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CUSTOMER-FOCUSED BUSINESS

PRACTICE ADOPTION:

A COMPARISON OF PRIVATE AND PUBLIC

SECTOR IMPLEMENTATIONS

THESIS

James P. Swisher, Captain, USAF

AFIT/GLM/ENS/04-19

DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY

AIR FORCE INSTITUTE OF TECHNOLOGY

Wright-Patterson Air Force Base, Ohio

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AFIT/GLM/ENS/04-19

CUSTOMER-FOCUSED BUSINESS PRACTICE ADOPTION:
A COMPARISON OF PRIVATE AND PUBLIC SECTOR IMPLEMENTATIONS

THESIS

Presented to the Faculty
Department of Operational Sciences
Graduate School of Engineering and Management
Air Force Institute of Technology
Air University
Air Education and Training Command
In Partial Fulfillment of the Requirements for the
Degree of Master of Science in Logistics Management

James P. Swisher, BS

Captain, USAF

March 2004

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CUSTOMER-FOCUSED BUSINESS PRACTICE ADOPTION:
A COMPARISON OF PRIVATE AND PUBLIC SECTOR IMPLEMENTATIONS

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Abstract

This thesis evaluates a variety of documented cases of customer-focused business practice initiatives to discern common principles of implementation within the private and public sectors. The business practices Quality, Activity-Based Costing (ABC), Customer Profitability Analysis (CPA), and Customer Relationship Management (CRM) were found to be the major techniques utilized over the past three decades. Cases were collected which documented implementation of these customer-focused business practices in the private and public sectors.

Using grounded theory methodology, the implementations were analyzed for emerging concepts. The concepts uncovered in this study were further analyzed through a comparison of private and public sector implementations. This research revealed similarities and differences between the implementations in the private and public sectors and provides a framework of common generalizable principles for further testing.

The concepts which emerged are of particular interest to government managers seeking improvement in their organization. Managers can use the information discovered in this research to increase their knowledge of a basic conceptual framework in which implementations of customer-focused business practices were conducted.

Acknowledgments

I would like to express my sincere appreciation to my faculty advisor, Lt. Col. Stephan Brady, for his guidance, support, and vision during this thesis effort. He provided me the inspiration that was needed when it seemed this project was at a dead end. Additionally, as the research progressed, the paths that were chosen were not always successful; but I appreciate the latitude I was provided to freely explore the possibilities.

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Although the actual course work and thesis research in this program are considered an individual effort...I couldn't have done it without the support of those around me...I'm truly thankful for the special people who helped me along the way.

James P. Swisher

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CUSTOMER-FOCUSED BUSINESS PRACTICE ADOPTION:
A COMPARISON OF PRIVATE AND PUBLIC SECTOR IMPLEMENTATIONS

I. Introduction

General Issue

In basic capitalistic economic theory, a firm exists to create a profit; a public agency exists to serve citizens. Although their purposes differ, both are similar in that resources are consumed in order to provide a product or service. “It is contended that private businesses are innately more efficient than public agencies. The reason is not that lazy and incompetent workers somehow end up in the public sector, while the ambitious and capable gravitate to the private sector. Rather, it is that the market system creates incentives and pressures for internal efficiency which are absent in the public sector” (McConnell and Brue, 1996:624). Economic efficiency is further defined by McConnell and Brue (1996) as obtaining the largest possible output of a good or service from the smallest possible input of resources. Due to the nature of commercial, for-profit firms, methods to improve efficiency are continuously explored; these improvements are sought across the entire organization from production to customer service strategies.

Public-sector agencies have not always been concerned with efficiency. In 1986, Michael Dulworth and Brian Usilaner of the Government Accounting Office presented evidence which demonstrated the, then recent, change. “The private sector’s concern with productivity improvement has only recently spilled over into the federal

government. There are many reasons for this heightened awareness, including the \$200 billion federal deficits, the Balanced Budget and Emergency Deficit Control Act of 1985, new policies and priorities under the Reagan administration, and the publicity associated with private sector productivity problems” (Dulworth and Usilaner, 1986:26).

The techniques of interest in this study are those which seek to improve efficiency of the organization as a whole, not just one aspect such as a production line. Some methods are strictly management policies or techniques where others are more philosophical in nature and relate to overhauling organization culture. Are the same efficiency improvement techniques directly applied to public not-for-profit entities? How does the improvement technique look, comparatively speaking, when used by a government agency?

Looking back 30 years, it is readily apparent that customer-focused business practices have been applied to public organizations. Although not implemented to increase profits, efficiency improvement methods have been adopted in order to decrease costs and/or increase the effectiveness of the organization in providing their services.

As in commercial business, public not-for-profits vary in size. Small public agencies are found at the municipal level while larger organizations exist at the federal level. Public-sector agencies are mostly government organizations. Not-for-profits in the public sector also include charitable and grass-roots community organizations; however, these agencies are not of interest here. From city management to the Department of Defense (DoD), public entities exist to serve the public. The organizations have many different functions; but each organization clearly provides some type of “public” service usually based on the organization’s purpose. At one end of the spectrum, city

governments provide services to their citizens such as refuse collection, municipal structure, utility services and recreation areas. The DoD, at the other end of the spectrum, provides security services for our nation.

In order to aid readers of this study, a few definitions are in order. First, the terms not-for-profit and public sector are used interchangeably in reference to government agencies. Second, a for-profit firm is referred to as a commercial sector organization, private-sector firm, or, the firm.

Background and Overview

Recent evidence in support of the assertion that government agencies seek to improve is found in the 1997 Defense Reform Initiative. In 1997, the DoD published the Defense Reform Initiative stating the DoD plan for meeting the requirements of the national defense strategy. A key part of this initiative is the focus on transforming the DoD into a leaner, more agile organization. “The Defense Reform Initiative addresses the third element of this DoD corporate vision: igniting a revolution in business affairs within DoD that will bring to the Department management techniques and business practices that have restored American corporations to leadership in the marketplace” (DoD, 1997).

The plan identified four key methods to be used for the transformation: Reengineer, Consolidate, Compete, and Eliminate. First, Reengineering was defined as adopting modern business practices to improve and achieve world-class standards of performance. Next, Consolidation was defined as streamlining organizations to decrease redundancies and increase synergies. The method of Compete also addressed common business practices and was defined as applying market mechanisms to improve quality,

reduce costs, and respond to customer needs. The last method, Eliminate, was defined as reducing excess support to free resources and permit a focus on core competencies (DoD, 1997).

The current Secretary of Defense, Donald Rumsfeld furthers the view that the DoD needs to improve operations.

Our challenge is to transform not just the way we deter and defend, but the way we conduct our daily business. Let's make no mistake: The modernization of the Department of Defense is a matter of some urgency. In fact, it could be said that it's a matter of life and death, ultimately, every American's.

We must develop and build weapons to deter those new threats. We must rebuild our infrastructure, which is in a very serious state of disrepair. And we must assure that the noble cause of military service remains the high calling that will attract the very best.

All this costs money. It costs more than we have. It demands agility -- more than today's bureaucracy allows. And that means we must recognize another transformation: the revolution in management, technology and business practices. Successful modern businesses are leaner and less hierarchical than ever before. They reward innovation and they share information. They have to be nimble in the face of rapid change or they die. Business enterprises die if they fail to adapt, and the fact that they can fail and die is what provides the incentive to survive. But governments can't die, so we need to find other incentives for bureaucracy to adapt and improve. (Rumsfeld, 2001).

One can reason the dynamic environment of defense, in which the DoD operates, would require a different approach to efficiency improvements; therefore, a static model developed from theory and practice in the private sector may not be a direct fit. This research aims to examine how customer-focused business practices have been applied to public sector not-for-profit organizations and to determine if a difference exists, compared to the private sector, in the implementations of the business practices.

The purpose of the research is not to determine the factors of a successful approach, as volumes of information of this type exists in the fields of organizational behavior, change management, and leadership; but rather to provide a broad exploration, a generalization, of how the efficiency improvements have been adopted.

Problem Statement

Public-sector organizations routinely face a fiscal dilemma as funding to provide their service is derived each year from local, state, or federal budgets. For example, the DoD is funded each year through their allocation of the federal budget. As such, government agencies are inherently required to constantly search for better, more efficient methods of doing business. Since commercial-sector organizations must generate profits or fail, government looks to for-profit firms for ideas which may improve government organization efficiencies. Public agency leaders are charged by citizens to provide their services at the best cost to the public; therefore, many commercial business practices migrate into the public sector. The primary focus in this research is on government organizations in the public sector, but the results should be applicable to any not-for-profit organization. This research seeks to identify what generalizable principles of customer-focused business practice adoption exist and how those principles in public-sector implementations differ from private-sector implementations in order to enable government managers to better achieve their organization's objectives.

Research Question

How do the common generalizable principles of private-sector customer-focused business practice implementation compare to public-sector agency implementation?

Investigative Questions

In order to address what common principles exist and how private-sector use differs from public-sector use, certain investigative questions should be answered.

- What are the recent customer-focused business practices used to improve operations?
- What are the common principles of recent customer-focused business practice implementations in private-sector entities?
- Which of the recent customer-focused business practices determined from the answer to investigative question one have been implemented by public-sector agencies?
- What are the common principles of recent customer-focused business practice implementations in public-sector entities?
- Do the common principles of commercial implementations match principles of implementations in public-sector entities?

Research and analysis will be based on answering these questions.

Summary and Conclusion

This chapter presented an overview of this thesis project. A problem statement was provided, and an overarching research question was stated. Five investigative questions were given which will be used to guide the focus of the research process in order to derive an answer to the research question. Subsequent chapters will cover the matter in more depth and reveal the appropriate data analysis formulated to provide valid and reliable results. Chapter II will examine common business practice techniques and philosophies that evolved over the past three decades to improve efficiency and profit.

II. Review of Literature

Chapter Overview

A review of the relevant literature, the existing body of knowledge, was conducted in order to answer the first investigative question and determine the common business practices which have evolved over the past thirty years. Although work has been done on individual business practice implementation, no works were found during the literature review that specifically addressed overall generalizable principles of customer-focused business practice adoption within government. This thesis aims to contribute to the body of knowledge by uncovering some generalizable principles of customer-focused business practice adoption within the public sector.

