there was an inevitability toward more customised Internet systems and that in the long run the intelligent use of data from this source was going to be critical. Over 50 per cent of managers believed that it was relatively easy to see how e-intelligence added value to customers and business partners (see Figure 3.12).

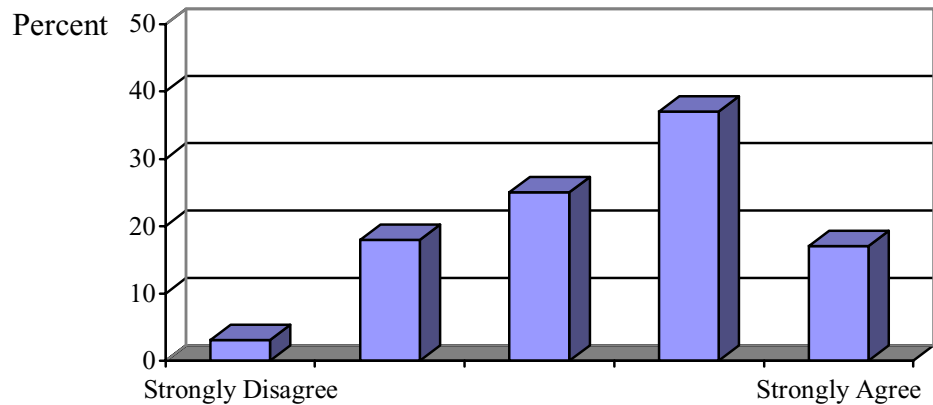


Figure 3.12: It is easy to see how e-intelligence systems would create new value for our major customers/partners

This is reinforced by the strong belief in the inevitability of customised products and services based on electronic data. Only 17 per cent of those surveyed disagreed with this assessment and more than 55 per cent were in strong support of the belief.

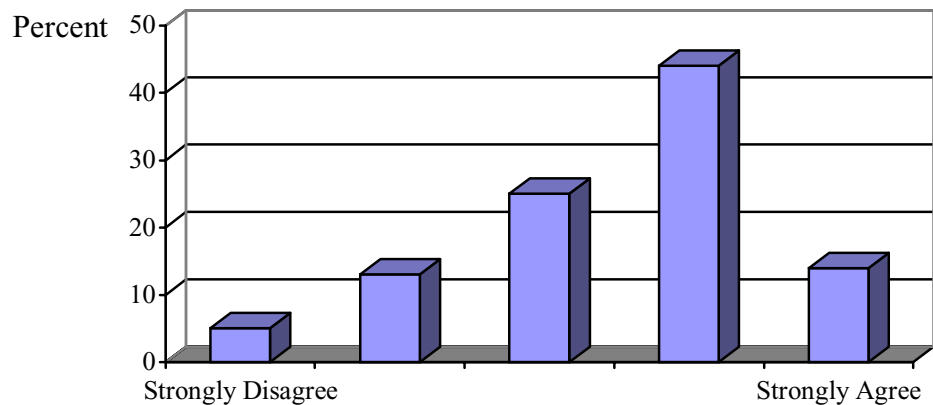


Figure 3.13: It is only a matter of time before full scale individual customisation based on electronic data is a reality

Finally, we see an extremely strong belief in the importance of long-term relations, those that are only possible with more accurate and complete understanding of customer needs. Importantly managers overwhelmingly believe in the value of long-term relationships to future success (see Figure 3.14).

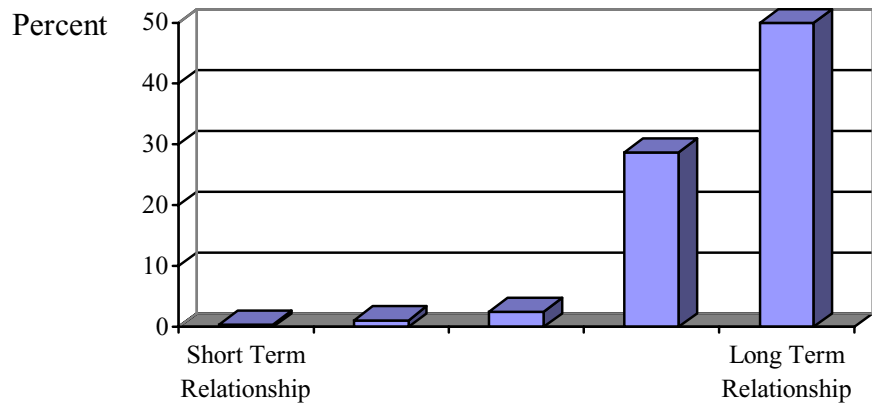


Figure 3.14: What do you believe are the most appropriate relationships structures to have with customers/partners?

