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Abstract

The paper explores the factors that may be important for organisations wanting to realise the benefits from their investment in CRM packaged software. Its major contribution is the development and preliminary validation of a model of factors that are important for the realisation of benefits from CRM packaged software-based work systems. Using a combination of literature review and content analysis of ten case studies, the study identifies 24 factors that appear to be important for an organisation currently or about to implement CRM packaged software. The most important factors identified are: the strategy adopted by an organisation to implement their packaged software; the overall data strategy and supporting data infrastructure; integration between other systems and data repositories; and clearly defined and communicated, roles and responsibilities.

Keywords: CRM, Packaged Software, IS Benefits, Enterprise Systems

1. Introduction

Many billions of dollars have been invested in customer relationship management (CRM) packaged software. According to Winer (2001), "this revolution in customer relationship management…has created a worldwide market for CRM products and services of $34 billion in 1999, a market that is forecasted by IDC to grow to $125 billion by 2004." However, despite the large body of knowledge on IS project success factors and mechanisms for achieving benefits from packaged software (Seddon and Shanks 2003), many CRM packaged software initiatives still fail to realise their intended benefits. For example, according to Nucleus Research (2002), 14 of 23 customers profiled on the Siebel website (60%) "do not believe they achieved a positive ROI from Siebel." Similarly, according to Rigby et al. (2002):

> "55% of all CRM projects don't produce results…one in five users reported that their CRM initiatives not only have failed to deliver profitable growth but also have damaged long-standing customer relationships."

Contrasting the view that CRM initiatives are not successful are the many success stories produced by the numerous vendors of CRM software applications. For example, Selchert's (2002) benchmarking study conducted on behalf of SAP asserts that many companies have achieved substantial benefits from mySAP CRM:

> "While critics have cast doubt on the merits of customer relationship management…this benchmark study demonstrates the high profitability of mySAP CRM, almost without exception, in 35 different companies."

There is significant knowledge about CRM initiatives. We know that: there are significant benefits to be gained by CRM initiatives; most large organisations are investing significantly in CRM initiatives; large and expensive CRM software packages are being used to support CRM initiatives; CRM software vendors claim most organisations achieve benefits from CRM initiatives; and many of these CRM initiatives fail to realise expected benefits from the CRM packaged software used.

What is not clear and the key research question of this research paper is:

> *"What factors are important for the realisation of benefits from CRM packaged software?"*

To answer this research question, we reviewed critically the extensive literature on CRM, CRM packaged software, Enterprise Systems, and IS success factors. From the literature we identified a number of factors that seem important for the realisation of benefits from CRM packaged software. We conducted a preliminary test of the factors identified in the literature by comparing them to factors identified in ten case studies of organisations that have or hope to realise benefits from their investment in CRM packaged software.

2. Definitions

The term CRM is used extensively in both practice and research. However, what is meant by CRM is not always consistently used both within and between practice and research. Presented below are three definitions of CRM that help clarify the definition of the term CRM.

- "Customer Relationship Management (CRM) is a business strategy to select and manage customers to optimize long-term value. CRM requires a customer-centric business philosophy and culture to support effective marketing, sales, and service processes. CRM applications can enable effective Customer Relationship Management, provided that an enterprise has the right leadership, strategy, and culture." (Thompson 2002)
- "To improve service and retain customers, CRM synthesizes all of a company's customer touch-points" (Yu 2001)
- "Good customer relationship management means presenting a single image of the company across all the many channels a customer may use to interact with the firm, and keep a single image of the customer that is shared across the enterprise." (Berry and Linoff 2000, p.14)

From these and other definitions, we have identified three key concepts associated with the term CRM. First, CRM is about business strategy, in particular, that part of business strategy focused around the customer. Second, CRM is about the business processes that support and enable the interaction between a business and its customers. Third, CRM doesn't equal technology, i.e., the software itself. Implementing CRM software on its own, without or before having customer strategy or understanding the customer business processes, will not be sufficient to realise benefits (Newell 2003; Fayerman 2002; Starkey and Woodcock 2002; Rigby et al. 2002; Winer 2001; Yu 2001). CRM packaged software is defined as the packaged software that support an organisation's customer strategy and customer-focused business processes. Examples of CRM packaged software include mySAP CRM from SAP and Seibel CRM.

3. Benefits from CRM–based Work Systems

The focus of this study is on the factors that affect benefits realization from CRM-based work systems. Following Alter (1999), we use the term "work systems" to describe CRM-based systems because it is impossible to separate benefits from the implemented package from the work system in which the technology is implemented. Shang and Seddon (2002) argue that CRM systems are just a special type of large-scale packaged software. Because benefits from such implementations tend to increase over time, e.g., as shown in Figure 1, Shang and Seddon (2003) and Davenport et al. (2002) suggest that benefit realization needs to be studied longitudinally, for a wide range of benefit types.