This chapter will examine common customer-focused business practice techniques and philosophies which have evolved over the past three decades which have been applied to improve efficiency and profit. The improvement techniques discussed will be Quality, Activity Based Costing (ABC), Customer Profitability Analysis (CPA), and Customer Relationship Management (CRM). These methods were subjectively chosen by the author as they were found to be the most popularly written about topics in business journals, textbooks, and periodicals covering the past three decades. As such, many public-sector organizations have adopted these methods. The business practices will be presented in the same chronological order as they occurred. In order to provide a clearer context of this research, the chapter will close with a brief history of some customer-focused business practices that have been implemented by the DoD's main supplier of consumable goods, the Defense Logistics Agency (DLA).

Quality

Much of the basis for quality comes from such notable scholars as Dr. Phillip Crosby, Deming, and Dr. J. H. Juran. The works of these three pioneers point to a basic premise. An organization that gets involved in quality improvement will face two challenges: First, instead of trying to improve product quality, it must concentrate on improving the quality of the process that produces the product; and second, the company must assure ongoing quality improvement throughout the organization. (Springs, 1998).

Quality is a philosophy which leads to specific management techniques in order to achieve improvements throughout an organization. Beginning in the 1950's, Dr. W. Edwards Deming taught Japanese corporations how to use statistical process control and how to be quality oriented. His teachings spurred an industrial revolution in Japan and enabled Japan-based businesses to compete head-to-head with American corporations. Perhaps, the most notable result of his teachings was the increased competition American automobile manufacturers faced from Japanese imports in the 1970's.

Dr. Deming's philosophy of quality was based on his experience as a statistician, when he was taught by Shewart and expertise in statistical process control. "The Deming management philosophy emanates from a profoundly simple statistical observation about how processes work: All processes, Deming points out, are subject to some level of variation that is likely to diminish quality. Variation is the enemy of quality, and it is as inevitable and ubiquitous as gravity" (Gabor, 1990:31-32). The main idea is to minimize variation in order to maintain a consistent standard. Dr. Deming expanded this philosophy to include all facets of business management. He ultimately developed a quality approach, Total Quality Control (TQC) which consists of fourteen points he

believed were as important as the biblical Ten Commandments. (see Figure 1 for Deming's Fourteen Points).

- Establish constancy of purpose
- Improve constantly and forever every system of production and service
- Eliminate numerical goals and quotas, including management by objective
- Drive out fear so that everyone may work effectively for the company
- Institute leadership
- End the practice of awarding business largely on the basis of price
- Break down the barriers between departments
- Institute training on the job
- Eliminate the annual rating or merit system
- Institute a vigorous program of education and self-improvement
- Eliminate slogans and exhortations
- Cease dependence on mass inspection
- Adopt the new philosophy
- Create a structure in top management to accomplish the transformation

Figure 1. Deming's Fourteen Points

Throughout his philosophy, Dr. Deming explains that the reason for the firm's existence is to serve the customer which purchases their product or service. The constancy of purpose, for example, is the constant focus on producing what the customer wants to be provided. Another common theme is the need to change the typical structure of the firm-less focus on what is happening and more focus on why it is happening. His focus emphasizes the requirement for management and workers to seamlessly meld into a common entity working toward goal attainment mutually beneficial to the firm and the consumer of the firm's wares. This melding is to be accomplished through breaking down management / worker barriers ultimately empowering lower level employees the ability to suggest or make process changes.

“The Shewart cycle, another idea Deming adopted from his mentor, is one that has become a central theme of quality management at leading companies” (Gabor, 1990:55). The Shewart cycle is named for Walter Shewart’s concept of the continuous improvement cycle which consists of four parts: Plan, Do, Act, Check. “The original aim of Shewart’s model was to create a preventive system of checks, improvements, and analysis that would produce products correctly with relatively little trial and error and predict the effects of changes. Deming would apply the idea to a customer-driven product planning process designed to continuously improve products and services in anticipation of the changing needs of the marketplace” (Gabor, 1990:55). According to Gabor, this interpretation of the Shewart cycle was the antithesis of American marketing techniques which were based on selling the consumers a product whether it was needed or not—simply because it was produced.

Another paradigm Dr. Deming’s method challenged was Fredrick Taylor’s scientific management philosophy where workers are to mindlessly perform tasks exactly as instructed by managers. “Deming’s theories create a scientifically reasoned justification for reenlisting the brains of workers to solve production problems” (Gabor, 1990:58). Dr. Deming’s quality philosophy is shared by his contemporary Dr. Joseph M. Juran.

Like Dr. Deming, Dr. Juran also taught the Japanese on control and quality principles. During this literature review, some discrepancies were discovered as to who was actually the first in Japan; however, it is clear that both Dr. Deming and Dr. Juran have had extensive influence on business practices and theory in Japan. According to a

film about Dr. Juran, “An Immigrant’s Gift” produced by Howland Blackiston, Dr. Juran lectured the Japanese on quality *after* Dr. Deming.

Dr. Juran’s focus on quality is derived from a study of management. His assertion is that managers exist to either make changes (breakthrough) or prevent change from occurring (control) (Juran, 1995). Like Dr. Deming, Dr. Juran also proclaims quality is not a reactive process; it is a proactive business philosophy. He has been credited with formulating the philosophy of Total Quality Management (TQM) and has developed a quality trilogy which is trademarked as the Juran Trilogy® consisting of three elements: Quality Planning, Quality Improvement, and Quality Control.

The first part of the TQM philosophy is Quality planning. The Quality Planning construct is “...a series of six logical steps, and a handful of basic tools, that can empower individuals throughout the various levels of the company hierarchy to plan for quality” (Juran, 1995:402). See Figure 2 below for Juran’s Six Steps.

1. Define the project
2. Identify the customers – those who will be impacted by the actions we take to complete the project
3. Discover customer needs
4. Develop the product-features that respond to customer needs
5. Develop processes that are able to produce those product features
6. Develop controls / transfer to operations

Figure 2. Six Steps of Quality Planning (Juran, 1995:403)

Dr. Juran states the quality planning process is to be used for developing both products and services which satisfy a consumer need or requirement. For example, “In developing a new car, it is important to identify the customers, plan the features, and

design the production processes and process controls. The exact same steps are required for developing new services-whether that service takes the form of a credit card that earns frequent flyer miles, a pay-per-view cable TV service, or a call answering capability offered by the telephone company” (Juran, 1995:404).

The second component of the trilogy, Quality Improvement, is a discipline which concentrates on improving the level of performance of a particular process. Dr. Juran provides three sources from which improvement can be derived. The first is elimination of the causes of variance which cause deviation from established standards. Next is increasing effectiveness through increased diligence such as making better use of facilities, knowledge, and vendor relationships. The last source of improvement can be found by establishing a higher level of effectiveness by “Breakthrough”. Dr. Juran posits “Breakthrough” is the organized method in which process change occurs (Juran, 1995).

The final element of the Juran Trilogy® is Quality Control. Quality Control “...involves developing and maintaining operational methods for assuring that processes work as they are designed to work and that target levels of performance are being achieved” (Juran, 1995:401). According to Dr. Juran, Quality Control requires a carefully defined series of steps. Figure 3 lists Juran’s Quality Control Steps.

1. Clear definition of quality
2. Knowledge of expected performance or targets
3. Measurements of actual performance
4. A way to compare expected to actual performance
5. A way to take action when measured results are not equal to expected results, or when processes appear to be drifting from their expected performance levels

Figure 3. Quality Control Steps (adopted from Juran, 1995:401-402)

Dr. Juran further states that any organization pursuing quality "...should create an all-pervasive unity so that everyone will know which is the new direction, and will be stimulated to go there" (1995:429). The purpose of the trilogy is to provide the means to achieve this cohesiveness and address the forces which cause resistance to change. "Such an obstacle can be overcome if we are able to find a universal thought process-a universal way of thinking about quality-which fits all functions, all levels, all product lines" (1995:429). Quality Planning addresses the quality features required and how they will be delivered, Quality Improvement addresses current deficiencies in goods or services, and Quality Control is used to maintain the results achieved in Quality Planning and Quality Improvement.

The quality movement provided a need for a method of collecting accurate cost information. Traditional cost-accounting methods were recognized as incapable of providing information of value to managers and were usually completely ignored during this time. Nonetheless, when seeking improvement throughout a for-profit firm, many decisions were made which required some type of cost data analysis. The new method born of this requirement was Activity-Based Costing (ABC).

Activity Based Costing

Activity Based Costing (ABC) is a method of assigning costs according to the activities resources perform on the object which consumes the resource. "The two-stage assignment process enables ABC to overcome the traditional volume-based allocation techniques. The approach directly addresses the management and control of overhead costs within an organization" (Pohlen and La Londe, 1994:8). It differs from traditional cost accounting (TCA) methods in that the goals are 180 degrees opposite: TCA

methods' objective is to allocate all costs while ABC's objective is to assign costs specifically to the object which generates the cost. ABC allows for specific cost focus at either the product or customer level. "ABC measures process and activity performance, determines the cost of business process outputs, and identifies opportunities to improve process efficiency and effectiveness" (DoD, 1995).

Under generally accepted accounting principles (GAAP), the accounting systems do not include information about customers or accurate product cost information on financial reports. Additionally, the problems created by GAAP are argued as obstacles to organization improvement. Before ABC, firms made process changes without knowing the "true" cost of the change.

"As competition increased, and as the basis of competition shifted away from the efficient use of direct labor and machines, managers needed more accurate information about the costs of processes, products, and customers than they could obtain from the system used for external financial reporting. ABC "...systems emerged in the mid-1980s to meet the need for accurate information about the cost of resource demands by individual products, services, customers, and channels" (Kaplan and Cooper, 1998:3).

