
Julie Griffin  
Department of Accounting and Information Systems, Cork Institute of Technology, Cork, Ireland.

Follow this and additional works at: https://sword.cit.ie/allthe

Part of the Accounting Commons, and the Management Information Systems Commons

Recommended Citation  

This Master Thesis is brought to you for free and open access by the Dissertations and Theses at SWORD - South West Open Research Deposit. It has been accepted for inclusion in Theses by an authorized administrator of SWORD - South West Open Research Deposit. For more information, please contact sword@cit.ie.

JULIE GRIFFIN

By

Julie Griffin BSC, ACA

A Thesis in Fulfilment for the Degree of Master of Business.

Research Supervisor:
Sylvia Dempsey

June 2007
The author hereby declares that, except where duly acknowledged, this thesis is entirely her own work and has not been submitted for any other degree in any other Institute of Technology or in any other University.
# TABLE OF CONTENTS

List of Figures 13

List of Tables 13

List of Charts 13

Acknowledgements 14

Abstract 16

Chapter 1 Introduction 17

1.1 Background to the Study 17
1.2 Gaps in the Literature 17
1.3 Focus of this Research: Cork County Council 19
1.4 Research Objective 20
1.5 Structure of the Study 20

Chapter 2 Literature Review 24

2.1 Introduction 24
2.2 Definition of Integrated Information Systems 24
2.3 Evolution of ERP 25
2.4 Reasons for Implementing an Integrated System 26
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.4.1</td>
<td>Efficient Choice Perspective</td>
<td>27</td>
</tr>
<tr>
<td>2.4.2</td>
<td>Forced Selection Perspective</td>
<td>27</td>
</tr>
<tr>
<td>2.4.3</td>
<td>Fashion Perspective</td>
<td>28</td>
</tr>
<tr>
<td>2.4.4</td>
<td>Fad Perspective</td>
<td>28</td>
</tr>
<tr>
<td>2.5</td>
<td>Best-of-Breed (BoB)</td>
<td>29</td>
</tr>
<tr>
<td>2.6</td>
<td>ERP V Best-of-Breed (BoB)</td>
<td>30</td>
</tr>
<tr>
<td>2.6.1</td>
<td>Origin of adoption</td>
<td>31</td>
</tr>
<tr>
<td>2.6.2</td>
<td>Relationship with Vendors</td>
<td>33</td>
</tr>
<tr>
<td>2.6.3</td>
<td>Level of Integration</td>
<td>34</td>
</tr>
<tr>
<td>2.6.4</td>
<td>Functionality</td>
<td>36</td>
</tr>
<tr>
<td>2.6.5</td>
<td>Cost</td>
<td>37</td>
</tr>
<tr>
<td>2.6.6</td>
<td>Organisational Issues</td>
<td>38</td>
</tr>
<tr>
<td>2.7</td>
<td>Future of ERP V BoB</td>
<td>38</td>
</tr>
<tr>
<td>2.8</td>
<td>Risks in the Implementation of Integrated Systems.</td>
<td>39</td>
</tr>
<tr>
<td>2.9</td>
<td>Critical success factors to Systems Implementation</td>
<td>40</td>
</tr>
<tr>
<td>2.9.1</td>
<td>Top Management Commitment</td>
<td>40</td>
</tr>
<tr>
<td>2.9.2</td>
<td>Business Driven</td>
<td>42</td>
</tr>
<tr>
<td>2.9.3</td>
<td>Clear Communication of Business Vision</td>
<td>43</td>
</tr>
<tr>
<td>2.9.4</td>
<td>Skilled Cross-functional Project Team</td>
<td>44</td>
</tr>
<tr>
<td>2.9.5</td>
<td>Well Developed Work and Resource Plan</td>
<td>45</td>
</tr>
<tr>
<td>2.9.6</td>
<td>Close Working Relationship with Vendor</td>
<td>46</td>
</tr>
<tr>
<td>2.9.7</td>
<td>Business Process Re-engineering (BPR)</td>
<td>46</td>
</tr>
<tr>
<td>2.9.8</td>
<td>Change Management</td>
<td>48</td>
</tr>
<tr>
<td>2.9.9</td>
<td>Project Champion</td>
<td>49</td>
</tr>
</tbody>
</table>
Chapter 3 The Role of the Accountant in the Implementation of an Integrated System

3.1 Introduction

3.2 Changing Role of the Accountant

3.3 Role of the Accountant in Implementing an Integrated System

3.3.1 Role of Accounting within Change Programmes

3.3.1.1 Accountant with Business Orientation

3.3.1.2 Managers' Perception of Accountant's Role

3.3.2 Level of Senior Management support for Accounting Innovation

3.3.3 Presence of an Accounting Champion

3.3.4 Level of Technological Skills of the Accountants

3.3.5 Level of Soft Skills of the Accountant

3.3.6 Positioning of Accountants within the Formal Hierarchy

3.3.7 Relationship between IT, Users and Accounting

3.4 Linking the "critical success factors" and the "key factors"

3.4.1 Top Management Commitment

3.4.2 Business driven

3.4.3 Clear Communication of Business Vision

3.4.4 Skilled Cross-Functional Project Team

3.4.5 Well Developed Work and Resource Plan
3.4.6 Close Working Relationship with the Vendor 73
3.4.7 Business Process Re-engineering 73
3.4.8 Change Management 73
3.4.9 Project Champion 74
3.4.10 Critique of Existing System 74
3.5 Conclusion 74

Chapter 4 Integrated Systems in Public Service Organisations 76

4.1 Introduction 76
4.2 Adoption in Public Sector Organisations 76
4.3 Needs Assessment Basis 78
4.4 Tendering Process 80
   4.4.1 Statement of Works (SOW) 81
   4.4.2 Final Contract Negotiations 83
4.5 Single Vendor Versus Best-of-Breed (BoB) Systems 83
4.6 Implementation of an Integrated System 85
   4.6.1 Top Management Commitment 86
   4.6.2 Business Driven 86
   4.6.3 Clear Communication of Business Vision 87
   4.6.4 Skilled Cross-functional Project Team 88
   4.6.5 Well Developed Work and Resource Plan 88
   4.6.6 Close Working Relationship with Vendor 89
   4.6.7 Business Process Re-engineering (BPR) 90
   4.6.8 Change Management 91

4
4.6.9 Project Champion 93
4.6.10 Critique of Existing Systems 94

4.7 Future Role of Accountants in the Public Sector 94
4.8 Functional V Business Unit Orientation in the Public Sector 95
4.9 Conclusion 96

Chapter 5 Methodology 98

5.1 Introduction 98
5.2 Research Definition 98
5.3 Research Topic 98
5.4 Literature Review 99
  5.4.1 Gap in the Literature 99
  5.4.2 Research Objective 99
5.5 Qualitative and Quantitative Research Methods 101
  5.5.1 Qualitative Research 101
  5.5.2 Quantitative Research 102
  5.5.3 Qualitative versus Quantitative 103
5.6 Research Strategy 105
  5.6.1 Case Study Strategy 106
  5.6.2 The Holistic Approach to Research 107
5.7 Limitations of Case Study Approach 107
5.8 Single Case Study Method 109
5.9 Triangulation 110
5.10 Participant Observation 111
5.10.1 Advantages

5.10.2 Disadvantages

5.11 Interviews

5.12 Documentation Review

5.13 Conclusion

Chapter 6 Organisational Profile

6.1 Introduction

6.2 Local Government Structure in Ireland

6.3 County Councils and City Councils Responsibilities

6.4 Cork County Council
   6.4.1 History of Cork County Council
   6.4.2 Cork County Councils Headquarters
   6.4.3 Structure and Organisation of Cork County Council
   6.4.4 Financing
   6.4.5 Achievements

6.5 Corporate Debtors System

6.6 Cork County Councils Water Service and Supply
   6.6.1 Water Customers
   6.6.2 Water Charge Types
   6.6.3 Water Metering Project

6.7 Conclusion
Chapter 7 Former Water Debtors System

7.1 Introduction

7.2 Former Debtors System

7.3 Billing Water Customers
   7.3.1 Metered Charge
   7.3.2 Fixed Charge Rates

7.4 Receipts from Water Customers
   7.4.1 Cash Desk Receipts
   7.4.2 Standing Orders
   7.4.3 An Post Billpay
   7.4.4 Electronic Funds Transfer (EFT)

7.5 Changes in the Finance Department
   7.5.1 Change Over To Accruals Based Accounting
   7.5.2 New Pricing Policy
   7.5.3 Bank Reconciliation Requirements

7.6 Needs Assessment
   7.6.1 Customers Accounts
   7.6.2 Preparation of Financial Statements
   7.6.3 Non Standard Business Processes at Divisional Level

7.7 Possible Solutions
   7.7.1 Outsource
   7.7.2 Use JDE Accounts Receivable (AR) Module
   7.7.3 Interface Upgraded Legacy Systems into JDE
Chapter 8 Tendering and Implementation of the Corporate Debtors System

8.1 Introduction
8.2 Tendering Process
8.3 Restricted Tendering Process
8.4 Responses to Pre-Qualification Questionnaire
8.5 Tender Assessment
  8.5.1 Vendor Interviews
  8.5.2 Marking Process
  8.5.3 Demonstration
  8.5.4 Site Visit
8.6 The Project Team
8.7 Project Initiation Document
8.8 Corporate Debtors System Project Plan
8.9 System Design and Interfaces
  8.9.1 Contact Central and Divisions
  8.9.2 JDE GL Mappings
  8.9.3 Customer Billing
  8.9.4 Morrison Interface
  8.9.5 CSAR Interface
8.9.6 JDE GL Interface 157
8.9.7 Bill, Credit note and Statement Layouts 159
8.9.8 Receipts from Water Customers 159
8.9.9 Corporate Debtors System Reports 161

8.10 Systems Configuration 161
8.10.1 Hardware 162
8.10.2 Software 162

8.11 Training 162

8.12 Functionality and User Acceptance Testing 163
8.12.1 Bill Calculation Testing and Bills Interface Testing 163
8.12.2 Receipts and Interface Testing 164

8.13 Data Conversion Testing and Live Build and Go Live 164

8.14 Future Expectations of the Corporate Debtors System 165

8.15 Conclusion 166

Chapter 9 Analysis 167

9.1 Introduction 167

9.2 Top Management Commitment 167
9.2.1 Commitment from Initiation 167
9.2.2 Commitment through Provision of Resources 168
9.2.3 Commitment throughout the Project 169
9.2.4 Commitment for Accounting Innovation 169

9.3 Business Driven 170
9.3.1 Not Just an Accounting System 171
9.3.2 Not Just a Technology Project

9.4 Clear Communication of Business Vision

9.4.1 Communication Methods Used

9.4.2 Communication to Top Management

9.4.3 Communication to Users of the System

9.4.4 Communication to Vendors

9.4.5 Communication with ICT Department

9.5 Skilled Cross-Functional Project Team

9.5.1 Project Team

9.5.2 Project Leaders

9.5.3 Technological Skills of the Accountants

9.6 Well Developed Work and Resource Plan

9.6.1 Accountants Role

9.6.2 Project Resources

9.7 Close Working Relationship with the Vendor

9.7.1 Vendors Future Plans

9.7.2 Finance Departments Relationship with the Vendor

9.8 Business Process Re-engineering

9.8.1 Impact of Non Accountants Involvement

9.8.2 Lessons Learned

9.9 Change Management

9.9.1 Training

9.9.2 Accountants Aid Change Management

9.10 Project Champion
Chapter 10 Conclusions of this Research

10.1 Question 1: How was the Integrated System Developed and Implemented within the Local Authority? 190

10.2 Question 2: Were the ten critical success factors for systems implementations present? 190

10.3 Question 3: What was the role of the accountants in each of the ten critical success factors? 191

10.4 Importance of the Role of the Accountant in the Ten Critical Success Factors 193

10.4.1 Top Management Support 193

10.4.2 Business Driven 193

10.4.3 Clear Communication of Business Vision 193

10.4.4 Skilled Cross-Functional Project Team 194

10.4.5 Well Developed Work and Resource Plan 194

10.4.6 Close Working Relationship with the Vendor 194

10.4.7 Business Process Re-engineering 194

10.4.8 Change Management 195

10.4.9 Project Champion 195

10.4.10 Critique of Existing System 195

10.5 Limitations of this Study 196

10.6 Future Research 197

10.7 Conclusion 198
Bibliography

Appendix 1  Pre-Qualification Questionnaire
Appendix 2  Main Tender Document
Appendix 3  Corporate Debtors Test Script
List of Figures

Figure 2.1 Critical Success Factors for a Successful Integrated Systems Implementation 41

Figure 3.1 Seven Key Factors in Analysing the Importance of the Accountant in the Implementation of an Integrated System 56

Figure 6.1 Organisational Chart 121

Figure 8.1 Team Involved in the Corporate Debtors System Implementation 152

Figure 8.2 Corporate Debtors System 154

List of Tables

Table 2.1 Comparing ERP and BoB 32

Table 3.1 Matrix linking the “critical success factors” and “the key factors” 71

Table 5.1 The Structured Interview Process 115

Table 8.1 Membership of Tender Assessment Team 147

Table 8.2 Reports Provided by the Corporate Debtors System 161

List of Charts

Chart 8.1 Cork County Councils Tendering Process Time Line Chart 148

Chart 8.2 Cork County Councils Corporate Debtors System Implementation Project Time-line Chart 155
Acknowledgements

This is my favourite part, as I get to gratefully acknowledge and thank everyone who was superb to me during my studies.

Firstly I would like to thank my wonderful Mum and my best friend Eileen. Thank you so much for all your support and always encouraging me to pursue my goals and dreams. She helped make this happen. Start fattening up your wallet because those Mummy daughter shopping sprees are back on the agenda!! Thanks to my brilliant sister for all the proofing and for always being there when I needed her. Thanks to Denis for always telling me to follow my heart and making me laugh. Thanks to Paddy for all the jokes and road trips to Cork but Cork after all is the real capital and cork chicks rule!!! Thanks also for the table of contents and all the formatting on his days off. Thanks to my Dad who is in spirit, for listening on the days I sat at my desk and said please inspire me to write fantastically today!!! I thank God for having you all in my life.

Thanks to Donna, my brain coach!!! 😊 for all her awesome tips and advice. For saying it straight out and making me laugh. She was a fantastic support during this writing and I am blessed to know her and have her in my life.

An enormous thank you to the Co Co gang especially Roisin for supporting me in every way and facilitating me in completing one of my lifetime goals, to her I am truly grateful. My babysitting services are always available at her request! Thanks to Ger for his permission to conduct this research and for all his wonderful assistance throughout the study. His full time support and backing on this was superb. I will work like a trooper for Roisin and Ger now, mini you it will be hard to top my previous 24/7 dedication!! A gigantic thank you to Mick, who was so brilliant during this, tutoring me the whole time and making me laugh, I was blessed to have his encouragement and support. Thanks so much to Kevin who was just amazing, thanks for all his help with the charts and formatting, I will never forget it. Thanks to
Brenda for her study tips and clearing the fog when I got a tad bit lost, hugely appreciated. Thanks to Liz for her speedy e-mail replies and water sharing knowledge, she was great. Not only are you all my work colleagues but you are friends for life.

Thanks to my friends (Vicki, Wendy, Eileen and Marienne) who were great to listen, support and understand when I couldn’t come out to play!!!! But be warned… HERE I COME.

Thanks to Audrey for her outstanding help and advice on masters programmes and steering me on the right path, she was amazing and thanks to Paul for his constant support and for putting me in contact with Sylvia, it was great.

And last but not least a GIGANTIC thank you to the lady who stuck with me for two years!! my research supervisor Sylvia Dempsey. I can’t find the words to express my thanks but all I can say is if I had to do it all over again I wouldn’t swap her for the world. Her patience, motivation, guidance, and advice were fantastic, I learned so much from her and she is someone I will always stay in contact with. Thanks Sylvia, I can’t believe we are done! What will I fill my time with now!!!!

I would just like to finish saying thank you one and all. I am truly blessed to have you all in my life. Everyone was so helpful to me.

Here’s to freedom and a full weeks pay!!!!
Abstract

The last decade has been a time of continuous rapid change in the business environment. To survive in this environment, organisations have had to become more competitive and customer focussed. The promised benefits of integrated systems made their implementation a popular attempt at achieving success in the private sector. The implementation process for, and the benefits of, integrated systems in the private sector are well documented.

Integrated systems are still a relatively new phenomenon in the public sector. The researcher was working, as an accountant, in Cork County Council, when it was tendering for and implementing a new integrated system. Very little has been written on the implementation of integrated systems in the public sector. Practically nothing has been written on the role of the accountant in this process. Recognising these gaps, and having the opportunity to act as a participant observer, the researcher decided this would be a worthy area of research. This study is an exploratory case study examining the influence of the accountants in the implementation of an integrated system in Cork County Council.

A review of the existing literature identified ten critical factors necessary to ensure that integrated systems are implemented successfully and seven key factors contributing to the influence of the accountant in that process. These are linked in a matrix which highlights the importance of the accountant in the implementation of integrated systems and forms the theoretical framework for the rest of the study.

In Cork County Council the accountants were instrumental figures in the successful implementation of an integrated system. The accountants were committed and involved in the implementation process from initiation to completion. Their traditional skills in accounting and analysis, combined with their modern softer skills, strong business acumen and knowledge of technology, made them valuable members of the implementation team.
Chapter 1 Introduction

1.1 Background to the Study

In the past decade the business environment has changed rapidly. Globalisation and technological development are the two major players in this change. Globalisation has forced businesses to be more competitive and customer focussed. In order to survive and flourish, each organisation must provide a better, faster service, a wider array of products and related services and even lower prices. Not only is technological development the other major player, it is also a valuable tool in becoming more competitive and customer focussed. Each organisation must be aware of how it can utilise appropriate technological developments to become more proficient in the new global competitive business environment.

An integrated information system is one of the modern information technology (IT) approaches an organisation can use to improve its competitiveness. Integrated systems are seen as a way to become more efficient and to deliver a better service to customers. They have been widely adopted by organisations in the private sector and masses of literature is available describing the factors required to successfully implement an integrated system in the private sector.

1.2 Gaps in the Literature

The researcher has identified two significant gaps. Firstly, there has been little research with regards to integrated systems' implementations in the public sector (Kumar et al, 2002; Kavanagh and Hoekstra, 2004; Botta-Genoulas and Millet, 2006). According to Kumar et al (2002) an integrated system in government organisations is a “relatively new concept and not much empirically supported research is available” (p169). Later Botta-Genoulas and Millet (2006) reiterate this
stating that it is a "new area" in the service sector and "there is little theoretical research on the topic" (p203). This new development for the public sector needs to be researched.

"Now the need for such studies has become apparent" (Botta-Genoulas and Millet 2006, p203).

Secondly, very little has been written on the role of the accountant in the implementation process. According to Scapens and Jazayeri (2003) existing research does not explore "how opportunities are opened up" (p201) by the implementation of integrated systems with regard to accounting. A lot of literature, such as Granlund and Malmi (2002), has examined "causal relationships" (Scapens and Jazayeri 2003, p204), that is, the impacts which the introduction of integrated systems can be expected to have on management accounting. However, more research is needed to explore the processes of change and the changes in accounting in the implementation, and due to the implementation, of integrated systems (Scapens and Jazayeri, 2003). This is again backed-up later by Sutton (2006) who writes that accounting research has added little with regards to the role of integrated systems in accounting. He claims that:

"the accounting research community has largely ignored the impact such systems have on all facets of business organisations" (Sutton 2006, p1).

Scapens and Jazayeri (2003) call for more case study research on the implementation of integrated systems and how these facilitate and reinforce accounting change in other organisations. This is reiterated in calls for further research on the relation between integrated systems and accountants expertise (Hunton, 2002; Bhimani, 2003; Granlund and Mouritsen, 2003; El Sayed, 2006). Research on 'how' accountants are redefining their expertise in terms of how implemented systems should work within their companies needs to be examined (El Sayed, 2006).
This study aims to instigate discussion and address these gaps by examining the role the accountants play in the implementation of an integrated system in a local government authority. The case study chosen is the implementation of an integrated Corporate Debtors System for the Water service of Cork County Council.

1.3 Focus of this Research: Cork County Council

Cork County Council is a local government authority. It has three divisions: North Cork, South Cork and West Cork. It is responsible for providing services such as water, refuse, housing and roads to the people of County Cork. It is managed by the County Manager, who is supported by the heads of the various departments. Each of the divisions were responsible for their own billing and receipting. This resulted in diverse billing and receipting procedures and poor collection levels. The Head of Finance and County Manager suggested the setting-up of a centralised Debtors unit with an integrated Corporate Debtors System. Each division could then focus on service delivery, while the centralised debtors unit could deal with the billing, receipting and customer account enquiries.

The researcher was employed by Cork County Council, as a contract accountant, when the decision was made to implement a new integrated system for the new debtors unit. She was involved in the project throughout the processes of tendering, implementation and training. Having recognised that the role the accountants in a local government authority played in this implementation was such a major gap in the literature, the researcher decided this would be a worthy area of participatory research. Ready access to information and interviewees and an in-depth knowledge of the way Cork County Council operates, made this study a feasible piece of research.
1.4 Research Objective

The objective of this study is:

To examine, in a Local Authority environment, the extent of the role of the accountant in the implementation of an integrated system.

This objective is accomplished by answering the following questions:

1. How was the integrated system developed and implemented within the Local Authority organisation?

2. To what extent were the critical success factors for systems implementations that were identified in the literature; namely top management support, clear business vision, communication of this vision, a skilled project team, a well developed work and resource plan, close working relationship with the vendor, business process re-engineering, change management strategy, a project champion and review of the current legacy systems, present?

3. What was the role of the accountants in each of the ten critical success factors?

The following describes how the research was carried out to answer these questions and fulfil the research objective.

1.5 Structure of the Study

An in-depth synthesis of the existing literature relating to this research is provided in chapters two, three and four. Chapter two provides definitions of an integrated
system and distinguishes between a Best of Br (BoB) system and an Enterprise Resource Planning (ERP) system. The main items in this area are Davenport (1998), Moriarty (1999), Granlund and Malmi (22), Nah et al (2003), Scapens and Jazayeri (2003) and Botta-Genoulas and Mille2006). The main outcome of this chapter is the formation by the researcher, from all the available literature, of ten critical success factors to aid the successful implementation of an integrated system.

Chapter three describes briefly the changing role of the accountant in today's business environment and then focuses on the role of the accountant in the implementation of an integrated system. The main writers are Tsay (1992), Brecht and Martin (1996), Chenhall and Langfield-Smith (1998), Carswell (2002), Clohosey (2002), Cagliò (2003), Newman and Vstrup (2005) and El Sayed (2006). The researcher, from the literature, configures seven key factors contributing to the significant impact the accountant can have on the implementation of an integrated system. The researcher then forms a matrix linking these seven key factors with the ten critical success factors for a successful system's implementation documented in chapter two. This matrix demonstrates the importance of the role of the accountant in each of the factors critical to the successful implementation of an integrated system and forms the theoretical underpinning of the rest of the study.

Chapter four focuses on the limited literature that examines the implementation of integrated systems in the public sector. The main writers are Kumar et al (2002) and Miranda (1999), (2002), (2003). It discusses the reason why integrated systems are adopted in the public sector. It describes how the "Needs Assessment" and the tendering process carried out prior to a system implementation help to prevent failure in systems implementations. This is extremely important in Ireland at the moment due to the recent failure in systems implementations in the Health Service. The ten critical success factors identified in chapter two are again discussed here in the context of public sector organisations.
The outcome of these three chapters was the formation of the research objective. Chapter five describes the research strategy chosen to achieve this objective. It explains why a case study method was selected. The use of triangulation in a single organisation is justified. The multiple data sources used by the researcher were participant observation, interviews and documentation.

Chapter six provides a profile of the case study organisation. It discusses the history of Cork County Council along with its remit. The structure of the organisation is described, as are its financing issues and main achievements. This chapter introduces the area within Cork County Council that is to be the focus of this study, namely the introduction of a new integrated Corporate Debtors System for the Water service. In the future, other services of Cork County Council will also avail of this centralised integrated system.

The findings of this research are described in chapters seven, eight and nine. Chapter seven provides a brief overview of the former Debtors Legacy Systems and reasons for adopting a new system. The options available to Cork County Council at the time are examined, with justification for the successful option: the integrated Corporate Debtors System. Chapter eight depicts the tendering, development and implementation processes involved. Finally the future expectations of the system are outlined.

In chapter nine the researcher analyses the processes examined in the previous chapter and places them in the context of the matrix which was created in chapter three. In other words, it highlights the significance of the role the accountants play in the ten critical success factors required to aid in the integrated systems implementation.

Chapter ten sums up the researcher's findings. It concludes that the role of the accountant in the implementation of an integrated system is a necessity. If the accountant is not involved the project will more than likely not be a success, as was
seen in earlier systems projects within Cork County Council. Cork County Council successfully implemented an integrated system. The ten critical success factors cited as necessary in a systems implementation were present. These were further strengthened by the presence of the accountant. This was evident from the accountants presence in the matrix developed by the researcher. These learnings are summarised and further suggestions for research are proposed.
Chapter 2 Literature Review

2.1 Introduction

This chapter defines an integrated system and the benefits of such a system. It looks, in detail, at the evolution and reasons for adoption of an Enterprise Resource Planning (ERP) system, the ultimate in integrated systems. It then contrasts this with best-of-breed (BoB) systems. It examines the risks involved in the implementation of an integrated system. This chapter concludes with a list of ten criteria needed for the successful implementation of any integrated system.

2.2 Definition of Integrated Information Systems

Integrated information systems are defined as "the extent to which different operational functions are tied together in the overall system" (Miranda 1999, p11). Integration can be achieved by developing system interfaces which links the software of the separated functions of the organisation (Moriarty, 1999; Granlund and Malmi, 2002; Chester, 2006). Integrated systems build synergies and efficiencies in an organisation thus building competitive advantage (Davenport, 1998; Granlund and Malmi, 2002; Nah et al, 2003; Spathis and Constantinides, 2004; Xue et al, 2005; Rikhardsson and Kraemmergaard, 2006).

The ultimate in integrated systems is the single vendor Enterprise Resource Planning (ERP) system. ERP systems are standard consolidated software packages that comprise many, if not all, of the functional modules (Finance, Production, Sales, Human Resources, Marketing etc) of the entire organisation. ERP systems are run over integrated client server technology and they sit on a common database which allows tight integration between all the modules (Davenport, 1998; Miranda, 1999;
Granlund and Malmi, 2002; Kumar et al, 2002; Doran and Walsh, 2004; Spathis and Constantinides, 2004; Newman and Westrup, 2005). It is because of this integration of the different business processes of the organisation that ERP systems can provide up-to-date, real-time information to their users (Davenport, 1998; Miranda, 1999; Scapens and Jazayeri, 2003; Newman and Westrup, 2005).

Davenport (1998) describes ERP systems as “a dream come true” when he sums up ERP systems as commercial software packages that:

"promise seamless integration of all the information flowing through a company-financial and accounting information, human resource information, supply chain information, customer information" (p121).

Dempsey and Vance (2006) have a similar quote from a financial manager in their case study stating that the integrated system “works like a dream” (p37).

2.3 Evolution of ERP

The evolution of ERP systems commenced in manufacturing industries in Europe in the 1960’s. It first emerged in the form of Material Requirements Planning (MRP) (Dahlen and Elfsson, 1999; Keller, 1999; Sprecher, 1999; Kumar et al, 2002). MRP involved the utilisation of software for scheduling production processes and raw material purchasing. Manufacturing Resource Planning II (MRP II) later emerged from this. MRP II further utilised software to include coordinating manufacturing from product planning, parts purchasing, stock control and distribution (Drury, 1996; Davenport, 1998; Wortmann, 1998; Shields, 2001; Kumar et al, 2002; Hyvonen, 2003; Doran and Walsh, 2004; Spathis and Constantinides, 2004; Xue et al, 2005; Botta-Genoulaz and Millet, 2006). Subsequently, as the systems gradually became mature, other business functions were incorporated to provide a full range of management and operational needs into these new ERP systems (Spathis and Constantinides, 2004; Xue, et al, 2005).
The term ERP is therefore a misnomer. ERP systems do comprise the enterprise and focus on resources, however they go beyond planning to facilitate tasks such as financial control, operational management, routine decision support, analysis and reporting (Davenport, 1998; Miranda, 1999; Klaus et al., 2000; Botta-Genoulaz and Millet, 2006; Rikhardsson and Kraemmergaard, 2006). A lot of research stresses the importance of the finance modules. In fact the foundation for most integrated systems is the general ledger, which reiterates the fact that ERP systems are more than just about planning (Miranda, 1999; Spathis and Constantinides, 2004; Botta-Genoulaz and Millet, 2006). Sprecher (1999) writes:

"An ERP system is a software solution that addresses the enterprise needs of an organisation, taking the process view to meet the organisational goals by tightly integrating all the functions of an enterprise" (p49).


2.4 Reasons for Implementing an Integrated System

The literature citing the benefits of integrated systems is vast. Integrated systems, including ERP systems, are sold by experts as being easier systems to use, promising more benefits and being customer focussed (Miranda, 1999). It is clear from the literature that the adoption initiation is strongly influenced by the perceived benefits of an integrated system, such as reduced overheads, lower stock levels, increase in productivity, improved customer focus, better quality of services provided, more timely management information, replacement of old legacy systems, competitive advantage, and strategic improvement initiatives (Davenport, 1998; Miranda, 1999; Adam and O’Doherty, 2000; Kumar et al., 2002; Hyvonen, 2003; Scapens and Jazayeri, 2003; Spathis and Constantinides, 2004; Newman and Westrup, 2005;
Ramon Gil-Garcia and Pardo, 2005; Botta-Genoulaz and Millet, 2006; Rikhardsson and Kraemmergaard, 2006). Spathis and Constantinides (2004) describe the driving forces for integrated systems adoptions as availability of real-time information, information for decision making and integration of applications.

However Abrahamson (1991) states that “efficient-choice” and benefits adoption is not the only reason for adoption. Adoption can also take one of three other perspectives, namely Forced Selection, Fashion Perspective and Fad Perspective (Abrahamson, 1991; Lapsley and Wright, 2004).

2.4.1 Efficient Choice Perspective

The efficient choice perspective according to the literature, assumes that organisations have clear goals with little uncertainty of what they want to achieve, these can either be profit maximisation, to increase their market share or to achieve a competitive edge over their competitors (Grandori, 1987; Abrahamson, 1991). Efficient choice also assumes that the new product is technically efficient and is assessed on its “ratio of outputs to inputs” (Grandori, 1987; Abrahamson, 1991). Under this perspective the organisation adopts new technically efficient innovations in a rational and independent manner:

“Given existing resource constraints, agents rationally choose the innovation that will allow them to most efficiently produce the outputs that are useful for attaining their goals” (Abrahamson 1991, p592).

2.4.2 Forced Selection Perspective

The forced selection perspective occurs where the adopter’s reason to implement the new change process is over-ruled by the influence of a powerful organisation outside the adopting organisation (Abrahamson, 1991; Lapsley and Wright, 2004). Powerful
organisations, such as labour unions or government regulators, may have an interest in forcing a technically inefficient product to be adopted or an efficient one to be rejected (Abrahamson, 1991). Examples given in management literature, of where the forced selection perspective was seen to be implemented, were in general strikes threatened by labour unions and unified actions by groups of managers (Kochan and Capelli, 1984; Jacoby, 1985; Abrahamson, 1991).

2.4.3 Fashion Perspective

The fashion perspective is where organisations imitate other organisations, such as consulting firms, due to the lack of confidence surrounding technical efficiencies, goals and environmental forces (Thompson, 1967; DiMaggio and Powell, 1983; Abrahamson, 1991). The fashion perspective acknowledges the fact that the organisation is influenced by organisations outside the group (Abrahamson, 1991). Fashion perspective is where the decision centres "less around which technology they should adopt, and more around which organisation they should imitate" (Abrahamson 1991, p595). With the fashion perspective the potential adopters can still change their minds about implementation (Abrahamson, 1991; Lapsley and Wright, 2004).

2.4.4 Fad Perspective

Fad perspective is where organisations implement a change program just to keep up legitimate appearances and retain competitive advantage rather than for logical reasons (Abrahamson, 1991; Lapsley and Wright, 2004). Due to organisations mimicking others in the group this can lead to adoptions of inefficient innovations and rejections of efficient ones (Abrahamson, 1991).
The fad perspective makes two assumptions:

"that organisations in a group are uncertain about both their goals and the efficiency of innovations and that organisations in a group experience few influences by organisations outside their group" (Abrahamson 1991, p606).

According to Malmi (1999) adoption usually falls under either the benefits and efficiencies expected or the forced selection.

2.5 Best-of-Breed (BoB)

Replacing all of the existing, separate legacy systems and databases within the business with an ERP system, is not the only way to solve integration problems (Moriarty, 1999; Hyvonen, 2003; Global Supply Chain Conference, 2006; Chester, 2006), a best-of-breed (BoB) strategy can also be implemented. A BoB strategy involves tying together the 'best' softwares for each function within the organisation through programming interfaces that do not automatically share a common database (Miranda, 1999; Moriarty, 1999; Hyvonen, 2003). However, according to Caruso (2005):

"Too often, the decision to adopt a BoB solution is based on the users desire for bells and whistles rather than a realistic evaluation of the solutions value" (p18).

Therefore the decision between a single-vendor ERP system or a BoB system should be assessed on functionality, integration requirements, costs, and how easily users will adopt (Caruso, 2005; Chester, 2006).
2.6 ERP V Best-of-Breed (BoB)

Despite trends in software, an organisation's integrated systems strategy should be based on its own unique business environment (Griffith, 2000). Therefore when implementing an integrated system, an organisation should compare the benefits and downfalls of an ERP system with those of a BoB system. This decision should not be "taken lightly" (Global Supply Chain Conference 2006, pG43). The effectiveness of a system should be judged on its flexibility, integration and functionality (Moriarty, 1999). The best solution for an organisation should be the most suitable system for that organisation.

"The challenge is to find the most suitable solution that brings together processes, solutions and people" (Global Supply Chain Conference 2006, pG43).

According to Hill (2002), when quoting a Chief Marketing Officer, there is "no perfect solution that works for every company" (p43). He states that:

"The most important thing is to first determine exactly what you want to accomplish with your software investment, and then make a rational decision about the applications that will best achieve those goals" (p43).

Dobrin and Constantinou (2006) claim that users have to view their decision on whether to implement a BoB or a single vendor system in the same way they view their car:

"Say you like your old car and want to keep on using it. To do that, you replace various parts over time. Getting a new car is a different ownership strategy" (p34).
According to Geishecker (1999):

"There is no right answer to "ERP vs. Best-of-Breed." The most appropriate choice-specifically if you're buying Financials/Accounting applications-depends on a number of criteria and variables. Each organization needs to assess its needs and evaluate its alternatives. Keep in mind that the vendors you'll evaluate are an integral part of the decision equation" (p65).

Therefore a clear analysis of the organisation's needs and capabilities should be the starting point for any technology decision (Moriarty, 1999; Griffith, 2000; Miranda, 2002; Caruso, 2005; Chester, 2006). Chester (2006) writes with regards to deciding on whether to choose a BoB or an ERP solution:

"The choice can be difficult. With one, you are undertaking the challenges of software integration and the consequent delay to arrive at a solution. The other can leave you with significant unmet (or over­met) needs and the struggle to convince your organisation to change its ways" (p48).

ERP and BoB systems need to be examined under the following headings: Origin of adoption, relationships with vendors, level of integration, functionality, cost, organisational issues and Business Process Re-engineering (see Table 2.1).

2.6.1 Origin of adoption

ERP systems originally derive from the manufacturing environment (Drury, 1996; Davenport, 1998; Sprecher, 1999; Kumar et al, 2002; Hyvonen, 2003; Doran and Walsh, 2004; Spathis and Constantinides, 2004; Botta-Genoulaz and Millet, 2006), while the BoB origins are linked with financial applications (Geishecker, 1999; Moriarty, 1999; Hyvonen, 2003). Historically financial applications consisting of general ledger, accounts payable and accounts receivable ran on mainframes and by default offered an integrated approach (Geishecker, 1999; Moriarty, 1999).
Table 2.1: Comparing ERP and BoB

<table>
<thead>
<tr>
<th></th>
<th>ERP</th>
<th>BoB</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Origin of Adoption</strong></td>
<td>Manufacturing Applicans</td>
<td>Financial Applications</td>
</tr>
<tr>
<td><strong>Relationship with Vendor</strong></td>
<td>Single vendor</td>
<td>Multiple vendors</td>
</tr>
<tr>
<td><strong>Level of Integration</strong></td>
<td>Full Integration</td>
<td>Interfaces</td>
</tr>
<tr>
<td><strong>Functionality</strong></td>
<td>Restricted Functionality</td>
<td>Greater Functionality</td>
</tr>
<tr>
<td><strong>Cost</strong></td>
<td>One solution can be very costly</td>
<td>Interface costs can be great</td>
</tr>
<tr>
<td><strong>Organisational Issues and Business Process Re-engineering</strong></td>
<td>Can be more difficult to implement and organisations may have to change business processes in line with the new system.</td>
<td>Can be easier to install and easier to develop in line with the organisations business processes.</td>
</tr>
</tbody>
</table>

As technologies progressed, specialised vendors tended to appear on the marketplace and offer niche applications such as asset management and payroll (Moriarty, 1999). These became known as BoB suppliers (Geishecker, 1999; Moriarty, 1999).