The literature also suggests that many factors affect realization of benefits from packaged software implementations. Shang and Seddon (2003), for instance propose that the eight factors labelled P1 to P8 in Figure 2 are all important in determining benefits from ERP systems, where the factors with more "+" signs beside the arrows are the most important determinants of benefits.
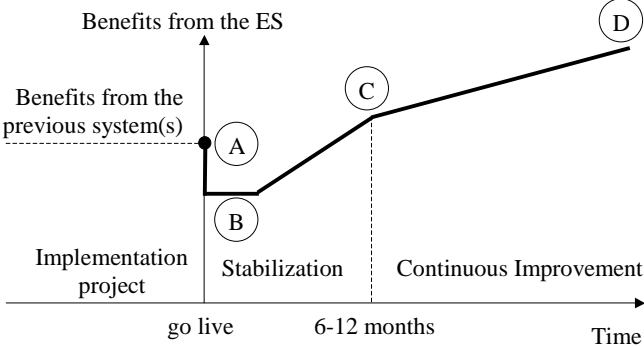

Figure 1: Stages and benefits from the ERP Journey, from Shang and Seddon (2003), based on Ross and Vitale (1998) and Davenport et al. (2002)
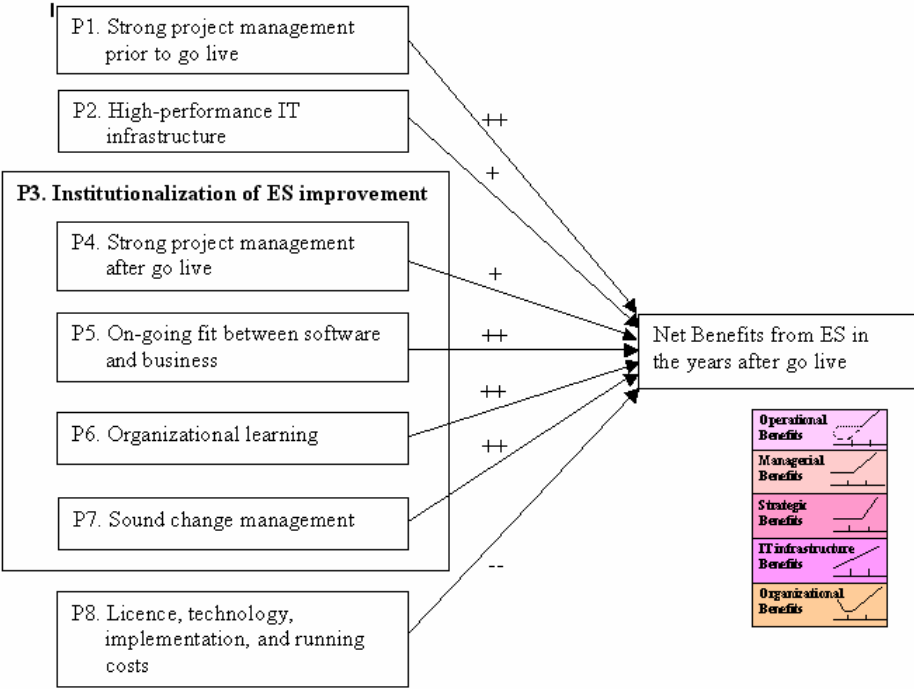

Figure 2: Factors affecting Net Benefits from ERP systems (from Shang and Seddon (2003))

4. Factors Influencing Benefits from CRM–based Work Systems

Although Shang and Seddon (2003) have argued otherwise, it is by no means clear that the factors driving benefits from CRM-based work systems are the same as those for ERP-based systems. The literature we reviewed suggests that factors influencing the realisation of benefits from CRM packaged software can be grouped under five headings: business factors, implementation project factors, technology factors, people factors and data factors. These five groups of factors are now discussed in turn.

4.1 Business Factors

Business factors are identified by many researchers as being important in the realisation of benefits from CRM packaged software. Several researchers argue that CRM software alone will not enhance business performance or that CRM initiatives can be successful unless a *customer strategy* is first developed (Verhoef and Langerak 2002; Rigby et al. 2002). The relationship between *processes* and CRM has also been discussed in many research papers. The acquisition of new customers has been identified as a specific CRM process (Rigby et al. 2002; Winer 2001). Rigby (2002) describes a key CRM imperative as "acquiring the right customer" as being achieved when an organization has "identified the most valuable customers" and "your share of their wallet" for your organisation's product and services. Winer (2001, p.95) describes selecting customers based upon some selection criteria from customer information contained in a database. Others, such as Verhoef and Langerak (2002, p.72) argue that customer acquisition and CRM are interrelated activities that must be managed in synchronization. This distinction between acquisition and relationship management by Verhoef and Langerak is based upon whether a customer is a new customer or an existing customer. This distinction between customer acquisition and CRM is quite artificial if one views CRM as encapsulating the whole customer life cycle, e.g., as argued by Fayerman (2002, p.61), Meta Group (2000) and Nelson (2002a). Nelson (2002a), for example, describes the customer life cycle as: target, inquire, acquire, welcome, develop, manage problems, retain, and win-back. Similarly, the Meta Group (2000) describe the customer life cycle as having four stages: engage the customer; 2, transact with the customer; 3, fulfil the customer; and 4, service the customer.