Change Inertia

The main insight emerging from the discussion above is that before any new e-intelligence strategy can be developed it must first be ‘do-able’. Do-able means either that it is not in conflict with the operational or strategic constraints or that sufficient strategic resources are in place to overcome the operational constraints. Direct and indirect costs were found to be strong operational constraints and these no doubt combine to form inertial tendencies that restrict new initiatives in many organisations. Add to this the reality that old skills and knowledge embedded in organizational routines and procedures are not easily changed and we see many implementation difficulties arising for firms in their attempts to exploit e-intelligence. As noted from the final quote below, a string of small successes works well for many companies not because it is the best strategy overall but because it is the most effective implementation approach.

“At the moment I would say it is quite smooth. We’re only at the beginning stages of it, though. I think the pilot that we ran has gone well. I think we’re making it smooth by not trying to do too much in one go. We’re doing a stacked approach to manage the change, and so I would say it’s running smoothly.”

Executive Manager, IT Sector

X-Store

- Implementation costs are always higher than expected
- Customers want value not relationships
- Compelling value propositions are still not visible

X-Store: Still skeptical about the benefits

The retail giant X-Store has always been a pioneer when it comes to customer focus. In 1998 the firm established a dot.com venture in response to new customer needs, the perceived threat from companies like Dstore and eToys.com and the general Wall Street euphoria surrounding online business. Despite early hiccups due to technical deficiencies the digital business venture X-Store Online has remained viable thanks to strategic partnerships with Amazon.com in the US and Softbank in Japan. As a global enterprise that generates over US\$10 billion in sales through 1,000+ stores in 30 countries, the dot.com arm of X-Store is a very small part of their revenue calculus. The meat of their business is conducted through physical locations and although the views presented in this case are representative of one particular retailer and may not be generalizable, they do provide an interesting insight into the challenges ahead.

Emerging Skepticism

Perhaps the most startling feature of X-Store's Australian operation is managerial apathy towards digital business design. The Australian subsidiary does not have a Web site and has no immediate strategic plan to enter into electronic commerce either upstream through B2B systems or downstream through B2C selling—although it is looking at possible partnerships that are in-line with its parent company's strategy. A few large vendors (e.g., Sony) characterize the upstream side of X-Store's business along with a vast number of smaller local and global suppliers. Despite minor e-business initiatives pushed by a small number of the larger vendors, the supply chain interfaces operating between X-Store and its suppliers are still very much paper driven and this manual process seems likely to remain intact for some time. Len Summers the managing director of X-Store Australia and New Zealand is skeptical of the benefits to be found in supply chain e-business. "I just don't believe, that setting up electronic market places for people to buy goods and services will yield the percentage cost reductions reported in the press. Sure there are transaction cost savings, but when we go to competitive tender there just isn't an opportunity to yield large cost reductions because purchasing managers for the last 25 years have been whittling away at the margins." His belief is that in retailing, revolutionary cost savings across the supply chain are hardly likely to arise.

Using Data Intelligently

Even though there is a reluctance within X-Store's management to embrace e-business across the value chain, the company still

undertakes significant e-intelligence analysis. Large amounts of data are gathered when customers buy products and extensive analysis is done to determine what you buy, why you buy, and the effectiveness of store positioning. Point of sale analysis of this type has been carried out throughout the business for many years. In terms of the customer relationship side of e-intelligence, the organization is still in its infancy. An active database of customers is maintained for direct mail customers but little work has been done to manage individual relations across the customer base.

The Challenge The main impediments to successful implementation of e-business within X-Store's Australia/New Zealand operations are two fold. Maintaining realistic expectations and having change agents on the ground who are willing to embrace change sensibly while redirecting and refocusing staff are critical to success. However, the greatest impediment to e-business development, according to X-Store management—has been the astronomical costs incurred when going direct to the customer. According to Len Summers the costs of implementation are both high and unpredictable. “When I discuss costs with colleagues in forums, never has anybody said to me that their e-retail or e-business development was cheaper or cost them what they expected. In all cases it always costs more, and in many cases significantly more, to implement.”