Many authors have proclaimed the benefits of ABC since the mid 1980s. Howell and Soucy provide support and argued current cost management practice was inadequate and only useful when assigning costs to products at an aggregate level (1990). Reichebacher supports the case for ABC with three main points: "...product/service costs aggregated in accounts separate from customer, sales/marketing/service costs collected separate from customers, and accounting systems exist in proud isolation from each other due to fragmented corporate operations" (2003). Robert S. Kaplan and Robin Cooper of

the Harvard Business School further demonstrate ABC is the only accounting method managers should use when looking for improvement opportunities or weighing decisions. Kaplan and Cooper provide a model for applying ABC to management decisions called Activity Based Management (ABM) (see Figure 4).

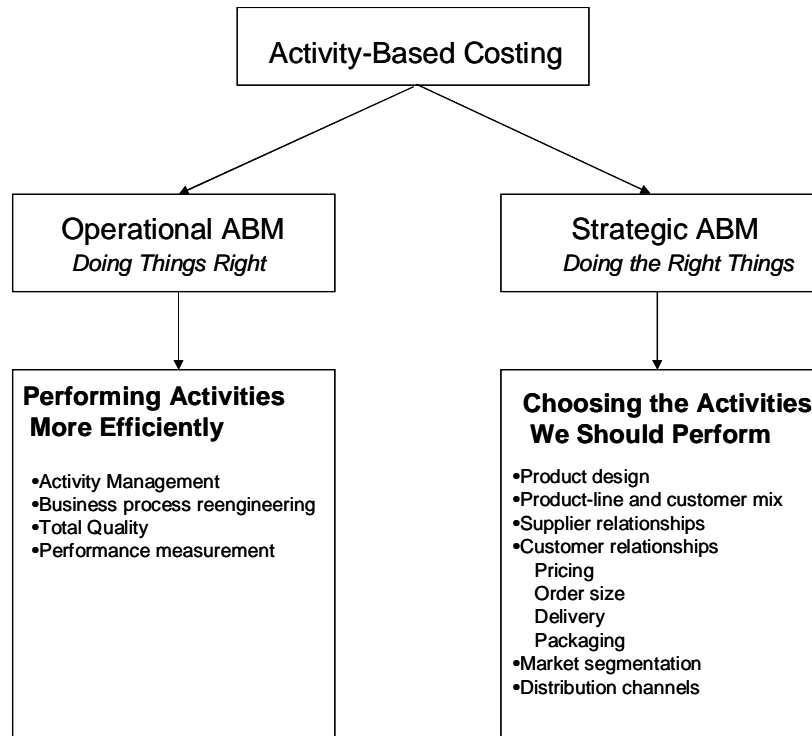


Figure 4. ABM Model (Kaplan and Cooper, 1998)

A difficulty faced when ABC first emerged was that under the also relatively new TQM school of thought, “...financial control systems should be discarded entirely-that financial information is at best irrelevant and at worst dysfunctional in the continuous improvement...” environment (Kaplan and Cooper, 1998:37). ABC was shown to provide tools which those using TQM could actually incorporate into their improvement

processes and leverage the benefits of their process changes. “ABC supports continuous process improvement by identifying where incremental improvements at the activity level can improve overall enterprise performance” (Pohlen and La Londe, 1994:10). Analysis of ABC generated reports at the customer level provided the jumping-off point for the next method of improvement-Customer Profitability Analysis.

Customer Profitability Analysis

The idea of Customer Profitability Analysis (CPA) is still relatively new as the earliest article found on CPA was written less than 15 years ago; “Customer Profitability: As Critical as Product Profitability” by Robert A. Howell and Stephen R. Soucy in *Management Accounting*, October 1990. CPA is an extension of Activity Based Costing (ABC). ABC analysis is used to assign costs directly traceable to specific company/customer interactions. ABC must be used because traditional accounting systems are “...ill equipped to support customer profitability analysis” (Reichebacher, 2003). This is an important point because customers are both revenue generators and revenue consumers for every business.

The idea of CPA is to analyze customer costs and revenues and determine which customers are profitable, which customers are not profitable, and why. Customers can then be ranked by profit contribution and customer profit profiles can be established. Once a firm identifies its “unprofitables,” Kaplan and Cooper explain a firm may transform “...unprofitable customers into profitable ones through targeted negotiations: on price, on product mix and variety, on delivery terms, and distribution and payment arrangements” (1998:189). According to Reichebacher, CPA is used to restore the link between customers and costs. Similarly, Howell and Soucy state “...effective use of

customer profitability information will greatly enhance a company's ability to direct the right services to the right customer" (1990).

"Customer profitability analysis provides the capability to determine how individual customers or customer groupings contribute to profitability. All sales do not contribute to profitability in equal proportions. Some customers consume more logistics resources than others do. Firms have tailored their logistics services to satisfy specific customer requirements. "Fragmentation" of the supply chain suggests wide differences may occur in the amount of logistics resources, or costs, required to support individual customers" (La Londe & Ginter, 1999). Forrester Research, Inc. surveyed 33 Global 2500 companies and bolsters La Londe and Ginter's finding—"Customers with identical revenue potential vary widely when it comes to acquisition and service costs" (Chatham, 2000).

Firms today must look toward the entire supply chain in order to gain a competitive edge, or maybe more so to just remain competitive. According to William Copacino, author of Supply Chain Management: The Basics and Beyond (1997), "In almost every industry, supply chain has become a much more important strategic and competitive variable. It affects all of the shareholder value levers – cost, customer service, asset productivity, and revenue generation" (2003). Tradeoffs are required throughout the chain. CPA can provide firms the ability to more accurately determine costs and find "hidden" profits. Niraj, Gupta, and Chakravarthi developed a CPA model for the supply chain in 2001 with their work "Customer Profitability in a Supply Chain" (2001). These authors demonstrate the need to look both upstream and downstream in the supply chain as customers generate costs affecting the chain. "Companies that

measure profitability by customer have a distinct advantage over those that don't” (Benchley, 2003). A basic CPA model was derived from the various literature (see Figure 5).

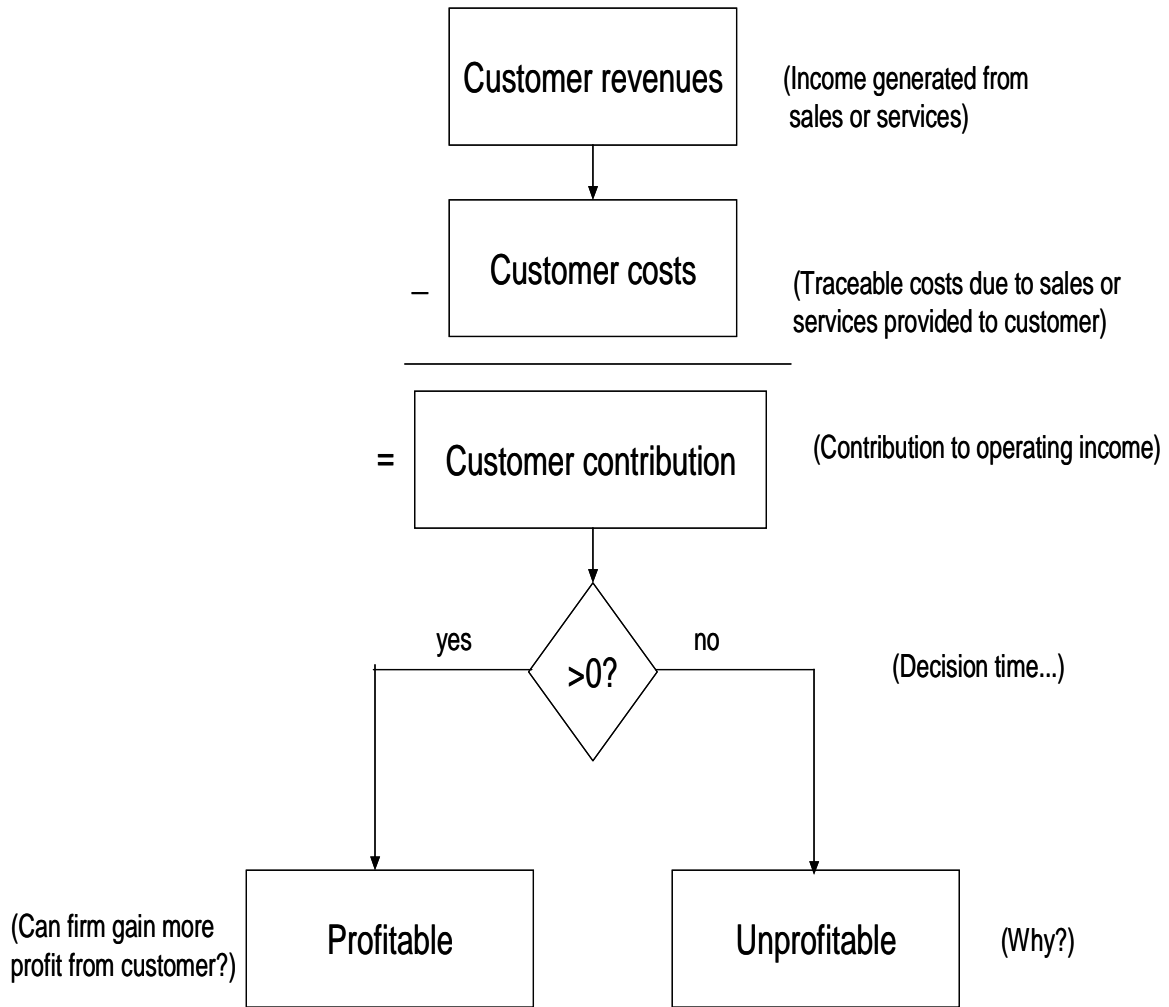


Figure 5. Customer Profitability Analysis Model

CPA can be made at several levels based on the history of transactions between the supplier and a specific customer. A common starting point is the calculation of what is called the contribution margin (gross contribution margin), i.e. sales revenue less all

product-related expenses for all products sold to an individual customer during one particular period of time (Wang & Splegel, 1994). Next, depending on the availability of data, sales, general and administrative expenses traceable to the individual customer are subtracted (Cooper & Kaplan, 1991, Howell & Soucy, 1990). One can then study the result of the calculations: the operating profit generated by the customer. An extension of this line of thinking is the computation of “customer return on assets”, i.e. customer profitability divided by e.g. the sum of accounts receivable and inventory (Rust et al 1996). Also, when CPA is applied to a supply chain, the entire chain should use ABC in order to compute the costs from end to end. More specifically, data is needed on costs of delivery, quality, flexibility, and service performance (Niraj, Gupta, and Narasimhan, 2001).