As well as the generic CRM business process described above, industry-specific CRM business processes form the core of some vendors' CRM packaged software. SAP (2003) describe in their latest release of CRM packaged software as having 24 different industry flavours, each aligned to the end-to-end business processes of these different industries. SAP argues that unless the CRM packaged software that you employ in your organisation is tightly aligned to your business processes in your specific industry, the benefits that you receive from your packaged software may be diminished.

Accenture (2002) suggest that a key problem area for CRM initiatives, is the lack of fit between the CRM technology and the higher-level business strategies of the organisation. "Many companies have fallen prey to the "sexy technology" trap – becoming so enthralled with a particular CRM technology that the organisation loses sight of whether the tool will actually support how the company goes to market." (Accenture 2002, p.5)

4.2 Implementation Project Factors

As suggested by the first factor in Figure 2, P1, project management prior to go live affects the fit between the configured software and organizational needs, and so affects benefits after go live. Based on their review of over 20 papers on project management, Seddon and Shanks (2003) have summarized factors affecting packaged enterprise application software implementation project success as shown in Figure 3.

Contextual factors	Project Success factors	
	Limited control or influence	*High level of control*
External 1a. Business Competitive environment 1b. Clear cost benefit 1c. Urgency, deadlines 1d. Vendor failure *Organizational* 1d. IT infrastructure 1e. Knowledge/skills 1f. Business processes 1g. Organizational structure, e.g., multinational 1i. Organizational culture	2a. Top Management support 2b. Organizational commitment to change 2c. Clearly-defined goals and scope 2d. Adequate resources 2e. Effective leadership 2f. Project champion 2g. Flexibility 2h. Clear communication 2i. Managing stakeholders	3a. Sound project planning and control 3b. Competent staff and knowledge 3c. Achieving fit between software and business needs (e.g., vanilla) 3d. Training and change management 3e. Data conversion 3f. Testing 3g. Vendor support 3h. Technical problems 3i. Political influence exercised by project leader

Figure 3: Packaged Enterprise Application Software Implementation Project Success Factors (from Seddon and Shanks (2003))

4.3 Technology Factors

Many researchers argue that CRM technology alone will not ensure a successful CRM initiative (Verhoef and Langerak 2002; Rigby et al. 2002; Yu 2001). However, some researchers do argue that the choice of technology is an important aspect of satisfying the business needs for CRM (Verhoef and Langerak 2002; Gillies et al. 2002). Gillies et al. (2002) argue that having established a customer strategy and then aligning your organisation to this strategy, that it is then necessary to provide the right technology and tools, but be aware "These waters can be treacherous. Some managers are so beguiled by the latest software system they fail to select the package that most precisely fits their customer strategy".

Newell (2003, p.180) also argues that CRM doesn't start with choosing the technology but at some stage the right tools have to be chosen for the CRM initiative. The type of technology used to support CRM has also been discussed. For example, the Internet is believed to be a valuable channel when dealing with customers because it can provide direct and immediate access between a business and its customers. However, some researchers argue that the Internet channel may actually decrease customer loyalty (Verhoef and Langerak 2002; Reichheld and Schefter 2000).

The level of integration between existing Enterprise Systems and CRM packaged software is a factor that will need consideration. The pervasiveness and benefits of Enterprise Systems in large organisations is well acknowledged by researchers in this area (Shang and Seddon 2002; Davenport 2000; Davenport 1998). Over the past few years the vendors of ERP packaged software have been integrating CRM into their packages, for example mySAP CRM. However, other vendors have focused on providing the "best-of-breed" CRM functionality and relying on integration software to provide the integration between their software packages. Davenport (2000, p.283) suggests that these large enterprise systems will become the repository of customer knowledge. Given this, then the dilemma faced by many business managers between "best-of-breed" CRM functionality versus enterprise integration will be a major factor.

4.4 People Factors

Yu (2001) suggests that there are many similarities between ERP implementation and CRM implementation success factors, but one area that is possibly different is the cultural fit between the IT and marketing departments. For ERP, the cultural fit between IT and production and finance may be good but this may not be the case for IT and marketing. Nelson (2002b) also

suggests that if staff culture doesn't have a "relentless focus on the customer" then the CRM initiative may fail. Seibel (2001) also discuss the change in culture and reward systems required for successful implementation of their CRM packaged software.