Due to further technology development, and a widening of the marketplace, many established vendors such as SAP, Baan and Ccle had to change their product offerings, from not only including accounting and finance functions, but also to include human resource applications and manufacturing applications (Geishecker, 1999; Moriarty, 1999). These systems became known as ERP systems.

Studies have found that BoBs are initiated by finance departments which confirms the origins of their background (Moriarty, 1999; Hyvonen, 2000; Shields, 2001; Granlund and Malmi, 2002; Hyvonen, 2003). Whereas, when the idea to develop a new information system is initiated in another department, the solution is more likely to be an ERP system (Hyvonen, 2003).
It is clear from the literature that the decision on whether to implement an ERP system or a BoB system hinges on a number of other related factors, such as what are the needs of the organisation, what are the options open to the organisation and what kind of service is offered by the potential suppliers of the systems.

### 2.6.2 Relationship with Vendors

One of the biggest decisions for organisations implementing an integrated system is whether to invest in an ERP system from a single vendor, or in software applications from various BoB suppliers (Morty, 1999). The central question which remains according to Moriarty (1999) is:

> "Is it better for an organisation to go to a one stop shop" and buy a totally integrated system, or is it better to buy from a number of different vendors, each of which offers 'best-of-breed' software for a particular application" (p52).

A key characteristic of an ERP system purchase is that the purchasing company locks itself into a relationship with a single vendor supplier (Davenport, 1998; Geishecker, 1999; Moriarty, 1999; Light et al., 2001; Hyvonen, 2003; Scapens and Jazayeri, 2003; Doran and Walsh, 2004; Botta-Coulaz and Millet, 2006; Chester, 2006). Having one supplier can be viewed negatively, like "not diversifying an investment portfolio", thus creating inherent risk for an organisation (Hill, 2004). It is therefore important that the buying company is aware of the viability and financial status of their potential vendors.

Hill (2002) quotes a Chief Marketing Officer as saying:

> "the reality of today's market place is that ers have to be concerned about the vendor's long term viability whether they are buying software" (p39).
However, far from being a disadvantage of an ER system, the idea of dealing with only one supplier is cited as the major attraction for forward for the adoption of ERP systems by others (Moriarty, 1999; Chester, 2006).

"The idea of buying a system whose component parts have been designed to work together seems much more logical than trying to bolt together applications from a number of different suppliers" (Moriarty 1999, p52).

Some companies have implemented BoB systems other than ERP systems to avoid being tied into one supplier (Botta-Genoulas and Lillet, 2006). However, this route also results in the maintenance of a greater number of vendor management and sales relationships (Chester, 2006). This may impact the speed at which technical issues are resolved as vendors cannot be expected to be experts on another firm's products (Chester, 2006).

2.6.3 Level of Integration

Some of the integrating benefits provided by ERP systems can also be achieved by BoB systems through programming interfaces (Minda, 1999). However interfaces should not be equated with true integration and some researchers state that each time new programming interfaces are developed to link software to another, the true ERP vision is undermined (Miranda, 1999).

According to Geishecker (1999) the issue of interfacing needs to be considered from two perspectives, firstly interfacing with existing systems and secondly interfacing with possible future systems. Many BoB projects were brought to an end due to the interfaces between systems (Griffith, 2000; Spooner, 2002). This is because the work involved in "trying to tie multiple disparate systems together" can lead to "many complex problems" (Spooner 2002, p28). However BoB will be a viable option if the "anticipated interfaces consist of passing information back and forth with little or no translation and programming required" (Geishecker 1999, p66). If
the interfacing issue is very complex then ERP systems may take the lead (Geishecker, 1999) as they are promoted for producing interfaces as the package covers most corporate business applications (Griffith, 2000).

The marketing power of the large ERP vendors claims that their products are homogenous and fully integrated (Moriarty, 1999). However according to Garrett, consultant with KPMG:

"Many ERP systems are not as integrated the vendor may suggest" (Moriarty 1999, p52).

Hill (2002) also agrees with this and writes:

"There is some question, however, about how tightly integrated various application modules are even when they are sold by the same supplier" (p40).

Therefore, in making the decision as to whether adopt an integrated system or a BoB system, the organisation needs to look at its skills and facilities of its own IT department for working with interfaces (Griffith, 2000; Chester, 2006). Griffith (2000) states that the organisation needs to ask the following questions:

"What are the core competencies of your group? Are they in a good position to develop and maintain interfaces in a best-of-breed environment?" (p72).

According to Laberis (2003):

"the enterprise customers no longer have the resources, human or financial, to do all the tinkering it takes to make typical best-of-breed solutions work, despite the robust solutions they provide" (p10).

However as stated earlier integration is only part of the selection process of a new integrated system, functionality, cost and organisational issues also need to be taken into consideration (Moriarty, 1999; Chester, 2006)
2.6.4 Functionality

The issue of "misfit" can occur when an organisation adopts an ERP package (Botta-Genoulaz and Millet, 2006). This is the gap between the functionality offered by the integrated system and the requirements of the organisation. As ERP systems may not meet every functional requirement of an organisation, the options then open to the company are to either look for a BoB package or to customise the ERP system (Hyvonen, 2003; Millman, 2004). Customisation is often frowned upon (Holland and Light, 1999; Nah et al, 2003; Nah and Delgado, 2006) because if a company takes this route it is stuck with it for life, whereas a BoB package is similar to a "bolt-on" and viewed like a bridge until the company can get the ERP vendor to include it in its platform (Millman, 2004).

Despite ERPs being the selected software of the 20th century for their cheaper cost, shorter development times, Y2K solutions and report writing tools, BoB systems are making a comeback due to their functional fit which helps achieve competitive advantage (Griffith, 2000). BoBs tend to focus on a particular business requirement which usually results in greater functionality (Moriarty, 1999; Griffith, 2000; Chester; 2006). However Langnau (2004) writes that a Director of Account Management acknowledges that while there is some loss of functionality with ERP systems "that loss is now viewed as better than trying to tie multiple disparate systems together" (p48).

Research also indicates that users find ERP functionality inconvenient and not inline with their work patterns (Fahy, 2005). Weston (1997) quotes the Manager of General Electric Co.'s Industrial Control Systems division in Atlanta as saying:

"We are trying to keep as much functionality in our enterprise backbone as possible" (p6).

This allows for the argument that the BoB systems overall have greater functionality (Miranda, 1999; Botta-Genoulas and Millet, 2006).
2.6.5 Cost

It is very difficult to compare the cost of an ERP system and a BoB system if they are delivering different functionality. It is important, that you are costing and buying only the features that you need (Chester, 2006). Griffith (2000) states that an organisation must ask itself:

"How critical is the state-of-the-art functionality to your organisation? Is the depth of feature and function found in best-of-breed software worth the cost of interface projects that come with it?" (p72).

There is a lot of evidence in the literature examined of ERP implementation processes going way over budget. Moriarty (1999) writes:

"There are sufficient well documented cases of ERP projects going hugely over time and over budget to suggest that the apparent convenience of the one stop shop solution may carry a considerable price" (p52).

Integration costs such as integrating your new product to your legacy systems and integrating the pieces of BoB set to each other can be very expensive (Geishecker, 1999; Chester, 2006). Langnau (2004) also writes about the mushrooming cost of BoB. She quotes a Director of Account Management, as saying:

"there is a big expense in interfacing best-of-breed, not only in the first go-round, but in handling upgrades too." (p48).

A product's cost includes licence fees, annual maintenance and support fees, hardware costs to run the solution, staffing, integration and training and ongoing maintenance costs (Geishecker, 1999; Chester, 2006). Often, training costs for a BoB can be more expensive than for an ERP system (Chester, 2006) due to the intricacies of the individual pieces of software. These life-cycle costs are difficult to estimate but must be included in the comparison of ERP and BoB costs.
2.6.6 Organisational Issues

An organisation acquiring a new integrated system must carry out a realistic examination of its abilities, philosophies and strategic concerns (Chester, 2006). The organisation must consider if the system matches its needs (Moriarty, 1999; Chester, 2006). Business process re-engineering will most likely be required once a system is selected (Moriarty, 1999). If a system is implemented and it does not meet the needs of the organisation, and it cannot be adapted, then the organisation will have to adapt to the business processes within the new system (Moriarty, 1999).

Moriarty (1999) writes with regards to BoB:

"Best-of-breed software is a great deal quicker and easier to install, modify and develop in line with a developing organisation" (p52).

Therefore it is evident that due to the ever changing business environment it is important that the organisations systems can move in tandem with these changes and that they can be upgraded with component parts to match the evolving needs of the organisation (Moriarty, 1999).

2.7 Future of ERP V BoB

Millman (2004) quotes the Global Process Information Officer at General Motors Corp as saying:

"Our world is much too complicated to say that ERP is the end-all solution. I really believe its ERP-plus, or some integrated solution" (Millman 2004, p40).

Fahy (2005) writes that Chief Financial Officers and Chief Executives:

"are willing to accept the 'messiness' of the multiple ERP/BoB environment because they believe future business decisions will derail any single ERP strategy, however elegant it is" (p32).
Research has found that despite the appeal of the technological merits of a single ERP system, the arguments of better information and improved process integration only stand up in a limited number of cases (Fahy, 2005). According to Fahy (2005):

“For the foreseeable future single-instance ERP will be a popular rhetoric, but a scarce reality” (p32).

Other than these future predictions, there are many other risks in the implementation of any integrated system.

2.8 Risks in the Implementation of Integrated Systems.

It is imperative that the organisation is aware of the full business implications for its company of implementing an integrated system (Davenport, 1998, Kumar et al, 2002, Scapens and Jazayeri, 2003; Botta-Genoulaz and Millet, 2006). Some of the risks cited in existing literature are user acceptance, soaring costs, organisational change, project scope change, availability and retention of skilled people, integration with other legacy systems, and the capability of the organisational infrastructure to contend with the new technology (Davenport, 1998; Holland and Light, 1999; Adam and O’Doherty, 2000; Kumar et al, 2002; Umble and Umble, 2002; Botta-Genoulaz and Millet, 2006).

Integrated systems adoption is a complex exercise involving not only technology but also fundamental organisational change (Markus and Tanis, 2000; Kumar et al, 2002). These systems have been viewed as a computer topic when in fact it is “very much a people related business subject” (Botta-Genoulas and Millet 2006, p205). According to Newman and Westrup (2005):

“Making an ERP system work, we contend, is more than an issue of technical expertise or social accommodation, it is the ongoing dynamic interaction between the ERP system, different groups in an organisation and external groups, such as vendors, management consultants and shareholders” (p259).
Research has revealed that if companies adopt the attitude that "once data is integrated, people will follow" the result can be a failed integrated systems implementation (Botta-Genoulaz and Millet 2006, p218).

2.9 Critical success factors to Systems Implementation

In order for the benefits of an integrated system to be achieved and the risks minimised, certain critical factors are essential. The critical factors which the researcher found cited in the literature are top management support, clear business vision, communication of this vision, a skilled project team, a well developed work and resource plan, close working relationship with the vendor, business process re-engineering, change management strategy, a project champion and review of the current legacy systems (see figure 2.1).

If these critical success factors are present they should help combat situations such as implementation projects going over-time and budget, focusing on technical issues and failing to "fit" with the organisation.

2.9.1 Top Management Commitment

Integrated systems require people to change the way they work in order to achieve the full benefits promised by the new system (Legare, 2002; Rikhardsson and Kraemmergaard, 2006). This can only be achieved by top management clearly displaying the project as a top priority which it fully supports and approves (Davenport 1998, 2000; Bingi et al, 1999; Buckhout et al, 1999; Holland and Light, 1999; Wee, 2000; Shanks et al, 2000; Murray and Coffin, 2001; Somers and Nelson, 2001; Legare, 2002; Umble and Umble, 2002; Loh and Koh, 2004; Motwani et al, 2005; Nah and Delgado, 2006).
Figure 2.1

CRITICAL SUCCESS FACTORS FOR A SUCCESSFUL INTEGRATED SYSTEMS IMPLEMENTATION

- Top Management Commitment
- Business Driven
- Clear Communication of Business Vision
- Skilled Cross Functional Project Team
- Well Developed Work & Resource Plan
- Close Working Relationship with Vendor
- Business Process Re-Engineering
- Change Management
- Project Champion
- Critique of Existing System
Nah et al (2003) sum this up, by quoting one of the Chief Information Officers in their survey, as saying that top management support is “the only way to get started” and to get “compliance and commitment from divisions” (p17). Rogoski (2006) quotes a Financial Controller as saying that a major system implementation “needs top management support from start to finish” (p12).

As a demonstration of this commitment, top management must be seen to allocate the necessary resources, such as time, money and personnel, to the project (Holland and Light, 1999; Shanks et al, 2000; Somers and Nelson, 2001; Nah et al, 2003; Nah and Delgado, 2006). Top management support strengthens the commitment of all employees in the enterprise to the project which is a key factor in influencing the successful implementation of ERP systems (Bingi et al, 1999; Nah et al, 2003).

2.9.2 Business Driven

According to the literature, it appears there is a need for ERP implementations to be business-driven rather than technically-driven and treated in a cost effective manner from the start (Davenport, 1998; Miranda, 1999; Holland and Light, 1999; Motwani et al, 2005). According to Umble and Umble (2002) IT provides a supporting role to ERP implementations and the technological aspects are managed as part of a broad enterprise-wide transformation.

The implementation of an integrated system has been described as “an organisation wide revolution” which is an “ongoing process, a journey” which never ends and which brings with it changes which impact on the entire organisation (Hammer, 1990; Bingi et al, 1999; Markus and Tanis, 2000; Kumar et al, 2002; Umble and Umble, 2002; Loh and Koh, 2004; Rikhardsson and Kraemmergaard, 2006). An organisation will draw greater competitive advantage from systems if it combines
them with the development of complementary human and business resources (Davenport, 1993, 1998; Powell and Dent-Micallef, 1997; Legare, 2002; Kumar et al, 2002).

A “To Be” vision detailing what will be common and what will vary throughout the organisation has been cited in the literature as one of the first steps that should be carried out prior to the integrated systems implementation (Davenport, 1998; Scapens and Jazayeri, 2003). If an organisation installs an ERP system without looking at its impact on the way the business operates, according to Davenport (1998) “the dream of integration can quickly turn into a nightmare” (p122).

2.9.3 Clear Communication of Business Vision

Clear Communication of this “To Be” vision, and a business plan is needed from the beginning and throughout the implementation period (Holland and Light, 1999; Shanks et al, 2000; Somers and Nelson, 2001; Legare, 2002; Umble and Umble, 2002; Nah et al, 2003; Loh and Koh, 2004; Motwani et al, 2005; Nah and Delgado, 2006). Goals at every level need to be communicated throughout the organisation (Falkowski et al, 1998; Wee, 2000; Nah et al, 2003; Loh and Koh, 2004). Communication should be open and honest with employees knowing that any feedback they provide regarding the integrated system will be managed and acted upon (Rosario, 2000; Nah et al, 2003; Loh and Koh, 2004; Nah and Delgado, 2006).

Communication involves the formal promotion of project teams, and the announcement of organisational progress with regards to the implementation of the integrated system (Holland and Light, 1999; Nah et al, 2003). Examples of communication tools, used to keep users updated on project progress in organisations, are weekly meetings, monthly bulletins and newsletters (Holland and Light, 1999; Nah et al, 2003).
It is critical that the entire organisation understands how the company should operate in the future to meet its customers’ employees’ and suppliers’ needs (Holland and Light, 1999; Legare, 2002; Umble and Umble, 2002; Motwani et al, 2005). All individuals within the organisation must understand how their activities support the organisational goals, or else they will not understand why the integrated system is being implemented, thus clear communication of the business vision is a necessity (Holland and Light, 1999; Legare, 2002; Umble and Umble, 2002; Motwani et al, 2005; Nah and Delgado, 2006).

2.9.4 Skilled Cross-functional Project Team

Research findings have clearly indicated that successful integrated systems have been implemented by cross-functional and multi-skilled teams (Davenport, 2000; Kumar et al, 2002). These teams should include a healthy balance of top management involvement, technologist involvement and user involvement (Davenport 1998, 2000; Holland and Light, 1999; Willcocks and Sykes, 2000; Somers and Nelson, 2001; Kumar et al, 2002; Legare, 2002; Umble and Umble, 2002; Caglio, 2003; Nah et al, 2003; Motwani et al, 2005; Nah and Delgado, 2006).

The team should be familiar with the business functions and products, so that they have the ability to make decisions and to rethink business processes in order to improve the current system (Rosario, 2000; Umble and Umble, 2002; Loh and Koh, 2004). Therefore as well as technical knowledge, business knowledge is also essential for successful implementation (Shanks et al, 2000; Nah et al, 2003; Nah and Delgado, 2006). Due to this, it is very important to have business experts, with knowledge of the business environment within which the organisation operates, working on the project on a full-time basis (Holland and Light, 1999; Shanks et al, 2000; Nah et al, 2003; Loh and Koh, 2004). The best people in the organisation should be placed on the project team (Falkowski et al, 1998; Bingi et al, 1999;

The selection of an integrated package is one of the most essential steps in an integrated systems implementation (Umble and Umble, 2002; Nah and Delgado, 2006). According to Umble and Umble (2002) a vendor team needs to be set-up to create a possible software vendor list, it must select two or three vendors to demonstrate their packages and then select a winner and negotiate a contract. The winning vendors integrated package selected must match the needs of the organisation and support its business processes (Umble and Umble, 2002; Nah and Delgado, 2006).

2.9.5 Well Developed Work and Resource Plan

If planning does not precede a new system’s implementation, the result is a very costly implementation which can run on for a number of years (Davenport, 2000; Legare, 2002; Scapens and Jazayeri, 2003). Granlund and Malmi (2002) emphasise the time taken as follows:

"Because the integration of an integrated ERP system is a complex puzzle where some parts have to wait until other parts are first put in place (and then other parts have to wait for reworking and so on) ERP systems implementation processes are typically quite long" (p313).

Research has found that implementation times can vary from six months to four years (Bancroft et al, 1998; Motwani et al, 2005). Timeliness must be enforced and progress tracked in order for ERP implementations to be a success (Rosario, 2000; Shanks et al, 2000; Murray and Coffin, 2001; Somers and Nelson, 2001; Nah and Delgado, 2006).

Milestones should be established and defined (Holland and Light, 1999; Umble and Umble, 2002; Nah et al, 2003; Loh and Koh, 2004; Nah and Delgado, 2006) with
realistic end dates (Shank et al, 2000; Murray and Coffin, 2001; Nah et al, 2003; Nah and Delgado, 2006). Tracking of budgets and schedules must not be overlooked and any amendments to the original project scope must be evaluated on their business benefits (Wee, 2000; Umble and Umble, 2002; Nah et al, 2003; Loh and Koh, 2004; Nah and Delgado, 2006).

2.9.6 Close Working Relationship with Vendor

Good relations and partnership trust between the vendors, consultants and project teams is vital for information sharing and the successful implementation of an integrated system (Holland and Light 1999; Somers and Nelson, 2001; Nah et al, 2003; Motwani, 2005; Nah and Delgado, 2006). The project team should therefore be balanced and include a good mix of internal staff and external consultants. This will allow the internal staff the opportunity to acquire the necessary technical skills for the design and implementation of an integrated system (Holland and Light, 1999; Shanks et al, 2000; Nah et al, 2003; Loh and Koh, 2004; Nah and Delgado, 2006), while maintaining a vital, strong working relationship with the external consultants (Holland and Light, 1999; Umble and Umble, 2002; Nah et al, 2003; Loh and Koh, 2004).

2.9.7 Business Process Re-engineering (BPR)

The implementation of an integrated system is not just a technological task which impacts only on the existing IT applications, it must also contribute to the re-engineering of a new organisation structure, changing work processes and how business units behave and communicate with each other (Bancroft, 1996; Davenport, 1998; 2000; Holland and Light, 1999; Scapens and Jazayeri, 1998; 2003; Kumar et al, 2002; Caglio, 2003; Botta-Genoulaz and Millet, 2006). With the implementation of an integrated system comes new ways of working and better relationships.
between different functions (Legare, 2002; Granlund and Malmi, 2002; Kumar et al, 2002; Scapens and Jazayeri, 2003). According to Legare (2002) an integrated system can facilitate the creation of an organisational culture where departments work together rather than independently.

ERP systems are seen to offer best business practice with regards to organisational process redesign (Miranda, 1999; Granlund and Malmi, 2002; Motwani et al, 2005; Newman and Westrup, 2005; Botta-Genoulaz and Millet, 2006). Kumar et al (2002) state:

"The ERP adoption process is important because the ERP applications lock the operating principles and processes of the organisation into the software systems" (p148).

According to some researchers a company that implements an integrated system must largely accept the suppliers assumptions about management philosophy and business practices and the company must reengineer existing processes and procedures to conform to those assumptions (Umble and Umble, 2002). According to Davenport (1998) and (2000), Holland and Light (1999), Kumar et al (2002) and Scapens and Jazayeri (2003) it is easier to adapt the organisation to the ERP software rather than the other way around. This will help to reduce the amount of customisation needed by companies during the implementation, thus enhancing the chances of success (Bingi et al, 1999; Holland and Light, 1999; Shanks et al, 2000; Nah et al, 2003; Nah and Delgado, 2006). Minimising customisation helps reduce errors and simplifies the adoption of newer versions and releases (Rosario, 2000; Loh and Koh, 2004) as it would later be difficult to upgrade if a company had made a major change in the ERP modules to fit its business (Loh and Koh, 2004).

However other researchers argue that if all competitors adopt the same integrated systems they will theoretically have the same business processes and best business practices (Davenport, 1998; Doran and Walsh, 2004; Rikhardsson and Kraemmergaard, 2006). They stress that the integrated system enables the company
to operate in an efficient manner, whereas the success of the company will still depend on its ability to compete based on cost and service (Davenport, 1998; Doran and Walsh, 2004; Rikhardsson and Kraemmergaard, 2006). Botta-Genoulaz et al (2005) write that Lengnick-Hall et al (2004):

"propose to consider ERP as an enabling technology to build and augment social and intellectual capital, rather than as an information technology solution for organisational inefficiencies, and to use ERP as a foundation for social and intellectual capital formation" (p515).

Doran and Walsh (2004) found that out of 148 respondents to their postal questionnaire a total of 35 different types of ERP systems were adopted. Doran and Walsh (2004) suggest the reason for this may be:

"that adopters consciously chose to implement a different type of ERP system to their major competitors in an effort to protect their uniqueness" (p32).

Therefore the adopting organisation should select and implement an integrated system that supports its unique competitive strengths while helping to overcome competitive weaknesses (Umble and Umble, 2002).

2.9.8 Change Management

People, organisation and culture are what make up an enterprise and an enterprise's structure and culture change must be managed (Rosario, 2000; Legare, 2002; Nah et al, 2003; Loh and Koh, 2004; Nah and Delgado, 2006). During the change period, not only is user involvement in the design and implementation of an integrated system and new business processes advised, but also formal training and education should be provided to help users understand how their job roles may be changed with the new integrated system (Bingi et al, 1999; Holland and Light, 1999; Shanks et al, 2000; Umble and Umble, 2002; Nah et al, 2003; Loh and Koh, 2004; Nah and Delgado, 2006).
Money must be set aside for this training and it must be incorporated as part of the implementation budget (Umble and Umble, 2002; Nah et al, 2003; Loh and Koh, 2004; Nah and Delgado, 2006). The literature has also recommended that, in order to manage organisational change and meet users needs, a help-desk or online user manual would be important (Wee, 2000; Nah et al, 2003; Loh and Koh, 2004; Nah and Delgado, 2006). However, it is often the case that training and education are the first expenses to be cut when the project overruns the budget (Nah et al, 2003; Nah and Delgado, 2006).

2.9.9 Project Champion

The project champion is critical to drive consensus and to oversee the entire life cycle of implementation (Bingi et al, 1999; Rosario, 2000; Umble and Umble, 2002; Nah et al, 2003; Loh and Koh, 2004; Motwani, 2005; Nah and Delgado, 2006). Twenty percent to sixty percent of the project champion’s time will be spent on the project (Willcocks and Sykes, 2000). The project champion must be an advocate for the project (Shanks et al, 2000; Umble and Umble, 2002; Nah et al, 2003; Loh and Koh, 2004; Nah and Delgado, 2006) and have the skills to manage resistance and change (Murray and Coffin, 2001; Nah et al, 2003; Nah and Delgado, 2006). The champion’s role involves:

"communicating the vision, maintaining motivation in the project team and the business, fighting political battles, and remaining influential with all stakeholders, including senior management" (Willcocks and Sykes 2000, p37).

The project champion must be a high level ranking official in the organisation to facilitate change and goal setting (Falkowski et al, 1998; Nah et al, 2003; Nah and Delgado, 2006).
2.9.10 Critique of Existing System

The present state of an organisation's current legacy systems determines the extent of IT and organisational change required for systems integration (Holland and Light, 1999; Nah et al, 2003). Thus the more complex the current IT architecture, the more organisational and technological change required for the new integrated system. By examining the existing legacy systems of an organisation you can determine some of the potential problems you may encounter and this will help to prevent reconfiguration at a later stage in the systems implementation (Holland and Light, 1999; Wee, 2000; Nah and Delgado, 2006).

Integrated systems implementations will be eased by effective and sophisticated software testing (Rosario, 2000; Nah et al, 2003; Loh and Koh, 2004). An essential requirement for a successful implementation is accurate data (Umble and Umble, 2002; Nah and Delgado, 2006). The organisation must decide what data it wants to convert and load onto the new system (Somers and Nelson, 2001; Nah and Delgado, 2006). This can be a difficult task as the data can come from a number of disparate sources in different formats (Somers and Nelson, 2001; Nah and Delgado, 2006).

2.10 Conclusion

This chapter defined integrated systems and looked at their evolution over time. It then went on to examine the reasons for adopting such systems. Once the decision to implement a new system is made, the implementing organisation has to decide on whether to implement an ERP system or a best-of-breed (BoB) system. This chapter has contrasted both systems and outlined the differences in both, in terms of origin of adoption, relationship with vendor, level of integration, functionality, cost and organisational issues and business process re-engineering.
Once the organisation has made a decision on what type of system to implement, it needs to be aware of the types of risks involved in the implementation of integrated systems. This chapter explains how implementation risks can be minimised by following the critical success factors to systems implementation identified in a review of the literature. These factors are top management commitment, business driven, clear communication of business vision, skilled cross functional project team, well developed work and resource plan, close working relationship with vendor, business process re-engineering, change management, project champion and critique of existing system. If these are present the project has a better chance of being successful.
Chapter 3 The Role of the Accountant in the Implementation of an Integrated System

3.1 Introduction

This chapter examines the role of the accountant in the implementation of an integrated system. Before doing this, it briefly describes the changing role of the accountant due to changes in the business environment, and in particular changes due to developments in information technology (IT). It then specifically identifies and discusses seven key factors to be examined when determining the importance of the accountant in the implementation of an integrated system.

3.2 Changing Role of the Accountant

From a review of accounting and other business literature, it is clear that the role of the accountant is changing rapidly. Accountants are no longer viewed purely as bean-counters and gate-keepers of information (Scapens et al, 1998; Scapens and Jazayeri, 2003; Granlund and Malmi, 2002; Caglio, 2003; Doran and Walsh, 2004; Newman and Westrup, 2005; Dempsey and Vance, 2006). A lot of the time-consuming, number-crunching work originally done by accountants, such as gathering, inputting and presenting financial information, is now taken over by computerised systems (Wagle, 1998; Burns et al, 1999; Collins, 2000; Caglio, 2003; Scapens and Jazayeri, 2003; Newman and Westrup, 2005; Dempsey and Vance, 2006; El Sayed, 2006).

These systems remove the need for accountants to carry out routine tasks (Scapens et al, 1998; Scapens and Jazayeri, 2003; Granlund and Malmi, 2002; Caglio, 2003; Hyvonen, 2003; Dempsey and Vance, 2006; El Sayed, 2006). In addition, preparing reports on business performance is no longer a primary concern of the accountant, a lot of this information is already available on the individual managers computers.
Not only have the traditional routines, such as data collection, processing and accuracy checking, of the accountant been automated by integrated computer systems (Scapens et al, 1998; Scapens and Jazayeri, 2003; Burns and Scapens, 2000; Caglio, 2003; Hyvonen, 2003; Dempsey and Vance, 2006; El Sayed, 2006) but the new systems actually outperform the accountant in the accuracy, speed and volume of data they can process. Dempsey and Vance (2006) quote a Finance Director they interviewed as saying:

"We have a system that works like a dream. But as well as that, we, and the other managers in the business, are more confident that the information provided is reliable" (p38).

This is not a new phenomenon. Cooper (1996) claimed that "the need for management accountants will fall, while the need for management accounting will rise" (p35). An Irish survey carried out by Pierce and O’Dea (2001) found that managers were turning to IT personnel, rather than accountants, for assistance when looking for accounting information. Thus, accountants are no longer seen as the custodians of accounting information but as customers, with the new integrated systems providing the information (Burns and Scapens, 2000; Westrup and Newman, 2003; El Sayed, 2006). Carey (2001) writes:

"the days are fast disappearing when a profession could successively strive to gain control of a specialist area of knowledge and then primarily focus on acting as guardian of it, often seeking to restrict the ability to practice the discipline concerned to its members" (p2).

So will the accountancy profession disappear, or has it started to reinvent itself? According to Newman and Westrup (2005) despite accountancy being an important profession, it will have to be active when it comes to new issues such as integrated systems if it is to maintain its position.
Due to the development of integrated systems, modern accountants are now developing a broader role for themselves, moving away from bean-counting, processing accounting information, towards evaluating and interpreting information and becoming advisers and internal consultants to their organisations (Anastas, 1997; Burns and Yazidafir, 2001; Scapens and Jazayeri, 2003; Granlund and Malmi, 2002; Caglio, 2003; Doran and Walsh, 2004; Newman and Westrup, 2005; Dempsey and Vance 2006; El Sayed, 2006). Instead of collecting and presenting information, these accountants must 'add value' to the information created by integrated systems (Fleming, 2005; Dempsey and Vance, 2006). Burns and Yazdifar (2001) sum-up the future role of accountants as follows:

"Managerial teams are expected increasingly to demand dynamic forward-thinking business analysts, who add value to the business process, not just highlight whether targets have been met" (p35).

El Sayed (2006) further reiterates the new role for the accountant by writing:

"According to the authors, this situation has potentially put the management accountant in the position of an internal consultant or analyst who assists managers to create strategies and to take operating decisions" (p86).

One of the Managers quoted by Dempsey and Vance (2006) states:

"Managers are looking for insights, they are looking for explanations. An information system will not give them that" (p38).

If these systems adjust the role of the accountant so dramatically, the role of the accountant in developing and implementing these systems needs to be examined.

3.3 Role of the Accountant in Implementing an Integrated System

Due to the ongoing change and revamping of organisations, coordination is required to bring the different organisational functions within the company together, to ensure
they act as a unified whole. Full benefits of an integrated system will not be realised if coordination between departments does not exist (Kumar et al, 2002). To manage the leadership of this, top management should take control, but “in the case of integrating information services resulting from technological challenges, accountants are called for” (Tsay 1992, p24).

Accountants can “manage technology risk better, by becoming more involved” (Clohosey 2002, p19) and creating a “harmonizing role rather than a coercive one” (Caglio 2003, p140). An analysis of the existing literature reveals seven key factors that should be taken into consideration when analysing the importance of the involvement of the accounting function in implementing an integrated system (see Figure 3.1). These are:

1. Role of Accounting within Change Programmes
2. Level of Senior Management Support for Accounting Innovation
3. Presence of an Accounting Champion
4. Level of Technological Skills of the Accountants
5. Level of Soft Skills of the Accountants
6. Positioning of Accountants within the Formal Hierarchy
7. Relationship between IT, Users and Accounting Departments

All of these factors are of course interrelated and they help influence the extent to which accountants contribute to the implementation of new integrated systems.

**3.3.1 Role of Accounting within Change Programmes**

Organisational literature was the first to introduce the term role involvement (Kwon and Zmud, 1987; Emsley, 2005). The term role involvement can take two different views.
Figure 3.1

Seven Key Factors in Analysing the Importance of the Accountant in the Implementation of an Integrated System

- Role of Accounting within Change Programmes
- Level of Senior Management Support for Accounting Innovation
- Importance of the Accountant in Implementing an Integrated System
- Presence of an Accounting Champion
- Positioning of Accountant within the Formal Hierarchy
- Level of Soft Skills of the Accountant
- Level of Technological Skills of the Accountant

56
Looking at these in relation to the role of accountants within change programmes, some writers think that accountants have valuable skills and are the key to providing valuable information involved in developing change programs (Shank, 1989; Back-Hock, 1992; Nanni et al, 1992; Shields and Young, 1992; Tsay, 1992; Brecht and Martin, 1996; Clohosey, 2002). However others believe that accountants can bring an overly financial view (Vollman, 1989; Eccles, 1991) which does not aid the development of new change programs (Johnson, 1992; Mc Kinnon and Bruns, 1992).

Case studies have highlighted the importance of the role involvement of accounting in organisations. Emsley (2005) stressed the importance of the role of the accounting function in the implementation of an integrated system when he quoted one of the respondents of his study as saying:

"Traditionally we have run our own show (in accounting) but we had to get together (with operations) when the ERP system was being implemented because it affected us all" (p172).

If the involvement of the accountant is to be influential, there must be a shared view throughout the ‘Change Team’ of the importance of the role of the accountant within this change program (Chenhall and Langfield-Smith, 1998; Emsley, 2005). According to Carswell (2002) because a lot of accounting is now being taken care of by the IT department, some of the accountants are now moving out of the ‘finance’ department and into the business units (Dent, 1991; Chenhall and Langfield-Smith, 1998; Lapsley and Pallot, 2000; Carswell, 2002; Caglio, 2003; Emsley, 2005; Dempsey and Vance, 2006).

3.3.1.1 Accountant with Business Orientation

The term role involvement was defined by Anderson (1995) as the:

“centrality of the management accountant’s job, authority and responsibility to the comptroller’s department” (p31).
High centrality reflects accountants with a functional orientation (Emsley 2005, p162). Functional orientated is where the accountants goals are more functionally focussed, such as compliance reporting and cashflows, rather than business unit goals (Chenhall and Langfield-Smith, 1998; Scapens and Jazayeri, 2003; Emsley, 2005). Chenhall and Langfield-Smith (1998) found some accountants had a preference to stay in their prime area of competency, that is the preparation of financial accounts. By maintaining a functional view, accountants are less likely to develop and implement change programs that are valuable to business unit managers, as they are less familiar with the business units information requirements (Chenhall and Langfield-Smith, 1998; Pierce, 2001; Emsley, 2005).

Low centrality reflects business unit orientation (Emsley, 2005). To be business unit orientated means the accountants spend time working closely within the business unit and gain a broad knowledge of the business (Chenhall and Langfield-Smith, 1998; Burns et al, 1999; Pierce, 2001; Scapens and Jazayeri, 2003; Emsley, 2005, Dempsey and Vance, 2006). Dempsey and Vance (2006) quote a Management Accountant, with regards to business unit orientation, as saying:

"The ability to work cross-functionally is paramount. Gone are the days that you are only working with the people in our own department. We are working with a range of people across the company now."

(p40).

Research findings suggest that accountants have a greater understanding, and are on the same wave length as business unit managers, if they are business unit orientated rather than functional accounting orientated (Cooper, 1996; Evans and Ashworth, 1996; Friedman and Lyne, 1997; Chenhall and Langfield-Smith, 1998; Tuopela and Partanen, 2002; Emsley, 2005; Dempsey and Vance, 2006). By moving out of the back office and placing themselves within the operations of the organisation, accountants will develop a better understanding of the needs of the company (Collins, 2000; Pierce, 2001; Caglio, 2003; Fleming, 2005; Dempsey and Vance, 2006).
Dempsey and Vance (2006) quote a Finance Director as saying:

“We are trusted to know what is going on. To do this we need to be close to the business” (p39).

Emsley (2005) quotes one of his research respondents as saying that during and after an ERP implementation, the accounting team spends about half their time in operations (p172). Accountants need to display a strong “business” focus.

### 3.3.1.2 Managers’ Perception of Accountant’s Role

If the accountants are to make a significant contribution to the design and implementation of an accounting system, not only must the accountants want to be involved, the managers must also actively pursue their involvement (Chenhall and Langfield-Smith, 1998; Emsley 2005). The managers of the company are often unsure as to what the accountants’ position should be in developing change programmes (Chenhall and Langfield-Smith, 1998). Managers often express the view that accountants should have provided greater support in developing change programs (Chenhall and Langfield-Smith, 1998; Pierce, 2001).

Contrary to the above, case studies have found that other companies had a strong understanding of the role management accountants could play in the development of change programs (Chenhall and Langfield-Smith, 1998; Ogden and Anderson, 1999; Emsley, 2005; Dempsey and Vance, 2006).

Chenhall and Langfield-Smith (1998) quote the Customer Manager of one company as saying:

“The customer focus is really hitting home with the accountants. They are looking at the customer outside the company, and their customers inside the business, and asking ‘what can we do to help?’. And they actually make changes to the systems to help their customers – it’s fantastic” (p376).
It is when the accountant and the rest of the management team share a view of the importance of the role involvement of the accountant, that the role of the accountant can be maximised in change programmes. Companies that understand the beneficial service that accountants can bring to change programmes spend time and effort in recruiting accountants who have a broad base of business and technical skills (Chenhall and Langfield-Smith, 1998; Caglio, 2003, Dempsey and Vance, 2006). Isolating the accountants involvement in the implementation of a new system can lead to a failed implementation (Chenhall and Langfield-Smith, 1998).