Making e-Intelligence Happen A simple bell curve most accurately illustrates the extent to which senior managers within X-Store believe that e-intelligence represents value to the firm. Some believe in the benefits, most are yet to be convinced and others are downright opposed to developments in this area. According to Summers, many traditional managers “simply do not grasp what customer e-intelligence can do and as a result they don't know what to request. They fail to see the big picture or appreciate the value of e-intelligence to their business.” However, this situation is changing. One of the main reasons for this change is the establishment of a team of ‘young guns’ who have been put in place to identify what sorts of e-intelligence the company's operations can and should provide its senior managers. The organization's vision in this respect is simple, customer information is valuable and the more they can learn about their customers the better off they'll be. The actual feasibility of these initiatives will be based on cost implications.

The Greatest Unknown The biggest unknown for Len Summers is whether an e-retailer like X-Store can ever develop a genuine e-business model that makes money. In the retailing game the transaction costs associated with the physical moving of product are high. Lessons emerging from supermarket initiatives to support grocery purchasing on-line do little to foster enthusiasm. Supermarkets work to thin margins and when you're packing and delivery groceries for relatively small numbers of geographically diffuse customers in a high labour cost market, it is not surprising that profitability is hard to come by. Having sat back and watched the B2C e-retail approach implode over the last 12 months,

key questions remain in Summer's mind as to whether B2B will face a similar meltdown in the foreseeable future.

*Future
Challenges*

As a generalization across the industry, Len Summers doesn't believe that customers care much for forming a relationship with retailers. Management might like to think that relationships exist but the reality is that customers know they have a wide range of choices when it comes to purchasing almost any item. In such an environment, relationships are difficult to develop and maintain and large digital investments in this area remain questionable. Although customer satisfaction is important to X-Store, data is collected the old-fashioned way—non-electronically, through face-to-face interviews, focus groups and market research.

Despite this, the collection of improved transactional data on individual customers is an area targeted for development by X-Stores. According to Len Summers it's an area in which the firm performs poorly at present "You know, we still don't operate a loyalty card and the closest we can get to the individual is the postcode in which they live." Work is currently being done to address both these issues so the firm can better match specific transactions to individual customers. Yet, although further developments in e-intelligence are planned, the lack of a compelling value proposition and high costs will continue to influence both the rate and extent of adoption.

Chapter 4: Building an e-Intelligence Company

The e-intelligence challenge is all about setting a firm strategy and building organisational systems that places primacy on the sophisticated, effective and timely use of data. Such an approach is less about technology and more about having the managerial will to counter the organisational and technical barriers laid in one's path.

The e-Intelligence Challenge

The previous three chapters provide a data-driven view of the state of e-intelligence in Australian companies. The results are very much 'warts-and-all' showing both the positive and negative aspects of firms' struggles with the complexities of the Internet age. Without underemphasising the complexity of the problem we can summarise our results succinctly as follows:

Managers believe very strongly that the intelligent use of Web-sourced data will change the nature of their relationships with their customers and revolutionise the competitive standing of their business

- ◆ HOWEVER, they do not understand at present what the potentialities are and how they can necessarily win from the change

The **main constraints** limiting the application of more customised, efficient and effective data delivered in a timely fashion are organisational first, financial second and technological third

- ◆ Organisational constraints fall into three main categories:

- ∇ Ability to integrate existing managerial structures with new realities so as to gain general consensus
- ∇ The ability to mobilize organisational resources for endeavours with unclear cash flow and profit implications
- ∇ Upgrading and acquiring of staff and managerial skills to meet the new challenge

- ◆ Financial constraints loom large in two ways:

- ∇ The direct cost of systems and people
- ∇ The potential unlimited future cost of systems that are constantly evolving

- ◆ Technological constraints are not about what software solutions are available but revolve around the ability to get systems to talk to one another and integrating disparate and legacy systems in an organisationally friendly manner

Firms operate e-intelligence systems with **varying degrees of success** that are affected by the above constraints but a major determinant of success appears to be how far down the learning curve the firm is. The constraints seem to slow activity but those

their efforts to date

“I’d probably say there were two organisational impediments. One is just having the people to be the change agents. There’s the whole question of embracing the change, which is, you know, redirecting, refocusing people, etc. But probably the greatest impediment, fundamentally, has been when you actually get right down into it is the astronomical costs that you can occur, particularly if you want to go direct to customer... I think that of all of the numbers I’ve seen for our own business and I’ve seen for other businesses and I’ve read and I’ve discussed in forums with people never has anybody said to me that their e-business and e-retail or e-business development was cheaper or cost them what they expected it to cost them.”