Skills across project management, change management, functional knowledge of the CRM software, amongst others has been highlighted as major success factors to CRM packaged software implementations (Nelson 2002b; Yu 2001). Ryals and Payne (2001) argue that a major barrier to successful CRM implementation is the lack of skills in the building and using of the CRM system. Wilson et al. (2002), in their study of CRM success factors, found that organisational board level backing was crucial to the success of CRM initiatives.

4.5 Data Factors
Data analysis and quality has been suggested by many researchers as being important to CRM initiatives (Nelson 2002b; Goodhue et al. 2002; Swift 2002; Winer 2001; Abbott et al. 2001; Ryals and Payne 2001). Winer (2001) argues that traditional analysis of customer data is based upon customer segmentation decisions which is quite different than the customer strategies which form part of CRM strategies today that rely more on "1-to-1 marketing" and "lifetime customer value". Abbott et al. (2001) studied seventeen organisations implementing CRM strategies and found that clean customer data was essential to successful CRM performance. Nelson (2002b) argues that poor-quality customer data and information is a top cause of failure of CRM initiatives, resulting in poor data analysis and decision making. Ryals and Payne (2001) suggest that data quality and quantity is a barrier to successful CRM initiatives, they found that having more detailed customer data to add to the data warehouse was important, as well as having quality data. Goodhue et al. (2002) argue that successful CRM initiatives will require great effort to improve data quality and underlying data infrastructure to the level needed for successful CRM initiatives. Swift (2002) also supports the view of Goodhue et al., and suggests that there is a propensity of firms that have failed CRM initiatives because they avoided the data issues required by their CRM initiatives.

4.6 Summary
The results of the above literature review are summarized in the very preliminary model in Figure 4. Superficially, the factors in Figure 4 are very different from those in Figure 2. However, there are some areas of overlap:

- Business factors in Figure 4 corresponds to some extent to Fit between the software and the business (P5) in Figure 2,
- Implementation factors in Figure 4 corresponds to implementation project factors (P1) in Figure 2,
- Technology factors in Figure 4 corresponds to some extent to High-performance IT infrastructure (P2) in Figure 2
- People factors in Figure 4 corresponds to some extent to Organizational learning (P6) and Change management (P7) in Figure 2.
- Data factors in Figure 4 does not seem to correspond to any factor in Figure 2.
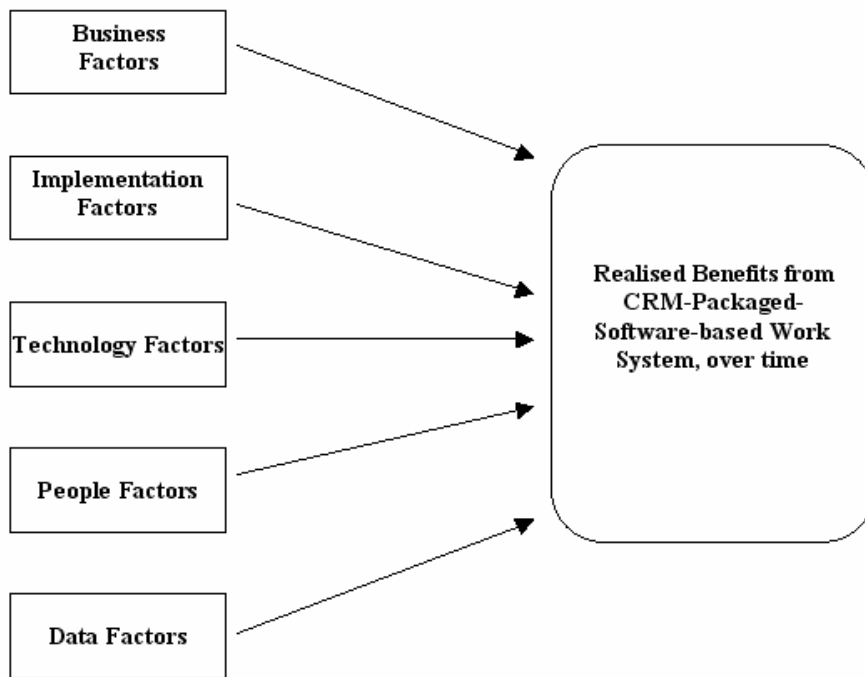
Figure 4: A Preliminary CRM-based-Work-System Benefits Factor Model

Because of the above differences, it seems important to check the preliminary model against empirical reality.

5. Research Method

As a preliminary test of the model in Figure 4, we decided to review and content analyse presentations at the June 2003 Sapphire conference held in Orlando, Florida[1]. At this conference, there were four keynote speeches from the CEO of SAP and board members, 79 presentations from senior SAP product and sales managers, and 109 presentations from IS managers from multi-billion dollar corporations, such as Bosch, Chevron-Texaco, Disney, Hershey, Lockheed-Martin. Typically, the presenter of each customer presentation was the most senior IS manager responsible for implementing the packaged software in that organization. Streaming video of each of these 45-minute presentations, together with PowerPoint slides, and full transcripts of each presentation, are available from the SAP website[2]. The prime goal for this paper was to see if the model in Figure 4 was consistent with the comments of these senior managers.