### 3.3.2 Level of Senior Management support for Accounting Innovation

An innovation is any concept, routine or item that individuals or units of adoption view as new (Rogers, 1995; Lapsley and Wright, 2004; Emsley, 2005). Innovations can be classified as either radical or non-radical (Zaltman et al, 1973; Emsley, 2005) According to Emsley (2005), radical innovations are a desire to “do things differently”(such as introducing customer profitability analysis for the first time)”(p161). Whereas non-radical innovations represent

> changes to existing management accounting techniques or practices that are characterised by a desire to ‘do things better’ (for example, making improvements to an already established system of variance analysis)” (Emsley 2005, p161).

Gurd et al (2002) write:

> “Dunk (1989) classifies accounting innovations as ‘administrative’ on the grounds that their implementation leads to new administrative procedures and policies, and to new organisational structures” (p208).

In order for new accounting innovations and changes to occur in an organisation, top management support is vital to their success (Kanter 1983; Walton and Susman, 1987; Chenhall and Langfield-Smith, 1998; Granlund, 2001; Gurd et al, 2002;
Abernethy and Bouwens, 2005; Motwani et al, 2005). Top management must be involved from the beginning, influencing the implementation decision, showing their commitment and communicating their understanding of the change program to the organisation.

If senior management is not seen to promote the new innovation, staff will not be influenced to participate in the new development (Gurd et al, 2002). Gurd quotes an Operations Manager with regards to management as saying:

"you've got to walk the talk; that is, not just talk about the matter, but get out onto the shop-floor and guide people through the required commitment" (p214).

The adoption of an integrated system involves the reorganising of the organisation to fit in with the system. This is a major change and must be led by top management (Weiss and Asai-thambi, 1993; Caglio, 2003). To quote Davenport (1998):

"If the development of an enterprise is not carefully controlled by management, management may soon find themselves under the control of the system" (p129).

Chenhall and Langfield-Smith (1998) found that one company's senior management recognised:

"that accounting innovations were complementary to implementing technical changes" (p378).

It is clear that when accountants wish to implement new innovations such as integrated systems this involves both technical and organisational change which requires the support of top management.
3.3.3 Presence of an Accounting Champion

A champion is a person that persuades others to support the project (Roberts, 1988; Markham, 1998; Markham and Griffin, 1998). Markham and Griffin (1998) quote the PDMA Handbook of Product Development as defining the role of a champion as varying:

"from situations calling for a little more than simulating awareness of the opportunity to extreme cases where the champion tries to force a project past the strongly entrenched internal resistance of company policy or that of objecting parties" (p437).

Champions whip up support for projects by showing personal commitment to them and promoting them beyond their job requirements (Markham, 1998).

A strong accounting champion can influence the views of individuals in the organisation and show them the important role accountants play in the development of new systems (Chenhall and Langfield-Smith, 1998; Bingi et al, 1999; Motwani et al, 2005). The power of the accountant as a project leader is determined by how he/she views the accounting function (Chenhall and Langfield-Smith, 1998). Some accountants do not view championing projects as part of their job role, they consider their role to be that of managing traditional functions such as accounts payable, cashflow and budgeting (Chenhall and Langfield-Smith, 1998). However others crave to move out of the traditional accounting roles and start “leading the agenda” (Dempsey and Vance, 2006).

Adam and O’ Doherty (2000) found that out of fourteen firms they surveyed that were implementing ERP systems, nine were headed and championed by either, the financial director, controller or accountant. In a survey carried out by Doran and Walsh (2004) over seventy percent of respondents held the title of Financial Controller/Financial Accountant, who in-line with other researchers suggestions “may have been the ERP project champions in their organisations” (p31). Other
case studies also indicated that the finance department was the main initiator of new information systems (Bingi et al, 1999; Hyvonen, 2003; Motwani et al, 2005).

Caglio (2003) found the strategic and operational decisions relating to the new accounting system were taken by the CFO and the accounting department. The accountant was the champion in this case because the project was sold to its employees by explaining the need for this new system due to Y2K dilemma, euro problems and the need to redesign the accounting department because of the low quality of accounting information being produced, the need to manage financial reporting and the need to reduce transactional costs (Caglio, 2003).

Research has found that champions use cooperative rather than confrontive influence tactics (Markham, 1998). Caglio’s (2003) findings revealed that the CFO influenced the users acceptance by selling the new system:

“as a new and desirable ‘way of working’, which would have required Pharmacon’s people to engage in genuine collaboration, and to overcome professional and functional boundaries” (p35).

A powerful champion is one of the factors contributing to conditions for program success (Volkoff et al, 1999; Legare, 2002). However Markham (1998), writes that the reality of ongoing projects does not support authors such as Chakrabarti (1974), Schon (1983) and Day, (1994) who attribute positive project outcomes to champions. According to Markham (1998):

“the traditional image of champions having a positive effect on project performance is still speculative” (p500).

However despite Markham’s (1998) comment, most literature still lists project champions as one of the critical success factors in implementing a successful integrated system.
3.3.4 Level of Technological Skills of the Accountants

If accountants don’t develop their technological skills they run the risk of being drowned by technology (Tsay, 1992). In today’s environment, with the high dependency on information technology, accountants can use this changing environment as a strategic opportunity to carve out a new role for themselves (Tsay, 1992; Dempsey and Vance, 2006). A survey developed by Accountemps, a temporary staffing service for accounting, finance and bookkeeping professionals, found that IT expertise is now listed as one of the “critical skills for today’s accountant” (Anonymous 1999, p5). Lyons (1993) wrote:

“In the current environment, for example, outstanding technology skills are a must for every accountant” (p46).

It is clear that modern accounting literature is stressing the fact that accountants are moving away from transaction-based accounting into value adding activities, which includes systems development, design and implementation (Burns and Scapens, 2000; Granlund and Malmi, 2002; Caglio, 2003; Fleming, 2005; Newman and Westrup, 2005; Dempsey and Vance, 2006; El Sayed, 2006). Fleming (2005) quotes one of his interviewees as saying:

“technology changes by the moment, and management accountants have to be on top of that and understand its potential to increase value” (p22).

Therefore, the future role of the accountant appears to span across three job roles which were traditionally considered independent, financial accounting, management accounting and information technology professional.

El Sayed (2006) claims:

“Accountants are reinventing themselves, not only by articulating and representing their business needs but by developing their IT skills” (p92).
But what level of knowledge of IT is required? Most writers believe accountants do not need to have an indepth knowledge of all aspects of IT. According to Carswell (2002) today’s accounting graduates need to be computer literate and willing “to embrace technological change” (p53). The results can be tremendous if you can put a computer literate user such as an accountant together with a software developer as they will have the ability to understand each other and talk the same language (Carswell, 2002). Cheney (2006) quotes a Technical Director as saying:

“every professional accountant needs to know these areas exist and know enough about them to talk sensibly with people who are more competent in those areas” (p45).

The empirical study of Dempsey and Vance (2006) verifies this. The Finance Director in their study states that accountants need only enough knowledge of IT to know what IT is capable of doing.

3.3.5 Level of Soft Skills of the Accountant

Accountants who work closely with the business units, and liaise with the managers, have a better working relationship and understanding of the information needs of these business units (Tsay, 1992; Chenhall and Langfield-Smith, 1998; Emsley, 2005). Accountants should no longer be viewed as a “cop” but as a “coach” (Chenhall and Langfield-Smith, 1998). These new roles require the accountant to be equipped with soft skills. These skills are what differentiate accountants and make them “wanted employees” (Boomer, 2005).

Boomer (2005) defines soft skills as falling “under three primary categories: leadership, communications and relationship management” (p22). Leadership requires an executive presence, clear and communicable vision, ability to make decisions and ability to manage themselves and others (Boomer, 2005). Communications requires the accountant to have good written and oral skills, ability
to give and take instructions and ability to listen and motivate others (Boomer, 2005). Relationship management requires the accountant to be a team player, ability to manage conflicts, and ability to manage projects (Boomer, 2005).

According to Maturo (2007):

"Accounting professionals need to develop a roadmap for investing in ourselves as leaders and communicators" (p24).

To do this accountants need to welcome change as opposed to rejecting it, in order to build up good working relations within an organisation (Tsay, 1992; Lyons, 1993; Usry and Calvasina, 1994; Boomer, 2005; Newman and Westrup, 2005; Brent, 2006; Cheney, 2006; Dempsey and Vance, 2006; Maturo, 2007).

It has often been the case that the accountant's lack of soft skills has been blamed for the poor relationships between company departments (Chenhall and Langfield-Smith, 1998). The building-up of a trusting relationship between accountants and users of accounting information is an important factor to ensure the effective development of accounting systems (Foster and Ward, 1994; Ross, 1994; Chenhall and Langfield-Smith, 1998). Without this, the accountant will have a limited role in developing change programs.

3.3.6 Positioning of Accountants within the Formal Hierarchy

Accountants who remain within the formal bureaucratic hierarchy rather than integrating and playing a hands-on role with the business units are likely to remain isolated from team based structures in organisations (Chenhall and Langfield-Smith, 1998). The role of the modern accountant involves working "closely with the production and sales people, to gain their respect by giving business advice and acting essentially in a training role to keep staff from losing perspective" (Chenhall and Langfield-Smith 1998, p381).
The implementation of a new system is often seen as the most appropriate time to redesign the positioning of the accounting personnel within the organisation (Caglio, 2003). Caglio (2003) describes, the development of the new accounting system as having “led to a redefinition of the relationship between Pharmacom’s workers and accountants” (Caglio 2003, p142). The ‘Accounting Department’ becomes involved in every organisational change process which results in it creating a new powerful position within the firm for itself (Caglio, 2003). This breaks down the boundary between the ‘operational people’ and the ‘accounting people’.

It is clear from research carried out that accountants need to be team players with good communication skills and be business driven as opposed to being mainly accounting focussed (Burns et al, 1999; Institute Management Accountants, 1999; Pierce, 2001, Fleming, 2005, Dempsey and Vance, 2006).

Fleming (2005) asked why should organisations employ management accountants and one of the responses included was:

“One is performance responsibilities, which includes being able to work with people in a team environment and having good judgement skills. Management Accountants are increasingly been seen as the people who drive change within an organisation” (p21).

It is evident that due to the ever changing business environment and challenges faced by organisations today, accountants are needed to “step in and work at any level as part of a team” (Fleming 2005, p21). They need “to work closely with other members of the management team” (Burns et al 1999, p29) and be viewed as excellent communicators possessing integrity, confidence and ethical conduct (Fleming, 2005).
3.3.7 Relationship between IT, Users and Accounting

According to Tsay (1992) systems specialists “are a group of people who specialise in information technology” (p24). These specialists are constantly pursuing the latest technology. This constant state of change can scare ‘users’ because they have to spend a lot of time learning the new system and are often ‘afraid’ of new technology (Tsay, 1992; Clohosey, 2002). This can result in ill feeling between these two parties and a bad investment, unless the user is clear as to why this new technology is required.

“The user will always want to know what is in it for them to persist with a new approach, as opposed to what they have been used to” (Carswell 2002, p54).

This is where the role of the accountant plays an important influence. Accountants were traditionally seen as the “information processors of the organisation” (Tsay, 1992; Brecht and Martin, 1996). They were the source of information within an organisation. They were viewed as the gatekeepers of financial information and as internal providers of information for operational and for competitive success (Tsay, 1992; Wallman, 1995; Brecht and Martin, 1996).

When new systems are introduced, accountants play a very important middle-man role in gathering the information needs of users and passing it onto the computer specialists (Tsay, 1992). As accountants are not experts on hardware and software, they are unable to put computers to work and as computer specialists are not experts in determining the users needs, accountants are the best information brokers between the computer specialist group and the end-user group in a system development project (Tsay, 1992). Because of this, accountants need to use their “information expertise to play a larger role in developing system applications” (Brecht and Martin 1996, p21) and get more involved in “the design and management of IT systems” (Caglio 2003, p124).
Accountants are the link between the users and the IT implementers. The importance of accountants and user input is stressed by Kumar et al (2002) by quoting one of the respondents to their survey:

"In essence, ERP deployment in itself saves nothing and does not improve anything. It's the people and processes that create benefits" (p170).

If both the people and business aspects are ignored when implementing an integrated system, it will result in a systems logic being imposed on the organisation which will result in a failed implementation (Davenport, 1998; Holland and Light, 1999; Kumar et al, 2002; Scapens and Jazayeri, 2003; Botta-Genoulas et al, 2005). As a result the accountants role must hold the user and IT developers together to ensure the users don't get a system which they don't want but is viewed as "perfect" by IT personnel (Tsay, 1992). Accountants today need skills and knowledge that allows them to work as multi-disciplined managers across organisations, communicating winning strategies and controlling implementation and performance (Allott et al, 2001).

3.4 Linking the “critical success factors” and the “key factors”

It is interesting to note the close correlation between the critical success factors required to facilitate a successful systems implementation (see figure 2.1) and the seven key factors influencing the importance of the accountant in implementing an integrated system (see figure 3.1). The linking of these two figures emphasises the importance of the accountant in the successful implementation of new systems (see table 3.1).

3.4.1 Top Management Commitment

Top management commitment is critical to the success of any innovative or substantial project undertaken by an organisation. The implementation of new
accounting innovations is a huge undertaking and requires substantial change in the way people, other than just finance staff, work. The implementation of an integrated financial system is often viewed as an accounting innovation. If top management do not give it their full support, other members of the organisation will not take it seriously, then most likely its implementation will not be a success. If this new initiative is to be encouraged it has to have the full backing of top management.

3.4.2 Business driven

Accountants today have to be business focussed. Some are even moving out of the finance department and away from the traditional hierarchical organisation structure. They are seen to be playing a ‘hands-on’ role in the management of the organisation. They operate in a style that moves the organisation forward in terms of service delivery and performance. With their knowledge of the business environment within which they operate, and their analytical and technology skills, they are a key part of the team required to drive new systems implementations. Therefore, their move to be business driven logically makes them an important part of the ‘implementation team’ and a factor in its success.

3.4.3 Clear Communication of Business Vision

Presentation skills, both written and oral, have always been of prime importance in the role of the accountant. This complements the critical success factor of a requirement of a clear communication of business vision, as the accountant is often seen as the best person to present analytical information. The accountant is often the individual that updates users and management on the plans for how the organisation will function in the future. The accountant in many case studies of systems implementations has even been the project champion.
Table 3.1 Matrix linking the “critical success factors” and the “key factors”

Table 3.1 Seven Factors Influencing the Accountants Role in Implementing an Integrated System

<table>
<thead>
<tr>
<th>Ten Critical Success Factors</th>
<th>Accountants Role in Change Programmes</th>
<th>Level of Senior Management Support for Accounting Innovation</th>
<th>Presence of an Accounting Champion</th>
<th>Level of Technology Skills</th>
<th>Level of Soft Skills</th>
<th>Positioning of Accountants within the Formal Hierarchy</th>
<th>Relationship between IT, Users and Accounting Departments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Management Commitment</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Driven</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Clear Communication of Business Vision</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skilled Cross Functional Project Team</td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Well Developed Work &amp; Resource Plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Close Working Relationship with the Vendor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Process Reengineering</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Change Management</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Project Champion</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Critique of Existing System</td>
<td>X</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

71
A vital skill for any project champion is to be able to communicate in a clear and articulate manner what the business vision for the organisation is. This stresses how the accountant as the communicator of the business vision fits into this critical success factor in a successful systems implementation.

3.4.4 Skilled Cross-Functional Project Team

The modern role of accountants involves more than the traditional analytical skills. They now require a whole set of softer skills. Their technology skills and an understanding of IT terms, combined with softer skills, such as communication, team work and motivation, allows them to communicate and work effectively within cross-functional teams. Accountants can bring significant benefits to this team in two ways. First they provide their analytical and logical thinking. Second they act as a useful communicator between the IT personnel and the end users of the system. The literature has cited a cross functional team as a critical factor in enhancing the successful implementation of an integrated system.

3.4.5 Well Developed Work and Resource Plan

The accountants' knowledge of planning and control, along with being on-site with the users, makes it clear that the accountant can help in progressing the project, meeting deadlines and finally assisting in training. Milestones and project progress needs to be tracked and communicated to the responsible individuals. For any system to be implemented successfully, planning and coordination are vital. Accountants are often best positioned for this role. Again this emphasises the importance of their involvement in the implementation process.
3.4.6 Close Working Relationship with the Vendor

The accountant can liaise with the vendor in an effective manner. Their knowledge of the existing system and the information requirements of the new system makes them a good contact person for the vendor. They often are the people that can best express to the vendor the requirements of the end users. This building of a strong working relationship with the vendor, shows how the role of the accountant maps into the critical success factors for systems implementation.

3.4.7 Business Process Re-engineering

As the accountant moves out into the organisation to work with the business units and assist staff with their work procedures, the accountant is in a position to provide valuable advice on best practices. They see the non-value-adding business processes that can be eliminated and the value adding processes that can be improved to the benefit of the organisation. Systems implementation involves changes in organisational structure and business process re-engineering. Again, the benefits of the involvement of the accountant in this regard could be influential in the successful implementation of an integrated system.

3.4.8 Change Management

Accountants can aid management of organisational change by emphasising the benefits of change using their leadership skills and communication skills. The accountant clearly communicates how the new system will impact on the users' roles. In addition by working on-site with the employees and being business unit focussed, they can reduce or eliminate the concerns of users by providing training on the new systems. In this way the accountant is a valuable part of the change management team.
3.4.9 Project Champion

The accountant is the logical champion of a financial systems implementation. The accountant’s accounting and technology skills, role in change programmes and their new set of ‘softer skills’ make them a strong contender for this position. Every systems implementation project needs a strong project champion. Once again showing how the accountant could fit into the critical success factor in a successful systems implementation.

3.4.10 Critique of Existing System

By having a business unit focus and having knowledge of the existing financial system, accountants can play an influential role in documenting and highlighting the problems of the existing systems and in providing business solutions to overcome these problems. This review of the existing system is a critical factor in the successful implementation of a new integrated system. This again shows how the accountant plays a vital role in implementing change programmes.

All of these links have illustrated the importance of the involvement of accountants in the implementation team. If they are involved from the beginning, right through to the completion and in the training of end users, not only will it improve the chance of success, but it will also improve the effectiveness of the new system.

3.5 Conclusion

This chapter examines how accountants are moving away from their traditional ‘bean-counting’, information gathering roles into more diverse business roles, such as business analysts, advisors and systems accountants. Today’s accountants not only need accounting and analytical skills but they need to understand technology,
have 'softer skills', such as leadership, communication, motivation and teamwork and have a knowledge of what is happening in the current business environment.

This chapter extracts seven key factors from existing accounting literature that should be taken into account when considering the importance of the accountant in developing and implementing an integrated system. Firstly, the role of the accountant in implementing new innovations needs to be viewed by the organisation as valuable and the accountant should be seen to be working closely with the organisations business units. Secondly, the accountant should be supported by management which should be clearly displayed throughout the organisation. Thirdly, accountants should be seen to be part of the leadership team of the project using cooperative rather than confrontational influence tactics. Fourthly, accountants must have sufficient IT skills to hold conversations with IT specialists. The fifth factor is that accountants need to have good communication skills and be respected within the organisation. The sixth factor is that accountants need to move away from the traditional formal bureaucratic hierarchy and place themselves among the various business units within the organisation. Finally they need to have good working relationships with IT specialists and users of the systems within the organisation, as accountants provide the link between the user and IT department assisting IT specialists to provide a system that meets the organisations needs.

The chapter concludes by linking these seven key factors to the critical success factors outlined in the previous chapter as being necessary for the implementation of an integrated system. This linkage stresses the importance of the accountant's role within the successful implementation process.
Chapter 4 Integrated Systems in Public Service Organisations

4.1 Introduction

This chapter focuses on the literature relating to the implementation of integrated systems in the public sector and the changing role of the public sector accountant. It discusses the reason for adopting an integrated system in the public sector, and the procurement process involved. It examines whether, according to the literature, a single vendor system or a best-of-breed (BoB) system is more appropriate in a public sector organization. This chapter then discusses the relevance of each of the factors required for a successful integrated systems implementation identified in Chapter 2 in a public sector environment. Finally it examines the future role of the public sector accountant.

4.2 Adoption in Public Sector Organisations

In public sector organisations adoption of new information technology (IT) innovations are affected by government influence, political and legal factors and real-time information (Miranda, 2002; Kumar et al, 2002; Lapsley and Wright, 2004; Ramon Gil-Garcia and Pardo, 2005; Botta-Genoulaz and Millet, 2006). Integrated systems should not be implemented in the service sector just because “it is the fashion” (Bakker and Leguit, 1999). Neither are they usually cited in public sector literature as being implemented in a response to increases in competitiveness. To quote Miranda (2003):

“In contrast to the private sector, investing in technology for most governments has little to do with direct competitive pressures” (p20).
Investments in IT by public sector organisations should be based on a needs assessment basis, as governments cannot be seen to be spending public money on failed systems implementations (Miranda, 2002). It is not unusual to hear reports where governments have spent millions of euro on IT projects only to have them halted or abandoned altogether (Miranda, 2002). The Irish government was seen to spend millions on a PPARS health payroll and personnel system only to have it halted due to systems errors and huge escalating costs (Hunter, 2005). An examination of the PPARS system was carried out by the Comptroller and Auditor General and this report claimed that part of the reason for the failed systems implementation was due to not properly defining the business needs of the health sector organisation prior to the system going live (Hunter, 2005).

Public sector organisations want to be viewed as service providers that meet the needs of their customers (Miranda, 1999; Lapsley and Pallot, 2000, Ramon Gil-Garcia and Pardo, 2005). Integrated systems are therefore attractive to public sector organisations as they promise better quality of service to customers. But as well as improved customer service, the improved functionality of integrated systems also helps to eliminate multiple data entries that were present in stand alone legacy systems, improve organisational work flow processes and web based technologies, and aid in cost reductions (Miranda, 1999; Kumar et al, 2002; Miranda, 2003; Lapsley and Wright, 2004; Miranda and Kavanagh, 2005; Ramon Gil-Garcia and Pardo, 2005; Botta-Genoulaz and Millet, 2006).

According to Madden and Miranda (1998), local governments were partly motivated by the Y2K problem, to move away from their old legacy systems towards integrated software. Kumar et al (2002) quote one of their public sector respondents as saying with regards to integrated systems:

"We were facing numerous problems with the legacy systems. We viewed the new ERP system as an opportunity to do things in a better way and differently" (p155).
Governments are attracted to ERP systems due to the added features they offer such as powerful development toolsets, drill down audit trail capabilities, flexible chart of accounts, advanced reporting, up to date reporting and analysis and web enabling capabilities (Miranda, 1999; Miranda, 2002; Kumar et al, 2002). The powerful development toolsets allows users to customise the way they use information in a manner that relates to their job role and also aids in the design of interfaces and system wide security (Miranda, 1999; Miranda, 2002). Drill down audit trail capabilities allows the ability to review all of the history changes to a record in the database and its useful to know which user made a change to a record for example a wages record (Miranda, 1999).

The chart of accounts is critical to a financial system and should include more detailed information than is available from the legacy systems (Miranda, 1999). Single vendor systems provide users with powerful reports and analysis that they can design themselves, rather than simply providing them with standard reports (Miranda, 1999; Miranda, 2002).

Another reason for integrated systems adoption by public sector organisations according to Sprecher (1999) is the promise of up-to-date financial information which makes it easier to manage the organisation. Reporting issues are often cited as the main reason for the procurement of a new integrated system (Miranda, 1999; Kumar et al, 2002). Many of the old systems did "not have flexible report writing and querying capabilities to provide for easy access to historical files" (Miranda 2002, p15). Finally web enabling and internet capabilities are also another reason for governments adopting ERP systems (Miranda, 1999).

4.3 Needs Assessment Basis

In order to prevent failed systems implementation scenarios occurring, the following four steps "Needs Assessment" methodology has been developed by the
Government Finance Officers Association (Miranda, 2002). The first step is to define the problem. Senior administrators and officials need to create a vision of the ideal system and look at the information needs of the constituencies (Miranda, 2002). The current legacy systems are reviewed by looking at their major deficiencies, deciding whether the technology is obsolete, asking is there poor management and poor staff training (Miranda, 2002). The following questions also need to be asked:

"Does a stand-alone system support the individual department only or the organisation as a whole? Is the stand-alone system holding the same information as the main financial system? If it is, how much staff resources are dedicated to reconciliation activities? Which system is correct if the data does not match? How much work goes into system maintenance?" (Miranda 2002, p14).

The next step is to identify and research alternatives. Market research is a necessity in order to answer the following questions:

"Is there an off-the-shelf software package available that meets our needs? Is a new system a significant improvement over the current one? What are the major costs of implementing particular packages? Are there established firms with experience in implementing the software? What is the customer service reputation of different firms?" (Miranda 2002, p14).

Research on best practice for governments is often obtained from "interaction with peers, publications, conferences of professional associations, and training seminars" (Miranda 2002, p14). After carrying out the research and identifying the best practices the third step is to document viable alternatives by establishing options and developing recommendations (Miranda, 2002).

This involves specifying "the benefits, costs and risks of each alternative" (Miranda 2002, p14). An alternative becomes an option providing that the government has the willingness and ability to implement that option (Miranda, 2002). A recommendation should be made from the list of alternatives and it should be backed up with strong data and analysis (Miranda, 2002).
The final step is for the Executive Steering Committee to meet and make a decision on the course of action to take. According to Miranda (2002):

"The executive steering committee that sponsored the needs assessment should meet to decide on a course of action" (p15).

Once it has been decided that a new system is required, the next step is the tendering process.

4.4 Tendering Process

For public sector organisations, the procurement of an integrated system is not only a huge capital investment, but also a highly political process. There are certain legal steps that have to be followed when a public sector organisation in Europe procures high value items (Botta-Genoulaz and Millet, 2006). The law states that local authorities must invite tenders for purchases greater than €50,000. The tender document must display details of the organisations requirements and terms of the contract. The suppliers then have fifty two days to respond. The local authority then needs to select a supplier based on the selection criteria (Botta-Genoulaz and Millet, 2006).

Madden and Miranda (1998) sum up the procurement process as:

"Typically, a Request for Proposal (RFP) is released, vendor proposals are received, responses to business requirements are analyzed, and demonstrations/site visits are conducted. After deliberations, a single vendor is announced (usually on the basis of costs presented in the proposal) and the contracting process commences "(p34).

For the procurement process to be a success, it is important to have an expert government procurement team set up (Madden and Miranda, 1998).
The team should be led by a project manager and complemented by:

"a group of key project stakeholders that is familiar with the business needs of the organisation (e.g., representation from law, MIS, budget, finance and purchasing)" (Madden and Miranda 1998, p36).

Once the procurement team selects two vendors from the applications submitted, each vendor should be invited to the government site to meet with the team and have a ‘discovery’ discussion which allows the “vendors to ask questions and find answers (e.g., number and type of interfaces required and data file dimensions)” (Madden and Miranda 1998, p37). The purpose of this session is to allow the vendors the opportunity to refine the scope/cost of their proposals (Madden and Miranda, 1998).

Once the ‘discovery’ process is complete the tender process reverts into two major phases. First, the statement of works (SOW) development detailing the software performance, implementation method, the technical architecture, the training strategy, maintenance and support and cost schedules for the new integrated system (Madden and Miranda, 1998). Then, the final contract negotiations take place (Madden and Miranda, 1998).

4.4.1 Statement of Works (SOW)

The SOW document should clearly highlight the functionality of the software, the staffing requirements, the rollout schedule and ‘go-live’ dates of the implementation method (Madden and Miranda, 1998). The role of the government team in the development of interfaces and data conversion to the new system must also be clearly documented in the SOW (Madden and Miranda, 1998). The training strategy to be used by the vendor for training the government’s project team, end-users and technical staff must be specified (Madden and Miranda, 1998).
The maintenance and support details must also be documented. Madden and Miranda (1998) write:

"Each vendor’s SOW should offer a comprehensive strategy that details the plan for supporting the regular maintenance of the application (including the interfaces), problem resolution, and upgrade of the system to future versions of the software" (p38).

Madden and Miranda (1998) warn that governments should "examine the fine print related to maintenance fee increases (e.g. percentage or CPI)" (p39).

After discussions on the government’s requirements and topics on the SOW are complete, the vendors should be able to update their cost schedules (Madden and Miranda, 1998). This will allow the government to carry out a cost analysis between the vendors based on hourly implementation rates, software module prices, fixed cost elements and contingency costs (Madden and Miranda, 1998).

"Governments procuring ERP software should take a 10-year life-cycle view of these costs and aggressively negotiate them down by capping escalation, seeking waivers for fees during the implementation period, and making the affordability of maintenance and support a strict criterion in ranking vendor proposals" (Miranda 2003, p21).

The government can now ask the vendors for a best-and-final-offer (Madden and Miranda, 1998). This can take the form of a fixed-bid, a not-to-exceed bid, or a combination of fixed/variable cost bids by category (Madden and Miranda, 1998). Under a fixed-bid contract, the vendor bears the risk of cost overruns and reaps the benefits of efficient systems implementation (Madden and Miranda, 1998). Under a not-to-exceed contract, the cost of the project is capped so if the project is completed under-budget, the government reaps the benefits, if it exceeds the budget, depending on the contract details, the vendor may suffer the loss (Madden and Miranda, 1998). Whatever pricing strategy is picked, governments must ensure that it’s a policy which motivates vendors to staff the project with highly skilled people who will work to achieve the implementation deadlines (Madden and Miranda, 1998).
Once the final SOW document is submitted, the governments team must select the most suitable and viable vendor (Madden and Miranda, 1998). Before the final decision to select an implementation firm is made, another important factor to consider in the selection process is whether the firm has had previous experience “installing the software at other public sector sites including whether these projects were on time and budget” (Miranda 2003, p20).

4.4.2 Final Contract Negotiations

Upon selection of the single vendor the government team must then finalise the terms and conditions of the contract. According to Madden and Miranda (1998):

“The final contract must be flexible enough to accommodate the unexpected, but comprehensive enough that it can be used as the definitive “roadmap” for executing the implementation” (p39).

It is clear that the contract must not be seen as a strait-jacket. It must be sufficiently adaptable to deal with the modern, ever-changing environment of the public sector organisation.

4.5 Single Vendor Versus Best-of-Breed (BoB) Systems

Miranda (2003) found that many state and local governments had legacy systems that were not integrated resulting in dispersed information throughout the organisation. The short term solution to this was to develop “standalone and ‘best-of-breed’ systems which has only further fragmented information access within government” (Miranda 2003, p17). In addition to the dispersed information, the individuals with the expertise for maintaining these legacy systems are “an endangered species” and instead of putting patches on existing systems, many local governments opted for the route of implementing an ERP system (Miranda, 2002; Miranda 2003, p17).
Miranda (2003) asks:

"What, then, is the appropriate course of action for governments saddled with antiquated systems? Should they stay with what they have and muddle along, or go with ERP as a viable alternative? (p19).

Research findings suggest that, while ERP systems implemented in manufacturing companies are viewed as an integrated solution, in the service sector enterprise-wide functional integration does not exist (Miranda, 1999; Schneider, 2000; Botta-Genoulaz and Millet, 2006). Research carried out indicates that ERP systems are commonly designed for profit-making organisations and the private sector, and that government departments’ have modified the software to meet their specific requirements (Kumar et al, 2002; Botta-Genoulaz and Millet, 2006).

"The dream of a seamless integration does not seem to be possible in services, which generally launch projects including customer relationship and human resources management, and less often design and production of services ’(Botta-Genoulaz and Millet 2006, p219).

However Miranda (2000) writes that while the term seamless integration can be exaggerated by single vendors, it is this trait of ERP systems that is “critical for the systematic implementation of e-commerce and e-government initiatives” (p11). With an increase in web payments by customers for bills such as water and parking fines selecting a single vendor that offers “CRM modules that are integrated with general ledger, accounts receivable and billing is one approach to avoid going down the wrong road” (Miranda 2000, p11). Otherwise the future holds expensive integration issues with back office systems (Miranda, 2000).

According to Miranda (2003) “replacing outdated legacy systems with modern ERP systems is an entirely rational course of action” (p20). Studies have found in the majority of cases that governments will benefit from replacing their old legacy systems with an integrated system (Miranda, 2003).
A BoB system is where:

“software for different functions are linked to one another through programming interfaces but do not necessarily share a common database” (Miranda 1999, p11).

Those in favour of a BoB strategy argue that the risk of implementation failure is lower (Miranda, 1999; Botta-Genoulaz and Millet, 2006) because “the “best” individual applications are being moulded into one system” (Miranda 1999, p11) and despite ERP systems being viewed as “vanilla installations” and “forced process change” they raise the question on “whether a single software vendor can indeed provide all the modules that constitute an entire administrative system” (Miranda 2002, p13). Spooner (2002) confirms this by stating that BoB systems were selected in the Healthcare Sector in San Diego because they arm the “various end-user communities with the specialised tools and functionalities they require” (p28).

4.6 Implementation of an Integrated System

Despite the benefits of integration and process improvement, governments are wary of the risks and challenges that come with implementing integrated systems (Madden and Miranda, 1998). As Botta-Genoulaz and Millet (2006) write:

“Government organisations, due to their social obligations, higher legislative and public accountability, and unique culture face many specific challenges in the transition to enterprise systems” (p211).

The critical success factors cited in Figure 2.1 as necessary in order to combat system implementation risks are just as important to public sector organisations as they are to private profit making organisations.
4.6.1 Top Management Commitment

Senior management must be seen as part of the key players in developing the business case for integrated systems implementations in government organisations (Kumar et al, 2002, Hadfield, 2006). Hadfield (2006) writes:

"The behaviour of senior management is (also) critical, since in those cases where management teams have demonstrated transparency, engaged with employees and engendered trust, the council has been more likely to deliver a successful project" (p28).

According to Davenport (1998) and Bingi et al (1999), top management support is required from the initiation to the completion of an integrated implementation. Kumar et al (2002) found, in 70% of the government organisations surveyed, top management support was present and they were seen to initiate the requirement for an integrated system. 50% of the implementation projects had top management involvement (Kumar et al, 2002).

4.6.2 Business Driven

The business is supported by integrated systems and Kumar et al (2002) identified important questions that arise in developing business cases:

- Does the system model the business in the best way?
- Do the systems technical imperatives coincide (or conflict) with the organisation's business imperatives?
- Does the organisation have, or can it draw upon, enough resources to mitigate perceived and unperceived risks? (Kumar et al 2002, pp154-155).

Investments in integrated systems require a greater return on investment and a much stronger business case than other investment projects.
According to Miranda (2002) public managers have to answer the following question:

"What is the business case for investing in new ERP and financial management systems" (p12).

The reason for this cautious strategic approach is that, in the past, government investments in integrated systems did not deliver what they were anticipated to deliver and also cost more than expected (Miranda and Kavanagh, 2005). This was seen in the implementation of the PPARS system in the Irish health sector where the project didn't properly define the business requirements of the system or allocate additional staff resources for the system (Hunter, 2005). Therefore these investments require a "detailed business case" (Miranda and Kavanagh 2005, p37) that identify, amongst other things, the rationale for the system, the benefit of such a system, the financial and staff resources needed (Miranda and Kavanagh, 2005).

4.6.3 Clear Communication of Business Vision

One of the first steps towards creating a collective vision and ownership of an integrated system in the public sector is to establish a project charter which clearly displays to staff the objectives of the project, roles and responsibilities of participants, project sponsorship and decision making processes (Harris, 1999; Miranda, 1999). Support and acceptance of new systems from the government employees within the organisation is required from the beginning (Kumar et al, 2002). In government organisations the popular methods of communicating the new business vision of integrated systems were meetings, e-mails, information seminars and training key members (Harris, 1999; Kumar et al, 2002).

These methods highlight the potential benefits and improvements that can be gained from the new system (Kumar et al, 2002).
Kumar et al (2002) quotes one of the managers they interviewed:

“Users were not told why to use the systems, which resulted in situations like a human resource clerk generating an employee number without understanding the significance of his activity and sometimes getting the whole process wrong” (p164).

If clear communication does not exist, the result can be the implementation of an inadequate or indeed inaccurate system.

4.6.4 Skilled Cross-functional Project Team

According to Kumar et al (2002), a project's success depends on its team members. Because of its 'enterprise-wide' scope, a successful team needs to be composed of cross-functional and multi-skilled people (Davenport, 2000; Kumar et al, 2002). Kumar et al (2002) found that 90% of teams in the government organisations surveyed had a strong IT and functional representation on them. Management, IT consultants and systems vendors were the other key members of the project team (Kumar et al, 2002).

4.6.5 Well Developed Work and Resource Plan

A project charter is critical to the successful implementation of an integrated system (Miranda, 1999). It defines the objectives, decision making process and roles and responsibilities of project members during the systems implementation (Miranda, 1999). If there is no well defined plan the outcome will be a government crippled timetable and budget (Miranda, 1999).
According to Miranda (1999):

"a government must perform at least 50 percent of the implementation work effort if the project is to be economical and successful" (p15).

In order for the integrated systems implementation to be a success governments must provide a critical mass of staffing resources (Miranda, 1999). If they are unable to provide the staffing requirements for the new project then they should not proceed with the new system (Miranda, 1999).

4.6.6 Close Working Relationship with Vendor

Implementations of integrated systems in government organisations requires close working relationships with the vendor, therefore governments should “choose firms that employ consultants with public sector expertise who have implementation experience at comparable sites” (Miranda 2003, p20).