Customer profitability is also referred to as a value with future worth in some writings. Lifetime Profitability Customer Analysis (LPCA) is a broader view of CPA. “In this case, it often takes the form of the output from a net present value analysis” (Söderlund & Vilgon, 1999). The output is referred to as the “lifetime value” of a customer. A customer’s lifetime value is defined as the stream of expected future profits on a customer’s transactions, discounted at some appropriate rate back to its current net present value (Peppers & Rogers 1997:32). Under LPCA, the analysis looks further back historically and forecasts into the future. Zaman (2002) states “Under the LPCA, all the revenues and costs that will occur during the entire life of a customer relationship can accurately be measured using...” ABC.

Niraj, Gupta, and Narasimhan (2001) extend the application of CPA to the supply chain. “Estimating current profitability at the individual customer level is important to

distinguish the more profitable customers from the less profitable ones. This is also the first step in developing estimates of customers' lifetime values. This exercise, however, takes on additional complexities when applied to an intermediary in a supply chain, such as a distributor, because the costs of servicing a retail customer include not only those incurred directly in servicing this customer" (2001). This view seems to be the broadest application of CPA and, as the authors suggest, the most complex to accomplish.

In Niraj et. al., a series of 14 equations was developed to address numerous cost factors in a supply chain. The focus was mostly on distribution channel costs; however, as stated earlier, the model includes upstream and downstream costs. Figure 6 shows the transaction flows according to the authors.

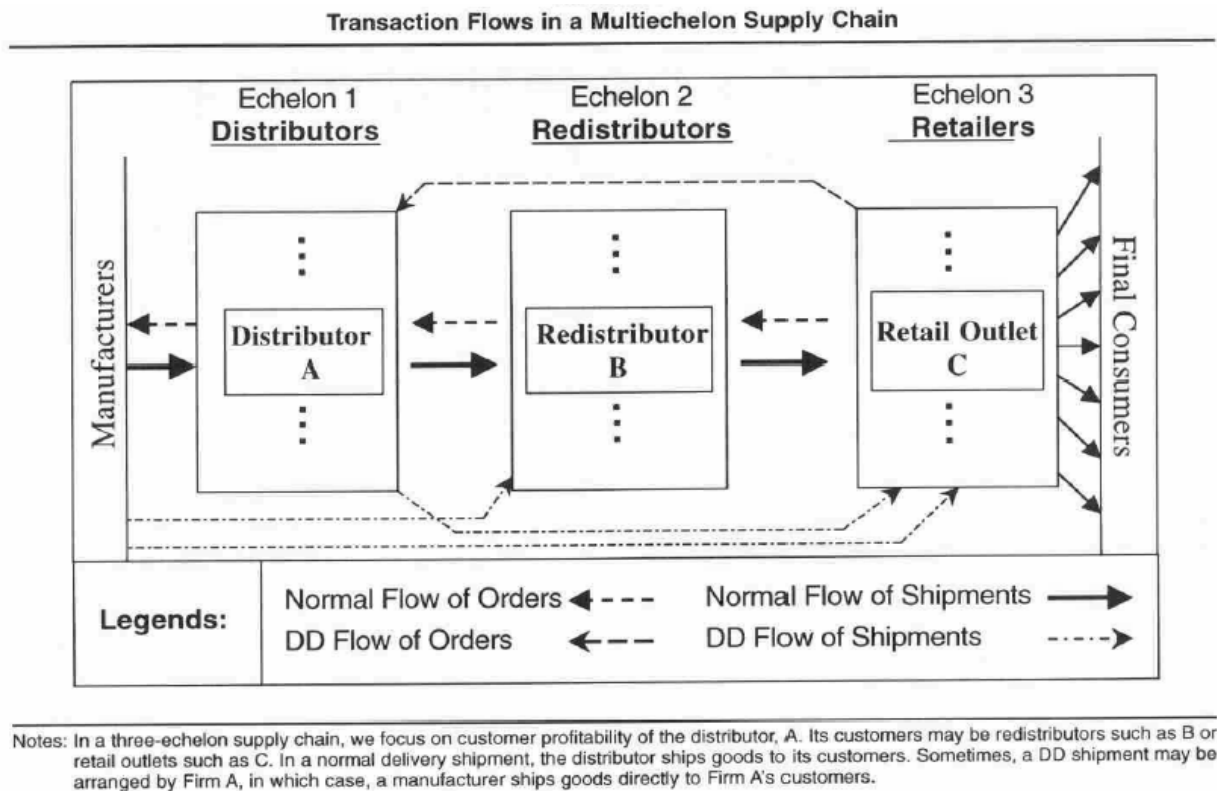


Figure 6. Transaction Flows in a Multi-echelon Supply Chain (Niraj et. al., 2001)

Another important piece in this literature is a diagram explicitly depicting factors which influence customer profitability. Understanding the factors is critical because a firm practicing CPA must make adjustments in the correct place in order to improve customer contribution to their operating income. Figure 7 shows the external factors which influence a firm’s customer level profitability.

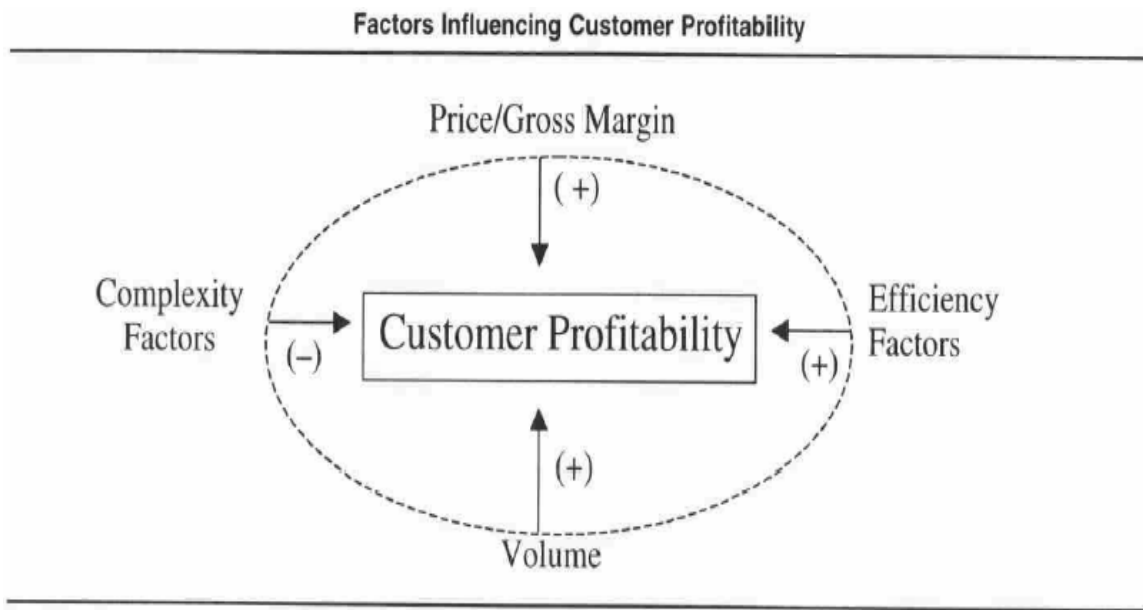


Figure 7. Factors Influencing Customer Profitability (Niraj et. al., 2001)

Once the CPA is complete and customer profiles created, the firm next needs to decide what to do with its unprofitable customers. Two distinct views exist regarding unprofitables: 1) Fire the unprofitable customers and 2) Make unprofitable customers profitable.

The first view, fire the unprofitables, is the elder. Many articles suggest one should fire the unprofitable customer and let their competition lose money. “Let

unprofitable customers put your competitor out of business, not you” (Goldsberry, 2003). Bankers also have this view; “Bankers often will say ‘I’d be happy to send certain customers to my competitor they just cost me money’...sounds reasonable. Particularly when applied to the customer who keeps \$165 in a savings account and comes into the branch every day to check his interest, and won’t use the ATM” (Fairley, 2000). Before customers are cut from the roster, competitors must consider the cost of bringing a new customer on board. Fixed costs which were once covered by the unprofitable customer don’t go away when the customer is fired. Fairley supports this point and also states it costs up to ten times the amount to hire a new customer than it costs to keep the loser. CPA provides not only the “who” is profitable; it can also provide the “why.”

The other, more recent view is if a customer is unprofitable the firm made them unprofitable. “Ultimately, there are no unprofitable customers, only poorly managed companies. Firms must model customer behavior, turn analysis into action, and revise constantly to maximize each customer’s profit” (Chatham, 2000). In other words, if a firm finds a certain customer to be unprofitable, the firm should address the relationship and resolve the problem causing the unprofitability. Many ways exist for firms to correct the condition; the most common include repricing, modifying delivery schedules, decreasing “free” services, and increasing lot quantities. The point to be made here is there is a reason a customer is unprofitable-fix it.

The last customer-focused business practice to be discussed evolved from applications of the theory of CPA. More specifically, once firms applied CPA, analysis was conducted in seeking to make the unprofitable customers profitable. The advent of this intense customer level focus differed greatly from the previous, traditional, product-

centric methods. This customer level analysis grew into the concept of Customer Relationship Management (CRM).

Customer Relationship Management

The idea of moving further away from product management and deeper into customer management is what makes CRM a new way of thinking. Demonstrated through each of the business practices presented thus far, application requires a paradigm shift-a difficult change for some organizations.

The main underpinning of CRM is one-to-one marketing. In one-to-one marketing, firms market their products or services to their customers one at a time. This philosophy in CRM has four objectives: gain customer, sell to customer, provide item sold to customer, and provide service to the customer after the sale. The advent of information technologies such as data warehousing and data mining have led to the capabilities firms needed to accomplish CRM. This “personal” relationship is the unit of analysis for all firm/customer interactions. Similar to CPA, once the customer level relationship is established, data from the transactions can be collected and analyzed.