Presentations from the ten organizations summarized in Table 1 were related to implementations of CRM software. Data from the presentations were content analyzed (Strauss and Corbin 1990) to identify factors that were important for the realisation of benefits for CRM packaged software. Results were then compared to the factors derived from the literature, i.e., to Figure 4.

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[1] The Sapphire conferences are a series of annual conferences organized by SAP, the world's largest vendor of enterprise systems, in various continents around the world. Sapphire conferences provide a vehicle for SAP to inform their customers of new product developments and for their customers to try out new software and exchange information about implementation experiences and what they are doing with SAP software. At a typical 3-day US Sapphire conference, there are over 6,000 attendees each paying some thousands of dollars to attend.

[2] Go to www.sap.com/community/pub/events.aspx and select Sapphire, Orlando, 2003, CRM

Company	Description	Functional Area	Time after go live
Audi AG	A large Germany automotive manufacturer. 720,000 customers, 550,000 vehicles stored.	Service Centre	12 months
Bosch Rexroth Corp.	A global provider of products and technologies for the drive control motion industry. 80 countries and 3.6 billion Euros Revenue	Marketing Automation, Sales Force Automation, Supply Chain Management, Internet Order Management, CRM Analytics	Just going live with various phases.
MCI	A global telecommunications provider. 20 million customers, 50,000 employees on 65 countries.	Revenue Management/Contract Accounting	Pre-live
CSC	A global IT services provider. 91,000 employees, $US14 billion revenue	Sales Force Automation	Just going live
Sharp Corp.	A global consumer electronics and components manufacturer. 56,000 employees.	Sales Force Automation	Just going live
Tetra Pak International SA	A global packaging manufacturer. 165 countries, 7.5 billion Euros Revenue, 21,000 employees.	Customer Interaction Centre	Just gone live
Adobe Systems	A global IT software product provider. 25 countries, $US1.2 billion revenues	Customer Interaction Centre	Just before going live.
Brother International	US based (Japan owned) consumer electronics manufacturer. 1,200 employees in USA and revenues exceeding $US 1 billion.	Campaign Management and Business Warehouse	24 months
Adidas Salomon AG	Global manufacturer of sports apparel and products. 14,700 employees, 6.5 billion Euros Revenue	Customer Interaction Centre	Post - live
AMR Research	Industry research provider.	Their research on successful CRM across many functional areas.	Various

Table 1: Case Study Organizations

6. Results

Table 2 summarizes the factors identified in both the literature review and from the coding of the Sapphire 2003 presentations. Overall there were 157 coded text passages in the transcripts of the ten case studies. These were grouped into a total of 24 factors, 22 of which were mentioned by the presenters. Each tick in Table 2 represents a specific coded text passage identified in one of the transcribed customer presentations. Each of these CRM benefit drivers and its level of support in the case presentations are discussed in the following table.

Group	Factors (157 ✓)	Frequency with which the factor was mentioned
1. Business (28 ✓)	1.1 CRM Architecture	✓✓✓
	1.2 Customer strategy	✓✓✓✓✓✓✓
	1.3 Customer processes	✓✓✓✓
	1.4 Industry	
	1.5 Measures	✓✓✓
	1.6 Value	✓✓✓✓✓
	1.7 Usage	✓✓✓
2. Implementation (42 ✓)	2.1 Implementation Strategy	✓✓✓✓✓✓✓✓✓✓✓✓✓✓✓
	2.2 Project Management	✓✓✓✓✓✓✓
	2.3 Change Management	✓✓✓✓✓✓✓✓
	2.4 Adoption Incentives	✓✓✓✓
3. Technology (34 ✓)	3.1 Technology Infrastructure	✓✓✓✓
	3.2 Functionality	✓✓✓✓✓
	3.3 Integration	✓✓✓✓✓✓✓✓✓
	3.4 IT processes	✓✓✓✓✓✓✓
	3.5 Tools	✓✓
4. People (37 ✓)	4.1 Culture	✓✓✓
	4.2 Skills	✓✓✓✓✓✓
	4.3 Roles and Responsibilities	✓✓✓✓✓✓✓✓✓
	4.4 Support	✓✓✓✓✓✓✓✓
	4.5 Communication	✓✓✓✓✓
5. Data (16 ✓)	5.1 Data Quality	✓✓
	5.2 Data Quantity	
	5.3 Data Strategy and Infrastructure	✓✓✓✓✓✓✓✓✓✓✓✓✓

Table 2: 22 Factors identified in the presentations as affecting benefits from CRM

6.1 Business Factors

Seven business factors were derived from the literature and the ten case studies. Case study data supported all factors from the literature except for the industry factor (Factor 1.4 in Table 2):

CRM Architecture (3 ticks)
AMR Research suggests that rather than an CRM package software being implemented as a tightly integrated software package, that in reality many organisations actually implement in a "very, very point fashion". These point solutions requiring a CRM architecture to describe how all CRM pieces relate to each other. Bosch suggests that CRM business model is required to describe benefits and IT enablers.