In addition to reviewing the integrated systems capabilities, governments need to also consider the vendor’s “long-term plan and vision for the future” as well as its commitment to the public sector market place (Miranda, 2003; Kavanagh and Hoekstra 2004, p15). If a government, in the first instance, only purchases certain modules of the integrated system such as financial and payroll, it should also evaluate the vendor’s “e-government capabilities” (Kavanagh and Hoekstra 2004, p15). According to Kavanagh and Hoekstra (2004):

“if the vendor does not have these capabilities, or at least a cogent plan for providing them in the future, it will probably not be a good long-term partner” (p15).

Only when it is satisfied that the vendor is technically strong and committed to future business solutions in the public sector, can public sector organisations build,
and later maintain, a strong working relationship with the vendor. Hardware vendors were also found to be part of the team, as maintenance and reliability of hardware were a necessary requirement of the organisation (Kumar et al, 2002).

4.6.7 Business Process Re-engineering (BPR)

Miranda (1999) addresses the importance of the issues of ‘best practice’ and business process re-engineering from the perspective of a public sector organisation:

"The implications of best business practices and process re-engineering must be carefully thought through in a government's decision to acquire and implement an ERP system" (p14).

The examination of the experiences in manufacturing organisations and other private sector organisations are important to public sector managers. However, it is not always safe to assume that ‘best practices’ in the private sector will be in the best interest of the public sector organisation (Halachmi and Bovaird, 1997; Miranda, 1999). As stated by Halachmi and Bovaird (1997):

"managers in either sector should not expect the experiences of others to provide tailor-made solutions to their specific problems" (p234).

BPR involves identifying the organisation’s business processes that add value to the organisation as opposed to those which do not add value (Manganelli and Klein, 1994; Halachmi and Bovaird, 1997). The concept of value is easier to define in the private sector than the public sector (Halachmi and Bovaird, 1997). In the public sector, the value is not the price of the service, because sometimes this is delivered to their less privileged customers at a zero price (Halachmi and Bovaird, 1997). Neither does the cost of inputs equal value in public sector organisations (Halachmi and Bovaird, 1997).
Halachmi and Bovaird, (1997) claim that if we accept ‘value’ in public sector organisations as:

"what is considered to be value by the stakeholder, i.e. what brings satisfaction to the stakeholder, then we are faced with the reality that value in the public sector must be multi-faceted and must encompass elements never to be found in private sector value analysis" (p230).

Investment projects in integrated systems seem to focus on the functionality and features of the software product (Miranda and Kavanagh, 2005). However research indicates that today’s technological investments should focus on re-engineering the organisation to obtain maximum benefits from the integrated systems. Miranda and Kavanagh (2005) quote Pfeffer and Hayes of the Hackett Group:

"executives tasked with ensuring that the maximum impact is obtained from ERP investments can take heart from the fact that, except for some small differences in features, ERP functionality is now so commoditized that, rather than agonizing over small differences (unless they are critically important to the business), one’s focus can instead be on properly implementing best practice processes and organization optimization" (p39).

When procuring an integrated system, governments must look more at their implementation approach as opposed to placing the emphasis on the software product (Miranda and Kavanagh, 2005). Sometimes the benefits of BPR can be missed in order to keep the project on time and within budget (Miranda, 2003).

**4.6.8 Change Management**

Change management, and training, focus on the human elements of integrated systems (Miranda, 1999).
Harris (1999) defines change management as:

“all activities associated with the interaction of technology, processes and people” (p29).

If change is not managed the problems that government organisations can run into are unavailability of skilled people, high turnover of key project persons, cost escalations and difficulties in estimating the project requirements (Kumar et al, 2002). It is very important to manage the knowledge gap between the implementers and users (Kumar et al, 2002). From the beginning each user of the new system must understand why the organisation is moving from the ‘as is’ to the ‘to be’ processes and the role they will play with the new system (Harris, 1999; Hadfield, 2006). This can be achieved by providing clear communication of the process and sufficient and timely training to project persons and users (Harris, 1999; Miranda, 1999; Davenport, 2000; Kumar et al, 2002). In a survey carried out on government organisations, Kumar et al (2002) found that most of the respondents stressed the importance of providing training for users.

Research findings indicate that government project teams are trained by sending them to vendors training centres, while executives and users are trained by using vendor-training facilities and developed in-house programs, courses and facilities (Kumar et al, 2002). Some government organisations use the ‘train the trainer’ model where key users in different work groups trained others in their groups (Harris, 1999; Kumar et al, 2002). According to Harris (1999) this has two benefits:

“The main benefits of a train the trainer strategy is that it lowers the cost of consulting services and improves ‘knowledge transfer’ between consultants, government project team members, and end users” (p30).
However a downside to train-the-trainer is that it can be difficult to find individuals with teaching skills and the time to train end users (Harris, 1999). Kumar et al (2002) quotes one of its government respondents as saying:

"It was tough finding enough knowledgeable people from the business to serve as project persons and trainers" (p164).

This comment highlights the challenges faced by government agencies in finding enough suitable people from their functional groups to serve on the project team and as key users (Kumar et al, 2002).

4.6.9 Project Champion

According to Miranda (1999), the government project champion should have a solid accounting, budgeting and technology background. The project leader of the systems implementation project should also be well-respected throughout the organisation (Miranda, 1999). The government champion must have excellent management skills such as communications, time management, ability to meet deadlines and supervisory experience (Miranda, 1999).

Greater project success is achieved in councils where integrated systems projects are headed by managers with change management, IT and business knowledge experience (Hadfield, 2006). An in-house project manager is best in a government organisation because a contractor is unlikely to have as much authority as a government staff member (Miranda, 1999).
4.6.10 Critique of Existing Systems

The critique of the existing system is carried out as part of the needs assessment. According to Miranda (2002) the existing systems are reviewed by looking at whether they meet the needs of the department they support, whether reconciliation activities are carried out and if there is poor staff and management training. A critique of the existing system is necessary in Local Government to prevent a reoccurrence of previous system deficiencies and to ensure the new system meets the organisations requirements.

4.7 Future Role of Accountants in the Public Sector

Freer (2002) writes specifically about the changing role of the accountant in a public sector organisation. He states that the traditional role of accountants dealing in financial appraisal, activity costing and in the preparation of financial management accounts is no longer an acceptable future role for the accountant as the public sector is a “cauldron of change” (p9).

The accountant must understand the ever-changing public sector environment. Not only will they use their traditional skills of accounting and costing but they must also interpret these figures to influence the leadership, performance and cultural change of the organisation (Freer, 2002). Freer (2002) sums the above up well by writing:

"Today's public sector accountants have to develop a much longer reach which aims to influence service delivery and its improvement, and behaviour and organisational culture. Judging the style and pace of the financial management strategy which delivers this biggest contribution is a critical skill. This and financial management in the public sector is art as well as science” (p9).
Lapsley and Pallot (2000) found that the local authority accountants were integrating into the management team, resulting in the demise of accounting "as a separate function" (p226).

4.8 Functional V Business Unit Orientation in the Public Sector

Lapsley and Pallot (2000) found in their case studies carried out in the UK and New Zealand, that the UK local authorities were institutionalised based, as opposed to the New Zealand local authorities operating a new public management style.

Burns and Scapens (2000) use Hamilton’s (1932) definition of Institution as:

"a way of thought or action of some prevalence and permanence, which is embedded in the habits of a group or the customs of a people" (p571).

In the UK local authorities, management adopted structures that displayed them as modern, well organised and rational organisations, but with a disconnection from accounting information (Lapsley and Pallot, 2000). The opposite was found in the New Zealand authorities where accounting was not viewed as a separate function but as part of the management of the organisation (Lapsley and Pallot, 2000).

In the UK local authorities studied, the accounting information was seen as very weak, not detailed and not user-friendly, as opposed to the New Zealand local authorities where accounting information was viewed as one with the management decisions made (Lapsley and Pallot, 2000). One of the Finance Directors in New Zealand did confirm that until his arrival at the local authority, accountants had been viewed very negatively, with a "them and us" mentality being present (Lapsley and Pallot, 2000). Upon the retirement of some of the old bureaucratic accountants, the new Finance Director recruited new young accountants who work closely with each operational unit (Lapsley and Pallot, 2000). These new accountants viewed
themselves as providing a customer service, in their case the internal customer was the business units (Lapsley and Pallot, 2000). Finance staff need to be familiar with the organisations operations and services and according to Chan and Miranda (1998);

"Finance staff should be able to apply their cost accounting knowledge to help the service departments measure performance, change practices, and organise efficiently" (p15).

The core finance functions have been defined as "budgeting, accounting, financial reporting, debt, and treasury management" (Chan and Miranda 1998, p17). While functions such as Information Systems, Purchasing and Risk Management do not fall directly under the responsibility of the finance department, they do have a financial aspect (Chan and Miranda, 1998). Due to this, in many government cases these related functions are classed as part of the finance domain (Chan and Miranda, 1998).

According to Madden and Miranda (1998):

"because finance officers are no longer selecting software for the accounting function alone, they often find themselves spearheading the selection of packages that may include functions outside of their core competencies" (p33).

This further highlights the requirement for accountants to be equipped with IT skills and be business unit orientated rather than functional unit orientated.

4.9 Conclusion

This chapter looked at the reasons why public sector bodies adopt integrated systems. Some of the reasons cited for adoption were the improved customer service to its constituents, improved functionality, enhanced reporting tools, improved work flow processes, web based technologies and reduced operating costs. It then
highlighted the fact that any investment in IT by public sector organisations requires a Needs Assessment procedure. Public sector organisations can’t be seen to be spending public sector money carelessly.

This chapter then went on to examine the tendering process, how a public sector organisation who is a member of the European Union has to comply with certain legal steps, depending on the monetary value of the procurement. It looked at the Statement of Works document and the various methods of pricing a contract. It highlighted the fact that the final contract drawn up between the vendor and the public sector organisation must be flexible to accommodate unexpected changes.

This chapter also looked at the literature contrasting a single vendor system to a best-of-breed (BoB) system. The literature seemed to favour the adoption of ERP systems for public sector organisations as opposed to BoB systems. It then looked at the critical success factors cited in chapter two of this dissertation as a necessity in preventing integrated systems implementation failures in a public sector context. The changing role of the accountant in public sector organisations was also looked at.

This chapter also highlighted the need for accountants to be IT literate and more business unit focussed as opposed to functional unit oriented. Accountants need to work closely with operational units if they are to assist them in implementing new systems and procedures.
Chapter 5 Methodology

5.1 Introduction

This chapter defines what is meant by the term research. As research is determined by what the researcher wants to find out, this chapter then sets out the researchers objective and the methodology used in this study. It begins with a broad discussion on research classification and of methods used in previous studies. It then focuses on the research methods considered and the appropriateness of the selection of the case study method.

5.2 Research Definition

Research can be described as work or activities undertaken by people in a systematic way with the aim of finding things out and increasing their knowledge (Saunders et al, 2003; Barrachina et al, 2004; Kumar, 2005). Systematic implies that “the procedures adopted to undertake an investigation follow a certain logical sequence” (Kumar 2005, p8). Finding things out suggests you have a clear purpose or topic you want to find out about (Burns, 1994; Saunders et al, 2003; Kumar, 2005).

5.3 Research Topic

The first and most important step of the research process is the formulation of the research topic (Saunders et al, 2003; Kumar, 2005). In this study the researcher’s first step in defining the topic was taken by observing, as an employee, the organisational changes within Cork County Council a Local Authority. Cork County Council was implementing a new integrated Debtors System, the researcher decided to carry out an extensive review of the available literature on successfully
implementing integrated systems in the public sector and the role of the accountant in that process.

5.4 Literature Review

According to Hakim (1987), the literature review is “commonly part of the ground-clearing and preparatory work undertaken in the initial stages of empirical research” (p17). It can be viewed as a means to an end and assist researchers in formulating more questions about a topic (Yin, 1994). The literature review process in this instance involved examining academic journals, books, online databases, the internet and conference papers.

5.4.1 Gap in the Literature

As a result of reviewing the literature available, the researcher recognised a gap which has not yet been adequately covered. Much has been written on factors cited as a necessity for a successful integrated systems implementation, but very little had been written about the role of the accountant in such implementations. Also there was very little literature on system implementations in public sector organisations. The researcher attempts to narrow the gap by carrying out an exploratory study.

5.4.2 Research Objective

The objective of this research is:

*To examine, in a Local Authority environment, the extent of the role of the accountant in the implementation of an integrated system.*
The researcher aims to achieve this objective by answering the following research questions:

1. How was the Integrated System developed and implemented within the Local Authority?

The first research question helps to document the approach taken in implementing an integrated system and specifically the people involved at each stage.

2. Were the ten critical success factors for systems implementations; namely top management support, clear business vision, communication of this vision, a skilled project team, a well developed work and resource plan, close working relationship with the vendor, business process re-engineering, change management strategy, a project champion and review of the current legacy systems, present?

The second question aims to determine whether the ten critical success factors revealed in the literature review as vital to a successful systems implementation were followed or not in Cork County Council.

3. What was the role of the accountants in each of the ten critical success factors?

The third question looks at the influence of the accountant in the implementation of an integrated system. It achieves this by examining the influence or involvement of the accountants in the ten critical success factors.

Due to the nature of these questions this study is classified as an exploratory study. The most important thing is the researcher was involved in the project.
5.5 Qualitative and Quantitative Research Methods

The division between qualitative and quantitative research methods is one of the most common distinctions in research methods (Myers, 1997; Adam and Healy, 2000). According to Kumar (2005) the only difference between these two research methods is the philosophy "that underpins their mode of inquiry as well as, to some extent, in methods, models and procedures used" (p17). Qualitative research aims to explain how all the components of a process work together, where as quantitative research takes apart the components of a process to understand them (Merriam, 1988). The main difference between these research methods resides in terms of the data collection methods used, the procedures used for data processing and analysis and the style used to communicate the findings (Kumar, 2005).

5.5.1 Qualitative Research

"The unstructured approach to inquiry is usually classified as qualitative research" (Kumar 2005, p12). As the researcher learns what and whom to ask, the research question may change and be redefined (Creswell, 2003). Qualitative research has been suggested as exploratory and should be used when the variables and theory base are unknown (Creswell, 2003). According to Morse (1991)

"Characteristics of a qualitative research problem are: a) the concept is "immature" due to a conspicuous lack of theory and previous research; b) a notion that the available theory may be inaccurate, inappropriate, incorrect, or biased; c) a need exists to explore and describe the phenomena and to develop theory; or d) the nature of the phenomenon may not be suited to quantitative measures" (p120). "Qualitative research is emergent rather than tightly preconfigured" (Creswell 2003, p181). It involves the researcher studying "things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them" (Denzin and Lincoln 1998, p3). Hakim (1987) backs this up by saying that
qualitative research offers “richly descriptive reports of individuals’ perceptions, attitudes, beliefs, views and feelings, the meanings and interpretations given to events and things, as well as their behaviour” (p26).

The researcher collects data in the form of words that were gathered by observation, interviews, documents, audio and visual material and the researcher’s impressions and reactions (Miles and Huberman, 1994; Meyers, 1997; Creswell, 2003; Sunyit, 2004). The data collected is then used to pose, refine and answer the research question (Adams and Healy 2000).

Examples of qualitative research are case study research, action research and ethnography (Meyers, 1997).

5.5.2 Quantitative Research

The structured approach to inquiry is usually classified as quantitative (Kumar 2005, p12). In the structured approach the objectives, design, sample and questions that the researcher plans to investigate are all predetermined (Kumar, 2005). Quantitative research is defined as an approach in which the investigator primarily “employs strategies of inquiry such as experiments and surveys, and collects data on predetermined instruments that yield statistical data” (Carswell 2003, p18). Quantification has been defined by Henwood (1994) as the sum of standardization, measurement and number. According to Creswell (2003) “In a quantitative project, the problem is best addressed by understanding what factors or variables influence an outcome” (p75).

Initially quantitative research methods were developed in the natural sciences to study natural phenomena (Meyers, 1997). This method emphasises that reality consists of a world of objectivity-defined facts (Henwood, 1994). Quantitative
researchers abstract from this world and seldom study it directly (Denzin and Lincoln, 1998).

The different types of quantitative data used by researchers include mathematical models, statistical tables and graphs (Denzin and Lincoln, 1998). The research instrument employed is critical to gathering and analysing or measuring data (Zikmund, 1997).

Examples of quantitative research methods include survey methods, laboratory experiments, formal methods, such as econometrics and mathematical methods such as modelling (Meyers, 1997).

## 5.5.3 Qualitative versus Quantitative

Yin (1989) states that a research design method is the logic that links data to be collected (and the conclusions to be drawn) to the initial question of a study. Guba and Lincoln (1994) confirms this stating that the particular paradigm chosen for any study must be driven from the research questions being investigated. Research methods are classified according to “the questions being investigated” (Benbasat 1987, p48).

If the purpose of a study is to primarily describe a situation, phenomenon, problem or event that are not examined or measured in terms of quantity, amount, intensity or frequency then qualitative research applies (Denzin and Lincoln, 1998; Kumar, 2005). However if the researcher wants to quantify the variation in a situation, phenomenon, problem or issue and the information is mainly gathered through quantitative variables and the analysis of casual relationships between variables is sought then quantitative research is suitable (Denzin and Lincoln, 1998; Kumar, 2005).
Kumar (2005) recommends that you do not focus your research solely on either qualitative or quantitative research. Quantitative data can appear very dry in comparison with the very rich data provided by qualitative studies (Adam and Healy, 2000). On the other hand qualitative research may be subject to considerable bias, and may be unreliable and impressionistic (Zikmund, 1997; Denzin and Lincoln, 1998).

If the researcher solely uses quantitative methods some important information that researchers need to uncover can remain hidden (Tellis, 1997). Quantitative researchers are seldom able to capture the subject's perspective because they have to rely on more remote, inferential empirical materials (Denzin and Lincoln, 1998). When textual data are quantified the researchers objective of understanding a phenomenon from the point of view of the participants and its particular social and institutional context is largely lost (Myers, 1997).

Hopper et al (2001) argued that quantitative research is too narrow, obsessively mathematical, and of little benefit to managerial problems that involve complex multiple factors and uncertainty. Quantitative techniques pay too little attention to the issues of designing organisations as sustainable entities (Otley, 2001).

On the other hand, research processes that include a qualitative approach can be very undefined and less objective than traditional analytical, survey and laboratory research (Kirk and Miller, 1998). Despite the fact that qualitative research permits the interpretation of results and allows a creative and in-depth analysis over the course of the study, this can result in the ideal of objective collection of purely descriptive 'facts' becoming blurred (Adam and Healy, 2000).

The skill of the researcher as an interviewer or observer in gathering data is crucial towards determining the value of the qualitative research methods, whereas the quantitative research methods place a great reliance upon instruments, such as experiments or questionnaires, employed to gather the data and analyse or measure it.
(Zikmund, 1997). It is a necessity in qualitative research that the researcher ensures that they remain objective (Merriam, 1998).

The researcher should select methods appropriate to the research question being posed. The choice between qualitative and quantitative mode of inquiry should depend upon:

"Aim of your inquiry-exploration, confirmation or quantification. Use of the findings-policy formulation or process understanding" (Kumar 2005, p12).

This study is an exploratory study because exploratory research is a valuable means of finding out “what is happening; to seek new insights; to ask questions and to assess phenomena in a new light” (Robson 2002, p59) (Saunders et al 2003, p96). Due to the nature of the topic the researcher choose qualitative methods of research as this provides insight, discovery and interpretation (Merriam, 1998) which is suitable to answering the research questions posed.

5.6 Research Strategy

According to Saunders et al (2003) the research strategy “will be a general plan of how you will go about answering the research question(s) you have set” (p90). Different types of research strategy are experiment, survey, case study, grounded theory, ethnography, action research, cross sectional and longitudinal studies, exploratory, descriptive and explanatory studies (Yin, 1994; Saunders et al, 2003). These strategies need not be thought of as mutually exclusive (Yin, 1994; Saunders et al, 2003). Yin (1994) believes that the choice of research strategy is dependent on “the type of research question posed, the control an investigator has over actual behavioural events, and the focus on contemporary as opposed to historical phenomena” (p1). This concurs with Merriam (1998) and Kumar (2005), who state
that the strategy selection depends on how you will find answers to your research question and the type of end product that is desired.

According to Yin (1994) the research strategy selected depends on the research question posed. 'How' or 'why' questions favour case studies, histories and experiments (Yin, 1994). Yin (1994) states that a case study strategy is best when a 'how' or 'why' question is being asked about a contemporary set of events over which the investigator has little or no control" (p9). Saunders et al (2003) state that a case study is suitable when 'what' questions are also being asked.

This research selected the case study strategy because the questions being posed were “how” and “what” questions.

5.6.1 Case Study Strategy

Yin (1994) defines a case study as an empirical inquiry that “investigates a contemporary phenomenon within its real life context, especially when the boundaries between the phenomenon and context are not clearly evident” (p13). Case study research is a traditional approach to the study of topics in social science and management (Chass, 2004). It seems to uncover influencing forces characteristic of the phenomenon (Merriam, 1998). Benbasat (1987) claims that the case study approach is an appropriate way of researching the implementation process of Information Systems and the factors involved. The qualitative research characteristics of describing, understanding and explaining are satisfied in case study research (Marshall and Rossman, 1989; Tellis 1997). According to Patton (1980) the depth and detail of qualitative data can be obtained only by “getting close”, physically and psychologically, “to the phenomenon under study” (p43).
According to Merriam (1998) "the case study seeks holistic description and explanation" (p10). Llewellyn (1992) agrees with this by claiming that case studies "seek to develop a holistic understanding" (p28).

5.6.2 The Holistic Approach to Research

A case study contributes uniquely to our knowledge of individual, organizational, social, and political phenomena (Yin, 1989; Zikmund, 1997; Otley, 2001; Barrachina et al, 2004). According to Merriam (1998) "Anchored in real life situations the case study results in a rich and holistic account of a phenomenon" (p32). The essential characteristic of the case study is that it strives towards a holistic understanding of "issues relating to an intervention from many perspectives: it seeks to view the performance of a program in its totality" (Kumar 2005, p294). Thus, the need for case study arises out of the desire to understand complex social phenomena. Yin (1989) summarizes this by saying:

"In brief, the case study allows an investigation to retain the holistic and meaningful characteristics of real-life events – such as individual life cycles, organizational and managerial processes, neighbourhood change, international relations, and the maturation of industries" (p14).

5.7 Limitations of Case Study Approach

Despite the descriptive, exploratory and explanatory nature of case studies (Yin, 1994), many researchers steer clear of case studies (Walker, 1985; Ryan et al, 1992; Yin, 1994). Guba and Lincoln (1981) claim:

"Case studies can oversimplify or exaggerate a situation, leading the reader to erroneous conclusions about the actual state of affairs" (p377).
This is backed up by Yin (1994) who writes a main concern of case study research is that it seems to lack rigour.

Qualitative case studies can also be limited by the biases of the researcher (Riley, 1963; Yin, 1994; Merriam, 1998). However bias is also a limit of other research strategies such as surveys and experiments (Ryan et al, 1992; Yin, 1994). However the researcher can work hard to avoid or reduce these limitations by learning from past experiences of researchers documented in earlier literature (Yin, 1994).

Another case study limitation cited in the literature is that case studies provide “very little basis for scientific generalisation” (Yin 1994, p21). However the same can be said for other research methods such as experiments and surveys. According to Merriam (1998) others argue:

“rather than applying statistical notions of generalizability to case studies, one should develop an understanding of generalization that is congruent with the basic philosophy of qualitative inquiry”(p34).

Hakim (1987) also states:

“The purpose of the case study is not to represent the world, but to represent the case” (p245).

According to the literature case studies can also be too lengthy and too detailed (Yin, 1994; Merriam, 1998). This can be avoided by suggestions for dealing with report writing and case study analysis in the literature (Yin, 1994; Merriam, 1998).

The objective of this study is to describe the role of the accountant in the implementation of an integrated system in a local authority. Despite its limitations, the case study was chosen for this analysis as a holistic study of the organisation was required to answer the necessary research questions.
"The qualitative case study can be defined as an intensive, holistic description and analysis of a single entity, phenomenon or social unit" (Merriam 1988, p16).

It enabled the researcher to study the role of the accountant not as an independent individual but as a key figure in the implementation process of an integrated system.

5.8 Single Case Study Method

A case study is focused on one area of study. In the forward to Yin's (1989) book, Donald T. Campbell states that a case study “epitomises a research method for attempting valid inferences from events outside the laboratory, while at the same time retaining the goal of knowledge shared with laboratory science”. Scapens (1990) describes a case study as a “single unit of analysis” (p264). Kaplan (1986) backs this up by saying case studies are characterised by the intense examination of a single entity.

The sample size for this study was limited to one Local Authority. The use of more Local Authorities would have allowed for cross unit comparisons. However, by concentrating on one Local Authority, an in-depth view of the organisation is provided. It is better to “work longer and with greater care, with a few people than more superficially with many of them” (Mc Cracken 1988, p17). If the sample size is one, the topic under investigation can be examined more closely.

According to Denzin and Lincoln (1998b) the case to select is that from which “we feel we can learn the most” (p101). “The potential for learning is a different and sometimes superior criterion to representativeness” (Denzin and Lincoln 1998b, p101).
Cork County Council was chosen because it represents an excellent example of a public sector organisation implementing an integrated system with the involvement of the accountant. The case selected “may mean taking the one that we can spend the most time with” (Denzin and Lincoln 1998b, p101) and as the researcher was employed by Cork County Council it was evident that this was the case she could spend her time on.

5.9 Triangulation

The issue of bias by the researcher is partially overcome by the use of multiple methods for data collection called triangulation (Denzin, 1970; Tellis, 1997; Merriam; 1998). According to Merriam (1998):

“triangulation combines dissimilar methods such as interviews, observations, and physical evidence to study the same unit” (p69).

The reason for using this strategy is that it helps to enhance the validity of the data collected because “the flaws of one method are often the strengths of another and by combining methods, observers can achieve the best of each, while overcoming their unique deficiencies” (Denzin 1970, p308). This is further backed up by Yin (1994) who stresses that

“any finding or conclusion in a case study is likely to be much more convincing and accurate if it is based on several different sources of information, following a corroboratory mode” (p92).

Triangulation contributes to the investigators efforts to achieve confirmation or convergent validity (Zikmund, 1997). By referring to the use of different data collection methods within one study triangulation helps to “ensure that the data are telling you what you think they are telling you” (Saunders et al 2003, p99). Triangulation increases confidence in the credibility of results (Yin, 1989).
The argument for case study research is strengthened by this opportunity to use multiple methods of data collection unlike

"that in other research strategies, such as experiments, surveys or histories. Experiments, for instance, are largely limited to the measurement and recording of actual behaviour and generally do not include the systematic use of survey or verbal information. Surveys tend to be the opposite, emphasising verbal information but not the measurement or recording of actual behaviour. Finally histories are limited to events in the 'dead' past and therefore seldom have any contemporary sources of evidence, such as direct observations of a phenomenon or interviews with key actors" (Yin 1984, p90).

As the approach to triangulation is flexible it can lead to a better fit between research problems and the methods chosen to investigate them (Brignall and Ballantine, 2003). Researchers are placing more emphasis on triangulation as journals are becoming more impatient with theoretical papers which lack accounting empirics (Hopper et al, 2001).

The methods used in this study to achieve triangulation are participant observation, interviews and documentation review.

5.10 Participant Observation

In Participant Observation the investigator may "take a variety of roles within a case study situation and may actually participate in the events being studied" (Yin 1989, p92). The roles can be one of many, either being a staff member in an organisation, a resident in a neighbourhood that is the subject of the study, or being a key decision maker in an organisation (Yin, 1994). In this case study the researcher was an accountant working as a member of staff specifically on the implementation of the integrated system.
Punch (1994) states that:

"participant observation...involves the researcher in prolonged immersion in the life of a group, community or organisation in order to discern people's habits and thoughts as well as to decipher the social structure that binds them together" (p85).

Saunders et al (2003) add to this by saying that the researcher reveals their role as a researcher to the organisation.

Participant observation is a double edged sword with advantages and disadvantages.

5.10.1 Advantages

The advantages cited by Saunders et al (2003) are:

"It is good at explaining 'what is going on' in particular social situations, it heightens the researcher's awareness of significant social processes, it is particularly useful for researchers working within their own organisations and virtually all data collected are useful" (p230).

According to Saunders et al (2003) the fact that the researcher is a participant:

"can be a very valuable tool, usually the principal research method, but possibly in combination with other methods" (p222).

The most unique opportunity available to the researcher by using this research method is access to information that may otherwise be restricted (Patton, 1990; Yin, 1994). This method allows the researcher to perceive the reality of the organisation by moving beyond the selective perceptions of others (Patton, 1990).

"Observation often enables you to draw inferences about someone's meaning and perspective that you couldn't obtain by relying exclusively on interview data" (Maxwell, 1996).
The researcher also has the added advantage of being able to organise meetings for the purpose of gaining insight into the research project (Yin, 1994).

5.10.2 Disadvantages

The disadvantages of participant observation cited in the literature are:

"It can be very time consuming, it can pose difficult ethical dilemmas for the researcher, there can be high levels of role conflict for the researcher, the closeness of the researcher to the situation being observed can lead to significant observer bias. The participant observer role is a very demanding one, to which not all researchers will be suited, access to organisations may be difficult and data recording is often very difficult for the researcher" (Saunders et al 2003, p231).

According to Yin (1994) the main problem arising from participant observation is that of biases. There will be conflicts between the roles of team members and the researcher (Hakim, 1987). The participant observer researcher may not be able to raise questions about events without being a supporter of the organisation. According to Merriam (1998):

"An observer cannot help but affect and be affected by the setting and this interaction may lead to a distortion of the real situation" (p103).

Patton (1990) agrees with this stating:

"The challenge is to combine participation and observation so as to become capable of understanding the program as an insider while describing the program for outsiders" (p207).

However according to Guba and Lincoln (1981):

"In situations where motives, attitudes, beliefs, and values direct much, if not most of human activity, the most sophisticated instrumentation we possess is still the careful observer-the human being who can watch, see, listen... question, probe, and finally analyze and organise his direct experience" (p213).
Thus it seems that overall there is no substitute for the participant observer (Merriam, 1998).

The researcher in this study is trying to develop a holistic perspective of the context within which the implementation process takes place and whether the accountant plays a role in this implementation process. Participant observation has been documented as the most appropriate research approach for investigating systems implementations (Benbasat, 1987).

5.11 Interviews

An interview has been defined as a “conversation with a purpose” (Webb and Webb quoted in Burgess 1982, p107). This is explained further by Patton 1980:

“We interview people to find out from them those things we cannot directly observe.... We cannot observe feelings, thoughts and intentions. We cannot observe behaviours that took place at some previous point in time. We cannot observe situations that preclude the presence of an observer. We cannot observe how people have organised the world and the meanings they attach to what goes on in the world- we have to ask people questions about those things. The purpose of interviewing, then, is to allow us to enter into other person’s perspective” (p196).

An overall picture of the organisation’s activities can be formed from interviews carried out by the researcher. Interviews can either be structured, semi-structured or unstructured (Saunders et al, 2003).

Structured interviews are predetermined and standardised questions (Merriam, 1998; Saunders et al, 2003; Kumar, 2005). In semi-structured interviews the interviewer has a list of themes and questions to be covered but neither the exact wording or order of questions is determined ahead of time (Merriam, 1998; Saunders et al, 2003). Unstructured interviews are informal. These interviews are ideal when the
interviewer does not know a lot about the topic and an in-depth interview is needed to obtain a clear idea about the area you want to explore (Merriam, 1998; Saunders et al, 2003; Kumar, 2005). Questions can be on the spur of the moment with the interviewer, they are not predetermined (Kumar, 2005).

The advantages of interviews is that they focus on the case study topic. They are more appropriate for studying complex situations, they are useful for collecting in-depth information, questions can be explained, information can be supplemented and interviews have a wider application (Kumar, 2005). The disadvantages are that

"interviewing is time consuming and expensive, the quality of data depends on the quality of interaction, the quality of data depends upon the quality of the interviewer, the quality of data may vary when many interviewers are used and the interviewer may introduce his/her bias" (Kumar 2005, p132).

Despite these interview limitations they allow the researcher to collect a rich and detailed set of data (Saunders et al, 2003).

In this study the researcher used both structured and unstructured interviews. The unstructured interviews involved meetings with various people on the project throughout the organisation. The researcher then conducted four structured interviews with those directly involved in the project (see Table 5.1). The interviewees were sent a copy of the proposed interview questions shortly before the interview. Multiple interviews and multiple interviewees allows for greater generalisation of results (Yin 1989).

Table 5.1 The Structured Interview Process

<table>
<thead>
<tr>
<th>Date</th>
<th>Name</th>
<th>Job Title</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>30/3/07</td>
<td>Ger Power</td>
<td>Head of Finance</td>
<td>1.5 hrs</td>
</tr>
<tr>
<td>26/4/07</td>
<td>Roisin O Sullivan</td>
<td>Financial Accountant</td>
<td>1.5 hrs</td>
</tr>
<tr>
<td>30/3/07</td>
<td>Kevin O Neill</td>
<td>SEO (Finance)</td>
<td>1.5 hrs</td>
</tr>
<tr>
<td>29/3/07</td>
<td>Mick Rogers</td>
<td>SEO (IT)</td>
<td>1.5 hrs</td>
</tr>
</tbody>
</table>
Throughout the interviews open-ended questions were used, allowing the interviewees to expand beyond the "facts of the matter" and give opinions about events (Yin, 1994). This allowed areas of interest to be explored in greater detail than would normally be possible (Adams and Healy, 2000).

As the interview process can be subject to poor recall, bias and poor or inaccurate articulation (Yin, 1994), a tape recorder was used by the researcher. This overcame the poor recall problem and allowed the opportunity to use direct quotes from interviewees. In this study the interview data was strengthened by data from observations and other documents.

5.12 Documentation Review

Documentary data includes written documents such as "notices, correspondence, minutes of meetings, reports to shareholders, diaries, transcripts of speeches and administrative and public records" (Saunders et al, 2003). A documentation review has two main advantages, making it a widely used method of data collection (Giddens, 1994). Firstly, it is a means of triangulation, which further enhances the external generalisation of the results (Adams and Healy, 2000). Secondly, the organisational actors are not required to actively participate in this (Adams and Healy, 2000). The strength of these documents is that they have a broad coverage, are exact and can be reviewed repeatedly (Yin, 1994).

In this study the researcher due to her role as a participant observer had access to internal documents. The documentation types used were tender documents, e-mails, minutes of meetings, proposals, progress reports, presentations, CD-Roms, and training manuals. These provided confirmation of information obtained from the interviews and they provided more rounded information. However documentary sources may be partial or difficult to interpret in terms of how close they are to
reality (Giddens, 1994). They vary in terms of accuracy and the researcher as a result had to ensure to validate them (Giddens, 1994).

The researcher in this study acknowledges the fact that the documents were prepared for a specific purpose rather than for the case study. By bearing this in mind during the analysis of the case study the researcher was not mislead by the contents of the documents.

5.13 Conclusion

This research used a single case study strategy. The researcher examined data from multiple sources. This data was gathered through participant observation, semi-structured interviews as well as through a review of Cork County Councils documentation. This strategy, together with a review of academic literature, fulfilled the criteria of sourcing data from a wide array of sources. Qualitative review techniques were chosen and validated by the researcher.
Chapter 6 Organisational Profile

6.1 Introduction

This chapter briefly discusses the history of Cork County Council. It examines its main remit. It then specifically discusses Cork County Councils Water service and Water customers. The role of the accountant in implementing a Corporate Debtors System is the subject of this research.

6.2 Local Government Structure in Ireland

The new Local Government Act 2001, which became law in 2002, changed the structure of local government in Ireland. Up to 2001 the structure was 29 County Councils, 5 County Borough Corporations, 5 Borough Corporations, 49 Urban District councils and 26 boards of Town Commissioners. This has changed, County Councils remain the same, corporations no longer exist. Dublin, Cork, Galway, Limerick and Waterford are known as City Councils, Drogheda, Wexford and Clonmel are known as Borough Councils, Urban District Councils and Town Commissions merged and are known as Town Councils. The result being 29 County Councils, 5 City Councils, 5 Borough Councils and 75 Town Councils. This local government system is supervised by the national Department of the Environment.

6.3 County Councils and City Councils Responsibilities

The remit of the County Councils and City Councils in Ireland is to supply water and sewage facilities, housing, roads, planning, public libraries and fire services. Policing and education do not fall under the County Councils and City Councils

---

responsibility, that’s the role of central government. Each County Council and City Council is headed by a manager known as the County or City Manager. This case study focuses on the Water service of Cork County Council.

6.4 Cork County Council

County Cork is the largest County in the Republic of Ireland. It has a population of 410,369 and an area of 7,459 square kilometres (that is 2,880 square miles). Its coastline is 1,100 kilometers (680 miles). Cork County Council has a degree of local autonomy for administering local government services for County Cork.

6.4.1 History of Cork County Council

Cork County Council evolved from the Norman institution – the Grand Jury. The grand jury composed of twenty three chief land owners chosen by the sheriff to advise the judges on various law cases. For years its duties were primary of a judicial nature, but they gradually began to expand to include administrative functions. Examples of some the administrative functions carried out by the grand jury were construction and maintenance of roads, marine works, reformatory and industrial schools and agriculture and technical instruction. Due to the grand jury's growing financial duties, Cork County Council was established in April 1899. Every fiscal power of the grand jury (except the award of malicious injuries transferred to the County Court Judges) relating to the County was transferred to Cork County Council.