CEO, Retail Sector

Figure 4.1 outlines a simple way of looking on the problem facing firms dealing with the e-intelligence challenge. On the firm size of the ledger are very clear cost benefits that are a spur to more intelligent use of data through internal integration. In some sense this is a reasonably easy task that might meet some organizational and financial challenges but the potential returns to process improvement are reasonably clear. On the other sides of the ledger are the demands of the customers and the need to integrate with business partners (suppliers, distributors, franchisees, etc.). This is where the real challenge lies because it is in this area where the constraints—organisational, financial and technological—become more salient and the outcomes less clear. The key is to find ways to break through these barriers

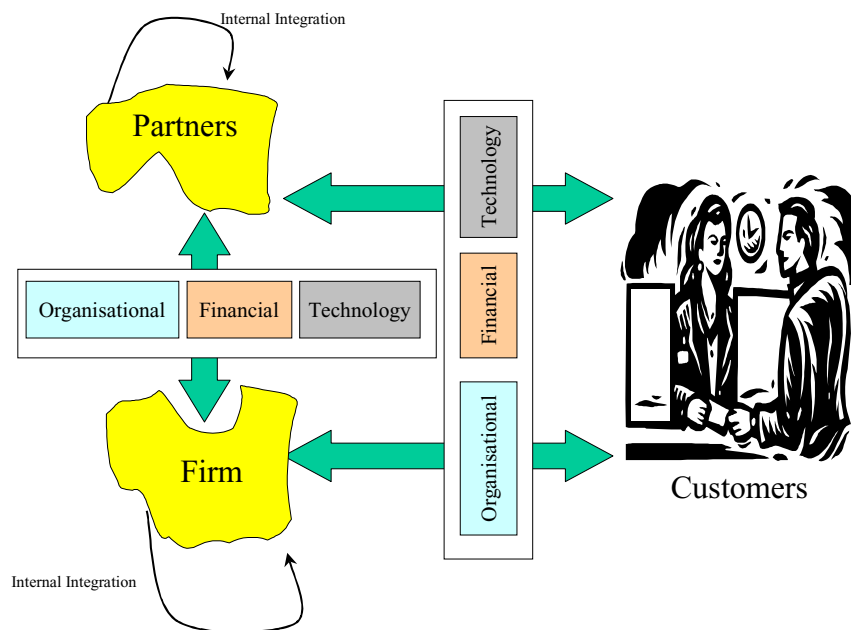


Figure 4.1: Organisational, financial and technological constraints as barriers to the intelligent use of data between customers, partners and firms

In our study, we see that it is less the constraints stopping firms from becoming effective e-intelligence organisations but the managers perceptions of the importance of those constraints. At one level this may be a backward looking process—managers use the constraints as an excuse for inactivity—but we are not able to determine the extent to which this is the case. What we can do is note the degree to which specific sorts of constraints are considered to be relevant.

Figures 4.2 and 4.3 present this information. These Figures present the perceptions of both IT and organizational constraints but adjust these based on the strength of the manager’s belief in the promise of e-intelligence (all of these are based on responses to several questions in our survey). Figure 4.2 shows that the stronger the positive opinion the manager has about e-intelligence the less likely they are to cite organizational constraints as a problem. Figure 4.3 shows that in spite of these strong beliefs the managers still cite technological constraints as a problem.

Although this appears to be a contradiction there is logic to this pattern. Managers with strong beliefs about the intelligent use of data are less likely to consider the organisational issues as relevant but are quite open about the technical limitations such a strategy implies. In some sense, we could say that e-intelligence mavens are ‘at peace’ with the strategic logic but are not fooled by the practical constraints!

		Organisational Constraints		
		None	Some	Strong
Managerial Belief	None	2%	7%	11%
	Some	4%	25%	35%
	Strong	1%	5%	9%

Figure 4.2: Perceptions of organisational constraints (No constraints, some constraints, strong constraints) and managerial beliefs about e-intelligence (No opinion, some positive opinion, strong positive opinion)

		Managerial Belief		
		None	Some	Strong
IT Constraints	None	2%	6%	13%
	Some	1%	15%	21%
	Strong	3%	16%	25%

Figure 4.3: Perceptions of IT and managerial constraints (No constraints, some constraints, strong constraints)

“I think the evolution of technology has been smooth and difficult. I think it’s been relatively smooth where we’ve done it for what we’re trying to do. I think the only time you’d come to a conclusion that it had been more difficult is if you actually believed what Microsoft said all the time. You know what I mean? Like Unix, Unix is a common platform, except there are umpteen different types of Unix. So I think realistically it’s still not a matter of plugging in and away you go; it’s still not plug and play. So, realistically it’s been smooth, although I’m sure you could find people who would tell you that it’s been harder than they expected but I don’t think the problem is how hard it’s been, I think the problem has been the simplicity of their expectations, if you know what I mean. “

CFO, Retail Sector

Horses for Courses

It was noted that managers ranked the ability of Internet applications to enable faster response to customer/partner needs as being most important benefit with cost reduction initiatives associated with servicing customer/partner needs a close second. Reliability issues concerning customer/partner information access, segmentation opportunities that identify and target the most profitable customers or partners and gaining new insights to customer needs, were important but secondary overall. However, one thing we didn’t note in Chapter 2 was that this opinion varied by industry (Figure 4.4 presents these results).