Customer Strategy (9 ticks)
Adobe Systems and their aim to manage there global business stress that a "single view of the customer is really critical". Similarly, several other case organisations stress the need for that single view of the customer. Bosch with their "methodology" that allows their five or six divisions to have a common view and definition of the customer. Definition of the customer strategy and linkage back to the overall business strategy was also seen as very important by many of the case study organisations.

Customer Processes (4 ticks)
The automation, definition and fit of the CRM packaged software against the customer processes was mentioned by several case organisations as being important. Brother International described how they conducted their process review of their national service

organisation. Adidas Salomon AG described how they plan to achieve best practice by adapting their business processes to the CRM software package "we basically say the best practice is there, so bring your customers, bring your people, bring your products and we put in the system".

Industry (no ticks)
The industry dimension was not explicitly mentioned by any of the case study organisations. However, it is plausible that industry fit may have been implicit in these case organisations as mySAP CRM is available and deployed in industry focussed forms.

Measures (3 ticks)
Alignment of business measures, baseline measurements and project measures were identified by three of the case organisations as being important. AMR Research described how it is important to "line the measures", how it's possible for different departments within the one organisation, i.e. sales and service, dealing with the same customers having competing measures. AMR Research also argue that unless you measure the area of your business that will be impacted by the investment then the post-implementation benefits can't be quantified. Tetra Pak argued that constant project measurement is important.

Value (6 ticks)
The value that the investment in CRM packed software will provide to all the different stakeholders or users of the CRM packaged software was mentioned by many of the case study organisations. This is well illustrated by a quote from the CSC organisation "we mapped the ten functional areas to the key stakeholders so that when they said, "what is in it for me?" we could tell them".

Usage (3 ticks)
CSC, Audi and Bosch all emphasised how it is important to understand how the CRM packaged software will be used. Audi spoke about how to best understand project success is by "asking the users and those responsible for various areas of customer care".

6.2 Project Implementation Factors
Four project implementation factors were derived from the ten case studies. Case study data strongly supported all factors from the literature:

Implementation Strategy (18 ticks)
A variety of strategies were mentioned by the case study organisations as being important. Pilots were mentioned by many, as well as ways of gaining executive support. Various other implementation strategies were aimed at ensuring that the CRM software package was actually adopted by the users. This is well illustrated by CSC "You need to go find a few advocates. You need to find a few people who really want to do this. You need to bring them with you and let them sell the other people.".

Project Management (9 ticks)
MCI articulated very well that project management is important and what parts of project management are key, these areas were also echoed by many other case study organisations. "All of you who have been involved in SAP programs before know it's very important to manage scope because there is so much you can do within the project suite. Stay focussed on what you've committed to do and have a strong change management program to deal with essential changes and leave everything else to the side."

Change Management (10 ticks)
Many case study organisations supported the importance of change management, mainly around the successful acceptance of the new systems. Adobe Systems sums up the change

management challenge quite well "we talk about the challenge of change management with the business, but so far we've found significant issues within my own organisation. The systems that we're looking at replacing, some of my people are very attached to them and they've had great difficulty giving up data and helping us move to this new arrangement". This example illustrates that change management even within organisational structures that we have control of, is difficult.

Adoption Incentives (5 ticks)
Many case-study organisations stressed that incentives must be provided to ensure that the new CRM packaged software systems are adopted by the users. Bosch link the bonuses of sales staff with their utilisation of the new systems "we have it as part of the bonus for individual sales people that they are using the system".

6.3 Technology Factors
Five technology factors were derived from the literature and the ten case studies. Case study data strongly supported all factors from the literature except for the tools factor (factor 3.5):

Technology Infrastructure (5 ticks)
The technology infrastructure upon which the CRM package software is based upon was highlighted as being important. MCI was one of the larger case study organisations reviewed with 20 million customers and 50,000 employees, and this size attribute amplified many of the infrastructure fit issues. Scalability, operational stability, security and auditability were amongst many attributes of the technology infrastructure that were important.

Functionality (6 ticks)
The depth and match of functionality against the business processes of the CRM packaged software was highlighted as important to many of the case study organisations. This was found to be important because the greater depth and match the less expensive customisation was required. Adidas mentioned that "the standard functionality ...was a very positive point that kick-started the project".