6.4.2 Cork County Council's Headquarters

The Council’s headquarters is the County Hall, Cork City, Ireland. Since 1899 a suitable headquarters for Cork County Council had been sought. This was not solved
until the 16 April 1968 when the County Hall was officially opened. This was a promising event in the history of Cork County Council as not only was the County Hall Cork’s first sky scraper and Ireland’s tallest building, it was also a prototype building which for the first time combined all administrative and civic departments within the one location. It comprised of sixteen floors with the Council Chambers on the top floor.

In the late 1990’s the County Hall was redeveloped. The redeveloped County Hall now included the construction of a triple height concourse as a new public space joining the existing tower to facilitate new accommodation. The new Council Chamber sits to one side of the six storey wing in the public volume of the concourse. The former Council Chamber is now a conference centre with a restaurant. The re-developed County Hall was officially opened on 26th June 2006 costing sixty-two million euro.

6.4.3 Structure and Organisation of Cork County Council

Cork County Council is divided into three Divisional Directorates: North Cork, South Cork and West Cork. South Cork due to its size is further divided into South Cork Rural and South Cork Housing and Hinterland. The Council has four Service Directorates which are Planning, Environment, Infrastructure and Development and Community and Enterprise. These are further supported by service directorates’, Personnel, Finance, Information Communication Technology, Corporate Affairs and Estates and Economic Development (see Organisational Chart 6.1). Each of these service directorates has a head of department to which a senior executive officer reports.

2 www.corkcoco.ie
Figure 6.1 Organisational Chart
The Council employs two thousand five hundred employees. It has forty-eight County Councillors. These are elected every five years. The full Council meets twice a month to conduct its business. The three Divisional Committees, North, South and West, each meet monthly. The elected members of the Council (through various committees) decide on policies, which are then implemented by the County Manager and staff.

6.4.4 Financing

Cork County Council has an annual revenue and capital spend of five hundred and fifty million euro. It must supply a substantial portion of the funds it spends. This is in line with the European Charter of Local Self-Government (Article 9.1):

“Local Authorities shall be entitled, within national economic policy, to adequate financial resources of their own, of which they may dispose freely within the framework of their powers” (Marnane 1999, p483).

Cork County Councils main sources of income are Rates, Water, Rents, Annuities, Refuse, Development Contributions and Roads. These income funds help to finance the Councils public spending. However if extra finance is required, Section 6 of the Local Government Act, 1998 deals with payments out of the Local Government Fund. This is a fund which can provide extra finance to local authorities however it is under the control of the Minister for the Environment and Local Government.

6.4.5 Achievements

The achievements of Cork County Council have been seen in the clearing away of slum and unhealthy housing in the County. The Council has tarred all public roads and maintains seven thousand five hundred miles of road. This is fourteen percent of

---

3 Cork County Councils Corporate Plan 2005-2009
the roads network in Ireland. The Council also supplies thirty nine million gallons of water per day through eight thousand miles of pipeline. Eighty percent of the inhabitants of the County are supplied with piped water by the Council while a further fifteen percent are on private schemes such as group schemes and pumped wells which would have been helped through grants by the Council.

6.5 Corporate Debtors System

Cork County Council has set up a centralised debtors unit within the Finance Department responsible for the management of Cork County Council’s Water customers. This allows for debtor management, ensuring timely billing of customers and optimum collection of sums owed to the Council. The new integrated system installed to manage this centralised function is called the Corporate Debtors System and is the focus of this research. The Corporate Debtors System will initially focus on Water billing and receipting, it will later assume responsibility for other income streams such as Rates, Refuse, Rents, Annuities, Roads and Development Contributions.

6.6 Cork County Councils Water Service and Supply

Cork County Council treats and supplies water in compliance with the European Communities (Drinking Water) Regulations, 2000 (S.I. 439 of 2000) to approximately forty thousand non-domestic customers and one hundred thousand homes across the county. The EU Directive 2000 aims to restore the surface and ground waters throughout Europe to a good status by 2015. The aim is to prevent any further deterioration in the status of Water bodies, particularly those of a current high status. This directive rationalises and updates existing Water legislation.

6.6.1 Water Customers

Cork County Council only charges non-domestic customers for usage of water. Examples are farmers, publicans, shops, hotels, hospitals, schools, business premises and industries. There is no charge for domestic water usage. A domestic allowance applies if part of the water usage was for non-commercial purposes, for example, there is no charge for the domestic water used by a family home on a farm.

A customer's water charge is split into two products; Water and Waste Water. 'Water' is where a customer uses Local Authority water but provides its own septic tank to dispose of the waste water. Waste Water is where the customer receives Local Authority water and also avails of the Local Authority septic tank to dispose of the Waste Water (sewage/effluent).

6.6.2 Water Charge Types

Cork County Council had two customer charge types, these being a metered charge and a fixed charge. A metered charge applied where a customer had a water meter fitted on their premises and a fixed charge applied where no water meter was installed. From the 1 January 2007, Local Authorities were required by Government to meter non-domestic water customers. The meters will result in a fair and equitable manner of charging water based on consumption. This will aid water conservation and customers will be able to monitor their water usage as meters will be readily accessible.

6.6.3 Water Metering Project

Cork County Council outsourced the installation and meter readings of water consumption to a company called Morrison Utility Services Limited for a period of
fifteen years. Cork County Council signed this contract with Morrison on 6 June 2006. There were approximately 15,000 water customers in Cork County Council's database at the time. It is expected that Morrison will increase this to approximately 40,000 customers by finding instances where customers were availing of water services and not being billed.

Morrison will remove the old meters from the customers' premises and replace them with new meters. It will also supply new customers with meters and fit existing fixed charge customers with meters. If existing customers wish to cancel their water service, Morrison is obliged to close-off the meter. It will take fifteen months from the date the contract was signed to install all new meters on the County Council's customers' premises.

The meters fitted will only read water. Morrison do not supply waste water meters. The volume of Waste Water (sewage/effluent) is assumed to be equal to the quantity of Water (clean water) supplied to the premises. However some large industrial customers claim that this is not the case due to evaporation and certain manufacturing processes carried out before the water is disposed of. As a result they have fitted their own waste water meters. Customers with their own waste water meters provide the waste water consumption readings to Cork County Council themselves. Agreements are in place with these customers. Morrison only reads meters supplied and fitted by itself.

6.7 Conclusion

This chapter sets the scene for the remaining chapters of this research. It describes the origin of Cork County Council and describes in detail the Water Service Cork County Council provides. A new Corporate Debtors System has been implemented for Water. The researcher participated in and reviewed the role of the accountant, in this process.
Chapter 7 Former Water Debtors System

7.1 Introduction

This chapter describes Cork County Council’s former Debtors Legacy Systems. It then describes its complex billing and payment methods. The changes in the finance department, such as new water pricing rules, change-over to accruals based accounting and implementation of the bank reconciliation module are also discussed.

This chapter also looks at the needs assessment procedure carried out by Cork County Council. It discusses the four possible solutions arrived at to overcome the Local Authority’s billing, receipting and financial accounting issues and it gives reasons why they chose the integrated Corporate Debtors System.

7.2 Former Debtors System

Prior to the centralisation of Cork County Council’s debtors, it used to operate the Water Debtors Legacy application on the I Series Platform and used JD Edwards (JDE) World to produce the Annual Financial Statements. These were not integrated.

The Water Debtors Legacy System, was a proprietary software application that was written in-house for each division by Cork County Council’s IT staff. The I Series Platform was the hardware on which the application operated. It was an IBM midrange computer that came with its own operating system and programming language. The Water Debtors Legacy System was the system which held all the information relating to the customers, such as the billing address and customers’ water location address. It also held the invoice charge, receipts figure, refunds and any amendments made to the customers’ accounts.
Despite JDE being an ERP system, Cork County Council only opted to use the accounts receivable (AR) module for Industrial Refuse and Miscellaneous Services, such as burial fees and parking fines. It did not transfer its other major services such as Water, Rates, Domestic Refuse, Rents, Annuities and Roads from their respective legacy systems to the JDE AR module due to limited JDE AR functionality. The legacy systems had much more appropriate functionality and movement to JDE AR would have been seen as a backward step.

"The financial information that the AR module provided was too limited in its structure and it was agreed by both the finance department and IT department that a move to the JDE AR module would not be a good management decision". 5

"Much work was done in investigating whether the JDE AR module could be used to incorporate all of the Council's debtors legacy systems, however it was decided it could not, therefore all the legacy systems were retained until a better solution was found". 6

Therefore, for these services the General Ledger (GL) module of JDE remained independent of the main Debtors Legacy applications.

7.3 Billing Water Customers

Up until 2006, customers were billed annually in arrears. Some customers were billed based on a meter reading and the remainder were billed on a fixed charge. 2006 was to be the last year for fixed charges, as every water customer was to be fitted with a water meter by March 2007 in compliance with the government regulations.

---

5 Interview with Financial Accountant 26/04/2007
6 Interview with SEO (Finance) 30/03/2007
7.3.1 Metered Charge

Where there was a meter the current Water consumption charge was applied to the Water meter readings, for the previous year provided by the Council Curators. Therefore Water consumption for 2005 was billed in 2006 at the 2006 rate.

The 2006 charge which was applied to water consumption had the following elements:

1. Water Consumption * water rate
2. Minimum charge
3. Administration charge
4. Domestic Allowance

The metered charge had four charge categories U, S, V, and T.

Category U (Water only customers) water consumption was charged at €0.84 per cubic metre, €230 was the minimum charge and no domestic allowance applied.

Category S (Water only customers) water consumption was charged at €0.84 per cubic metre, €100 was the minimum charge and a domestic allowance of €130 applied.

Category V (Water and Waste Water customers) water consumption was charged at €1.84 per cubic metre, €420 was the minimum charge and no domestic allowance applied.

Category T (Water and Waste Water customers) water consumption was charged at €1.84 per cubic metre, €130 was the minimum charge and a domestic allowance of €290 applied.
An administration charge of €60 was applied when the average 2006 charge for all of a customers meters exceeded the minimum charge. If a customer had multiple meters the €60 administration charge only applied to the customer’s first meter.

7.3.2 Fixed Charge Rates

Where there was no water meter fitted, fixed charges for 2006 were billed according to which category they fell into. These were:

- Category Y Water only €220.00
- Category W Water only with Domestic Allowance €90.00
- Category Z Water & Waste Water €460.00
- Category X Water & Waste Water with Domestic Allowance €170.00

The Water Debtors Legacy System was responsible for issuing bills for these complex billing processes. It was felt that JDE did not have the functionality to perform this function.

"The AR module was more suited to the routine billing of a company and did not facilitate the complex billing rules required by Cork County Council".7

7.4 Receipts from Water Customers

Cork County Council offered its customers four forms of payment method for water:

1. Cash desks in Cork County Council offices
2. Standing orders
3. An Post Billpay
4. Electronic Funds Transfer (EFT)

7 Interview with Financial Accountant 26/04/2007
7.4.1 Cash Desk Receipts

Each division (North, South and West) receives cash, cheques and credit cards at its cash desks. Credit card payment is also received over the phone, and cash and cheques can be received in the post.

When customers paid by cheque, cash or credit card at the cash desks, the receipt was entered onto the online cash receipting cashbook (OLCR) (front office procedure). This application was developed inhouse by Cork County Council and operated on the 1 series platform.

At the end of each day the Clerk had to ensure that all lodgements to the bank agreed to the total receipts on the OLCR. The following morning, the customers’ accounts were updated when the receipt batches on the OLCR were posted to the Water Debtors Legacy System by the responsible Clerk (back office procedure). It was also necessary to update the JDE (GL) with the receipts when the OLCR batch was closed.

One of the divisions, South Cork had its cashbook interfaced into the JDE GL. This resulted in the automatic generation of a receipts journal overnight to the JDE GL. The next day this journal was posted by the Management Accounting team (Finance Department) to the JDE GL. However North Cork and West Cork cashbooks were not interfaced into JDE GL. The receipts in these divisions were recorded on the JDE GL module by a manual journal posted by the responsible Clerk.

7.4.2 Standing Orders

Receipts by standing order came in on a bank statement called the Auto Rec Bank Statement. Every Monday and Wednesday this statement was downloaded by the Management Accounting team from the “Adds System” provided by AIB. A
photocopy of these receipts were sent by the Management Accounting team to the relevant divisions. The relevant divisions then updated their Water Debtors Legacy system with the receipts.

The Management Accounting team posted a manual journal to the JDE GL which recorded the standing order receipts for Water North Cork, Water South Cork, and Water West Cork.

7.4.3 An Post Billpay

Non domestic water customers could also pay for their water services through the post-office. The County Council received an electronic file in a flat text file format from the Councils IT Department detailing all the customers that paid by An Post Billpay at the end of every week. Each division printed-off a copy of this file to look at any exception receipts on the file, before posting the receipts to the customers' accounts. Any receipts unidentified were placed in a holding account on the Debtors Legacy System until they were identified.

The customers' accounts were updated showing the date the customer paid as recorded on the An Post Billpay file, however the actual cheque for these receipts was not received by each division until about two days later. The cheque was then lodged to the Council's bank account by the responsible Clerk.

The An Post receipts were recorded onto the JDE GL by the Management Accounting team for South Cork and West Cork when the lodgement slips arrived in with the bank statement. The lodgement slip detailed the GL code on JDE to which it should post the receipt, after being documented by the Clerk mentioned above when lodging the cheque. The An Post cheque for North Cork was posted by the Clerical Officer in North Cork to the JDE GL by a manual journal. This journal was posted to the JDE GL on the same day the cheque was lodged to the bank. It was
clear that there could be a two to three day time delay between the customers' accounts being updated and JDE GL being updated.

7.4.4 Electronic Funds Transfer (EFT)

Some of the bigger non domestic water customers, for example the industrial water customers availed of the electronic funds transfer method of payment. The money was lodged directly into Cork County Council's general bank account. The Management Accounting team identified the money received on the bank statement as an EFT for a water customer. They then posted a journal to the JDE GL to record this receipt. Management Accounting then notified the relevant division of the EFT receipt by sending them a lodgement slip detailing the name of the water customer, date and amount of money received. The cash office then updated the relevant water debtor’s account with the receipt on the Debtor's Legacy System.

It is clear that the receipting processes were not efficient, they involved double work. Not only had it to be recorded on the Debtors Legacy System but it also had to be recorded onto the JDE GL.

7.5 Changes in the Finance Department

There have been major changes in the Finance Department since 2004. These include a change over from receipts-based accounting to accruals-based accounting, new water pricing policies and automation of the bank reconciliation process. All of these changes took place before the implementation of the new integrated Corporate Debtors System commenced.
7.5.1 Change Over To Accruals Based Accounting

Historically Cork County Council recorded its income on a receipts basis. It changed over to an accruals basis in 2004. However, throughout 2005 and 2006 the income codes on JDE still recorded the receipts, not the bill charge, for the service provided. At year-end, the receipts were reversed out of the income codes by the financial accountant and posted to the relevant debtors control accounts. The reversed out receipts figure was replaced with the invoice charge, provided by each of the divisions after they ran year-end reports from the Debtors Legacy System in accordance with the accruals concept.

7.5.2 New Pricing Policy

Since 2005 under the Government’s Water Service Pricing Policy, all Local Authorities are required to recover operational costs (day-to-day costs of providing the water service) and capital contributions (long-term costs, such as piping the water to customers) in respect of the provision of water and waste water services to the non-domestic sector. This has resulted in a change in pricing policy which came into effect in 2005.\(^8\)

Up until then there was no charge for waste water or for the capital cost of providing the water service. In 2005 the revenue raised through the supply of water and treatment of waste water was split into a revenue element and a capital element. The revenue element is reinvested into the cost of producing and supplying clean water and the cost of collecting/treating waste water. The capital element contributes to the capital infrastructure required to deliver the water service.

Due to this new pricing policy for water, the income charge for Water in 2005 and 2006 had to be split by the financial accountant between water income and waste

\(^8\) Cork County Non-Domestic Water Metering Project, Customer Information Sheet June 2006
water income on the JDE GL for income report purposes, and for the Annual
Financial Statements. A further split into a revenue (operational) income element
and a capital income element for both water and waste water was also required. This
was in accordance with the Governments Water Services Pricing Policy.

To facilitate this new pricing method the Financial Accountant had to set up twelve
new additional income codes for Water on the JDE chart of accounts. Water
(revenue), water (capital), waste water (revenue) and waste water (capital) were
required for all three divisions (North, South, West). In addition, four corresponding
Debtors Control Accounts were also set up for each of the three divisions, those
being water debtor revenue, water debtor capital, waste water debtor revenue and
waste water debtor capital.

The split of the Water and Waste Water income figures into their respective revenue
and capital elements on the JDE GL was done by a manual journal posted by the
Financial Accountant. These splits were based on percentage figures provided by the
Management Accountant.

In early 2007 there were further adjustments to the pricing policy for water. This
came about due to complaints from customers, who claimed the water pricing policy
was unjust. It was not equitable to charge a prior year’s water consumption at the
current year rate. Due to this, the accountant had to pro-rate the water charge on
outgoing bills. For example if the previous water consumption reading was on 10
October 2007 and the new water consumption reading is taken on 24 February 2008,
the water consumption is pro-rated and consumption to 31 December 2007 is billed
at the 2007 water charge rate with the balance being billed at the 2008 water charge
rate.

Even though fixed charges are being phased out by the County Council, any
customers who did not have meters installed by March 2007 were billed at the 2007
fixed charge rates. When the meter was installed during 2007 the annual fixed
charge invoiced to the customer was then adjusted to reflect the new water meter consumption readings charge. The customer was notified about this when the fixed charge bill was issued.

### 7.5.3 Bank Reconciliation Requirements

Up until 2003 the bank reconciliation was prepared manually. In 2004 the Council commenced using a JDE module to prepare the bank reconciliation automatically. When the automatic bank reconciliation module is run it matches the description and amounts on the JDE GL bank account to the description and amounts on the downloaded bank statement tape. Therefore in order for this automatic reconciliation module to run effectively, it is a necessity that the correct lodgement description is used by the Clerk when posting the journal. For the cash and cheques receipts, the reference used by the Clerk is the 6 digit lodgement serial number at the bottom of the lodgement slip. As agreed with the bank the description the bank puts on their bank statement is also this 6 digit lodgement serial number. This facilitates the automatic reconciliation of these receipts.

However the procedure is not as straightforward for the other receipt methods. For EFT’s and standing orders, the bank puts the name of the customer as its description on the bank statement. The JDE bank reconciliation module does not accept alpha characters. In order to get around this problem, the Management Accounting team, who post the receipts journals for EFT’s and Standing Orders onto the JDE GL bank account, change the description on the bank statement to the same as the JDE GL bank account.

As well as the complexity of the billing and receipting processes, the accruals, and the new pricing policy issues were all pushing Cork County Council towards implementing a new integrated Corporate Debtors System.
7.6 Needs Assessment

A needs assessment was completed at the end of 2005 by the Finance Department. It revealed that the existing Debtors Legacy Systems were not obsolete. However they were becoming dated and no longer provided enough information for management purposes. It also revealed that there was poor management and staff training in the divisions.

"Poor management and staff training on divisional sites existed. Mainly due to movement of staff within sections. The knowledge was not retained. Users were not always from a systems or finance background and so this affected the use of the system".  

It also revealed inaccuracies in customers' accounts, difficulties in preparing auditable financial statements and non-standard business processes throughout the organisation.

7.6.1 Customers Accounts

Due to the number of various Water Debtors Legacy Systems across the county, the Water billing and receipting function in Cork County Council was completely disorganised and customer accounts were in need of immediate attention. The SEO (ICT) said:

"Due to the number of various systems, billing processes across the county were non standard and customers accounts were in need of urgent reviews."

Collection levels in certain areas were extremely low, as these areas saw themselves as service providers and not as debt collectors. This was a main driver in moving

---

9 Interview with Financial Accountant 26/04/2007
10 Interview with SEO (ICT) 29/03/2007
away from the independent divisional Debtors Legacy Systems towards a centralised integrated Corporate Debtors Billing and Receipting System.

7.6.2 Preparation of Financial Statements

The fact that the financial modules of JDE were operating independently of the Water Debtors Legacy Systems, led to major problems at year-end when preparing the financial statements.

"All the difficulties the Accountant had in balancing and reconciling the Legacy Systems with the JDE Financial Systems were causing needless timewasting and endless ticking and bashing, with no productive benefit". 11

Receipts on the Debtors Legacy Systems were not reconciled with receipts on the JDE GL. Differences always existed and no explanations were given by the divisions to the finance department for these differences. In many instances, the differences between the two systems weren’t brought to light until the external auditors highlighted them. Often back-up reports required during the audit were not available from the Legacy Systems. Which system was more accurate was debatable, and from an accounting standards perspective it was not acceptable for Cork County Council to have incomplete and inaccurate financial information.

Amendments to the water charge figures should have been split into bad debts and adjustments to the charge figure. In some divisions this split was not in place. This created difficulties for the financial accountant at year-end. It was evident that amendments to customer’s accounts needed to be standardised across the three divisions.

As the Water Debtors Legacy Systems operated at a divisional level as opposed to an overall organisational level, to achieve an overall County wide report, the reports

11 Interview with Head of Finance 30/03/2007
from the three individual divisions would also have to be combined by the financial accountant. In addition the legacy systems did not provide an Aged Debtors Analysis and according to the Head of Finance:

"The Debtors Legacy Systems did not meet the full accounting and financial requirements."\textsuperscript{12}

So even though the Debtors Legacy Systems had more functionality than JDE they still could have been improved upon.

7.6.3 Non Standard Business Processes at Divisional Level

There was also a need to have all three divisions operating in a similar fashion. The three divisions should have billed customers in a similar way and had a standard policy for making amendments to customers' accounts. There was also some circumstances where amendments and bad debts write-offs to water charges were not authorised. This further highlighted the issue that strict policies needed to be enforced with regards to customer billing and amendments.

The three divisions should have offered the same types of payment methods to their customers and updated the JDE GL in a consistent and timely manner. The time delay of three to four days between updating a customer's account with a receipt and updating the JDE GL with that receipt had an impact on the monthly income reports for Councillors.

These issues drove the need for a solution to implement consistent and accurate methods for the billing and receipting of water services within Cork County Council. A new system was required.

\textsuperscript{12} Interview with Head of Finance 30/03/2007
7.7 Possible Solutions

After examining the existing Legacy Systems, Cork County Council had a clearer vision of what it required from a new system. The next step was to identify and evaluate possible solutions. Four solutions were identified:

7.7.1 Outsource

The first possible solution identified was to outsource all the billing and receipting of Water to an external contractor. This was rejected for two reasons: The first was the cost involved. It would be cheaper to build an inhouse system, which later could also be used for other services such as Rates, Refuse, Rents, Annuities, Development Contributions and Roads. The second was the present condition of the customers’ accounts. The amount of work that would go into rectifying the current data on each customer’s account, before they were transferred over to the new contractor, was substantial. If Cork County Council had to put the work into rectifying the data before handing it over to the outsourcing organisation, a lot of the work would already have been done. According to the SEO (ICT):

"By not outsourcing the water billing to an external contractor and instead building an inhouse system the Council could later opt for customer consolidation, that is assign the same customer number to an individual or company for all income streams. In addition the Council rather than a third party would derive the direct benefit from the data cleansing required to issue correct water bills in 2007".\(^{13}\)

7.7.2 Use JDE Accounts Receivable (AR) Module

The next option was to transfer the Water Debtors Legacy Systems over to the Accounts Receivable (AR) module of JDE. There were four reasons given for this

\(^{13}\) Interview with SEO (ICT) 29/03/2007
preference. First, this would have provided the Finance Department with up-to-date information without the need for duplicating input of information. Second, it provides reports that facilitate easy reconciliations between what is recorded on the JDE AR module and the JDE GL module. Third, it would also facilitate a more accurate and speedy production of the Annual Financial Statements at year-end. Fourth, it would eliminate the need for creating interfaces as JDE is a fully integrated ERP system.

After discussion and tests carried out on the JDE AR module, it was decided that the transfer to the AR module would not be a viable solution. The functionality offered by the current Debtors Legacy Systems could not be provided by the JDE AR module. The Senior Executive Officer of ICT said:

"The reason the JDE AR module was not selected was because it was not appropriate, the functionality of AR was not sufficient or robust enough to support an Irish Local Authority without considerable and costly modifications".  

The Head of Finance supported this view stating;

"It is suffice to say that generally AR modules in ERP systems are developed for production companies and don't necessarily sit well for Service companies".  

For example, invoices could not be printed from the JDE AR module in the format required by certain departments, as it could not cater for some of the complicated charge formulae involved in billing for services such as water.

14 Interview with SEO (ICT) 29/03/2007  
15 Interview with Head of Finance 30/03/2007
This was backed up by comments made by the Financial Accountant:

"The Finance and IT departments on assessment of the JDE AR module agreed not to select the JDE AR module. The JDE AR module was more suited to routine billing of a company and did not facilitate information required for Cork County Council purposes for example calculation functionality, more detailed reminder notices and ability to obtain a consolidated debtor overview in a simplified manner".  

This solution although initially preferred by the Finance Department was not a suitable option for the County Council as the billing functionality was more suited to manufacturing companies rather than the service industry. In addition there would also have been huge costs involved in upgrading the JDE AR module to provide the billing and receipting functionality required by Cork County Council.

7.7.3 Interface Upgraded Legacy Systems into JDE

The third option identified was to continue with the existing Debtors Legacy Systems and interface them into the JDE GL. These Debtors Legacy Systems would need to be upgraded for the new water pricing rules and Aged Debtors Analysis Reports. Interfaces would also have to be built into the JDE GL. It was felt that this investment would not be worth it and other systems might have better functionality.

According to the SEO (ICT):

"it was thought that the investment that would have been needed to achieve this would be wasted, and not inline with Cork County Councils long term plan to have all income streams operating off the same system". 

16 Interview with Financial Accountant 26/04/2007
17 Interview with SEO (ICT) 29/03/2007
7.7.4 Corporate Debtors System interfaced into JDE

The fourth option, and the solution which was decided upon, was to implement a centralised billing and receipting system known as the Corporate Debtors System. This would replace the numerous existing legacy systems and would be interfaced into the JDE Financial Management System. This would be part of a modernisation agenda, which was driven by the problems of the existing system, such as poor collection levels, poor control, non integrated systems and reconciliation issues between the Debtors Legacy Systems and the JDE GL.

The main reason why Cork County Council opted to interface the Corporate Debtors System into JDE, as opposed to purchasing a new ERP system was because it wanted retain its existing JDE asset management, procurement and general ledger modules. Both ICT and the Finance personnel were in agreement on this.

"We did not go to tender for an ERP system. We already had one in the case of JDE, so that was number one. There was no guarantee when we went to tender that the best debtors solution would have been part of an ERP system anyway".  

"We were not looking to replace our JDE Financial Systems, we didn't see the need".

"The JDE GL suite at present is satisfying all other financial requirements".

Once the needs assessment was completed and a possible solution was agreed, the next step was the tendering process.

It is clear that from the findings that Cork County Councils reason for a new system ties in with the “efficient choice” perspective described by Abrahamson (1991). Cork County Council had clear goals, aiming to improve customer service and knew

---

18 Interview with SEO (ICT) 29/03/2007
19 Interview with Head of Finance 30/03/2007
20 Interview with Financial Accountant 26/04/2007
exactly what it wanted to achieve from a new system. Cork County Council was not forced to implement the new Corporate Debtors System due to external pressures such as government regulators, nor was it imitating other organisations like in the forced selection and fashion perspectives reasons for adoption. Neither was it a fad perspective choice where Cork County Council decided to implement a new Corporate Debtors System solely to keep up appearances.

7.8 Conclusion

This chapter examined the former Debtors Legacy Systems, detailing the complex pricing rules for billing. It discussed the various receipt methods and highlighted the timing differences between updating the customers' accounts and the JDE Financial Management System. It also looked at changes within the Finance Department. It documented the needs assessment carried out. This assessment highlighted the reasons why a new integrated Debtors System was required. It then discussed the four options available to Cork County Council justifying the option chosen.
Chapter 8 Tendering and Implementation of the Corporate Debtors System

8.1 Introduction

This chapter examines the tendering and implementation processes. It describes the software package purchased, the Project Team involved in implementing this new Corporate Debtors System, the implementation plan and stages, the billing processes and system tests carried out, the payment methods offered to customers and the benefits of the new system. This chapter concludes with a description of the future expectations of this system.

8.2 Tendering Process

After the decision to implement an integrated Corporate Debtors System was made, Cork County Council had to go to tender, to procure and implement a robust Corporate Debtors computer system. In tender contracts worth up to €211,000 the County Council is required to advertise these on the government website called www.etenders.gov.ie in Ireland.

The budgeted cost of the new Corporate Debtors System required by the Council would far exceed the EU threshold under Procurement Directives of €211,000, therefore it was necessary to advertise the requirement in the Official Journal of the European Communities (OJEC). This is one of the regulations of being a member of the European Union. It is in line with the Treaty of Rome and the free movement of trade. The OJEC notice was published on 10 February 2006, and the formal tender process commenced at that point.
8.3 Restricted Tendering Process

Prior to publishing the OJEC notice, the Council decided that the tender process would be a restricted rather than an open tender competition. In the majority of cases an open tender competition is used. This is a one stage process. Tenders are invited to reply to the public advertisement. They have fifty-two days in which to respond. All tenders received within the time limit are opened at the next Council Meeting after the fifty-two days rule. These must then be assessed by an assessment team based on award criteria established. The successful tenderer will be notified after it has been agreed by the County Manager.21

A restricted tendering process is followed when the procurement item is more complex. The integrated Corporate Debtors System was viewed as a complicated system. In a restricted competition, vendors must submit answers to a pre-qualification questionnaire (see Appendix 1). The applicants have thirty days to reply to the questionnaire. This questionnaire focuses on the vendors' economic standing, resources and track records. As stated by the SEO of Finance:

"The questionnaire allows Cork County Council to gain an understanding of the bidders financial standing, its capability for the project, how many employees it has, what type of back-up and support it can provide and what type of work it has carried out before".22

The pre-qualification questionnaire of a restricted procedure focuses on the specific system requirements. As a result the completion of the pre-qualification questionnaire is a lot less onerous for vendors. Also only vendors with a realistic chance of winning the contract make it through the pre-qualification stage. This results in a much smaller number of tender documents being submitted.

21 Interview with Procurements Officer 22/06/2006
22 Interview with SEO (Finance) 6/06/2006
8.4 Responses to Pre-Qualification Questionnaire

Cork County Council received four replies to the pre-qualification questionnaire within the time period. The SEO (Finance) and the SEO (ICT) were given the task of assessing the pre-qualification questionnaires.

The assessment of the questionnaire revealed that two of the four vendors did not meet the pre-qualification standards and were eliminated from the tender competition. The pre-qualification standards focussed on:

1. Financial standing of the vendor (eg. turnover, balance sheet information)
2. Staffing resources of the vendor (including assurances that staff will be available to work on the project should the vendor be successful)
3. Track record with similar projects in the past

In the restricted process, only vendors that meet the pre-qualification criteria receive the full tender document for completion. The two remaining vendors met the standards required at this stage and the formal tender documents were forwarded to both of them on 3 April 2006 (see Appendix 2). They were given forty days to respond.

The closing date for receipt of the completed tender documents was 19 May 2006. Both vendors in the competition submitted tenders and these were opened at the Council meeting on 22 May 2006.

8.5 Tender Assessment

A team consisting of a Finance Officer, three Accountants, and two IT specialists was put in place to assess the tenders (See Table 8.1). The remit of this team was to recommend the most appropriate solution for Cork County Council. To do this, the
formal tender documents were evaluated, vendors were interviewed by the Tender Assessment team, further clarifications were sought, a formal marking process was undertaken, demonstrations were requested and a site visit was completed (see Chart 8.1).

**Table 8.1: Membership of Tender Assessment Team**

<table>
<thead>
<tr>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head of Finance</td>
</tr>
<tr>
<td>SEO (Finance)</td>
</tr>
<tr>
<td>Financial Accountant</td>
</tr>
<tr>
<td>Head of ICT</td>
</tr>
<tr>
<td>SEO (ICT)</td>
</tr>
<tr>
<td>Contract Accountant</td>
</tr>
</tbody>
</table>

**8.5.1 Vendor Interviews**

Both vendors were invited to meet the Tender Assessment Team and discuss their solutions as set out in the formal tender documents. The meetings took place on 7 June 2007 and on 12 June 2007 respectively.

Discussions focussed on the assessment criteria set out in the tender document. Each vendor was given three hours to clarify the tender under the following headings: functionality, costs, deployment, maintenance support, vendor capacity and case studies. Both vendors were asked to provide written confirmation of areas that needed clarification during the interviews.

**8.5.2 Marking Process**

Following receipt of the clarifications, a formal marking process commenced. Marks were awarded to the vendors under the assessment criteria set out above.
The marks were based on the information provided in the Tender documents, garnered at the vendor interviews and set out in the clarification documents following the interviews.

Vendors were awarded marks out of 100 across each of the six assessment criteria. Saaty weightings were then applied to the raw marks to reflect the relative importance of the six assessment criteria. One vendor scored 743.223, the other vendor only scored 566.44.

The Tender Assessment Team was satisfied that both vendors could provide a viable Corporate Debtors solution for Cork County Council. However, the considerable lead enjoyed by the first vendor, iB Solutions, resulted in the next stage of the tender assessment process focusing exclusively on the iB Solutions offering. In particular the Team wished to verify that the marks awarded to iB Solutions particularly in the areas of functionality, support and vendor capability were realistic.

| Chart 8.1 Cork County Councils Tendering Process Time Line Chart |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Tasks           | Feb-06          | Mar-06          | Apr-06          | May-06          | Jun-06          | Jul-06          | Aug-06          | Sep-06          |
| Pre-Qualification Questionnaire |                 |                 |                 |                 |                 |                 |                 |                 |
| Tender Document |                 |                 |                 |                 |                 |                 |                 |                 |
| Opening of Tender Document |                 |                 |                 |                 |                 |                 |                 |                 |
| Assessment of Tender Document |                 |                 |                 |                 |                 |                 |                 |                 |
| Vendor Interviews |                 |                 |                 |                 |                 |                 |                 |                 |
| Demonstration   |                 |                 |                 |                 |                 |                 |                 |                 |
| Site Visit      |                 |                 |                 |                 |                 |                 |                 |                 |
| Contract Signed |                 |                 |                 |                 |                 |                 |                 |                 |

148
8.5.3 Demonstration

iB Solutions were requested to provide a demonstration of its Corporate Debtors System. The Tender Assessment Team provided a list of twenty nine specific areas (see Appendix 3) to be covered in the demonstration, under the following headings:

1. Raising and Managing Charges
2. Receipting
3. Reporting
4. Transaction Processing
5. Inquiry Options

The demonstration was held in iB Solution's offices in Dublin on 6 July 2006. It was attended by the Tender Assessment Team. This demonstration combined with future clarification from iB Solutions in writing, satisfied the Tender Assessment Team as to the functionality set out by iB Solutions in its formal tender document. Therefore the functionality marks awarded in the marking process could stand.

8.5.4 Site Visit

The final part of the evaluation process was for Cork County Council team assessment members to visit Wexford County Council, where an iB Solutions Corporate Debtors System is already in operation.

The site visit took place on 26 July 2006 and focussed on the following areas:

1. How the individual modules integrate with the Corporate Debtors System
2. How the on-line payments module is performing (live)
3. Wexford’s working relationship with iB Solutions
The Tender Assessment Team found that much of the systems functionality demonstrated was specifically geared to providing a solution in an Irish Local Authority environment. While there are differences in scale between Wexford County Council and Cork County Council, the team was satisfied that what was demonstrated could be implemented successfully in Cork County Council.

Wexford County Council is deriving great benefits from the on-line payments module. This module allows on-line payment by the public for any income stream live in the Corporate Debtors System. If implemented, it could also be used in Cork County Council's outlying offices to accept and receipt payments from people calling in and wishing to pay at the counter.

The site visit established that Vendor capability and support arrangements in Wexford were of the standard required by Cork County Council. Wexford County Council had a good working relationship with iB Solutions and was happy with the calibre of people provided to work on the various debtors projects. Wexford County Council was also satisfied that iB Solutions was honouring all maintenance/support agreements that are in place. The Tender Assessment Team was now satisfied that the vendor capability and maintenance/support marks awarded in the Saaty scoring could stand.

The decision was made to award the contract to iB Solutions. The other vendor was notified, by letter, of its unsuccessful tender application. The contract between iB Solutions and Cork County Council could not be signed for a further fourteen days. This was to allow the unsuccessful vendor time to appeal the decision or take an injunction against Cork County Council, should they feel they had a legitimate reason to do so. The contract with iB Solutions was signed Thursday 21 September 2006. The Corporate Debtors System was to be up and running by mid May 2007.
8.6 The Project Team

Once the contract with iB solutions was finalised, a Steering Committee and a Project Team were established. The Steering Committee, comprising of the Head of Finance, Head of Information Communication Technology and iB Solutions General Manager, agreed project schedules and also agreed to resolve any critical issues that arose during the lifetime of the project.

The Project Team was headed by two Project Leaders, the SEO (Finance) and SEO (ICT) and a multi-functional team: ICT Staff, Financial Accountant, Contract Accountant and a user of the legacy systems. According to the SEO (ICT) “the experience of each of these project members was required”.23

The remit of the Project Team was to liaise with the implementation and development team of iB Solutions. They would manage the project on a day to day basis and report regularly to the Steering Committee.