A review of the literature showed varied definitions of CRM. The appropriate definition depends on how CRM is used. “Many vendors, consulting firms, and even companies, build their own definition of CRM partially mindful of how others are defining the term. Because of this, while definitions are diverse, the market seems to have coalesced along three “kinds” of definitions...” technology centric, customer lifecycle centric, and strategy centric (Kellen, 2002:3). Kellen’s view was confirmed by the author during this literature review.

Generally, a technology centric version of CRM is largely based on computer systems or software which automates a portion of the customer's interactions with the firm. In technology centric CRM, a customer may use the internet to purchase the firm's product, the firm may market to the customer through electronic media, or a customer may access the firm's customer service area via the internet.

Customer lifecycle centric CRM is a philosophy of managing the customer lifecycle, not the more familiar product lifecycle. The firm focuses efforts on attracting the customer, transacting business with the customer, servicing and supporting the customer, and ultimately enhancing the relationship with the customer (Kellen, 2002). This method is a much broader application of CRM and was also found to be referred to as analytic CRM by some authors (Kamakura, 2002, Swift, 2002, Oi and Singh, 2003). "The customer lifecycle definition of CRM often describes CRM as the ability to seamlessly interact with or market to the customer across this lifecycle" (Kellen, 2002:3) enabling a continuous one-to-one relationship.

The third type of CRM discovered during this research is strategy centric. Many information technology vendors and consulting firms are providing products today which make this the most common form of CRM. The products marketed are referred to as "CRM Solutions." In strategic CRM, a new business model is developed with customer relationships as the focus. Strategy is developed which seeks to exploit data collected from each customer interaction in order to maximize profit. "These definitions describe CRM as a technique to compete successfully in the market and build shareholder value" (Kellen, 2002:3).

This author's definition of CRM is a consolidation of the three previously described views: CRM is a customer focused strategy in which a firm leverages technology to extract maximum profit from the customer lifecycle. Functionally, this definition describes the broadness and depth of the CRM philosophy.

According to a February, 2002 article in the *Harvard Business Review*, companies are spending millions of dollars on CRM initiatives. "The promise of customer relationship management is captivating, but in practice it can be perilous. When it works, CRM allows companies to gather customer data swiftly, identify the most valuable customers over time, and increase customer loyalty by providing customized products and services" (Rigby, Reichheld, and Scheffer, 2002:101-102). Rigby et al provide four perils of CRM companies must avoid in order to be successful: 1. Implementing CRM before creating a customer strategy, 2. Rolling out CRM before changing your organization to match, 3. Assuming that more CRM technology is better, and 4. Stalking, not wooing, customers.

The first peril, implementing CRM before creating a customer strategy is very closely related to the purpose of strategic centric CRM. This strategy can be as simple as segmentation analysis of customers as groups or a more complex division to the individual customer level. "To implement CRM without conducting segmentation analyses and determining marketing goals would be like trying to build a house without engineering measures or an architectural plan" (Rigby et al, 2002:102).

Peril two, rolling out CRM before changing your organization to match is analogous to the old saying "you can't put a square peg in to a round hole." For example, customer service and order fulfillment functions should be modified to be customer

centric processes before CRM can be implemented. Firms which do not traditionally harbor a customer focused vision statement will be out of sync with CRM. Rigby et al state “The most successful companies in our study have worked for years at changing their structures and systems before embarking on CRM initiatives” (2002:104).

The third peril, assuming more CRM technology is better, like peril number two, can be interpreted at face value—more is not always better. CRM does not have to be technologically intense. Information technologies provide the means for in-depth analyses which should be conducted in full-blown CRM operations; however, CRM may be better suited to incremental implementation (Peppers and Rogers, 2001:5). Further supporting a small-scale CRM starting point, Rigby et al state “Customer relationships can be managed in many ways, and the objectives of CRM can be fulfilled without huge investments in technology simply by, say, motivating employees to be more aware of customer needs” (2002:104).

The last peril, stalking, not wooing, customers is not as simple as the other three previously discussed. There appears to be a fine line between one-to-one marketing and junk mail. In marketing, direct mailings are often perceived as junk mail by those that receive them. The principle variable is the level of interest that exists within the household receiving the advertisement. In CRM, the variable of interest is not so obvious. “Relationships are two-way streets. You may want to forge more relationships with affluent customers, but do they want them with you?” (Rigby et al, 2002:108). Further “...build relationships with disinterested customers, and you will be perceived as a stalker, annoying potential customers and turning them into vociferous critics” (Rigby et al, 2002:108). The challenge has been levied.

The improvement technique of CRM is another in a long line of “new” ideas which have developed over the last three decades to improve profits in private-sector firms. Quality, ABC, CPA, and CRM have grown in the private sector out of the need of firms to constantly outpace their competitors. These techniques and philosophies are by no means an all inclusive representation of customer-focused improvement efforts; however, they do demonstrate fairly well the lineage of evolution which occurs. More emphasis was placed on CPA in this review because it was the technique which departed most from the previous, traditional focus of product profitability. Less emphasis, perhaps, was placed on CRM because it encompasses attributes of Quality, ABC, and CPA. Another look at an evolution of improvement efforts will be discussed next in order to show public-sector agencies also have motivation for efficiency gains.

Defense Logistics Agency

The Defense Logistics Agency (DLA) is presented as a typical large public-sector organization. The organization has a specific purpose in serving the public through the support DLA provides the DoD in accomplishing its mission.

Government business process reengineering is a radical improvement approach that critically examines, rethinks, and redesigns mission product and service processes within a political environment. It achieves dramatic mission performance gains from multiple customer and stakeholder perspectives. It is a key part of a process management approach for optimal performance that continually evaluates, adjusts or removes processes. (Caudle, 1995)

Consumables are items that are “used up” or consumed by the end user sometime after the item is purchased. The Department of Defense (DoD) purchases millions of dollars of consumable items each year and the Defense Logistics Agency (DLA) is

DoD's "supplier" of consumable goods for the military services. DLA manages most, approximately 96 percent, of all consumable items used by DoD while the remaining items are termed "service specific" and are managed by the individual service components. DoD categorizes items of supply into nine specific classes: I) Subsistence; II & IV) Clothing, tents, consumables; III) Bulk fuel, packaged petroleum, oils and lubricants; V) Ammunition; VI) Comfort items; VII) End items; VIII) Medical; IX) Repairables/non-repairables. DLA provides almost 100 percent of classes I, II, III, IV, VI, and VIII along with class IX non-repairables. The military services provide class IX repairables. DLA had \$20.6 billion in sales in FY 2002.

DLA measures its effectiveness by customer satisfaction ratings; traditional DoD supply-type metrics like issue and stockage effectiveness measure how often DLA is able to satisfy a customer demand. Normally, the higher the metric, the better the service; however, with fiscal restraints imposed by the annual DoD budget, DLA is limited in the amount of inventory it can hold which in turn limits effectiveness ratings. Therefore, like any wholesale operation, DLA is continuously attempting to buy the items its customers will quickly purchase and use. Many methods are used to manage the inventory and most recently, DLA has begun implementation of a philosophy called the Business Systems Modernization (BSM) in order to update their computer systems software and architecture.

Adequate inventory management is critical for DLA to enable its customers, the United States Military services, to perform their mission. While enabling military effectiveness DLA must cover the costs it incurs as a result of doing business. Although the Quality movement took place during the 1980s and early 1990s in the DoD, DLA

began looking for more specific ways to improve operations efficiencies soon after the end of the “Cold War”. At that time, the “new” business process improvement was adoption of ABC.

ABC implementation at DLA began in the early 1990’s and led to the initial implementation of ABM in 1996. DLA was out-front when compared to the efforts of the rest of DoD. In July, 1999, the Under Secretary of Defense declared “...I direct the Secretaries of the Military Departments and the Directors of the Defense Agencies to pursue aggressively ABC/M implementation in maintenance depots and everywhere else it could be expected to provide improved cost management” (DoD, 1999). The Under Secretary further mandated all DoD agencies develop an implementation plan for meeting his requirements. DLA published their plan in October, 1999. “In fact, DLA was proactive in the development of ABC by initiating the program in 1993. In 1996, we revised and revitalized our ABC efforts and began an aggressive ABC/M implementation program across the Agency” (DLA, 1999).

As we enter a new century, which will provide significant changes in our Armed Forces and increases in technological sophistication of those forces, logistics and acquisition organizations and systems must change to keep pace. To remain competitive, DLA has recognized that we must reshape and refocus ourselves and apply the same innovation, teamwork, and warfighter focus that has made us successful in the past. To provide a roadmap for the future, we have developed a strategic plan which defines our vision, mission, goals, and objectives.

Embedded in our strategic goals is the need to reduce acquisition and logistics support costs to our customers. To achieve these goals, we recognize that we must better manage all of our costs, and we believe that Activity-Based Costing/Management (ABC/M) is a most effective tool to accomplish this. By utilizing activity based costing, we will provide our managers with information on activities that are taking place within their organization, and through management of those activities, we will institutionalize quantitative analysis in our decision-making and management process (DLA, 1999).

Broad and far reaching goals were established as part of DLA's ABC/M implementation effort. Figure 8 lists DLA's ABM objectives.