Integration (12 ticks)
Integration between other information systems and data repositories has mention by case study organisations as being very important. Bosch use the term "harmonisation" to reflect the level of integration required by their organisation "we had a huge harmonisation effort...extensive data harmonisation...we had seven different ERP systems and literally twelve different CRM systems, that all had to be reduced into one system".

IT Processes (9 ticks)
The IT processes needed to provide a manageable and stable technical environment was seen as important. Again, the huge size of MCI illustrated this point very well "five levels of testing, we'll be sure there are no surprises during those early months of operation. We'll invest heavily up front to be sure we don't have to redo at the back".

Tools (2 ticks)
Both Tetra Pak and MCI mentioned the need for inherent and common tools. MCI in their quest to minimise customisation stress "we know we can use the inherent tools that come with the SAP product to probably make it (SAP) do most anything".

6.4 People Factors
Five people factors were derived from the literature and the ten case studies. Case study data strongly supported all factors from the literature:

Culture (3 ticks)
Many of the case study organisations including AMR Research suggest that the greatest reason for CRM initiative failure is due to culture " the number 1 reason is a huge cultural resistance to change in customer facing processes...companies that have market organisations, sales organisations, service organisations, that are measured and managed differently....so when you think about implementing a common set of systems, a common set of processes in that context – it just doesn't work".

Skills (8 ticks)
Current and extensive skills in the specific product and in the processes were seen as very important. Sharp emphasised that product specific skills are needed "we also had our internal resources that were really familiar with SAP technology". Adidas mentioned the need for "strong support from business process experts" and the need for current skills "old R/3 knowledge...is not sufficient to do development here in CRM...the infrastructure complexity is a bit different than usual".

Roles and Responsibilities (11 ticks)
Clear, defined and communicated roles and responsibilities had substantial support from most case study organisations. This need was best illustrated by CSC "so when we put all these (activities) together, we will stay aligned. Everybody knows their roles and responsibilities and they have the same vision of the end game".

Support (9 ticks)
Support from senior executives and the business was seen as important. Brother suggest that "the president should be aware of all the IT projects...assigning business process leaders for all IT projects...the key responsible person is always a business person, who requires to make a full commitment for his own resources".

Communication (6 ticks)
We mentioned the need for communication of roles and responsibilities above, however a more general need to communicate all aspects of the CRM initiative was supported by the case study organisations, value to stakeholders, obtaining feedback from users, and conducting road-shows were all mentioned. Tetra Pak put it most succinctly "then communicate – communicate, communicate, communicate".

6.5 Data Factors
Three data factors were derived from the literature and the ten case studies. Case study data supported all factors from the literature except for the quantity factor (factor 5.2):

Data Quality (2 ticks)
Both MCI and Adobe Systems stress the need for data quality. MCI explain that they have a lot of work to achieve their data quality requirements " we know a lot of scrubbing, a lot of cleaning up is going to happen to be able to achieve data fit".

Data Quantity (no ticks)
There was not support for the data quantity factor from the ten case study organisations. However, given the support from the literature review for this factor we have chosen to leave this dimension in at this stage.

Data Strategy and Infrastructure (14 ticks)
Standardised, single view, and integrated data characteristics were all seen as important to most of the case study organisations. Obtaining these data characteristics was achieved through a data strategy and architecture. AMR Research illustrated this need very well "even if your planning a CRM strategy – how do we think about an overall architecture that's going to give

the opportunity to have a consistent customer data model that can for one time aggregate this information".

7. Conclusion

This study has identified a huge range of factors that potentially affect the realisation of benefits from CRM packaged software-based work systems. Tabulating and grouping similar factors identified in the literature led to our preliminary model (See Figure 4) of 24 factors in five groups, that have all been found to affect benefit from CRM-based work systems. Despite some similarities, there is considerable difference between our model in Figure 4 and that of Shang and Seddon (2003), in Figure 2. Shang and Seddon argue that their model should apply to all implementations of packaged software, so the difference is of considerable concern.

To test whether our model was consistent with real-world experience, we content-analysed ten presentations from senior managers at the 2003 Sapphire conference. Despite the limitations of this data set (the most obvious limitation being that all presentations were from large companies using one vendor's CRM software), we found that twenty-two of the 24 factors from the literature were also mentioned by presenters at the Sapphire 2003 conference.

This finding, i.e., that our literature-based model is consistent with experience in ten major corporations, gives us sufficient confidence to use the preliminary model as the starting point for in-depth case study research into the factors that affect benefits from CRM packaged software. The model in Figure 4 and list of factors in Table 2 are thus the key contribution of this paper. In addition to their use in our forthcoming research, we also believe Figure 4 and Table 2 provide valuable insights to organisations into which factors are important and where limited resources may be focused to realise benefits from their investment in CRM packaged software.

8. References

Abbott, J., Stone, M. and Buttle, F. "Customer Relationship Management in Practice - a Qualitative Study", *Journal of Database Marketing,* (9:1), 2001.