8.7 Project Initiation Document

iB Solutions created the Project Initiation Document which it distributed to the Steering Committee and the Project Leaders. It outlined the objectives, scope, products, approach, key deliverables, timescales and organisation of the Corporate Debtors System project.

This document described the proposed Corporate Debtors System as a centralised system comprising of the following Integra software modules; Sales Ledger (SLS), Cash Management (CMS), eReceipts and a Water Billing System.

---

23 Interview with SEO (ICT) 29/03/2007
Figure 8.1 Team involved in the Corporate Debtors System Implementation

- **Steering Committee**
  - Head of Finance
  - Head of Information
  - Communication Technology
  - Project Manager iB Solutions

- **Cork County Council Project Leaders**
  - SEO (Finance)
  - SEO Information
  - Communication Technology

- **iB Solutions Project Managers**

- **Cork County Council Project Team**
  - Financial Accountant
  - Contract Accountant
  - ICT Staff
  - Key User

- **iB Solutions Implementation & Development Team**
These modules are fully integrated and operate on the Integra e Series platform. iB Solutions also provided the Sales Ledger interface (SLI) and Cash Management interface (CMI) from the Integra Corporate Debtors System into the JDE General Ledger module (see figure 8.2). The Water Billing System is tailored specifically for Cork County Council. This module has the functionality to cater for the complexity of Water billing as described in chapter seven.

The Project Initiation Document had to be formally approved by the Head of Finance on the 18 September 2006 before the detailed Project Plan covering all the projects activities was produced.

8.8 Corporate Debtors System Project Plan

A Project Plan was documented in September 2006 by iB Solutions. This outlined the projects key stages as system design, interfaces, configuration, training, functionality and user acceptance testing, data conversion testing and live build, and Go live system. It also presented a time-line for these key stages (see chart 8.2).

8.9 System Design and Interfaces

In order to determine and finalise the successful design, configuration and interfacing of the Corporate Debtors System a number of familiarisation meetings were held in October and November 2006 between the iB Solutions team and the relevant members of the Cork County Council’s Project Team. These meetings involved intense information gathering discussions by iB Solutions with regards to how Cork County Council wanted its billing and receipting processes to work.
Figure 8.2  Corporate Debtors System
8.9.1 Contact Central and Divisions

The SEO (ICT) and SEO (Finance) explained to iB Solutions that the Corporate Debtors System would be located in the Finance Department and it would provide web access for account enquiry and cash management functions to remote office personnel and the contact centre (location where customers can ring up and query their accounts and make credit card payments).

8.9.2 JDE GL Mappings

iB Solutions requested to meet the accountant to get an understanding of the JDE chart of accounts. The accountant explained to iB solutions that Cork County Council’s layout is different to most other companies.

"The norm is to have the object code first and the business unit after, however when the chart of accounts was set up there was no accountant involved and the result was the business unit first".\(^{24}\)

The accountant explained the format as follows, the business unit has twelve digits, the object code has six digits and the subsidiary has eight digits. iB solutions only offered twenty-four digit codes for the GL chart of accounts. It was agreed by the

\(^{24}\) Interview with Financial Accountant 26/04/2007
Financial Accountant and the Senior Administrative Officer ICT that this was adequate for Cork County Council. The next issue discussed was the billing and receipting processes.

8.9.3 Customer Billing

The Project Team described how the Water Service operates to iB Solutions. The Financial Accountant and SEO (Finance) explained the water and waste water services are billed at different pricing rates. It was also explained that the Head of Finance and County Manager had decided that instead of each division issuing invoices, they were to be issued centrally through the Corporate Debtors System within the Finance Department. Another request was to have the bills issued half yearly to customers instead of annually.

The pricing rules were also supplied to iB Solutions by the accountant because they must be applied to the water consumption levels supplied by Morrison to determine the water charge issued on the customers invoices. The Finance Department decided to issue a bill per meter, so if a customer has three meters, they will receive three invoices with a summary statement attached. The Corporate Debtors System would have to cater for this. Also if an amendment is required to the charge figure, credit note functionality would be a necessity of the new system.

8.9.4 Morrison Interface

The SEO (ICT) described Cork County Councils relationship with Morrison and according to the SEO (ICT):

"In order for bills to be issued from the water module, the metered water consumption readings have to be interfaced into the Integra water module from Morrison." 25 (see Figure 8.2).

25 Interview with SEO (ICT) 29/03/2007
The water consumption meter will be read quarterly using automatic meter reading technology. iB Solutions General Manager, the SEO (Finance) and SEO (ICT) decided that Morrison will feed this information back via an online link to Cork County Council’s Corporate Debtors System. The SEO (Finance) also explained how Cork County Council required a data field in the Corporate Debtors System to hold the frequency of the meter reading and to ensure that the customer is only billed every six months. Examples of the customer details Morrison sends to Cork County Council are Customer Name, Billing Address CSAR ID, Meter Location CSAR ID, Meter Type and Meter Serial Number. There are two CSAR ID’s for times when the meter location is different to the billing address.

8.9.5 CSAR Interface

The SEO (ICT) then went on to explain how the Corporate Debtors System would also have to cater for another interface called the CSAR interface. CSAR (Corporate Spatial Address Register) is a new database of all addresses which Cork County Council’s ICT department is building and maintaining. CSAR is an SQL database. It is sourced from the Geodirectory, which is a list of all official postal addresses provided by An Post. It also contains references to non-postal addresses such as plots of land and outhouses. CSAR establishes a precise geographic location for all buildings in the system. When invoices are issued to customers from the Corporate Debtors System, the addresses have to be pulled from the CSAR database. This ensures that customers’ addresses are standard on each bill issued, reducing human error in inputting address details.

8.9.6 JDE GL Interface

According to the Financial Accountant after the water charge has been calculated and the bills are subsequently issued in the Integra water module, they should be
automatically interfaced into the JDE GL overnight, eliminating the annual journal posted by the accountant at year end in accordance with the accruals concept of accounting. The bills will be coded into the JDE GL income and debtors codes based on the accruals method of accounting as opposed to the receipts method previously followed by Cork County Council.

In addition due to a change in the Water pricing policy, the accountant further explained how the annual financial statements must split the total water services income between water revenue income, water capital income, waste water revenue income and waste water capital income. As a result the Corporate Debtors System was designed to specially cater for this income split. A program was designed by iB Solutions to ensure that when the charge is generated in the Corporate Debtors System it is split into its various income types before being interfaced into the JDE GL income codes.

The Financial Accountant explained that receipts, unlike the bills are not split on the JDE GL between receipts for water revenue income receipts, water capital income receipts, waste water revenue income receipts and waste water capital income receipts. However should that be required a receipts analysis report must be generated from the Corporate Debtors System.

The JDE GL codes should be updated with the customer’s receipts by automatic interface which operate nightly. This will eliminate all the various journal methods and timing differences that previously occurred with regards to recording receipts on the JDE GL. The ICT Department had the responsibility to activate the interface between the Corporate Debtors System and JDE GL.
8.9.7 Bill, Credit note and Statement Layouts

The bill, credit note and statement formats were designed by the SEO (Finance) and the accountant. It was agreed with iB Solutions that these documents would show the total charge figure. No split would be given on the bill, credit note or statement between water revenue income, water capital income, waste water revenue income and waste water capital income. Nevertheless an explanation of the charge applied will appear at the bottom of the bill, credit note and statement.

The SEO (Finance) also requested to have copies of the customer's documentation saved and stored in the sharepoint database.

8.9.8 Receipts from Water Customers

The Finance Department decided to cut down the receipting methods offered. The SEO (Finance) and Financial Accountant explained to iB Solutions that standing orders and An Post Billpay will no longer be offered, customers will now only be able to pay by cheque (by post), Electronic Funds Transfer or credit card payment.

The Project Team informed iB Solutions of its decision to introduce web based credit card receipting. Cork County Council had already entered into a contract with Realex, an on-line credit card payments validation company. iB solutions agreed that the Corporate Debtors System can facilitate this where credit card readers are attached to keyboards.

The accountant explained that Cork County Council wants to record the receipt onto the customers account at the point of receipt, updating the customers account instantly. A major criticism of the former Debtors Legacy Systems was that receipts
were not updated to the customers’ accounts until the receipt batches were posted to their accounts either that evening or the following day.
The accountant demanded the functionality to automatically reinstate the bill charge if a cheque bounces. The accountant then explained that a refund will have to be done on the customers account as an adjustment because the Corporate Debtors System is only for receipting. Cork County Council have not selected the integra payments module. Payments will be made through Cork County Councils JDE payments module. iB solutions agreed this was possible.

The accountant explained that the Corporate Debtors System would also be required to provide a report analysing the receipts between water revenue income receipts, water capital income receipts, waste water revenue income receipts and waste water capital income receipts. This report may be required for County Councillors who are used to reviewing income reports based on a cash receipts basis as opposed to an accruals basis. iB Solutions had to specially design this report as it is unique to this system.

In addition, some customers may have a number of meters on their account with different pricing rule charge categories attached (as already discussed in chapter 6), for example meter 1 is billed at charge category U and meter 2 is billed at charge category V. It was decided by the SEO (Finance), SEO (ICT), Accountant and Senior Administrator Officer (ICT) that each customer account would also have an overall pricing rule charge category split attached. This overall pricing rule charge category split will be the pricing rule attached to the meter with the greatest water consumption. This pricing rule charge category will only be used to accommodate the splitting of unallocated cash elements and unallocated account adjustments which are on the customer account and not affiliated with individual invoices. It was acknowledged by the Head of Finance accountant and iB Solutions that reports of this type cannot be assumed to be a 100% accurate in establishing how much of the cash received was for water revenue income receipts, water capital income receipts, waste water revenue income receipts and waste water capital income receipts.
8.9.9 Corporate Debtors System Reports

Table 8.2 displays the type of reports required from the Corporate Debtors system for debtors management and for financial accounting purposes. These reports were requested as a minimum from the system for Cork County Council.

Table 8.2 Reports Provided by the Corporate Debtors System

<table>
<thead>
<tr>
<th>1. Balance by Customer</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Balance by Customer within Area</td>
</tr>
<tr>
<td>3. Balance by Credit Controller</td>
</tr>
<tr>
<td>4. Turnover by Service</td>
</tr>
<tr>
<td>5. Debtors in descending Balance</td>
</tr>
<tr>
<td>6. Receipt Type Analysis</td>
</tr>
<tr>
<td>7. List of refunds, bounced cheques</td>
</tr>
<tr>
<td>8. Total value of Bills issued</td>
</tr>
<tr>
<td>9. Exception reporting in water</td>
</tr>
<tr>
<td>10. Meters not read report</td>
</tr>
<tr>
<td>11. Frequency of billing reports</td>
</tr>
<tr>
<td>12. Domestic Allowance Reports</td>
</tr>
<tr>
<td>13. Total Administration Income</td>
</tr>
<tr>
<td>14. Reports with customers only with a waste water bill</td>
</tr>
<tr>
<td>15. Business type category reports (Industries, holiday cottages)</td>
</tr>
</tbody>
</table>

8.10 Systems Configuration

The systems configuration was carried out from the end of November 2006 to the middle of February 2007. This involved putting the hardware together and installing the software.
8.10.1 Hardware

After all the familiarisation meetings and information gathering sessions the required servers were ordered by Cork County Councils ICT Department and delivered in October 2006 to the iB solutions offices in Dublin. iB Solutions commenced server configuration and installed the server 2003 operating system using an enterprise licence key provided by Cork County Councils ICT Department. The servers were installed in the server room in the County Hall. Upon installation of the servers, Cork County Council installed agents for back ups and anti-virus updates. iB solutions agreed with Cork County Councils ICT Department that it would fully test the operation of the software following the installation of these agents to ensure there were no conflicts with Oracle/Integra.

8.10.2 Software

The Sales Ledger (SLS), Cash Management (CMS), eReceipts/ePayments and Water billing modules were installed after any bespoke development requirements were included in the Integra Corporate Debtors Suite. No conflicts existed between the software and agents when iB solutions tested the operations. Once the hardware and software were in place the training could commence.

8.11 Training

User training in Cork County Council was based on ‘train-the-trainers’. The SEO (Finance) selected two people, the manager of the new Corporate Debtors System and a finance clerk to be those, who would be trained as trainers. iB solutions came on-site over eight weeks and trained the Project Team members and the two trainers. The trainers, with the assistance of the accountants when required, subsequently trained the users in the Finance Department, contact centre and divisions.
iB Solutions provided end user training materials during the training sessions. The trainers and the accountants also produced their own user manual which was saved on Cork County Council’s shared server. After training was completed, it was time to carry out functionality and user acceptance testing.

8.12 Functionality and User Acceptance Testing

The accountant and the Corporate Debtors System users carried out a number of tests on the system to ensure it met the Council’s requirements for billing and receipting procedures.

8.12.1 Bill Calculation Testing and Bills Interface Testing

The interface between the Water module and Morrison was tested by the ICT department and iB Solutions. The use of the relevant pricing rule charge categories was tested by the accountant and a key user of the Corporate Debtors System.

The accountant subsequently tested the interface from the Corporate Debtors System into the JDE GL income codes. The accountant raised water bills in the Integra Water module, traced it to the customer’s account on the Corporate Debtors System and through to the various income and debtor codes on the JDE GL. The accountant also raised credit notes to amend the invoices raised on the Corporate Debtors system and traced these through to the JDE GL income and debtor codes. These tests were all done on the Corporate Debtors System test environment and JDE GL test environment. The tests were found to be satisfactory.

The interface into SharePoint was tested by the ICT department. The interface set up by the ICT department from the Corporate Debtors System to the CSAR database
was then checked. The customer address printed on the bill was verified by the users of the Corporate Debtors System.

8.12.2 Receipts and Interface Testing

This interface was tested in the test environments in the Corporate Debtors System and JDE Financial Management System by the accountant. The accountant recorded dummy receipts for the various receipt methods mentioned earlier. Bounced cheques, refunds and the receipts analysis reports were also tested and found to operate efficiently.

8.13 Data Conversion Testing and Live Build and Go Live

When the Debtors Legacy Systems were closed for the year ended 2006, these closing debtors balances were given to iB Solutions to transfer into the live Corporate Debtors System. The accountant checked that these opening figures in the live Corporate Debtors System agreed to the closing figures recorded on the Annual Financial Statements for 2006. The receipts for early 2007 were recorded on the old Debtors Legacy System initially and transferred to the Corporate Debtors System in March 2007. This transfer was again done once the accountant had agreed that the receipts recorded on the Debtors Legacy System agreed to the receipts recorded on the JDE GL. All the data was converted to the live Corporate Debtors System.

Cork County Councils accountants, ICT personnel and key users had tested the functionality and interfaces of the Corporate Debtors System. They were now satisfied that the system met the organisations needs. The next step now was to ‘go live’. The system went live and issued its first set of water bills on the 21 May 2007.
8.14 Future Expectations of the Corporate Debtors System

The future vision of Cork County Council is to consolidate the multiple Debtors Legacy Systems that exist for its other services into the single Corporate Debtors System. The Corporate Debtors System provided by iB Solutions will facilitate this. At the moment, it includes cash management modules integrated with the Integra Water Billing System and over time this will be integrated with all Cork County Council Service Department ICT Systems including Rates, Refuse, Rents, Annuities, Development Contributions and Roads.

The Council also aims to achieve a consolidated customer view, for example where a customer has both a water bill and a refuse bill, a clerical officer can look into an individual customer’s account to see all the services availed of from Cork County Council. This should aid the collection from debtors. At the moment there is no consolidated customer view. According to the FA:

"Debtors collection will be more efficient due to the unit being able to run consolidated debtors reports for customers and follow up outstanding amounts on all services which a customer has transacted with Cork County Council. This consolidation was not available with the Debtors Legacy Systems." 26

It is also the Council’s future intention to allow the public to view their accounts and pay their water bills online.

Once the Finance Department saw the functionality of the whole system they also decided that the automatic bank reconciliation module (included as standard as part of the Integra cash management module) included in the Corporate Debtors System package should also be implemented.

The bank reconciliation module was tested by the Accountant and the Finance Departments employees who will be operating it. iB Solutions were present for this

26 Interview with Financial Accountant 26/04/2007
test. Various lodgement types were recorded on the Corporate Debtors System and tested against a dummy bank statement created by the Council staff. The automatic reconciliation is to be carried out by matching the reference and amount on the bank statement to the reference and amount on the Integra GL bank account. The Finance Department opened a new bank account solely for water receipts to facilitate an easier bank reconciliation process. Testing proved satisfactory.

8.15 Conclusion

This chapter firstly described the tendering process. A Tender Assessment team was set up to review and select the vendor. Once the selection decision was made the next step was to implement the new Corporate Debtors System. This chapter then described the Corporate Debtors System and the process of designing and implementing it. The Project Initiation Document and the Project Plan were discussed. They described the various stages involved in the implementation of the Corporate Debtors System. Each of these stages namely systems design and interfaces, configuration, functionality and user testing, data conversion testing and live build and Go Live were described. Finally the future expectations were also discussed.
Chapter 9 Analysis

9.1 Introduction

This chapter looks at the matrix linking the ten critical success factors identified in chapter two, as being significant in the successful implementation of an integrated system, with the influence of the accountant as discussed in chapter three, in the context of Cork County Council's new Corporate Debtors System.

9.2 Top Management Commitment

Top management commitment was evident in the implementation of the Corporate Debtors System in Cork County Council from the beginning to the end. This commitment was demonstrated by top management involvement from initiation, right through tendering, implementation and training. This project was given priority over all other projects. This commitment was seen by the provision of necessary resources such as money, staff, and time. All of the interviewees agreed that top management support within Cork County Council and specifically that of the Head of Finance was a vital factor in the successful implementation of the new centralised Corporate Debtors System.

9.2.1 Commitment from Initiation

The County Manager and the Head of Finance initiated and remained committed to the project until it was running successfully. Without this commitment, they felt the project would not have been implemented successfully. The initial idea and resulting support stemmed from the growing need “to make the public service more efficient
and better focussed on the needs of its customers" (Marnane 1999, p471). There were fundamental problems with the old debtors systems, there was a need for change if efficiency and customer focus were to be achieved. According to the Head of Finance:

"Management support was there from the beginning as it was driven by the poor performance, poor collection levels, and unfavourable external audit reports. The County Manager and I entered initial discussions and decided that a centralised integrated system was required and we stayed committed to the end".  

This statement clearly displays how top management support, and specifically support from the Head of Finance, laid the foundation for the development and implementation of a new integrated Corporate Debtors System.

9.2.2 Commitment through Provision of Resources

Top management commitment was further demonstrated by the availability of resources to fund and develop the new system. Even though all interviewees mentioned monetary support, the accountants interviewed also stressed the importance of the provision of human resources as well. The Financial Accountant stated that:

"Top management supported the project and assisted in making key ICT and Finance staff available from their sections to assist in specking the requirements of the proposed new system".

The provision of key personnel from IT and Finance by top management helped build and maintain the priority of the project throughout the organisation.

27 Strategic Management Initiative, County Manager Comment 9/04/1996
28 Interview with Head of Finance 30/03/2007
29 Interview with Financial Accountant 26/04/2007
9.2.3 Commitment throughout the Project

The Head of Finance and the Head of Information Communication Technology were members of the Tender Assessment team and the Steering Committee. At the tender stage, they reviewed the information presented to them by the other members of the Tender Assessment team and they participated in the vendor interviews. The final decision to award the contract to the vendor was taken by the Head of Finance and Head of Information Communication Technology, supported by the County Manager. This clearly displayed management’s commitment of their own time at the beginning.

The Head of Finance and Head of Information Communication Technology were also members of the Steering Committee. The Steering Committee oversaw the work of the Project Team. The Project Team reported monthly to the Steering Committee members and any critical issues that needed resolving were dealt with by the Steering Committee members. Their membership on these teams highlighted managements commitment throughout the project and reflected their view of the importance of their contribution.

9.2.4 Commitment for Accounting Innovation

There was a consensus among all the interviewees that management support within Cork County Council is not usually strong for accounting change. For example, when Cork County Council was changing from cash based accounting to accruals based accounting, top management commitment was not as evident. This was seen in comments made by the Financial Accountant:

"The change over to accruals accounting was a directive enforced by Local Government. As it was not initiated by Top Management it did not get the support it should have from them".  

Interview with Financial Accountant 26/04/2007
The Head of Finance stated that there tends to be a negative view towards the requirements of accountants, often with top management, and users, viewing the requirements of accounting as "a waste of time, and not of use to them".\textsuperscript{31}

The SEO (ICT) backed this up stating that:

"It is difficult for people to support something they don't understand and I am not too sure how many people, myself included, understand what the difference from cash based receipting to accruals based accounting makes."\textsuperscript{32}

According to the interviewees, the Corporate Debtors System project received unprecedented top management support because of the profile of the existing Head of Finance, as a key member of the management team, and the perceived benefits of the integrated system to the customers and to people within the organisation, other than to the accountants.

It is clear from this case study that the new integrated system needed the approval and support of top management from all sectors of the organisation to be implemented successfully. It had the support of the Head of Finance and the County Manager, and they made this support an important encouragement to the Tender Assessment Team and the Project Team throughout the project.

\subsection*{9.3 Business Driven}

It is also clear from this case study that the case for this new Corporate Debtors System was not just 'technology' or 'accounting' driven, it was business driven. It came about as a result of the problems the various divisions and their billing and receipting procedures.

\footnotesize{\textsuperscript{31} Interview with Head of Finance 30/03/2007  
\textsuperscript{32} Interview with SEO (ICT) 29/03/2007}
"Poor collection levels, no receipt reconciliations between systems and lack of control over divisions' procedures due to the organisational structure were some of the reasons why a new centralised structure and integrated system was needed".\textsuperscript{33}

The Head of Finance was responsible for developing and communicating the business case for the new system to the different management levels within the organisation. By explaining and detailing the Council's business case, the support of top management was strengthened and the staff, in particular the users, were won over.

\textbf{9.3.1 Not Just an Accounting System}

The Head of Finance was able to cite the benefits of a new Corporate Debtors System and drive the business case for investing in this project. The accountants were in a position to provide this information because of their knowledge of how divisions work. Accountants were located out in the business divisions for a certain amount of time each week. They assisted these divisions with their financial accounting queries and learned their problems and information requirements.

There was not an 'us versus them' divide, it was very much a team based spirit. The accountants had started to break-down the boundaries between departments and were aware of the existing problems and possible solutions. According to the Head of Finance:

"The accountants needed to know what the divisions required and to inform them of how their roles impacted on other departments and on the financial statements".\textsuperscript{34}

Accountants are now seen as part of the management team, the Head of Finance claimed that Cork County Councils accountants had to "use their business acumen to

\textsuperscript{33} Interview with Head of Finance 30/03/2007
\textsuperscript{34} ibid

171
try to establish where the project should be going”. The accountants have disregarded the role of solely producing financial reports for month-end and are very much viewed within the County Council as being business-oriented.

9.3.2 Not Just a Technology Project

The interviewees all agreed that the project was business driven as opposed to being viewed as technologically driven. Of course it always maintained the support of the ICT department. The SEO (ICT) said:

“It was business driven, these projects must be business driven, any organisation whereby these projects are ICT driven aren’t doing things properly”.

In 2005 a Debtors System called “Interlock Pay By Weight” for billing and receipting for Refuse was implemented by the Environment Department and ICT Department. The Finance Department was not involved. Not only were the requirements of the accountants not taken into consideration, but the monitoring of the progress of the project was not controlled. The result was a very costly Refuse Debtors System, with many system modifications required after it was implemented to allow for financial accounting requirements. These post implementation problems stress the importance of the Finance Department as one of the key players in driving the business case for any other new system.

All interviewees agreed that the Finance Department were the main contributors to this project. The Head of Finance (project champion), SEO (Finance) and accountants were involved throughout the project. The SEO (ICT) stated that “the main reason for this is that the system is mainly a finance system, and it addresses efficiency issues as well as finance issues”. This shows how the involvement of the

35 Interview with Head of Finance 30/03/2007
36 Interview with SEO (ICT) 29/03/2007
37 ibid
accountant in establishing and driving the “business case” is influential in implementing a successful integrated system.

9.4 Clear Communication of Business Vision

As the new Corporate Debtors System in Cork County Council is viewed as mainly a finance system, it was seen by the ICT Department as the responsibility of the Finance Department to communicate the organisations new business vision to its members. This was evident from comments made by the SEO (ICT):

"The ICT department does not have a role in formulating or selling business processes that are owned by other departments and in this case Finance". 38

Accountants were well placed to fill this role as they had a good knowledge of the requirements of, and the benefit from, the new integrated system.

9.4.1 Communication Methods Used

Communication of the vision of the new Corporate Debtors System was ongoing in Cork County Council and it was mainly carried out through meetings, e-mails, presentations and training of key users. Clear communication of individuals’ roles and responsibilities were communicated, by the Project Leaders-the SEO (Finance) and the SEO (ICT), to the specific individuals concerned. This ensured they clearly understood their tasks in order to achieve the projects objectives of a successfully implemented Corporate Debtors System.

38 Interview with SEO (ICT) 29/03/2007
9.4.2 Communication to Top Management

Cork County Council, in its wish to be viewed as a modern service provider, wanted its customers to be able to make payments online and view their accounts online. As a result collection levels and customer credit ratings would be improved. It was the responsibility of the Head of Finance to communicate this vision to management at regular management meetings. He explained why the Council was implementing the new system, described the solution that was selected and its benefits and explained how the council was going to implement it. These presentations won and maintained the support of the management team throughout the systems implementation.

9.4.3 Communication to Users of the System

The users of the legacy system were initially resistant to this change. They were “quite happy” with the systems they had, they “liked the face of these systems and it did what they wanted it to do”\(^{39}\). The Head of Finance was instrumental in overcoming this resistance. He explained that the legacy systems did not meet organisational objectives and that the new Corporate Debtors System would actually free-up some of their time to focus on other aspects of their job roles. The business vision was further successfully communicated to users by the accountant during the set-up and training of the new system.

9.4.4 Communication to Vendors

It was also the accountant who communicated to the vendors, in a way that they understood, the requirements of the new system. This was especially apparent during the systems design and interface implementation stage of the project where the accountants described the billing, receipting and financial reporting requirements of

\(^{39}\) Interview with Head of Finance 30/03/2007
the new system. The need for interpersonal skills and technology skills by the accountant were a necessity and according to the Head of Finance:

"Communicating to the Vendors, in an understandable manner, meant that the excellent communication skills of the accountant were essential to ensuring the success of this project".\textsuperscript{40}

These findings highlight the role of the accountant as a communicator of the business vision in the implementation of an integrated system. To do this the accountant needs a suite of softer skills, such as communication and leadership skills, as well as technological and analytical skills. Armed with all of these skills, the accountant can clearly and successfully communicate the business vision to all the stakeholders of the project.

\textbf{9.4.5 Communication with ICT Department}

The accountants communicated the business vision to the ICT staff. To do this the accountant needed IT knowledge, in particular the relevant terminology to communicate and explain the requirements to the ICT personnel. The accountant had to have an understanding of IT terms such as interfaces, file structures and servers. They were required to explain to the ICT staff how the information in the Corporate Debtors System was to be recorded on the JDE GL and how often. In order to achieve this, the accountant had to have a certain amount of IT knowledge to ensure that the IT staff correctly understood what was required of them.

\textbf{9.5 Skilled Cross-Functional Project Team}

The Tender Assessment team comprised of members of the Finance Department and the Information Communication Technology Department. The Finance Department played a major influence in the selection decision. At the implementation stage other

\textsuperscript{40} Interview with Head of Finance 30/03/2007
cross functional teams were established to implement the system and to oversee the implementation of the system. The Steering Committee comprised of the Head of Finance, the Head of Information Communication Technology and the vendors General Manager. The Project Team comprised of the SEO (Finance) and the SEO (ICT), two accountants, ICT staff and the key user. This team worked closely with the vendor organisations implementation and development team. The training team comprised of the key user, a finance clerk and the accountants.

9.5.1 Project Team

The Project Team structure was comprised of two groups, the Steering Committee comprised of top management figures including the Head of Finance and the Project Team, including members of the Finance Department. This Project Team was selected because:

"the individuals involved had the skills and vision to be able to deliver the integrated billing and receipting system. They were highly motivated and goals and objectives focussed. They had also delivered in the past on previous County Council projects". \(^{41}\)

The main rationale behind putting this team structure together was that top management involvement, knowledge of the current business environment, knowledge of the existing Debtors Legacy Systems and knowledge of ICT were essential. These were the main deliverables on the project, so experience in these particular areas was vital. The accountants were a crucial part of this Project Team to ensure that the financial reporting requirements were met as well as the organisations customer focus requirements.

\(^{41}\) Interview with Head of Finance 30/03/2007
9.5.2 Project Leaders

The two project leaders were the SEO (Finance) and SEO (ICT). They were selected because of their unique skills relating to their areas of expertise and specifically to the business of Cork County Council. They had previous experience in setting up the Council's Contact Centre. They were motivated and self-driven and had delivered on projects in the past. The SEO (Finance) was a key member in the Council and had the vision of where the council was going in the future.

9.5.3 Technological Skills of the Accountants

The accountants provided the other members of the team with all the financial requirements, such as GL codes on JDE for debtors, bank and income. To do this they had to understand the technology issues. As trainers of the new system, the accountants were also required to have good communication and technological skills. To do this the accountants were not required to be "programming gurus" but they needed to understand how the systems "could work and what they could and could not do.".

The level of technology skills required by accountants "will always depend on the level of the project and the worst thing for a project is to have accountants who are too technology dependent on the ICT department for support". Because of the perceived, or perhaps actual, lack of technological skills, the accountant was not involved in the initial implementation of the JDE Financial Management System. The consequence of this was that Cork County Council spent "many years having to back track, having to balance accounts and making it do what the accountants needed it to do".

42 Interview with Head of Finance 30/03/2007
43 ibid
44 ibid
45 ibid
The necessity of accountants as members of the Project Team in Cork County Council was seen to be essential. None of the mistakes made in the past were to be repeated.

9.6 Well Developed Work and Resource Plan

A Project Initiation Document (PID) was prepared by the vendors and signed by the Head of Finance. It outlined the project objectives. Upon signing the PID, a detailed Project Plan was prepared by the Project Team and the vendor. It clearly outlined individuals’ roles and time deadlines. According to the Head of Finance:

"It outlined the key objectives and goals and the realistic but challenging time scales which to date were met throughout the project".46

Progress on the project was reviewed by the Project Team at weekly meetings and through e-mails and phone calls. The weekly meetings were chaired by the SEO (Finance) and SEO (ICT). They highlighted where individual departments were not meeting their targets. Immediate resolution of any unmet targets was required. This process was a success.

9.6.1 Accountants Role

The accountants played a major role in providing the opening water debtors figure for the new Corporate Debtors System. To do this the accountants worked closely with the three divisions (North, South and West) setting up weekly timetables to be adhered to and carrying out site visits to ensure the Debtors Legacy Systems at the previous year end were closed in a timely manner for the transfer of the Water Debtors data to the new Corporate Debtors System. This highlights the importance

46 Interview with Head of Finance 30/03/2007
of the accountants planning and control skills, along with their position within the organisation, in preparing project plans and monitoring progress.

**9.6.2 Project Resources**

With regards to resources the Head of Finance and SEO (Finance) said Cork County Council made the resources it was given work to full benefit. It was clear that by Cork County Council using the relevant people with the relevant skills the success of the project was enhanced. The Head of Finance stated:

> "I don't think there is any project particularly in local government that you can put enough people into. But given what was available to us, I think we have done pretty well. I think it's far more important to have a small number of the right people rather than a large number of the not so right people."  

The ICT staff who were required to work on the new system were made available as required because of the priority of the project. Other ICT tasks which were not as critical were placed at the bottom of the task list.

The findings show how the accountants position in the organisation and level of business acumen and soft skills aid and complement the resource and planning process.

**9.7 Close Working Relationship with the Vendor**

In this case study a key factor in selecting the vendor was the importance of Cork County Council working in partnership with a vendor that could deliver the proposed solution.

---

47 Interview with Head of Finance 30/03/2007
"It was crucial for us that it wasn’t an ‘us and them’ solution, it had to be a partnership". 48

The selected vendor had previous experience working with another Irish Local Authority. This meant that it was familiar with the specific systems requirements of the public sector. Due to the vendors unique Local Authority expertise, the level of cooperation throughout the project was “first class”.49 Any key requirements that were not specified in the beginning were incorporated into the solution by the vendor at no extra cost within the scope of the original agreement.

9.7.1 Vendors Future Plans

The vendor viewed Cork County Council as an important customer, not just for this project, but also as potential for the future. It saw this as an opportunity to improve its reputation as a systems specialist in the public sector market. This further enhanced the relationship between Cork County Council and the Vendor as it displayed the Vendors future long term plans to remain as a player in the public sector technology market.

9.7.2 Finance Departments Relationship with the Vendor

The vendor was available to Cork County Council over the phone and by e-mail when required. It carried out on-site visits and provided on-site training. It was also present to help the accountants with the testing of the new Corporate Debtors System.

48 Interview with Head of Finance 30/03/2007
49 Interview with SEO (ICT) 29/03/2007
According to the Financial Accountant:

"The close working relationship was evident from the availability of vendor personnel during specification/workshop days, together with their availability to answer any concerns on a daily basis to personnel of Cork County Council where necessary".  

The accountants and the SEO (Finance) played a major role in passing the information requirements of the key users onto the vendor. According to the Head of Finance:

"If the accountant has a business sense and knows the business requirement from the project, then they can be a fantastic middle-man explaining to both the vendor and users in layman’s terms the solution to the problem".  

The accountants' soft skills and technology skills were critical in liaising between the vendor and the key users, in analysing the existing legacy systems and in communicating the business needs of the new Corporate Debtors System. The Vendor came on-site regularly to gather systems and accounting information. The accountants explained the set-up of the chart of accounts to the vendor, they supplied the water pricing rules and the JDE GL codings to be used. The accountants also described how the bills, receipts and amendments were to be recorded on both the customers accounts and on the JDE GL codes.

It is clear that the close working relationship built by the accountants with the vendor had an impact on the success of the implementation of the system.

9.8 Business Process Re-engineering

Cork County Councils billing and receipting procedures were reviewed by the Finance Department during the Needs Assessment. This process illustrated the

---

50 Interview with Financial Accountant 26/04/2007
51 Interview with Head of Finance 30/03/2007
different billing and receipting methods used by the three divisions. It also highlighted the non-value-adding activities. They needed to “look at ways in which an integrated Debtors System would improve the processes”.52

By designing a centralised Corporate Debtors System within the Finance Department, separate billing and receipting processes carried out in the divisions were eliminated. One standardised method of billing and a set number of standard payment method options were established. It also standardised adjustments to customer accounts. The accountant played a major role in the redesign of business processes due to the knowledge and expertise they had acquired from working on-site with the Council staff.

9.8.1 Impact of Non Accountants Involvement

The downfall of the absence of the accountant in Cork County Council’s earlier attempts at organisational change and redesign was seen after a new Refuse Debtors System for billing and receipting was introduced. No consideration was given to business processes such as how the invoice charges, amendments, receipts and opening balances would be interfaced into the JDE GL for the Annual Financial Statements.

The clerical users of Interlock did not understand the necessity of preparing monthly reconciliations between the figures recorded on the Refuse Debtors System and the figures recorded on the JDE GL Refuse codes. They did not understand the impact on the Annual Financial Statements of classifying transactions incorrectly on the Refuse Debtors System. In addition the clerical staff did not understand the importance of posting the receipts journals correctly to JDE GL. They failed to understand the impact incorrect receipt journals details had on the automatic bank reconciliation procedures.

52 Interview with Head of Finance 30/03/2007
9.8.2 Lessons Learned

The new Corporate Debtors System created a new organisation culture and structure within the Council. Business process re-engineering was carried out and the accountant was involved in designing the new business processes. The accountants' input was aided by the fact that they worked within the business units and had experience in implementing previous change programmes. The success of this project, compared to the implementation of a previous debtors system, clearly demonstrates the importance and impact the accountant has in business process re-engineering.

9.9 Change Management

The changes that came about with the implementation of the new Corporate Debtors System in Cork County Council were managed by the Project Team. The SEO (ICT) and SEO (Finance) documented the possible risks that could have occurred during the implementation of the system on the Corporate Debtors System Risk Register. Some of the risks identified were: member(s) of Project Team leaving the Project Team, internal staff resources not available, reduction in senior level commitment to the project, delay in developing interfaces, failure to communicate effectively into local offices, inaccurate information exchanged between the old system and the new system, user acceptance testing delays and ICT issues. They then identified possible courses of action should any of these occur.

9.9.1 Training

Using the 'train-the-trainer' model the vendor trained key staff within the Finance and ICT departments. The training team then trained the other key users within the council. An online training manual was also provided.
According to the Financial Accountant:

"It was included as part of Cork County Councils tender process that the successful tender would provide adequate training of the new system to the County Councils key staff".53

Using this technique, a wide range of staff were trained and the risk of losing key knowledge if key staff members were to leave was reduced.

The users “grew enthusiastic about the new system”54 during training when its user-friendliness was pointed out to them, by the accountant. The user screens are self explanatory and the manual reconciliations between the different systems were no longer required. These all helped to foster a positive attitude among the users towards learning how to use the new system.