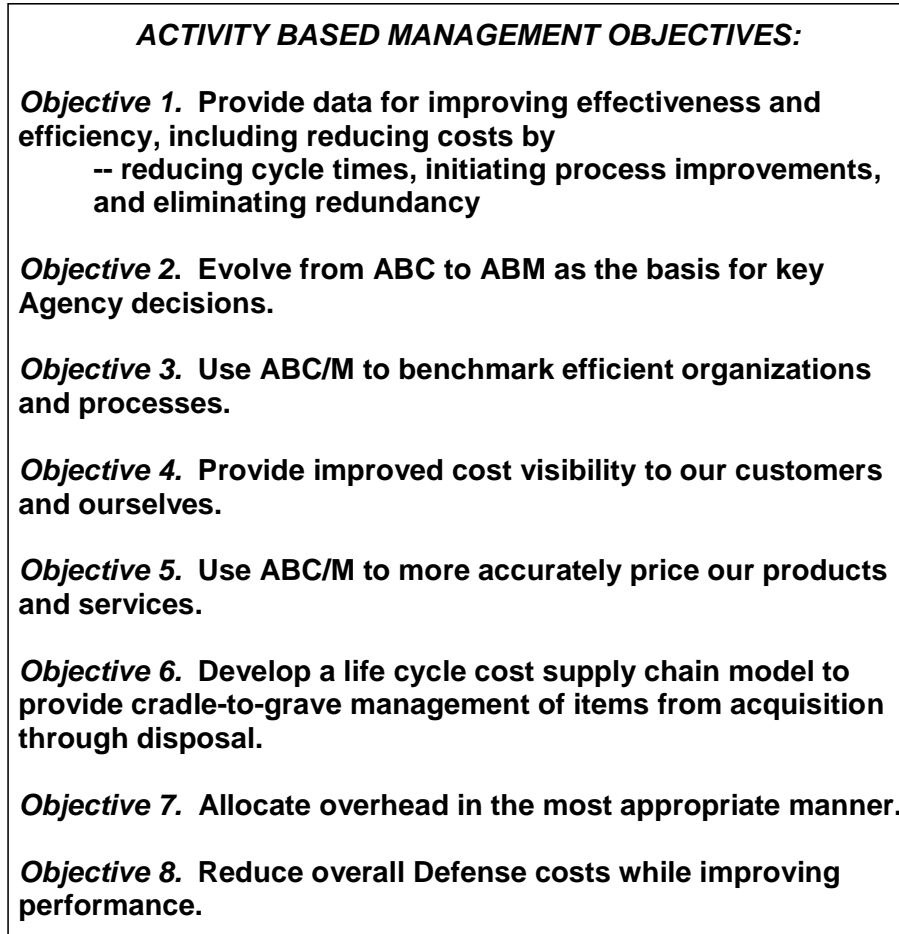


Figure 8. DLA ABM Objectives

DLA has begun implementation of a program called the Business Systems Modernization (BSM) in order to update their computer systems software and architecture, business processes, and performance measurement methods.

As part of BSM and according to DLA's Strategic Plan, DLA is focusing on CRM. Through CRM, DLA is attempting to provide its customers more accurate information about costs generated through the services DLA provides. The goal of the CRM program is to enable customers to make better informed management decisions by establishing and maintaining open communication with DLA. Ultimately, DLA desires to increase effectiveness by gaining a more-correct picture of customer needs. Figure 9 lists DLA's BSM goals.

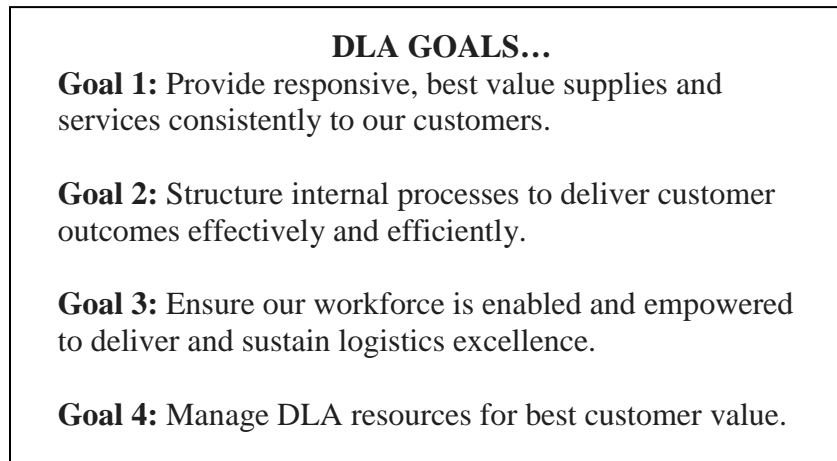


Figure 9. DLA BSM Goals

Goals 1, 2 and 4 demonstrate the customer-centric focus DLA has adopted.

Figure 10 shows goals 1, 2, and 4 as defined by DLA.

<p>Goal 1: As a Combat Support Agency, the DLA mission is to provide logistics support to the war fighter. DLA’s first and most important goal concerns the outcome for our customer. The strategies and objectives under this goal communicate how DLA will improve customer service and the level of service we have targeted to deliver. DLA aims for logistics excellence.</p> <p>Goal 2: This internal process goal results in strategies for improved market knowledge, customer and supplier accessibility, and collaboration. Supply chain management practices provide the set of tools to manage our internal processes. Our focus on the objectives for perfect order fulfillment, supplier management, and Information Technology (IT) investments’ performance provide the means of assessment.</p> <p>Goal 4: Focusing on the financial goal will sustain the strong financial discipline required to ensure effective financial planning and management in DLA. The strategies and objectives associated with this goal allow DLA to provide best value to DLA customers. Accurate forecasts strengthen DLA’s ability to project and support requirements and plan for the resources needed. Better supply chain cost decisions result in better management of our resources. Compliance with the provisions of the Chief Financial Officer Act assures that the financial management systems produce relevant, reliable, and timely information</p>

(DLA, 2002)

Figure 10. Table of DLA Goals 1, 2 and 4 Defined

DLA has established a strategy for achieving their goals. The following two figures, Figure 11 and Figure 12, show DLA’s overall Air Force BSM strategy and their Air Force specific strategy of CRM implementation.

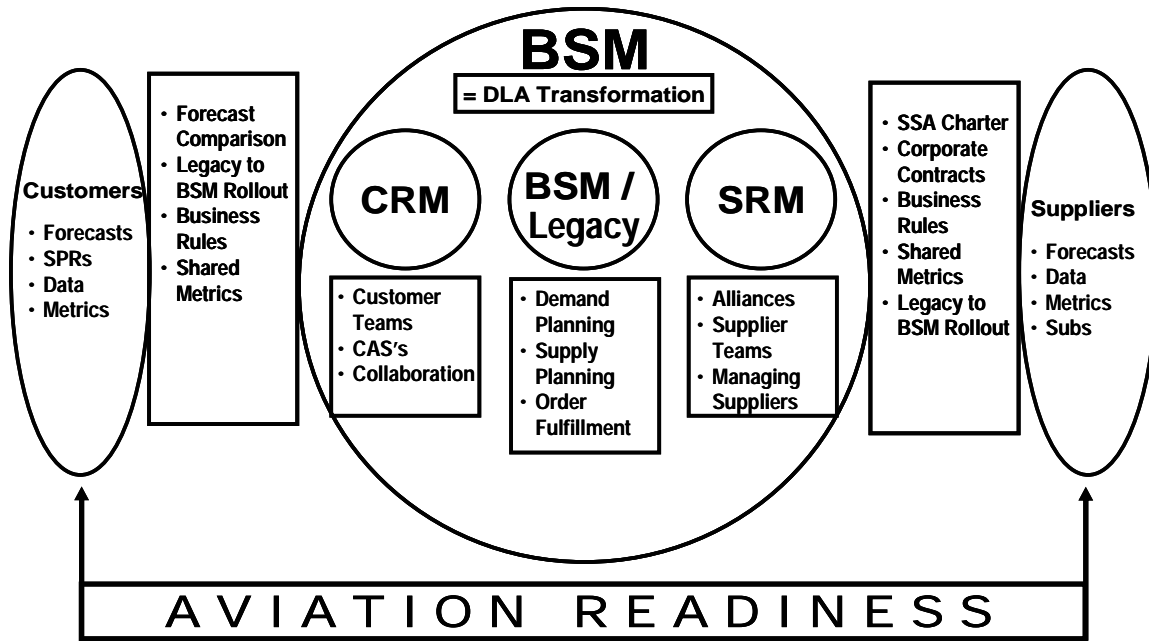


Figure 11. DLA Strategic BSM Model for Air Force

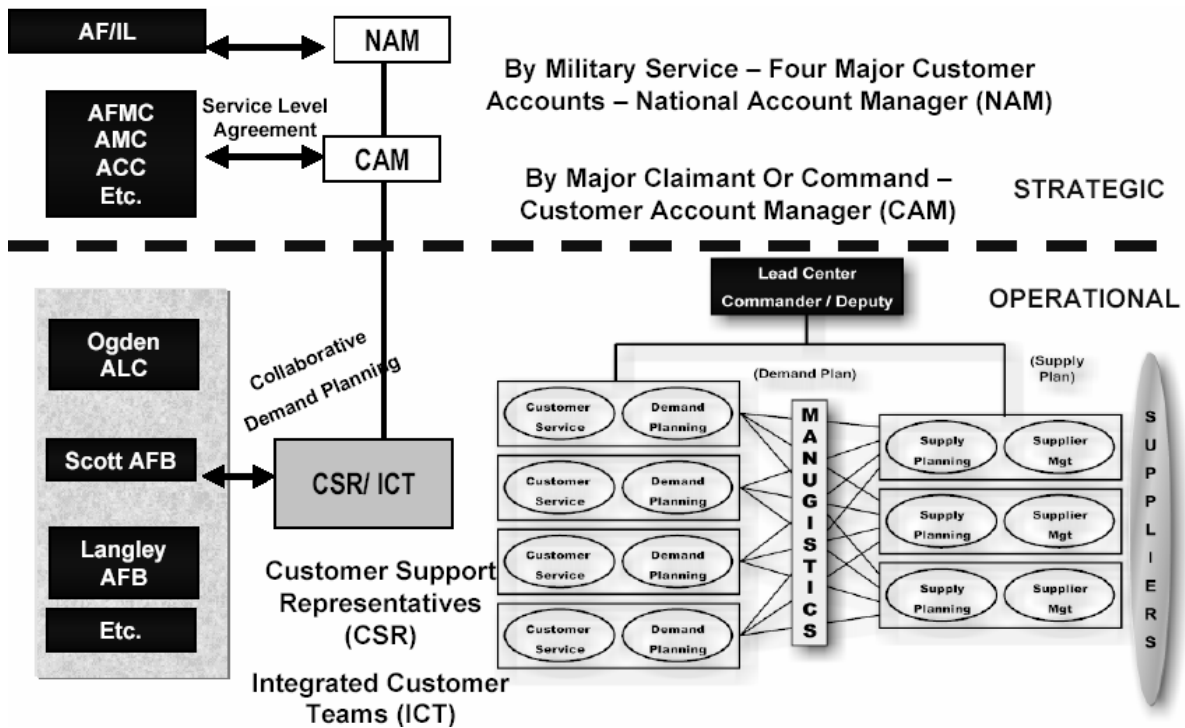


Figure 12. DLA CRM Model (Air Force Version)

DLA has also worked to improve cost visibility for their customers. Net landed cost is the current method (since FY 2002) used to assign distribution costs by activity. This brings cost to the customer level and provides each customer the visibility of costs generated by their activities. According to DLA’s FY2002 Amended Budget Submission, “Net Landed Cost is the next generation of discrete pricing to (1) fairly allocate costs to the level of services desired, (2) allocate costs to the customer driving the costs, and (3) align costs more accurately” (DLA, 2002).