Accenture, Road to CRM Riches, 2002. http://www.line56.com/research/download/accenture_road_crm.pdf (Viewed 24 February, 2004).

Alter, S. "A General, Yet Useful Theory of Information Systems", *Communications of the Association for Information Systems,* (1:13), 1999.

Berry, M. and Linoff, G. *Mastering Data Mining: The Art and Science of Customer Relationship Management,* John Wiley & Sons, New York, USA, 2000.

Davenport, T. H. "Putting the Enterprise into the Enterprise System", *Harvard Business Review,* (76:4), 1998.

Davenport, T. H. *Mission Critical: Realizing the Promise of Enterprise Systems,* Harvard Business School Press, Boston, Massachusetts, 2000.

Davenport, T. H., Harris, J. G. and Cantrell, S. "The Return of Enterprise Solutions: The Director's Cut", *Accenture Institute for Strategic Change,* 2002.

Fayerman, M. "Customer Relationship Management", *New Directions for Institutional Research,* 2002.

Gillies, C., Rigby, D. and Reichheld, F. "Then Story Behind Successful Customer Relationship Managment", *European Business Journal,* (14:2), 2002.

Goodhue, D., Wixon, B. and Watson, H. "Realising Business Benefits Through CRM: Hitting the Right Target in the Right Way", *MIS Quarterly Executive,* (1:2), 2002.

Meta Group "*CRM Ecosystem",* Meta Group, Stamford, Conn., 2000.

Nelson, S. "Customer Relationship Management (CRM): Moving From Disillusionment to

Real Value", *Session 35, 2002 Gartner Symposium, Sydney Australia,* 2002a.

Nelson, S.   "Customer Relationship Management (CRM) the Second Time Around", *Session 41, 2002 Gartner Symposium, Sydney Australia,* 2002b.

Newell, F. *Why CRM Doesn't Work,* Bloomberg Press, Princeton, New Jersey, 2003.

Nucleus Research, Research Note C47, Assessing the real ROI from Siebel, 2002. http://www.nucleusresearch.com/research/c47.pdf (Viewed 24 June, 2002).

Reichheld, F. and Schefter, P.   "E-loyalty: Your Secret Weapon on the Web", *Harvard Business Review,* (78:4), 2000.

Rigby, D., Reichheld, F. and Schefter, P.   "Avoid the Four Perils of CRM", *Havard Business Review,* (80:2), 2002.

Ryals, L. and Payne, A.   "Customer Relationship Management in Financial Services: Towards Information-enabled Relationship Marketing", *Journal of Strategic Marketing,* (9:1), 2001.

SAP, Webcast Transcript: mySAP Customer Relationship Management, CRM Solutions, 2003. http://www.sap.com/community/int/webcast/2003_07_16_crm_transcript.asp   (Viewed 4 September, 2003).

Seddon, P. and Shanks, G.   "Lessons from the Packaged Application Software "Go Live" Failures at Cambridge and RMIT Universities: Implement in Haste, Repent at Leisure", *Melbourne University Working Paper,* 2003.

Seibel, Why CRM? The Business Case for Customer Relationship Management, 2001. www.seibel.com (Viewed November, 2003).

Selchert, M., Value Added With mySAP CRM Benchmarking Study, 2002. http://www.sap.com/community (Viewed 4th September, 2003).

Shang, S. and Seddon, P.   "Assessing and Managing the Benefits of Enterprise Systems: The Business Manager's Perspective", *Information Systems Journal,* (12:4), 2002.

Shang, S. and Seddon, P.   "Factors Affecting Net Benefits from Enterprise Systems", *Melbourne University Working Paper ,* 2003.

Starkey, M. and Woodcock, N.   "CRM Systems: Necessary, but not Sufficient. Reap the Benefits of Customer Management", *Journal of Database Marketing,* (9:3), 2002.

Strauss, A. and Corbin, J. *Basics of qualitative research : grounded theory procedures and techniques,* Sage Publications, Newbury Park, California, 1990.

Swift, R.   "Executive response: CRM is Changing Our Eras, the Information we Require, and Our Processes...", *MIS Quarterly Executive,* (1:2), 2002.

Thompson, B., What is CRM?, 2002. www.crmguru.com (Viewed 11 February, 2004).

Verhoef, P. and Langerak, F.   "Eleven Misconceptions about Customer Relationship Management", *Business Strategy Review,* (13:4), 2002.

Wilson, K. R., Knox, S. and Maklan, S.   "Factors for Success in Customer Relationship Management (CRM) Systems", *Journal of Marketing Management,* (18:1-2), 2002.

Winer, R.   "A Framework for Customer Relationship Management", *California Management Review,* (43:4), 2001.

Yu, L.   "Successful Customer-Relationship Management ", *MIT Sloan Management Review,* (42:4), 2001.