9.9.2 Accountants Aid Change Management

The accountant participated in training the users due to their communication, technology and leadership skills. They had been seen to manage change before when they were required to design new business processes for the Refuse Debtors System after it was implemented. The accountants also sat with the key users of the Corporate Debtors System during the start-up phase to assist them with any systems accounting queries they had.

The accountants also coordinated and managed the testing of the Corporate Debtors System. This was evident during the functionality and user acceptance testing, data conversion testing and live build phases. The accountants ensured that the Corporate Debtors System could do what it was supposed to do and they ensured that the testing of the new system was carried out in line with time scales outlined in the project implementation time chart. The accountants’ technological skills, soft skills,

---

53 Interview with Financial Accountant 26/04/2007
54 Interview with SEO (Finance) 30/03/2007
position within the organisation and role in change programmes all facilitated the change management of this project.

It is clear that the organisational change within Cork County Council due to the implementation of the new Corporate Debtors System was well managed and the accountant played a valuable role in managing that change.

9.10 Project Champion

The Project Champion in this case study was the Head of Finance. His status as a well respected high-ranking inhouse official, along with his excellent communication skills, solid accounting, budgeting and technology skills, made him an ideal Project Champion. It was important that the champion had this status as according to the Head of Finance:

"Within the Local Authority structure, for a project to get status, it has to be discussed and debated at management level so the champion would have to be at management level".  

The SEO (Finance) also confirmed this stating that:

"It was necessary to have the Head of Finance as project champion because at the end of the day he is the only person within Finance to achieve the resources for the project and influence top management support".  

The Project Champion, as the advocate for change, must have status and strong business, communication and technology skills. It is evident from this case study that one of the top accountants within Cork County Council fits this role. This illustrates the importance of the accountant as Project Champion for an integrated systems implementation.

---

55 Interview with Head of Finance 30/03/2007
56 Interview with SEO (Finance) 30/03/2007
9.11 Critique of Existing System

The Finance Department played a key role in highlighting the problems with the Debtors Legacy Systems. It carried out an analysis of the existing legacy systems and the JDE AR module by speaking with key users, the ICT Department and the other staff of the Finance Department. This was part of the Needs Assessment before the tendering process.

It met with the key users and assisted them with their work. This helped highlight the problems of the legacy systems which were then documented by the SEO (Finance) and the accountants. Without this information the same problems with regards to the Debtors Legacy Systems may have been repeated. This information helped provide Cork County Council with a clear vision of what the Corporate Debtors System should and should not do.

This shows the important role the accountant plays in analysing the existing systems. This analysis is critical to the successful implementation of an integrated system. It is clear from the findings that a critique of the existing system is a starting point in the successful implementation of an integrated system and the accountant is a key figure in assisting that analysis.

9.12 Conclusion

This chapter analysed the case study under the ten critical success factors for a successful systems implementation determined from the existing literature in chapter two. Under each of the factors it examined the impact of the accountants' involvement in ensuring that the Corporate Debtors System was implemented successfully.
Top management support was present from the beginning to the end which encouraged the Project Team’s dedication to the successful implementation of the system. It was business driven by the Finance Department with the accountants seen to be the key business drivers. This vision was communicated by the Head of Finance and the accountants. A skilled cross functional team was set up comprising of top management members, Finance Department members, ICT Department members, a key user and members of the vendor development and implementation team. The accountants were viewed as crucial members of this team as their absence in previous systems projects had resulted in costly and time consuming modifications to systems after their implementations.

Well developed work and resource plans were implemented with the accountants planning and control skills being seen with the timely delivery of year end figures for the new Corporate Debtors System. A close working relationship with the vendor existed and this relationship was enhanced by the close working relationship the vendor had with the accountants throughout the project. Business Process Re-engineering was carried out during the Needs Assessment and the accountants played a major role in redesigning Cork County Councils business processes due to their experience in correcting the mistakes of past systems implementations and their knowledge from working on-site with the users. Change Management was also catered for by the Project Team with the creation of the Corporate Debtors Risk Register. The accountants played a key role in managing the change, locating themselves among the key users of the Corporate Debtors System during its implementation to answer any user questions. They also participated in training users on the Corporate Debtors System.

The project was championed by the Head of Finance which clearly shows the role of the accountant in successfully implementing an integrated system. A critique of the existing system was carried out during the Needs Assessment by the Finance Department. This highlighted the problems of the existing systems. Due to the accountants close working relationship with the users they had a clear knowledge of
what the new Corporate Debtors System should be able to do, leaving the problems of the legacy systems behind.

This case study clearly demonstrated that the ten critical success factors cited in the literature as being necessary to ensure a successful systems implementation were present in the case of Cork County Council. Not only that, but it also highlighted the considerable impact the accountant has in each of the ten critical success factors. It was clear that in Cork County Council, the accountants were considered to be pivotal to the successful implementation of the new Corporate Debtors System. Previously Cork County Council's systems projects were viewed as belonging to the Departments implementing them and they were supported by the ICT Department. The help of the Finance Department was not sought. However this view resulted in systems not meeting financial reporting requirements and Cork County Councils accountants later spending time on correcting the systems. It is clear from these findings that the role of the accountant in each of the ten critical success factors required for a successful systems implementation in a Local Authority environment was very significant.
Chapter 10 Conclusions of this Research

The objective of this research was:

*To examine, in a Local Authority environment, the extent of the role of the accountant in the implementation of an integrated system.*

The researcher achieved this by examining and answering the following questions as set out in chapter five:

1. How was the Integrated System developed and implemented within the Local Authority?

2. Were the ten critical success factors for systems implementations identified in the existing literature (namely top management support, clear business vision, communication of this vision, a skilled project team, a well developed work and resource plan, close working relationship with the vendor, business process re-engineering, change management strategy, a project champion and review of the current legacy systems) present?

3. What was the role of the accountants in each of the ten critical success factors?

This chapter summarises the conclusions of the analysis. It describes the limitations of this piece of research and suggests possible areas of future research.
10.1 Question 1: How was the Integrated System Developed and Implemented within the Local Authority?

In the period from March 2006 to May 2007, Cork County Council successfully implemented a new centralised integrated Corporate Debtors System for one of its main services, Water. This was described in detail in chapters six, seven and eight of the dissertation.

A similar project existed for the Refuse service in early 2005, however it was not as successful. The lessons learned from that project helped make the Water project a success. The main lesson was that the introduction of an integrated system could not be treated as a purely technological project involving just ICT staff, the knowledge and skills of the accountants, users and other stakeholders in the organisation were also crucial to the success of the project.

The new Corporate Debtors System for Water was a major project. Even though it is a new information system, it required the commitment, support and involvement of all the stakeholders. This case study examined the role of the accountants. It is evident throughout this case study that the accountants played a huge role in the process and helped develop and implement a very successful system. In comparison with the previous Refuse project, this highlights the importance of the input of the accountants in the implementation process.

10.2 Question 2: Were the ten critical success factors for systems implementations present?

Chapter nine analysed the implementation process, in particular examining each of the ten critical success factors for a successful systems implementation and the seven key factors influencing the accountants role in implementing an integrated system. It highlighted the importance of the accountant in all aspects of the implementation process.
10.3 Question 3: What was the role of the accountants in each of the ten critical success factors?

The obvious involvement of the accountant in the implementation of any system is to assist from the perspective of the chart of accounts layout, financial accounting requirements, financial reports requirements, customer account details, and user requirements. If the accountant is not involved in this “information giving” process, the result is the implementation of a system which does not meet financial accounting and reporting requirements. However, this research explored the need for a much more comprehensive involvement by the accountant. The modern accountant described in chapter three as a business person with softer skills such as communication, leadership and team work, combined with a working knowledge of technology, is a critical member of the implementation team throughout the life of the project.

There was unanimous consensus among the interviewees within Cork County Council that the accountants played a key role in the implementation of the Corporate Debtors System. The accountants were not just drawn into each stage of the project, they were anxious to be part of the team, often initiating each stage and giving it priority over other work. The accountants were involved in scoping the functionalities of the existing Debtors Systems. They documented, and brought to the attention of management, the existence of time wasting tasks, for example weekly reconciliations between the Debtors Legacy Systems and the JDE Financial Management System. They explained that time could be freed-up to carry out more productive duties if the systems were integrated. The accountants explained the inability of the Debtors Legacy Systems to handle the new water pricing rules and the inefficiencies of the divisions billing and receipting procedures. It is clear that the accountants communication, analytical and technological skills allowed them to instigate and justify the investment in the new Corporate Debtors System for Cork County Council.
Once the requirement of a new integrated system was confirmed, the Council required a list of possible solutions. Again the accountants were involved in putting forward and evaluating the possible solutions available to Cork County Council. Their accounting and technology skills and their knowledge of the public sector made them a strong force in this team and gave them the ability to arrive at the most suitable option. The accountants had the ability to stress the importance and aptness of the new solution.

The accountants then continued their involvement by being key figures on the Tender Assessment Team. Their position on this team was a necessity to ensure that the vendor selected could provide a software package that would fit with the JDE Financial Management software and meet the billing and receipting requirements of the public sector environment. The vendor’s solution would have to provide all the financial reporting requirements needed by the Finance Department. The accountants were in a good position to be able to inform the possible vendor of these requirements. It is interesting to note that all of the ICT staff interviewed in this study agreed that this was the responsibility of the accountants and not the ICT Department.

The accountants remained involved throughout the implementation process, by their presence on the Project Team. Their presence on this team was crucial because they fulfilled the requirement of being able to explain not only the chart of accounts set up to the vendors, but also the user requirements and the business needs of Cork County Council. Their strong communication and working technology skills enabled them to liaise successfully with the vendor, indeed some of the interviewees referred to them as the “middlemen” between the users and the vendors.

The accountants were also involved in preparing training manuals and in assisting the trainers in training the key users of the new system. This shows how the accountants need for a set of softer skills, such as communication and relationship management, is important to ensuring a successful systems implementation.
10.4 Importance of the Role of the Accountant in the Ten Critical Success Factors

Cork County Council implemented a successful integrated system and the ten critical success factors, identified from the literature as necessary to ensuring a successful systems implementation, were present. The matrix created by the researcher from the literature review (see Table 3.1) illustrates how the accountant could be influential in the implementation process. Throughout the case study, the researcher delved to find the accountants fit in this matrix. Interestingly, the accountants seemed to be strongly involved in each of the factors and even more interestingly, their involvement was very much supported by top management and other members of the implementation team.

10.4.1 Top Management Support

Top management support for the project was primarily from the finance function. They were seen as the people who were pushing the project forward at every stage. This was evident from the presence of the Head of Finance, on each of project teams: Tender Assessment Team and the Steering Committee.

10.4.2 Business Driven

Even though the Head of Finance initiated the project, the project was clearly business driven, not just finance driven. He justified the investment as part of a modernisation phase within Cork County Council. He believed it was critical in today’s environment, and from the perspective of the outside customer looking in, that the council would have a centralised Corporate Debtors System.

10.4.3 Clear Communication of Business Vision

This business vision was communicated clearly to the organisations staff by the Head of Finance, the SEO (Finance) and the accountants. The accountants with their
communication skills and close working relationship with the employees were a vital force in communicating Cork County Council’s new business vision.

10.4.4 Skilled Cross-Functional Project Team

The Project Team comprised of two project leaders; SEO (ICT) and SEO (Finance), the accountants, ICT staff and a key user. This team reported to the Steering Committee comprised of top management figures. This team composition provided top management support and had project team members with business skills, knowledge of the Debtors Legacy systems, public sector knowledge and technological skills. This multi-skilled team was fundamental to ensuring a successful systems implementation occurred in Cork County Council.

10.4.5 Well Developed Work and Resource Plan

The Project Team followed well developed work and resource plans, that were drawn up by the Project Leaders, the accountants and the vendor. They met weekly to ensure these plans were being adhered to. Any time delays were documented and followed up with a solution.

10.4.6 Close Working Relationship with the Vendor

Cork County Council’s implementation team had a close working relationship with the vendor. The accountants, in particular, had an excellent working relationship with the vendor, and due to their financial and technological terminology they were a vital support to the vendors.

10.4.7 Business Process Re-engineering

Cork County Council carried out business process re-engineering prior to and during the systems implementation. The SEO (Finance) and the accountants were the key
figures involved in examining these processes. The accountants were in a position to highlight the value-adding activities and the non value adding activities due to their close working relationship with the Council staff and their business unit focus.

**10.4.8 Change Management**

The change brought about by the new integrated system was managed by the Project Leaders and accountants. A train-the-trainer method of training was provided. The accountants were instrumental in providing back-up support to the trainers. They assisted in training the users and in answering any accounting questions they had. The accountants' position within the organisation, by working closely within the various divisions, and their technological skills, helped to manage the change brought about due to the implementation of the integrated Corporate Debtors System.

**10.4.9 Project Champion**

Cork County Council felt, from previous experience with other projects such as the Refuse System implementation, that the new Corporate Debtors System would be best championed by a finance person with authority. The Head of Finance's position within the organisation, along with his business skills, made him an ideal champion for this project.

**10.4.10 Critique of Existing System**

A critique of the legacy systems was carried out as part of the Needs Assessment. It highlighted the current systems strengths and weaknesses and the requirements of the new system. The accountants were able to highlight the existing systems limitation. Their positioning out in the business units they serve, meant that they had a knowledge of the existing system and its problems, but also had ideas on how these problems could be solved.
The involvement of the accountant in each of the ten critical success factors meant that their financial, analytical, communication, team-playing, leadership and technological skills, and business acumen, could be utilised to make the implementation of the new system a success. Of course the accountants on their own could not be responsible for the implementation of an integrated system, but their involvement in the multi-skilled team was vital to the success of the new system.

10.5 Limitations of this Study

The research method, tools and techniques used by a researcher are determined by a number of factors (Layder, 1993). Among these factors are the resources available to the researcher and the availability and accessibility of data.

The first step taken by the researcher in defining the topic was an extensive examination of the literature available in three areas, those being the role of the modern accountant, the implementation of integrated systems and public service organisations. Hakim (1987) states that a literature review is “commonly part of the ground-clearing and preparatory work undertaken in the initial stages of empirical research” (p17). In this instance, it involved examining recent volumes of academic journals and some older ones, as well as recent books. From reading the literature available, the researcher was provided with a “synthesis of existing knowledge” (Hakim 1987, p17) and recognised a gap in that knowledge.

Much has been written on the implementation of integrated systems in the private sector, but very little has been written on their implementation in the public sector and on the role of the accountant in that implementation process. The researcher thus set out to complete an exploratory thesis in an attempt to narrow that gap.

Traditionally accounting theory is widely criticised for its isolation from practice, this is commonly referred to as a “gap” between accounting theory and practice.
(Hopwood 1978, 1986, Kaplan 1984, Otley 1984). In acknowledging this, Scapens (1983) argues that accounting academics are unaware of the problems facing practitioners. Accounting research is no longer viewed as being purely technical but as being concerned with the environment in which it operates (Kaplan 1984; Hopwood, 1986). Qualitative research allows the researcher examine data from many sources and draw a personal conclusion.

When undertaking the qualitative research in this study, the researcher examined not only the accounting system, but also the whole organisation in which that system operates. This was possible here due to the fact that the researcher was working in the organisation:

"The purpose of the case study is not to represent the world, but to represent the case" (Hakim 1987, p245).

The objective of this study is to describe the role of accounting as it stands in one organisation, but in a way that is intended to facilitate subsequent research on the topic and the formation of hypotheses for testing. This approach is appropriate to this study due to the limited resources available to the researcher.

10.6 Future Research

This exploratory research opens a new area of further research. For example the role of the accountant in the implementation of integrated systems in the private sector still needs a lot more research. Another area of future research could be to review the role of the accountant after the integrated system is implemented. What role does the accountant play in an organisation after having assisted in automating the procedures they would have traditionally been responsible for.
Future research could also be carried out on other areas of public service and how integrated systems cope with service expansion. For example when the Corporate Debtors System in Cork County Council expands to include Refuse and Roads, does it facilitate the expansion as planned and meet the organisations requirements. All of these areas are worthy of further research.

10.7 Conclusion

The findings of this dissertation show that the ten critical success factors identified in the literature for a successful implementation of an integrated system were present in Cork County Council. The involvement of the accountants, and the support of others in the organisation for this involvement, in each of the critical success factors was paramount. This study shows how the accountants' skills of change management, leadership, communication and training, along with their business acumen and analytical skills, makes them a valuable and instrumental figure in ensuring the successful implementation of an integrated system.

These findings add to the limited existing literature which claims that accountants are using integrated systems to create a new role for themselves. This study demonstrates how accountants have used their new skills and knowledge to assist in the development and implementation of an integrated system.
Bibliography


Chass, (2004), Accessed from www2.chass.ncsu.edu/garson.pa765/cases


Institute of Management Accountants, Montvale, NJ, *The 1999 Practice Analysis of Management Accounting*.


Pierce, B., and O’ Dea, T., (2001), Research conducted by Pierce in conjunction with O’ Dea, Dept of Accountancy, UCD.


Appendix 1 Pre-Qualification Questionnaire

Cork County Council

Corporate Debtors System
incorporating Billing/Invoicing & Receipting

Selection of Vendor to Supply & Implement Solution

Pre-Qualification Questionnaire

Restricted Procedure
Section 1 – Instruction to Respondents

1. All responses should be printed and (unless otherwise stated) presented in a punched ring-binder folder and not spiral bound or any other form of binding. Please clearly separate each of the questionnaire sections and appendices.

2. Five copies of this response are required.

3. If the Tenderer is proposing to outsource or sub-contract activities to a third party, a separate questionnaire (Section 5 with the exception of 5.3 and 5.7, and Section 6 including the signed declaration in Appendix 9) is required to be completed for each of the parties in question.

4. Cork County Council will not be bound to accept any or all submissions.

5. Cork County Council is a public body and is subject to the provisions of the Freedom of Information Act, 1997, and as amended.

Cork County Council requires that all information provided pursuant to this questionnaire will be treated in strict confidence by Tenderers.

Cork County Council undertakes to use its best endeavours to hold confidential any information provided by any organisation in response to this invitation to tender, subject to its obligations under law.

Please note that, in response to a request under the Freedom of Information Act, information not identified as confidential or commercially sensitive (with supporting reasons) could be released. Therefore, in responding to this invitation to this questionnaire, you should clearly identify the specific information, which you do not wish to be disclosed, stating the reasons for its sensitivity. Cork County Council will consult with you about such information before making a decision on any Freedom of Information request received.

6. The latest date/time for receipt of your response (i.e. 5 copies of the completed Pre-Qualification Questionnaire and supporting documentation) is 20th March 2006 at 12.00 noon. Submissions received after this deadline shall not be considered.

The completed response should be submitted (in hard copy only) in a sealed envelope marked “Submission for Corporate Debtors System incorporating Billing/Invoicing & Receipting” to:

Mick Rogers, Senior Executive Officer, I.T. Department, Model Business Park, Model Farm Road, Cork.

3/2/06
Section 2 – Consortium Structure

2.1 Are you requesting to participate in the competition as a consortium

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

If “Yes”, then complete the remainder of Section 2.

If “No”, proceed to Section 3, and complete the remainder of the Questionnaire in full.

All consortium members should also complete separate Questionnaires in full, responding on behalf of their own organisation. A separate Questionnaire (Section 5 with the exception of 5.3 and 5.7, and Section 6 including the signed declaration in Appendix 9) is also required from each sub-contractor. All completed Questionnaires should be ring bound together and returned as one document.

2.2 State the full legal name and address of the consortium:


2.3 Phone number (including area code):


2.4 Facsimile number (including area code):


2.5 Contact name and title (including contact address, phone, e-mail and fax no.):


2.6 Has the consortium been formed specifically to participate in this project?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

2.7 For what period has the consortium been in business under its present name?


Years
Appendix 1 Pre-Qualification Questionnaire
Selection of Vendor

2.8 List the names and addresses and services to be provided of the persons, firms and/or companies which make up the consortium:

<table>
<thead>
<tr>
<th>Company Name &amp; Address</th>
<th>Service Provided</th>
<th>Company Registration Number</th>
<th>Number of Years in Business</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.9 How will the consortium be financed?

2.10 Is there a legal agreement which defines the rights and liabilities of each member person, firm and/or company?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

If "Yes", please provide a copy of this agreement in Appendix 4.

Is there a lead member of the consortium who is taking responsibility for performance of the members under the contract?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

If so, please provide the name and address.

N.B. In this competition there must be a designated party that is legally responsible for the performance under the contract. Failure to organise in compliance with this requirement will result in the submission being excluded from further consideration.
2.11 Provide details of the consortium insurance protection in respect to public liability cover. Amend (x Party) with the relevant consortium member names.

<table>
<thead>
<tr>
<th>(1st Party)</th>
<th>(2nd Party)</th>
<th>(3rd Party)</th>
<th>(4th Party)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insurer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value (Euro)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Provide details of the consortium insurance protection in respect to employers liability cover.

<table>
<thead>
<tr>
<th>(1st Party)</th>
<th>(2nd Party)</th>
<th>(3rd Party)</th>
<th>(4th Party)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insurer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value (Euro)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N.B. In this competition each member of a consortium must be jointly and severally liable for the performance under the contract. There must be a legally binding agreement that determines the responsibilities and obligations of the consortium members. Additionally, there must be a designated party that is the point of contact for the group. Failure to organise in compliance with this requirement will result in the submission being excluded from further consideration.

Required insurance levels on this programme shall be:
- Public Liability: €12.7m for any one occurrence but unlimited throughout the Contract
- Employer Liability: €12.7m for any one occurrence but unlimited throughout the Contract

A statement should be provided outlining that the required levels can be obtained and furnished to the Contracting Authority within 14 calendar days if appointed.
Section 3 – Company Structure

3.1 State the full legal name and address of the company and trading name:


3.2 Phone number (including area code):


3.3 Facsimile number (including area code):


3.4 Contact name and title (including contact address, phone, e-mail and fax no.)


3.5 Is this company a private limited company?

| YES | NO |

Is this company a public limited company?

| YES | NO |

If a limited, please state the amount of capital and reserves as of the end of the most recent quarter:

- Capital €
- Reserves €

If other than the above, please specify


3.6 For what period has the company been in business under its present name?


Years

3/2/06
3.7 Provide details of the company insurance protection in respect to public liability cover.

<table>
<thead>
<tr>
<th>Policy No</th>
<th>Insurer</th>
<th>Value (Euro)</th>
</tr>
</thead>
</table>

Provide details of the company insurance protection in respect to employers liability cover.

<table>
<thead>
<tr>
<th>Policy No</th>
<th>Insurer</th>
<th>Value (Euro)</th>
</tr>
</thead>
</table>

Required insurance levels on this programme shall be:
- Public Liability: €12.7m for any one occurrence but unlimited throughout the Contract
- Employer Liability: €12.7m for any one occurrence but unlimited throughout the Contract

A statement should be provided outlining that the required levels can be obtained and furnished to the Contracting Authority within 14 calendar days if appointed.

3.8 Please provide the following information if the Company is a registered company:

Company Registration Number

Registered Address:

3.9 If the Company is a subsidiary, please provide the name and address of the parent company:

3.10 If Company is a subsidiary, will the parent company, or any other companies in the same group have any role in the provision of services under the contract?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

If “Yes” please give details:
Appendix 1 Pre-Qualification Questionnaire
Selection of Vendor

3.11 Will the parent company guarantee the financial position of the subsidiary?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

3.12 Has the Company undergone any merger or major reorganisation in the past 5 years?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

If "Yes" please give details:

[Blank space for details]

3/2/06

Page 8 of 29
Section 4 – Financial and Economic Standing

4.1 Tendering parties must submit the following documentation / information with their completed questionnaire:

a) Information on their annual turnover for the three preceding years. Tenderers must also state separately the percentage of this turnover that relates to Application Development and Application Implementation. The table in Appendix 1 should be used for this purpose.

b) An appropriate statement from bankers to prove the tendering parties financial and economic standing. This shall be included in Appendix 5, one for each consortium member shall be provided where applicable.

c) A statement from their auditors/accountants confirming accounts have been audited for the past 3 years. This shall be included in Appendix 6.

d) Audited accounts for each of the 3 preceding years or such shorter period that the contractor has been in business. This information is required for each member of a consortium. These shall be included in Appendix 7.

N.B. Failure to provide financial documentation may result in the submission being excluded from further consideration.
Section 5 – Technical Capability

5.1 Tenderers are asked to provide a list of similar projects, incorporating at a minimum 3 separate projects, related to the Development/Implementation of a Corporate Debtor System, incorporating Billing/Invoicing and Receipting, undertaken over the last five years. It will also be required that references or other evidence of the success of the projects be available.

Evidence should highlight the Vendor’s relevant experience in the following aspects of a Corporate Debtor System, incorporating Billing/Invoicing and Receipting:

- Development/implementation of a system in an SQL, Oracle or DB2 environment to run in-house on the Customer’s servers. (The Council will not accept an externally hosted solution).
- Deployment of the system via thin client (maximum bandwidth 512K) to multiple remote locations.
- Distribution of printed output (receipts, statements etc) to remote locations.
- Provision of a browser-based front-end, irrespective of the back-end database.
- Provision of a web portal for self-service (on-line payments, account checking, receipt/statement etc).
- Development/implementation of real-time integration between the Debtors system and the Financial Management System, a Contact Centre / Call Centre system, pre-existing bespoke applications and Geographic Information Systems.
- Management of diverse income streams, each with their unique charge calculation rules.
- Provision of a consolidated customer view across all income streams.
- Management of both property based and service based charges.
- Provision of end-to-end management information reports.
- Provision of a workflow engine.
- Contract management.
- Project Management

The table in Appendix 2, together with any supporting information you deem relevant (in Appendix 2A) should be used to address the points listed above.

Tenderers are required to clarify whether they have been successful in tendering for and completing fixed price projects against a scope of services.

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

5.2 Tenderers are required to indicate any circumstances where they have had to revert to a client on one of these fixed price tenders with a claim for additional fees for their services where they are the beneficiary. Please state “None” if applicable; do not leave blank.

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Contract Value</th>
<th>Claim Value</th>
<th>Reason for Claim</th>
<th>Client Contact Details</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3/2/06
5.3 Staffing

Tenderers are required to provide details of the average annual number of people directly employed by them over the last 3 years. The table in Appendix 3a should be used to provide the relevant information.

Tenderers are also requested to provide an organisation chart of the staff (from director level down to managerial level) that are available to be assigned to this project. Please indicate the positions and names of staff as well as their title and responsibilities. Please indicate if they are directly employed or contracted and their qualifications and experience. The table in Appendix 3A should be used to provide the relevant information.

N.B. In this competition Tenderers must provide evidence that:

(a) The management team has the ability to address the requisite technical, administrative, and health and safety requirements and
(b) The person(s) who will be responsible for managing and supervising the implementation has at least 5 years project management experience on major ICT projects.

Failure to demonstrate the above staffing capability will result in the Tenderer being excluded from further consideration.

5.4 Quality Control and Management

Tenderers are asked to provide details of their measurements for ensuring quality control and to specify any current quality certifications that are held:


5.5 Sub-Contracting

The Tenderer shall indicate details of any element of the services which it is intended to out-source. The Tenderer shall also state the companies to which such services will be outsourced. Please state “None” if applicable; do not leave blank.


Are all staff to be employed on the Project full time employees of the tendering organisation or contracted?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

If “NO” please provide further details on level of expected contracting:
5.6 Health & Safety

Does the Tenderer have a Safety Statement in compliance with the Safety, Health and Welfare at Work Act 2005?

| YES | NO |

If “YES” please provide a copy in Appendix 8.

If “NO” please provide details of any equivalent Safety Statements that are in place and their statutory compliance (a copy is to be provided in Appendix 8):

Submit details of notifiable accidents or convictions that have occurred on projects for which the Tenderer had responsibility over the past three years in any jurisdiction. Please state “None” if applicable; do not leave blank.

Indicate qualifications or training that the Tenderer has in the matter of Health and Safety; please provide specific details of quality or training certifications held.
5.7 Workload

Tenderer to indicate existing workload and projects due to commence within the next 12 months, and availability to commence this proposed project in July 2006.

<table>
<thead>
<tr>
<th>Client</th>
<th>Duration (Months)</th>
<th>Start Date</th>
<th>Description</th>
<th>No. Resources</th>
<th>Resources who may be assigned to the Debtors project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract 5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.8 Intellectual Property Rights

Given the diverse nature of the debtor streams in Cork County Council, the Council is prepared to consider a fully standard (packaged) solution, a standard solution with modifications or a totally bespoke solution. It is the Council’s policy to own the Intellectual Property Rights of ICT solutions, wherever this is feasible. In relation to the projects outlined in Appendices 2 & 2A (or any other project you think relevant), set out the IPR arrangements that were put in place.

<table>
<thead>
<tr>
<th>Client</th>
<th>IPR wholly owned by Customer (Enter ‘Y’ below)</th>
<th>IPR wholly owned by Vendor (Enter ‘Y’ below)</th>
<th>Other (Give Details)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contract 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract 6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Set out the licensing models on offer when customers are not given the option (or choose not) to buy the full IPR of the system.

5.9 References

Tenderer is required to provide contact details for three referees.

<table>
<thead>
<tr>
<th>Contact Name</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisation Name</td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td></td>
</tr>
<tr>
<td>Phone</td>
<td></td>
</tr>
<tr>
<td>email</td>
<td></td>
</tr>
</tbody>
</table>
5.11 Dispute Resolution

The tenderer is required to provide details on its Dispute Resolution Procedures indicating how disputes are processed. The Dispute Resolution procedure should indicate how disputes are processed with clients.

The tenderer should indicate any scenarios currently outstanding where a client is withholding payment and state the reason.
Section 6 – Conflict of Interest

Any conflict of interest, actual or potential, involving a candidate/tenderer (and any affiliate company, including companies affiliated with each legal person comprising the candidate/tenderer) must be fully disclosed to the Contracting Authority, particularly where there is a conflict of interest, or potential conflict of interest, in relation to any recommendations or proposals put forward by the candidate/tenderer. The contracting authority shall consider conflicts of interest disclosed and where a conflict of interest is considered significant the contracting authority may in its discretion reject the candidate. The contracting authority’s decision shall be final in this regard.

Without prejudice to the generality of the foregoing, any registrable interest involving the candidate/tenderer and the Contracting Authority, members of the Government, members of the Oireachtas or their relatives must be fully disclosed in the response to the Instructions to Tenders, or should be communicated to Contracting Authority immediately upon such information becoming known to the candidate/tenderer, in the event of this information only coming to their notice after the submission of a bid and prior to the award of the contract. The terms “registrable interest” and “relative” shall be interpreted as per Section 2 of the Ethics in Public Office Act 1994.
Section 7 – Grounds for Automatic Exclusion

Tenderers are informed that they will be automatically excluded from the request to participate if any of the conditions in sections (a) – (g) inclusive of Article 29 of the Directive 93/37/EEC as amended by Directive 97/52/EC apply to them. These conditions apply to any Tenderer who:

a) is bankrupt or is being wound up, whose affairs are being administered by the court, who has entered into an arrangement with creditors, who had suspended business activities or who is in analogous situation arising from a similar procedure under national laws and regulations:

b) is the subject of proceedings for a declaration of bankruptcy, for an order for compulsory winding up or administration (or examinership) by the court or of an arrangement with creditors or of any other similar proceedings under national laws or regulations:

c) has been convicted of an offence concerning professional conduct by a judgement which has the force or res judicata:

d) has been guilty of grave professional misconduct proven by any means which the contracting authority can justify:

e) has not fulfilled obligations relating to payment of social security contributions in accordance with the legal provisions of the country in which he is established or with those of the country of the contracting authority:

f) has not fulfilled obligations relating to the payment of taxes in accordance with the legal provisions of the country of the contracting authority:

g) is guilty of serious misrepresentation in supplying or failing to supply the information [required by the contracting authority].

Are any of the conditions (a) to (g) applicable to the Tenderer

| YES | NO |

If “Yes”, please give details

3/2/06
Tenderers/Candidates are informed that in respect of their personal situation:

1. Any candidate or tenderer who has been the subject of a conviction by definitive judgement for one or more of the reasons listed below shall be excluded from participation in this competition:

(a) participation in a criminal organisation, as defined in Article 2(1) of Council Joint Action 98/733/JHA;

(b) corruption, as defined in Article 3 of the Council Act of 26 May 1997 and Article 3(1) of Council Joint Action 98/742/JHA respectively;

(c) fraud within the meaning of Article 1 of the Convention relating to the protection of the financial interests of the European Communities;


---

Appendix 1 Pre-Qualification Questionnaire
Selection of Vendor

Section 8 – Undertaking

When you have completed the Questionnaire, please ensure that:

You have completed all the applicable questions.

You have attached all documents including as a minimum:

Appendix 1: Financial and Economic Standing (See Section 2)
Appendix 2, 2A: Technical Capability: Experience (See Section 5.1)
Appendix 3a: Technical Capability: Staffing (See Section 5.4)
Appendix 3b: Technical Capability: Qualifications (See Section 5.4)
Appendix 4: Consortium Agreement
Appendix 5: Bankers Statement
Appendix 6: Auditors Statement
Appendix 7: Audited Accounts
Appendix 8: Safety Statement

Where additional sheets are used, they clearly identify the section and questions being answered.

It is your responsibility to ensure that all applicable questions are fully answered (i.e. not left blank) and relevant documentation attached. It shall not be possible to include any missing / incomplete sections in the evaluation of the submissions. No assumptions can be made by the evaluation committee.

You have read and signed the section below.

I certify that the information supplied is accurate to the best of my knowledge and I accept the conditions and undertakings requested in the Questionnaire. I understand and accept that false information could result in exclusion from the tendering process or rejection of our tender.

THIS UNDERTAKING IS TO BE SIGNED BY AN AUTHORISED REPRESENTATIVE ON BEHALF OF THE TENDERER. FAILURE TO SIGN WILL RESULT IN THE SUBMISSION BEING EXCLUDED FROM FURTHER CONSIDERATION.

Name of Tenderer

Signed on behalf of Tenderer

Position/Status in Tendering Organisation

Date

3/2/06 Page 19 of 29
Appendix 1 – Turnover Profile

Tenderer(s) Annual Turnover (See Section 2): Please provide details for the *three most recent preceding years* for which Audited Accounts have been completed. Where a consortium is completing this section please include details below and amend the (Party x) in brackets to reflect the name of the consortium member name or individual company name.

<table>
<thead>
<tr>
<th>Year</th>
<th>(Party 1) (£)</th>
<th>(Party 2) (£)</th>
<th>(Party 3) (£)</th>
<th>(Party 4) (£)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005/2006</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004/2005</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003/2004</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002/2003</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001/2002</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000/2001</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>% of Turnover Generated from Application Development (Party 1)</th>
<th>% of Turnover Generated from Application Development (Party 2)</th>
<th>% of Turnover Generated from Application Development (Party 3)</th>
<th>% of Turnover Generated from Application Development (Party 4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005/2006</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004/2005</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003/2004</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002/2003</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001/2002</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000/2001</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix 2 – Project List

Tenderers experience in projects of a relevant size and nature (see Section 5.1).

<table>
<thead>
<tr>
<th>Contract</th>
<th>Contract 2</th>
<th>Contract 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Client</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Members of staff who worked on this project and their roles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Tender Value Euro (excluding V.A.T.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description of Project with particular reference to the information requested in Section 5.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start/End Dates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name and contact address of Referee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is evidence of satisfactory execution of the works attached (Yes/No)?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix 2 (A)

Previous Experience in Similar Projects (Supporting Information)
### Appendix 3(A) - Staffing

Average Annual Staffing (see section 3.3)

<table>
<thead>
<tr>
<th>Year</th>
<th>Resource Location</th>
<th>Avg. Annual Staff Complement (Permanent Contract of Employment)</th>
<th>Avg. Annual Staff Complement (Temporary Employment/Sub-contractor)</th>
<th>Other (Please specify)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>In Republic of Ireland</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Outside Republic of Ireland</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>In Republic of Ireland</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Outside Republic of Ireland</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>In Republic of Ireland</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Outside Republic of Ireland</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix 3b - Qualifications

Educational and professional Qualifications & Experience of Personnel who will be assigned to this project (see section 3.3)

Note: Permanent is defined as qualifies for pension and employers PRSI.

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Contractor/Permanent</th>
<th>Years of Continuous Service</th>
<th>Qualifications &amp; Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix 4 – Consortium Agreement
Appendix 5 - Bankers Statement
Appendix 7 – Audited Accounts
Appendix 8 – Safety Statement
Appendix 2 Main Tender Document

Cork County Council

Main Tender Document

for

Corporate Debtors System
(including Billing & Receipting)

5th April 2006
1. Introduction & Background Information

The purpose of this document is to request proposals from potential suppliers of a Corporate Debtors System (including Billing & Receipting) for Cork County Council.

Cork County Council intends to set up a centralised Debtors section within the Finance Department that will be responsible for debtor control, billing and receipting. A project to implement a Corporate Debtors System (including Billing & Receipting) will be undertaken in tandem with the creation of a centralised Debtors section.