DLA recovers costs according to DoD regulations and, like most public-sector agencies, is permitted to recover 100% of all costs incurred. DLA is currently using a cost plus additive charge, according to Cost Recovery Rate (CRR), two-component model in order to set price and generate their revenue stream from the Defense-Wide Working Capital Fund (DWCF). See Figure 13 for DLA costs and pricing definitions.

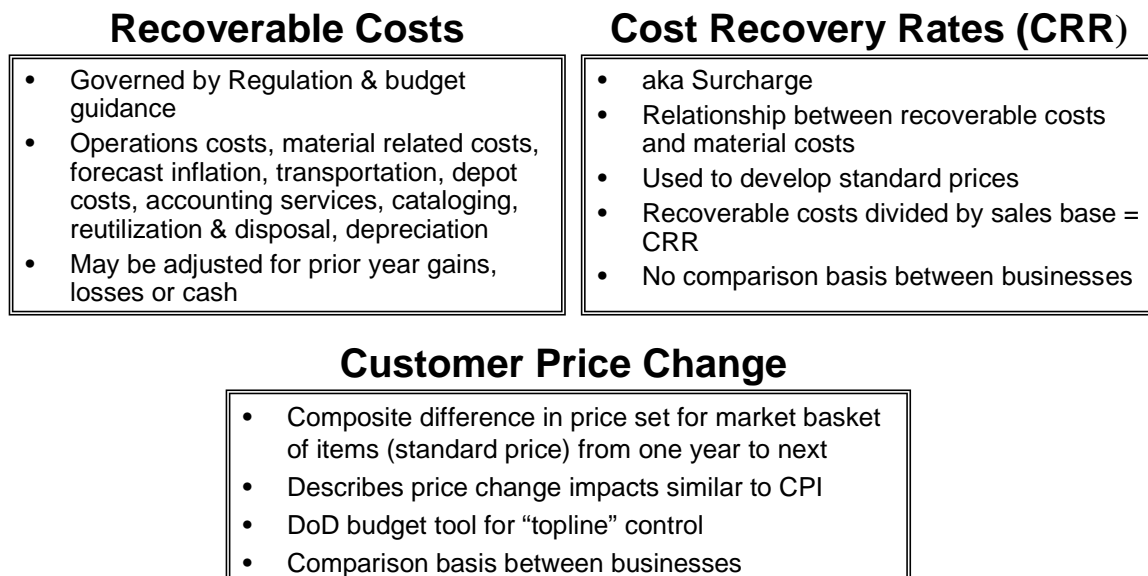


Figure 13. Term Definitions Used in DLA Cost and Pricing

The two pricing components break down as follows:

Cost of goods = acquisition cost + inflation + transportation charges from vendor
+ item testing and unitization

CRR = Distribution cost + Operating cost + Policy driven cost =

- 1) Distribution cost = receiving cost + holding cost + shipping cost
- 2) Operating cost = Mil/Civ compensation + travel + training + supplies + depreciation + utilities + security + facilities maintenance
- 3) Policy driven cost = accumulated operating results + DLIS + DAASC + other

Under this model, it can be inferred DLA has no incentive to improve operations or lower costs which are directly passed on to their customers; however, recent other efficiency improvement efforts elsewhere in the DoD to modernize the acquisition process have provided the opportunity for DLA's once mandatory customers to shop elsewhere. DLA has been placed into unfamiliar territory and just like the private sector, must compete for customers.

Under the old policy, operating cost and policy driven costs were previously "peanut butter" spread across all customers. Since DLA's customers are charged 100% for all services provided, and they must now compete to retain their customers, DLA is attempting through their CRM portion of the BSM to charge the customer which is actually consuming service – i.e. the customer which generates the cost. This assigns cost, according to the principles of ABC, to the customer level as opposed to the product level. Ultimately, this cost visibility should provide DLA's customers the information needed to determine which of DLA's "value-added" services to use (consume).

Summary and Conclusion

This chapter provided a discussion of the common customer-focused business practice techniques and philosophies which have evolved over the past three decades to improve efficiency and profit. The improvement techniques of Quality, ABC, CPA, and CRM were presented in the order in which they historically occurred. The methods presented were found to be the most popularly written about topics in business journals, textbooks, and periodicals covering the past three decades and have been widely adopted by many public-sector organizations. The chapter closed with a brief example of a large public-sector organization, the DLA, to set the context for the organizations reviewed in this research. The next chapter will discuss the research methodology.

III. Methodology

Chapter Overview

The previous chapter provided a discussion of the common customer-focused business practice techniques and philosophies which have evolved over the past three decades to improve efficiency and profit and an example of a public-sector organization, the DLA, to set the context for the material reviewed in this research. This chapter will establish the methodological framework in which this research will be accomplished.

The goal of this research is to develop a set of principles or a theoretical framework of how public-sector entities implement customer-focused business practice improvements compared to private-sector organizations and therefore will require a broad and holistic approach in design. The methodology selected follows tenets of case study research and an inductive grounded theory approach for analysis. This research will be an inductive, multiple case study grounded theory design.

In order to support the author's choice of methodology, the following chapter will discuss method comparison, strategy of inquiry, case study definition, case study application, and types of case studies. An explanation of grounded theory will be followed by the author's case selection strategy and design for data analysis. The chapter will close with a discussion of validity and reliability.

Method Comparison

There are three basic approaches to research: quantitative, qualitative, and mixed (Creswell, 2003). Each approach has specific strategies and methods which vary according to the type of data used in the study. Selection of a research methodology is

dependent upon the knowledge claims being made by the researcher, the strategies of inquiry used to inform the procedures, and the methods of data collection and analysis to be used (Creswell, 2003). Table 1 represents the alternative strategies of inquiry according to the three approaches to research.

Table 1. Alternative Strategies of Inquiry (Creswell, 2003:13)

Quantitative	Qualitative	Mixed Methods
Experimental designs Non-experimental designs such as surveys	Narratives Phenomenologies Ethnographies Grounded Theory Case Studies	Sequential Concurrent Transformative

Creswell further provides the procedures used within each approach. Table 2 summarizes the procedures used within each method.

Table 2. Research Approach Procedures (Creswell, 2003:17).

Quantitative Research Methods	Qualitative Research Methods	Mixed Research Methods
Predetermined Instrument based questions Performance data, attitude data, observational data, and census data Statistical analysis	Emerging methods Open-ended questions Interview data, observation data, document data, and audiovisual data Text and image analysis	Both predetermined and emerging methods Both open- and closed-ended questions Multiple forms of data drawing on all possibilities Statistical and text analysis

This study lends itself to the qualitative research strategy due to the document based non-numerical nature of pertinent literature and associated case studies requiring analysis. “The word qualitative implies an emphasis on the qualities of entities and on processes and meanings that are not experimentally examined or measured...” (Denzin and Lincoln, 2000:8). Furthermore, scientific experiments are typically not conducted in business; change is implemented and effect is measured but not like a controlled experiment. Due to this qualitative nature, inferential statistical methods can not be accurately applied and studied thereby eliminating quantitative and mixed methods from consideration.

Qualitative research encompasses various methods structured specifically to address qualitative data. “Qualitative research, as a set of interpretive activities, privileges no single methodological practice over another...nor does qualitative research have a distinct set of methods or practices that are entirely its own” (Denzin and Lincoln, 2000:6). Although there are no distinct methods, a qualitative approach to research design typically uses narratives, phenomenologies, ethnographies, grounded theory studies and case studies (Creswell, 2003:18). The methods used in qualitative study provide the framework for forming generalizations or theories. “Qualitative researchers seek a better understanding of complex situations. Their work is often exploratory in nature, and they may use their observations to build theory from the ground up” (Leedy and Ormond, 2001:102). Figure 14 demonstrates the inductive logic flow in qualitative research.

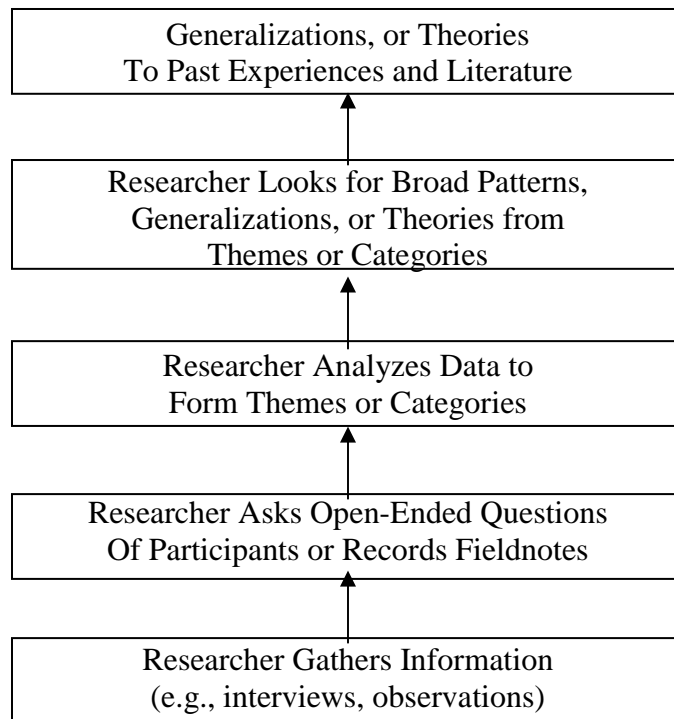


Figure 14. Inductive Logic of Research in Qualitative Study (Creswell, 2003:132)

Strategy of Inquiry

Selection of the strategy of inquiry “reflects a series of major decisions made by the researcher in an attempt to ascertain the best approach to the research questions posed...” (Marshall and Rossman, 1989:76). Yin, 2003, posits there are three primary conditions which affect strategy selection: the type of research question posed, the extent of control an investigator has over actual events, and the degree of focus on contemporary or historical events. Table 3 demonstrates Yin’s comparison of conditions important to research strategy selection.