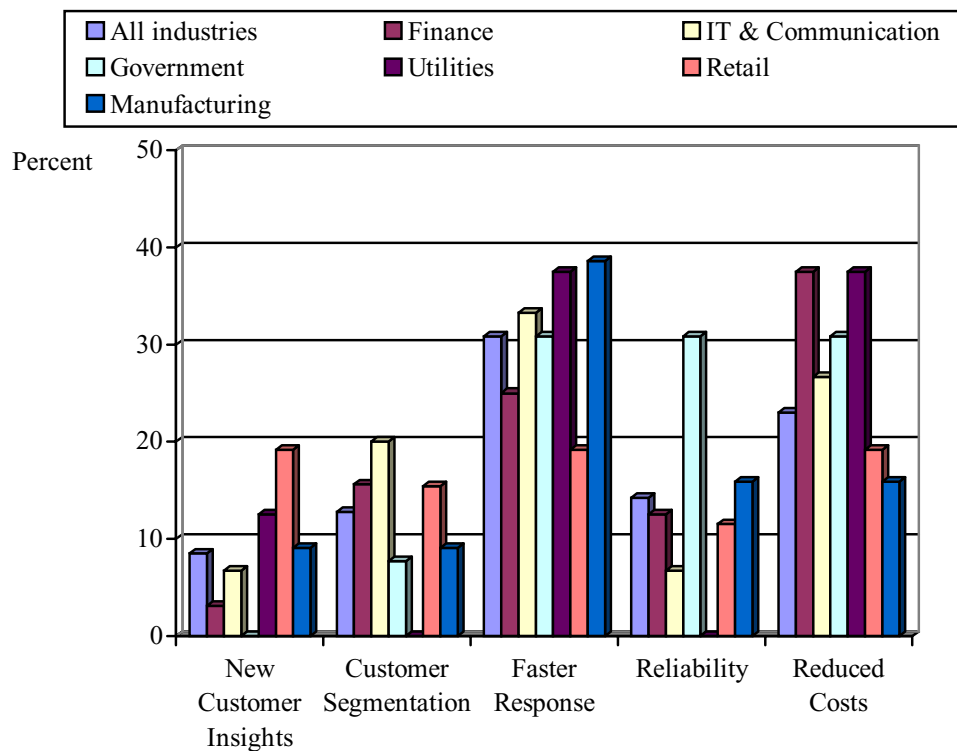


Figure 4.1: Number one e-intelligence benefit cited by industry

Respondents in the government sector considered response times, reliability and reduced costs as equally important, while those from the retail sector thought that new customer insights were most important. For financial services firms response time and cost reduction were most important while manufacturing firms believed responses time was by far the most critical and surprising thought cost reduction was no more important than the reliability of data access.

The main point of this discussion is that our results show quite strongly that e-intelligence requires tailored responses to specific needs—companies looking for easy off the shelf solutions will be disappointed.

Intelligence
First 'e'
Second

The final insight we gained was that e-intelligence is about intelligence first and 'e' second. The firms that were most comfortable with the idea of e-intelligence and its potential were firms that not only already knew what they wanted to get from their data systems but had a idea of what they would want to achieve if there were no constraints. In other words, these firms had a clear, unconstrained strategy aimed at extracting the most value from their economic interactions with partners and customers. If anything they were waiting for the technology to catch up with their imagination.

Firms that were struggling with e-intelligence initiatives were those that were allowing the technology to decide where they needed to go. As such, they were more likely to be befuddled by the options being presented to them by technology suppliers and were much more reactive to customer demands and competitors' initiatives.

“We committed very substantial funds right up front to fund e-technology—this is what there is to be spent. We succeeded in gaining consensus or a common understanding of where we wanted to go and the beauty of this is that we did not prevent some places from going ahead faster than others. The model then is really to help the bank evolve into the next generation of investment banks, to be able to meet the demands of here and now.”

HR Director, Investment Banking