Cork County Council is the local authority for County Cork, the largest county in the Republic of Ireland. The Council administers local government services for County Cork. Headquarters are at County Hall, Cork City, Ireland. The elected members of the Council (through various committees) decide on policies, which are then implemented by the County Manager and staff. The following table sets out some information on Cork County and its administrative structure:

<table>
<thead>
<tr>
<th>County Cork and Cork County Council</th>
<th>Divisional Directorates</th>
<th>Service Directorates</th>
<th>Support Service Directorates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population → 410,369.</td>
<td>West</td>
<td>Planning</td>
<td>Personnel</td>
</tr>
<tr>
<td>Area → 7,459 Sq. Km (2,880 sq. miles - 11% of the State)</td>
<td>North</td>
<td>Environment</td>
<td>Finance</td>
</tr>
<tr>
<td>Number Of Councillors → 48</td>
<td>South (2)</td>
<td>Infrastructure &amp; Development</td>
<td>ICT</td>
</tr>
<tr>
<td>Staff Numbers → 2,500</td>
<td></td>
<td>Community &amp; Enterprise</td>
<td>Corporate Affairs</td>
</tr>
<tr>
<td>Coastline → 1,100 Km (680 Miles - 19% of the State)</td>
<td></td>
<td></td>
<td>Estates &amp; Development</td>
</tr>
</tbody>
</table>
An overview of Cork County Council’s current technical architecture is shown below:

Network:
The system is based on a Microsoft 2003 Active Directory domain with a mixture of Windows 2003 and Windows 2000 member servers. There are also some stand-alone Novell servers, which are currently being replaced with Windows 2003. The desktops consist of Windows 2000 and Windows XP.
Cork County Council has over 90 offices and I.T. support is also provided for 12 Town Councils. Each Town Council has either a Novell or MS Windows 2003 network. It is planned to move all Town Councils to MS Windows 2003 and include them in the Council’s 2003 domain structure. At present, all offices are connected to Headquarters by means of a Wide Area Network based mainly on leased lines ranging in speeds from 64K to 512K. Some offices are connected by means of 64k ISDN lines. This network is based on TCP/IP.

A major upgrade of the WAN should be complete by September 2006. This will result in an upgrade to a minimum 1Mb link between the various Council offices & HQ. Major sites such as the Divisional offices in Mallow, Clonakilty & Skibbereen will connect via a 34Mb link.

Application Platforms

The application platforms are broken into two main categories

- iSeries
- Microsoft/LAN

The main applications on the iSeries are the financial modules of JD Edwards World. There are also a large number of legacy applications such as rates and payroll. Most of these applications will continue to reside on the iSeries for the foreseeable future.

On the Microsoft/LAN platform there are a wide variety of applications such as planning, intranet, email, personnel system. The main drive in this area will be to migrate the applications fully to MS SQL 2000, IIS and Web front ends.

Clients

Terminal Emulator for iSeries applications and JD Edwards.
MS Internet Explorer
MS Outlook
MS Office
MS Sharepoint

MS.Net
Autodesk AutoCADMap & Mapguide
MapInfo Professional

Appendix 2 Main Tender Document
Page 4 of 40
2. Selection Process & Award Criteria

Vendors may propose a packaged solution, a bespoke solution or a combination of the two. **Only solutions that run in-house on Cork County Council’s servers will be considered.** **External hosting of data or software is not acceptable.**

Within the context of the above, the award criteria are as follows:

<table>
<thead>
<tr>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Costs (including):</strong></td>
</tr>
<tr>
<td>• Software</td>
</tr>
<tr>
<td>• Hardware</td>
</tr>
<tr>
<td>• Implementation</td>
</tr>
<tr>
<td>• Support</td>
</tr>
<tr>
<td>• Upgrades / Future Versions (if not included in support)</td>
</tr>
<tr>
<td>• Product Licenses (if applicable)</td>
</tr>
<tr>
<td>• Purchase by Cork County Council of IPR (if applicable)</td>
</tr>
<tr>
<td>• 3rd Party Licenses (if applicable)</td>
</tr>
<tr>
<td>• Vendor charges for professional services, software development etc</td>
</tr>
<tr>
<td><strong>Functionality (including):</strong></td>
</tr>
<tr>
<td>• Standard Debtors functionality</td>
</tr>
<tr>
<td>• Specific Cork County Council requirements – Charge &amp; Debtor Management</td>
</tr>
<tr>
<td>• Specific Cork County Council requirements – Billing &amp; Receipting</td>
</tr>
<tr>
<td>• Workflow Engine</td>
</tr>
<tr>
<td>• Self Service Option</td>
</tr>
<tr>
<td>• Reporting Options</td>
</tr>
<tr>
<td><strong>Deployment (including):</strong></td>
</tr>
</tbody>
</table>
- WAN usage & deployment
- Desktop requirements (browser type etc)
- Deployment of self-service functionality to the general public
- Underlying technology (databases, development languages etc)
- Security

**Maintenance/Support Model:**
- Availability/Frequency of Upgrades
- Fault reporting & fixing
- Willingness & ability to transfer knowledge to Council Staff
- Availability of on-line training
- Availability of suitable formal training courses

**Vendor Capability:**
- Staffing resources
- Quality Assurance
- Insurance
- Reference Sites
- Future proofing of the offered solution

**Case Studies**

Marking will be based on the answers provided in Sections 3, 4, 5, 6 & 7 of this document together with the costings set out in the Excel spreadsheet.

Appendix 2 Main Tender Document
Page 6 of 40
Terms and Conditions

- Cork County Council does not accept any liability for any expenses incurred by any vendor in the preparation of tenders, portfolios or attendance at any meetings or demonstrations.
- The supply of goods/services under this notice will be governed by the terms and conditions of Cork County Council.
- The Council reserves the right to reject any and all tenders and does not bind itself to accept the lowest bid tender.
- The Council reserves the right to purchase all or part of the proposed solution.
- The vendor must be prepared to (a) make all source code available to Cork County Council or (b) enter into an escrow agreement with the Council.
- The Council reserves the right to seek to purchase the Intellectual Property Rights of all or part of the offered solution.
- The response to this Tender Document and the undertakings given within it will form part of the contract with the successful vendor.
- The Council is not providing a warranty as to the accuracy and completeness of this Tender Document however significant effort has been made to ensure that it reflects the overall requirements of the Council.
- The Council does not make or imply a commitment to purchase the system set out in this Tender Document.
- Tenders should be firm for 90 days.

Completed responses should be delivered to:

Mick Rogers  
Senior Executive Officer,  
I.C.T. Department,  
Model Business Park,  
Model Farm Road,  
Cork.  

Please note that Cork County Council’s ICT Department is scheduled to move to a different location during May 2006.  
Any change of address will be notified to Vendors one week prior to the closing date.
Vendors must return their response in both of the following formats:

- Four copies of the response in hardcopy.
- One copy of the response on a PC compatible diskette or CD in Microsoft Word 2000 for Windows 2000 file format.

Vendors should address all questions regarding this Tender Document by email to: mick.rogers@corkcoco.ie. All reasonable requests will be answered as soon as possible and the text of the original question and the answer may be made available to other participants.

Tenders will be opened at the meeting of Cork County Council to be held on May 22nd 2006 and it is hoped the tender evaluation and the selection of the successful Vendor will be complete by 30th June 2006.
3. Functionality

Completion Instructions

The following table sets out the functionality required by the Council in the Corporate Debtors solution. Vendors are required to do the following:

- Put an entry in the proposed solution box for each requirement. If the solution for addressing a particular requirement has already been set out in a different box, enter that box reference. It will be inferred from blank entries that the required functionality is not offered.
- Enter P (packaged), B (Bespoke) or C (Combined) for each proposed solution.
- Enter the number of sites where each element of the proposed solution has been previously deployed.
- Go to the Functionality Costings spreadsheet and enter the costs associated with each element of the proposed solution. Each solution element entered below should have a corresponding entry in the Functionality Costings spreadsheet. If the costs for addressing a particular requirement have already been set out in a different part of the spreadsheet, enter that reference number in the clarifications box.
- For all licenced parts of the solution, enter the licence model (Named, Concurrent or other) in the clarifications box.
- Enter the VAT exclusive cost in the ‘Cost’ column and the VAT amount in the ‘VAT’ column. All amounts in Euro (€).
<table>
<thead>
<tr>
<th>Ref</th>
<th>Award Criteria</th>
<th>Requirement</th>
<th>Proposed Solution &amp; description of how it will address the Council’s requirement</th>
<th>P/B/C</th>
<th>No. of Sites where the solution has been previously deployed</th>
</tr>
</thead>
</table>
| 3.1 | Standard Debtors Functionality | The system must have all standard debtor features including:  
- Multi-company functionality  
- Unlimited transactions & accounts  
- Parent/child account facilities  
- Balance brought forward & open item transaction accounting  
- Flexible text recording facilities against customers and/or charges  
- Customer Bank Account & Credit Card information.  
- Automatic discount allowance based on user criteria  
- Assignment of customer accounts to credit managers  
- On-screen drill-down facilities to transaction level (including details interfaced from feeder systems)  
- Configurable classification codes  
- Interactive context sensitive help | | |
<table>
<thead>
<tr>
<th><strong>3.2</strong> Specific Cork Requirements – Charge &amp; Debtor Management</th>
<th><strong>3.3</strong> Cork County Council operates a strict policy on address management. Direct data entry of addresses into the Corporate Debtors System will not be allowed. Instead, the Corporate Debtors System will need to link to the Council’s Corporate Spatial Address Register (CSAR) to pick up correctly formatted addresses. The Council will provide the successful vendor with the relevant .NET code to allow the Corporate Debtors System link to the CSAR.</th>
</tr>
</thead>
</table>
| *facility*  
- Product pricing  
- Receipts Ledger  
- Invoices Ledger  
- Cash Office(s) point of sale transactions  
- Credit Notes  
- Payment Plans | The system must allow:  
- Facility for multiple mailing & property addresses per account  
- Facility for holding GIS references for property based Charges  
- Facility for differentiating between domestic & commercial charges |

Appendix 2 Main Tender Document  
Page 12 of 40
- The Council's Customer Contact Centre (Siebel based BT Contact Central)
- The Council's Financial Management system (JDEdwards World on iSeries DB2)
- The Council's Business Intelligence system (SQL based MicroStrategy)
- Sundry feeder systems (based on DB2 or SQL)

3.5 The system must be capable of holding a multiplicity of different income streams (e.g. water, refuse, rates, development contributions) and ensuring the integrity of the different income streams is maintained as follows:
- The system must allow the calculation of Charges based on Income Stream and apply different rules for different Income Streams.
- The system must ensure all payments received carry an Income Stream signal and ensure that 'invoice matching' occurs only within Income Stream.
- The system must be capable of producing reports based on Income Stream.
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The system must allow different rules for amending Charges for different Income Streams.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The system must allow different rules for amending payments for different Income Streams.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The system must allow the easy transfer of payments from one Income Stream to another, when payments have been misclassified.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The system must allow role-based access to income information i.e. some users allowed access to all Income Streams, while others are restricted to one or two Income Streams.</td>
<td></td>
</tr>
</tbody>
</table>

3.6 The system must be capable of the following processing for each Income Stream:

- Creating weekly, monthly, annual or irregular Charges based on the rules pertaining to the Income Stream by user selectable criteria including debtor category
- Allowing easy interface of information used to calculate Charges (e.g. meter readings) from feeder systems.
- Allowing easy interface of pre-
<table>
<thead>
<tr>
<th>calculated Charges from feeder systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Matching Charges with payments in a manner that requires the minimum amount of manual intervention</td>
</tr>
<tr>
<td>• Dealing with waivers (where a charge is struck out because of inability to pay) as non-cash payments as opposed to charge amendment, including different waiver schemes per Income Stream based on but not limited to a % of the charge, an amount in Euro, a part of the feeder system data like a weight.</td>
</tr>
<tr>
<td>• Dealing with bad debts</td>
</tr>
<tr>
<td>• Dealing with refunds</td>
</tr>
<tr>
<td>• Holding start of financial year balances for all accounts</td>
</tr>
<tr>
<td>• Allowing on-going charge amendments throughout the year</td>
</tr>
<tr>
<td>• Preventing amendment to the start of financial year balances once those balances have been signed off</td>
</tr>
<tr>
<td>• Allowing accrual of income based on the rules applied by Cork County Council</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>3.7</td>
</tr>
<tr>
<td>3.8</td>
</tr>
<tr>
<td>3.9</td>
</tr>
<tr>
<td>3.10</td>
</tr>
<tr>
<td>3.11</td>
</tr>
</tbody>
</table>
| 3.12 | For the Pay By Weight Refuse Income Stream, the system must provide the following specific functionality:  
• *Permit customers to join a route at a particular time in the year and calculate the appropriate fixed charge. For example, if the collection charge for the year is €120 and a customer joins in week 10 then they are charged 42/52 of the charge in year one and the full charge in subsequent years.*  
• *Permit customers to leave a route and calculate a refund on the same basis as above.*  
• *Record the start/end date of the service.* |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3.13</td>
<td>The system must be capable of acting as a Master Debtor database in the generation of accounts in feeder systems under</td>
</tr>
<tr>
<td>3.14</td>
<td>Specific Cork Requirements – Billing &amp; Receipting</td>
</tr>
<tr>
<td>------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>3.15</td>
<td>The system must be capable of generating/printing batches of invoices, reminders or statements.</td>
</tr>
<tr>
<td>3.16</td>
<td>The system must be capable of printing single invoices, reminders or statements.</td>
</tr>
<tr>
<td>3.17</td>
<td>The system must be capable of re-printing invoices, reminders &amp; statements.</td>
</tr>
<tr>
<td>3.18</td>
<td>The system must allow the automatic/manual e-mailing of invoices, reminders, statements &amp; receipts.</td>
</tr>
<tr>
<td>3.19</td>
<td>The system must allow the electronic faxing of invoices, reminders, statements &amp; receipts.</td>
</tr>
<tr>
<td>3.20</td>
<td>The system must be capable of generating/printing name &amp; address labels by customer type.</td>
</tr>
</tbody>
</table>
| 3.21 | The system must be capable of accepting payment data from the following sources:  
- Interfaces from banks, an Post, Credit Unions etc  
- Cash & cheques over the counter and by post at multiple locations throughout the County  
- Debit/Credit Card  
- Self-Service Portal |
| 3.22 | The system must be capable of reporting on the different type of payments received (see above) on both an on-going and historical basis. |
| 3.23 | The system must be capable of printing a receipt when required (a) in the central Debtors section and (b) over the WAN at designated remote locations throughout the County. The Council uses PrintBOS to distribute printed output from the iSeries (primarily JDE related) across the WAN. You are invited to either confirm that the proposed system is compatible with PrintBOS or set out an alternative methodology. |
| 3.24 | Each printed receipt (generated by a Council official) must carry the name of that official and the location at which the receipt was generated. |
| 3.25 | The system must be capable of converting all payment data (irrespective of source) into one standard format prior to:
  - *Posting to the debtor accounts*
  - *Interfacing to JDE G/L*
  - *Interfacing to JDE Bank Reconciliation* |
| 3.26 | The system must be capable of splitting payments across Income Streams, e.g. a cheque is received for €1,000, but the amount covers 2 different Income Streams. The system must be capable of generating a separate payment amount for each of the Income Streams. |
| 3.27 | To facilitate the Bank Reconciliation process, the system must allow multi-user entry to shared receipts batches. |
| 3.28 | The system must be capable of tagging each payment with the User id of the person generating the receipt within shared receipts batches. |
| 3.29 | The system must be capable of tagging each payment with the relevant JDE G/L account before interface to JDE. |
| 3.30 | The system must be capable of tagging each payment with the relevant JDE Bank Reconciliation reference before interface to JDE. |
| 3.31 **Workflow** | The system must provide end to end process workflow from generation to the collection of the charge:  
  * Generate charge or accept from feeder system  
  * Raise & send invoice  
  * Pursue charge via reminders  
  * Pursue charge via legal proceedings  
  * Receipt monies  
  * Update accounts  
  * Interface with JDE  
  * Generate appropriate reports  
  * Manage Cash Office & Lodgement procedures |
| 3.32 | Ideally the system should link to the Council’s MS Sharepoint 2003 document management system to retrieve scanned images for Debtors and Transactions. Failing this the vendor should outline the proposed methodology for scanning and routing documents at debtor and transaction level. |
| 3.33 | **Self-service** | Secure access to the system via the Council’s website is required to allow customers:  
- View account current balance  
- View account history  
- Print invoice/statement  
- Make payments by credit/debit card  
- Print receipt  
- Contact the Council via e-mail |
| 3.34 | | The system must provide on-line real time verification of credit/debit card details. |
| 3.35 | **Reporting Options** | The system must be capable of producing the following reports:  
- *Financial year summary reports for each Income Stream incorporating opening balance, Charges raised, amendments to charge, payments made, waivers and closing balance.*  
- *Aged analysis for each Income* |
<table>
<thead>
<tr>
<th>Stream</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘As at’ reporting for each Income Stream i.e. production of a report in June showing the situation as at 31st March</td>
</tr>
<tr>
<td>Various alert reports for each Income Stream highlighting accounts where action is required.</td>
</tr>
<tr>
<td>Reports that differentiate between Commercial and Domestic customers</td>
</tr>
<tr>
<td>Reports based on classification codes</td>
</tr>
<tr>
<td>Each of the above on a total basis across all Income Streams</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.36</th>
</tr>
</thead>
<tbody>
<tr>
<td>The system must be capable of generating reports in various sequences and using various filters such as:</td>
</tr>
<tr>
<td>Customer Type</td>
</tr>
<tr>
<td>Geographic Location</td>
</tr>
<tr>
<td>Active/Inactive</td>
</tr>
<tr>
<td>Invoice Status.</td>
</tr>
<tr>
<td>Outstanding amount</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.37</th>
</tr>
</thead>
<tbody>
<tr>
<td>The system must integrate with Microsoft Exchange 2003 for Alerts and Reporting</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.38</th>
</tr>
</thead>
<tbody>
<tr>
<td>The system reporting facilities must allow the design &amp; generation of new reports in an intuitive manner by Finance Department staff &amp; must not require</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td><strong>3.39</strong></td>
</tr>
<tr>
<td><strong>3.40</strong></td>
</tr>
<tr>
<td><strong>3.41</strong></td>
</tr>
<tr>
<td><strong>3.42</strong></td>
</tr>
</tbody>
</table>
4. Deployment

Completion Instructions

The following table sets out the deployment issues to be addressed by the Vendor. Vendors are required to do the following:

- Put an entry in the proposed solution box for each requirement.
- Enter the number of sites where each element of the proposed solution has been previously deployed.
- Go to the Deployment Costings spreadsheet and enter the requested costs.
- Vendors should be aware that Cork County Council will require deployment of Corporate Debtors to multiple locations throughout the County. An estimated average per site figure is therefore required for remote deployment.
- The basis for the setup & deployment costs should be entered e.g. daily rate, expenses factored in etc.
- Replace the ‘3rd Party Licences’ text with the name of the actual 3rd party licenses required to run the system (including database licences, reporting licences (if not already included in the functionality spreadsheet), print distribution licences etc. The basis for these licence costs should show the licensing model in question (named, concurrent etc) and the number of licenses covered by the cost.
- Enter the VAT exclusive cost in the ‘Cost’ column and the VAT amount in the ‘VAT’ column. All amounts in Euro (€).
<table>
<thead>
<tr>
<th>Award Criteria</th>
<th>Requirement</th>
<th>Proposed Solution &amp; description of how it will address the Council’s requirement</th>
<th>No. of Sites where the solution has been previously deployed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WAN Deployment</strong></td>
<td>The application and data will be hosted centrally in the ICT Department’s server room. Because of the geographic spread of Cork County, the system must be deployable over the Council’s WAN to a number of multi-user locations (up to 50) over a 512K bandwidth. Please set out the bandwidth required by different parts of the system such as PC client, browser, or administration tasks. State clearly whether or not you are confident the system can run effectively over the Council’s WAN, as well as setting out the reasons for your confidence or otherwise.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The system must allow an unlimited number of users internal and external.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Access to the system by Council staff must be via the Council’s Intranet. Please set out any situation where system functionality is not available via this method.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Set out the configuration of the Server(s) required to host the application. You are not required to provide a cost for the hardware, the Council will establish this based on your</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommendation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Set out the type of receipt printers supported by the system. You are not required to provide a cost for the printers, the Council will establish this based on your recommendation.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The system must support the setup of a Test Environment. Set out the steps required to do this.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Desktop Requirements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The system must run in as thin a client as possible with minimum footprint on client PCs, preferably in pure browser mode. Please set out which parts of the system require installation of a client on the local PC and which parts run in browser mode.</td>
<td></td>
</tr>
<tr>
<td>The system must have a browser-based front-end, irrespective of the hardware platform or underlying database.</td>
<td></td>
</tr>
<tr>
<td>Set out the desktop configuration required to run the system. You are not required to provide a cost for the desktop. The Council will establish this based on your recommendation.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Self-Service Deployment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The system must allow access to the self-service options by the general public via Cork County Council’s website.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Underlying Technology</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The system must be based on Microsoft SQL 2000, Oracle or iSeries DB2. All data used by the system must be stored in one of those formats.</td>
<td></td>
</tr>
<tr>
<td>The system must have a considerable degree of flexibility through tables, parameters, etc that</td>
<td></td>
</tr>
</tbody>
</table>
can be readily altered by the Council without recourse to programming.

The system must provide user documentation in electronic format consistent with the ability to store and search within Sharepoint.

List the documentation to be provided including:
- *User documentation*
- *Technical or administrative documentation including database schema*
- *On-line documentation & help features*
- *Training documentation*
- *Ability to customise documentation*

Set out the development language(s) used in the system.

The system must be capable of holding sufficient information for all Income Streams to allow pursuit of Charges without reference to feeder systems. As different information is required to effectively pursue the various Income Streams, it will be necessary to populate fields with different information depending on Income Stream. The system must have sufficient flexibility to allow this and must be robust enough to ensure no misinterpretation of data occurs when fields are used for different purposes in different Income Streams.
<table>
<thead>
<tr>
<th>Security</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The system must allow authorised access based on user profiles and roles by use of these profiles, permit or deny access by users to functional areas, menus, screens or any data items in update, enquiry or delete mode.</td>
<td></td>
</tr>
<tr>
<td>The system must provide a comprehensive audit trail of all transactions in all parts of the system, recording user, location, time and date of all changes.</td>
<td></td>
</tr>
<tr>
<td>Set out the recommended security approach (if any) in implementing the system.</td>
<td></td>
</tr>
</tbody>
</table>
5. Maintenance/Support Model

Completion Instructions

The following table sets out the Maintenance/Support issues to be addressed by the Vendor. Vendors are required to do the following:

- Put an entry in the proposed solution box for each requirement.
- Enter the number of sites where each element of the proposed solution has been previously deployed.
- Go to the Support Costings spreadsheet and enter the requested costs.
- Any additional support costs, not already entered on the Functionality spreadsheet should be entered. Overwrite the support text with the actual support element being costed. You may give further details in the clarifications box.
- The costs of the different training courses to address the requirements set out below should be entered. Overwrite the ‘training text’ with the actual training course being costed. You may give further details in the clarifications box.
- The different types of expenses chargeable to the Council should be entered. Overwrite the ‘expenses text’ with the actual expenses being costed. You may give further details in the clarifications box.
- Enter the VAT exclusive cost in the ‘Cost’ column and the VAT amount in the ‘VAT’ column. All amounts in Euro (€).
<table>
<thead>
<tr>
<th>Award Criteria</th>
<th>Requirement</th>
<th>Vendor Response</th>
<th>No. of Sites where the Model been previously deployed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability/Frequency of Upgrades</td>
<td>For packaged solutions - outline the approach to product development, frequency of upgrades etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>For packaged solutions – confirm the Council’s entitlement to upgrades &amp; new versions of the product is covered by the figures outlined in the Costings spreadsheet.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>For bespoke development – outline the approach for additional development as required.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Fault Reporting & Fixing             | Set out the fault reporting & fixing model to apply to Cork County Council based on the costs in the Costing Spreadsheet including:  
  - *Support method (on-site, on-line etc)*
  - *Response times* |                 |                                                     |
|                                      | Set out the number of staff with expertise to support the solution:  
  - *In Cork*
  - *In Ireland*
  - *Overall* |                 |                                                     |
|                                      | Confirm that remote support can be done via a VPN connection. |                 |                                                     |
| Knowledge Transfer                   | Outline the proposed approach to knowledge transfer to Council staff both technical to |                 |                                                     |
| Training | Set out the technical knowledge required, to successfully run the system in-house, by the following Council Staff:  
- Database Administrator  
- ICT support Team  
- Super users  
- Report generators  
- Ordinary users |

| Training | Set out the training courses available for the following Council Staff:  
- Database Administrator  
- ICT support Team  
- Super users  
- Report generators  
- Ordinary users |

| Training | Set out any on-line interactive training options available. |

| Training | It is the Council’s policy to become as self-sufficient as possible in the configuration of bought in systems. You are invited to comment on the feasibility of this approach vis-a-vis your proposed solution. |
### 6. Vendor Capability

<table>
<thead>
<tr>
<th>Award Criteria</th>
<th>Requirement</th>
<th>Vendor Reply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staffing Resources</td>
<td>Please set out Vendor staffing resources by giving the numbers available to work on the project under the following headings:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Systems Analysts</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Developers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Implementers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Trainers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>What staffing resources (under the above headings) would the vendor plan to base in Cork during the project?</td>
<td></td>
</tr>
<tr>
<td>Quality Assurance</td>
<td>Set out the quality assurance methodology employed in implementing similar solutions in the past.</td>
<td></td>
</tr>
<tr>
<td>Insurance</td>
<td>Please give details of Professional Indemnity Insurance held.</td>
<td></td>
</tr>
<tr>
<td>Reference Sites</td>
<td>Give details of 3 reference sites where similar projects have been undertaken in the past</td>
<td></td>
</tr>
<tr>
<td>Future Proofing</td>
<td>Give details of the following:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Plans, if any, to upgrade the system offered during the next 5 years</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Vendor resources currently employed in Research &amp; Development</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Any additional information to give confidence the vendor is offering a long-term solution</td>
<td></td>
</tr>
</tbody>
</table>
7. Case Studies

Each of the 4 case studies set out on the following pages, deals with a different Cork County Council Income Stream. You are invited to demonstrate how your proposed Corporate Debtors solution can deal with the requirements of those debtor streams. There is no set format for replying to this part of the tender document but the following should be borne in mind:

- The solution must be capable of calculating the charge for non-domestic water from raw meter reading data. There is no existing debtors system for non-domestic water.
- For Rents, Rates and Development Contributions, there is an existing debtors system. Vendors are invited to suggest whether it is more appropriate to maintain the existing debtors systems and feed the calculated charge to Corporate Debtors or whether the existing systems should be replaced and all processing done in Corporate Debtors.
- Irrespective of where the charge is calculated, pursuit of the charge must be possible solely within Corporate Debtors without reference to any feeder system. Taking Rates as an example, the Corporate Debtors system must be capable of holding all information on which the charge was based (property valuation, domestic allowance and other adjustments to the gross charge) for the current charge and also historically. This facility must be available even if the Rates charge has been calculated in a feeder system.

7.1 Non-Domestic Water Metering

<table>
<thead>
<tr>
<th>Charge Description</th>
<th>Cork County Council is legally empowered to charge Non-Domestic Customers for the provision of Water and for the facility to discharge Waste Water to Cork County Council Sewers. From the 1st January 2007 all charging will be based on consumption. All Non-Domestic customers must be charged based on a meter reading.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charge Calculation</td>
<td>The charge will be made up of a number of elements. This will include a charge based on consumption, (provided electronically by an external contractor), multiplied by a rate (set annually). It will also include an administration cost and a charge for waster water. The charge will also be subject to adjustments based on rules dictated by policy, which will change periodically.</td>
</tr>
<tr>
<td>Billing / Reminders</td>
<td>Bills will be issued centrally twice a year, (including arrears). Reminders and legal proceedings will also be issued where the charge is not paid. Bills, reminders and legal notices must be in a particular legal format which may be</td>
</tr>
</tbody>
</table>
Legal Proceedings
required to be amended periodically

Receipting
Receipting and posting of payments against accounts will be done centrally

Other Information
A JDEdwards G/L account will be credited with Non-Domestic Water payments.

### 7.2 Rates on Commercial Properties

| Charge Description | Rates are a charge on non-domestic property, based on a valuation of the property, set nationally. This Valuation is then multiplied by a Rate which is set locally by Cork County Council and the charge is subject to a number of adjustments
| | A National Body, the Valuation Office holds a database of all Commercial Rateable Property, which is updated each time a new commercial property is identified or there is a change of use etc. Cork County Council also maintains a Database of Commercial properties and ensures that it is kept in balance with the National Database.

| Charge Calculation | The valuation of Property is multiplied by a Local Rate (changed annually) minus various adjustments based on a set of rules. Allowance must be made for changes to Valuation of the Property and adjustments.

| Billing / Reminders / Legal Proceedings | Bills are issued centrally twice annually, (including arrears). Reminders and legal proceedings are also issued where the charge is not paid. Bills, reminders and legal notices must be in a particular legal format which may be required to be amended periodically.

| Receipting | Receipting and posting of payments against accounts is done centrally.

Appendix 2 Main Tender Document
Page 35 of 40
<table>
<thead>
<tr>
<th>Other Information</th>
<th>A JDEdwards G/L account is credited with Rates payments.</th>
</tr>
</thead>
</table>

### 7.3 Housing Rents

<table>
<thead>
<tr>
<th>Charge Description</th>
<th>Cork County Council maintains a Housing Stock which it rents to its tenants. Currently the 3 Divisions of the Council, i.e. North, South and West manages its own Housing Stock and the resultant income stream</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charge Calculation</td>
<td>The rent amount for tenants is calculated based on family income and the number of dependants in the household. The rent charge is weekly and is subject to adjustments both current and retrospective</td>
</tr>
<tr>
<td>Billing / Reminders / Legal Proceedings</td>
<td>There is a requirement to issue Rent documentation and Reminders and legal proceedings will also be issued where the charge is not paid. Bills, reminders and legal notices must be in a particular legal format which may be required to be amended periodically</td>
</tr>
<tr>
<td>Receipting</td>
<td>Receipting and posting of payments against accounts is currently done on a Divisional basis</td>
</tr>
<tr>
<td>Other Information</td>
<td>A JDEdwards G/L account for each Division is credited with Housing Rents</td>
</tr>
</tbody>
</table>

### 7.3 Development Contributions

Appendix 2 Main Tender Document  
Page 36 of 40
<table>
<thead>
<tr>
<th>Charge Description</th>
<th>Cork County Council is empowered to levy development charges, as part of the planning process, for the provision of services such as roads, amenities, water/drainage and sewerage.</th>
</tr>
</thead>
</table>
| Initial charge Calculation | Initial charge calculation is done as part of the Planning process. Among the factors taken into account when calculating the charge are:  
  - Gross floor area  
  - Exemption rules  
  - Whether a domestic or commercial development is involved  
  - Whether a special contribution should be levied (these are decided ad hoc on a case by case basis)  

When planning permission is granted, a County Manager's order is signed. At this point the charge is deemed to be potential. It will become collectible (active) when the development commences. |
| Charge Revision Rules | When the total charge has been calculated, it is split into its constituent categories (maximum of 5). There are 2 schemes in operation and different rules apply to each scheme. |
| Scheme One: | The charge is split under such categories as road works, water supply, sewerage etc.  
  - An additional charge is raised for each category every month whereby CPI is applied to the category balance. This is done for potential as well as collectible (active) charges. |
| Scheme Two: | The charge is split under such categories as general contribution, special contribution, supplementary contribution.  
  - An additional charge is raised for each category every month whereby an indexation percentage (currently 8%) is applied. For some categories, CPI rather than the indexation percentage is applied. This is done for potential as well as collectible (active) charges. |

Amendments to the charge are allowed. These can occur when a developer contests some part of the charge. |

Appendix 2 Main Tender Document  
Page 37 of 40
raised and is found to have a case e.g. a charge is raised for water but no supply is available.

Write-off of charges is also allowed, particularly for small remaining balances that are deemed uneconomic to collect.

<table>
<thead>
<tr>
<th>Billing / Reminders / Legal Proceedings</th>
</tr>
</thead>
<tbody>
<tr>
<td>As stated earlier, charges become collectible (active) when development commences. In an ideal world, the debtors section would become aware immediately when a development subject to a charge commences, and send out a request for payment.</td>
</tr>
<tr>
<td>That doesn’t quite happen. Those charged with managing the development contributions income stream become aware development has commenced and a charge has become active as follows:</td>
</tr>
<tr>
<td>• <em>A commencement of development notice is received by the Building Control section, who pass on the information</em></td>
</tr>
<tr>
<td>• <em>Council employees stationed around the county become aware of a development commencing in their area and notify the debtors section</em></td>
</tr>
<tr>
<td>• <em>A developer makes a payment.</em></td>
</tr>
<tr>
<td>When this happens the debtors section moves the charge from potential to collectible (active) and requests payment.</td>
</tr>
<tr>
<td>Developers are afforded the facility of making staged payments and this is noted on the system to ensure reminder letters etc. are not sent for amounts not yet due under the staged payments agreement.</td>
</tr>
<tr>
<td>Requests for payment, reminder letters etc. do not have to conform to a statutory layout for development charges.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Receipting</th>
</tr>
</thead>
<tbody>
<tr>
<td>While receipting for development charges is done at various locations throughout the county, posting of payments against accounts is done exclusively by the debtors section</td>
</tr>
<tr>
<td>When a developer pays over money to the Council in respect of a particular development charge, a single</td>
</tr>
</tbody>
</table>
Receipt is issued. When the receipt is posted against the debtors system, it is automatically apportioned across the 5 possible charge categories. This apportionment is done pro-rata based on the balances in the charge categories, as per the following example showing how a €1,000 payment might be dealt with:

<table>
<thead>
<tr>
<th>Charge Category</th>
<th>Opening Balance</th>
<th>Payment Apportionment</th>
<th>Closing Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Supply</td>
<td>€4,000</td>
<td>€400</td>
<td>€3,600</td>
</tr>
<tr>
<td>Road Works</td>
<td>€1,000</td>
<td>€100</td>
<td>€900</td>
</tr>
<tr>
<td>Sewerage</td>
<td>€5,000</td>
<td>€500</td>
<td>€4,500</td>
</tr>
</tbody>
</table>

When refunds are made (following an overpayment) the same pro-rata rules are applied.

Other Information
A number of JDEdwards G/L accounts are credited with development contribution payments. The G/L account credited for each payment is established based on the following criteria:

- The location of the development (North, South or West Cork)
- The charge categories to which the payment is allocated (This means one payment could be allocated over a number of G/L accounts)
- Whether the charge is for proposed or existing works
8. Glossary

Corporate Spatial Register (CSAR)

This is a module written in .NET on a SQL2000 database. It has a full mapping interface written in Autocad Mapguide. A user can search for a building through the map interface or through database searches. All addresses in the database are held in an Post Geo Directory format. The module allows a user to search for and select a premises or setup a new CSAR record by means of a wizard. All Addresses (buildings) are keyed by a unique system generated CSAR ID. It is this CSAR ID that needs to be stored in the Corporate Debtors system and used to link to the CSAR database to retrieve the actual address of the building. The .NET code for the module will need to be linked to and/or integrated with the Corporate Debtors system. Cork County Council will provide expertise to facilitate this integration.

MS Sharepoint 2003

This is the Council’s preferred document management system from Microsoft. Coupled to this the Council has developed a sophisticated scanning solution which used PDF437 (2D) barcodes for automatic indexing. All scanned images are compressed using Lizardtech DjVu compression.
## Appendix 3 Corporate Debtors Test Script

### Raising & Managing Charges

Raise a charge for an income stream based on the following criteria:

- Consumption (water meter reading, refuse lift etc)
- Allowing a reduction for domestic allowance
- With a fixed charge element
- Category based, with a different multiplier for each category
- Minimum Charge

Raise a charge for a batch of customers or on an individual basis

Amend a previously raised charge (a) because it’s too big and (b) because it’s too small

Apply a waiver to an individual charge

Demonstrate how a batch of waivers could be generated for a number of charges based on specified criteria

Raise a charge in a second income stream based on information received from a feeder system. This second charge should be for the same person/persons as have charges in the first income stream.

Amend a charge in the second income stream and show this has had no effect on the first stream.

Generate/print invoices/bills for stream 1 (a) by batch and (b) individually

Generate/print invoice/bill for one person in stream 2, for whom an invoice/bill has already been generated in stream 1.

Generate appropriate G/L transactions for all of the above activities

### Receipting

Demonstrate how the system handles batches of receipts from external sources e.g. bank standing orders or an Post

Generate & print a receipt locally based on a cash transaction

Demonstrate the web self-service option, with particular emphasis on this option being used by Council staff in remote locations.

Generate a lodgement for a batch of cash receipts.

Demonstrate balance forward / open item functionality and show how these are configured.

Generate appropriate G/L transactions for all of the above activities

### Reporting

Demonstrate standard reports available on the system.

Generate a simple ad-hoc report (to be agreed on the day)

### Sample Transactions & Inquiry Options

For one particular customer in one income stream generate the following transactions in the following sequence:

- Charge for €100 on 01/01/2006
- Charge for €100 on 01/04/2006
- Charge for €50 on 01/07/2006
- Receipt for €250 on 15/07/2006
Appendix 3 Corporate Debtors Test Script

- Charge for €70 on 01/09/2006
- Receipt for €50 on 01/10/2006
- Charge for €80 on 01/12/2006
- Receipt for €40 on 15/12/2006

View standard customer inquiry to establish what, if any, links exist between charges and receipts.

Demonstrate what customer views are available as standard.

For the same customer in a different income stream generate the following transactions in the following sequence:
- Charge for €2500 on 15/01/2006
- Receipt for €3000 on 14/02/2006
- Charge for €600 on 10/03/2006

View standard customer inquiry to ensure integrity of both income streams has been maintained