Table 3. Conditions Relevant to Strategy Selection (Adopted from Yin, 2003:5).

Strategy	Form of Research Question	Requires Control of Events?	Focuses on Contemporary Events?
Experiment	how, why?	Yes	Yes
Survey	who, what, where, how many, how much?	No	Yes
Archival analysis	who, what, where, how many, how much?	No	Yes/No
History	how, why?	No	No
Case Study	how, why?	No	Yes

Creswell (2003) further clarifies this decision for the researcher through examples which demonstrate the purposes of each strategy. “For example, researchers might study individuals (narrative, phenomenology); explore processes, activities, and events (case study, grounded theory); or learn about broad culture-sharing behavior of individuals or groups (ethnography)” (Creswell, 2003:183). According to Yin and Creswell, this research would be best accomplished through a case study strategy.

Case Study Definition

The case study strategy provides a structured method for investigating a situation or series of events. “The case study is a research strategy which focuses on understanding the dynamics present within single settings” (Eisenhardt, 1989:534). “The case method lends itself to early, exploratory investigations where the variables are still unknown and the phenomenon not at all understood” (Meredith, 1998:444). Yin (2003)

further explains that case studies are used to explain “how” and “why” a phenomenon occurs. For example, “...if you wanted to know how a community successfully overcame the negative impact of the closing of its largest employer-a military base-you would be less likely to rely on a survey or an examination of archival records and might be better off doing a history or a case study” (Yin, 2003:6).

Case Study Application

The case study method has been used in Operations Management and Meredith (1998) argued more case research should be conducted in the field because new discovery seems to be limited by the traditional quantitative (rational) methods alone. “We also find that the objectivity provided by quantification in the rationalist methods can be a hindrance in the attempt to build theory because a qualitative understanding of the quantified factors is still required for theories to be accepted by others in, and outside, the field” (Meredith, 1998:442). Meredith continues the argument for qualitative study and states combining traditional rational methodologies with qualitative analyses provides greater potential for strengthening theories than using either method alone. The purposes of case studies can also vary. “Case studies can be conducted and written with many different motives, including the simple presentation of individual cases or the desire to arrive at broad generalizations based on case study evidence” (Yin, 2003:15).

“The case/field focus on understanding is preferable for new theory development in operations management because eventually, the explanation of quantitative findings and the construction of theory based on those findings will ultimately have to be based on qualitative understanding” (Meredith, 1998:453). Case studies are useful for selective testing of existing theories in particular situations or circumstances, when existing theory

must be extended to include new factors, or for situations that require a deeper understanding of what is happening (Meredith, 1998).

Types of Case Studies

Case studies can consist of either single or multiple cases, and use either an embedded or holistic approach of analysis (Yin, 2003, Stake, 2000, Eisenhardt 1989). An important part of the case study as a method is the determination during the research design of what constitutes a case. A case can be a single individual or "...the case also can be some event or entity that is less well defined than a single individual. Case studies have been done about decisions, programs, the implementation process, and organizational change" (Yin, 2003:23). "But the more the object of study is a specific, unique, bounded system, the greater the usefulness..." (Stake, 2000:436). Stake explains three types of case study: intrinsic, instrumental, and collective (2000:437). A case study is intrinsic if it is the primary concern of the researcher, instrumental if it provides support for some other phenomena the researcher is concerned with, and collective if multiple cases are used in an instrumental study. According to Stake, this research is a collective case study design; however, the author of this research interprets collective case study and multiple case study to be the same.

Grounded Theory Definition

Grounded theory provides a structured method of analyzing data extracted through case study research. "Essentially, grounded theory methods consist of systematic inductive guidelines for collecting and analyzing data to build middle-range theoretical frameworks that explain the collected data. Throughout the research process, grounded theorists develop analytic interpretations of their data to focus further data collection,

which they use in turn to inform and refine their developing theoretical analyses” (Charmaz, 2000:509). Figure 15 provides the strategies used in grounded theory approaches.

1. Simultaneous collection and analysis of data
2. A two-step data coding process
3. Comparative methods
4. Memo writing aimed at the construction of conceptual analysis
5. Sampling to refine the researcher’s emerging theoretical ideas
6. Integration of the theoretical framework

Figure 15. Strategies of Grounded Theory (from Charmaz, 2000)

The grounded theory method for analysis was selected in order to elicit and develop concepts from the case studies chosen for this study.

Grounded Theory Application

Grounded theory was developed by Barney Glaser and Anselm Strauss in 1967 when working on social science studies and documented in a book entitled Discovery of Grounded Theory. Two major schools of thought on grounded theory currently exist and conflict divides current grounded theorists. On one side, Glaser (1992) believes pure grounded theory emerges from unmolested data. On the other side, Strauss and Corbin (1990) developed grounded theory further to address conceptual development through structured data reduction. Strauss’ original partner, Glaser, challenged Strauss and

Corbin in 1992 as he believed their interpretation was not true grounded theory.

Charmaz (2000) supports both sides of the argument and incorporates a “mix” of the “rules” established by the developers of the theory.

Grounded theory methods are not specifically required to produce a theory. The methods can be used “...as flexible, heuristic strategies rather than as formulaic procedures” and provide a set of clear guidelines from which to build explanatory frameworks that specify relationships among concepts” (Charmaz, 2000:510). Grounded theory strategies do not need to be rigid or prescriptive and can be adopted to further interpretive understanding (Charmaz, 2000).

Cases are initially selected to provide as broad a representation of the phenomena of interest as possible. Further data collection is then directed throughout the research according to the concepts which emerge through analysis. As concepts emerge, gaps are often found in the initially gathered data and require targeted selection of additional cases. “We use theoretical sampling to develop our emerging categories and to make them more definitive and useful” (Charmaz, 2000:518). This back-and-forth activity is what grounds the theory or findings while increasing conceptual depth and density (Strauss and Corbin, 1990:111).

According to grounded theory procedures, data is coded in order to define and categorize. “Selective or focused coding uses initial codes that reappear frequently to sort large amounts of data” (Charmaz, 2000:516). Categories ultimately develop out of the coding process which aid the researcher in synthesizing and examining the data. Categories then “...turn description into conceptual analysis by specifying properties

analytically...” (Charmaz, 2000:516) allowing the researcher to build matrices of common phenomena.

Case Selection

In qualitative methods, case study selection has various purposes; however, the ultimate decision to include a case is guided by the research purpose and data analysis method. “Even for collective case studies, selection by sampling of attributes should not be the highest priority. Balance and variety are important; opportunity to learn is of primary importance” (Stake, 2000:447). Under the grounded theory approach, case selection is a two-phase process. The initial phase consists of gathering as much data as possible in order to discover an unconstrained range of concepts related to the phenomena of interest. Furthermore, in this stage, the lesser the restrictions applied to case selection the better (Strauss and Corbin, 1990). This is a critical departure from the traditional case study method but applicable to the requirements of this study. Traditional case study methods call for the development of a case selection criteria (Yin, 2003, Eisenhardt, 1989) according to an objectively defined strategy at the outset of the research.

The vast amounts of information required to be analyzed in this study required the use of multiple case study methodology. The research plan for accomplishing the multiple-case strategy will be used to gather cases from various sources according to the inclusion definition developed by the author. The case inclusion definition that will be used in this study is purposely broad and non-restrictive as the case selection is to be as inclusive as possible in order to not exclude what may later become needed information.

Figure 16 below shows the case definition that will be used for case study inclusion criteria.

1. Business improvement method used
 - Quality, ABC, CPA, or CRM
2. Why improvement was pursued
3. How improvement philosophy was implemented
4. Cover either a private-sector firm or a public-sector agency

Figure 16. Case Study Inclusion Criteria

As previously stated, the intent of the initial case selection is to be broad and non-restrictive. Additional, more critical evaluation will occur once a number of cases have been obtained. The author established a goal for case selection of 100 cases for this phase of the data collection. Further review will determine if more cases need to be included during the data analysis portion of this study.

In this study, four criteria were established for initial case study selection: 1) Case must represent an application of Quality, ABC, CPA, or CRM, 2) Case must state why application pursued, 3) Case must state how application was implemented, and 4) Case must discuss a commercial sector business or a government organization. Cases will be retrieved from Academic Journals, trade publications, DTIC, consultation firms, industry white papers, industry web sites, and books.

Data Analysis

The data analysis phase of this research will follow, as discussed earlier, a grounded theory approach. This portion of the project will be segmented into five distinct phases: 1) Initial data collection and analysis, 2) Case study summary, 3) Concept Coding, 4) Concept Grouping, and 5) Concept Comparison.

The initial data collection will follow the process previously discussed in the Case Study Selection section of this chapter with the intent of being broad and non-restrictive and a goal of obtaining at least 100 cases. The second phase, Case Summary, will consist of transcribing each case into a spreadsheet in order to provide a catalog of data according to broad categorical headings. Figure 17 demonstrates an example of the Case Summary tool that will be used in this study.

Case ID	Authors	Year Publication	What Used	Public Method	Private	Customer Who Targeted	Why Pursued	How Implemented	Results	Cost
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Figure 17. Case Summary Spreadsheet Example

The next phase, Concept Coding, has two parts. The first part will consist of examining the information recorded on the Case Summary sheet in order to develop a list of subcategories for each main category. For example, under the heading “Why Pursued” in the Case Summary, entries such as 1) “To increase profit”, 2) “Increase customer loyalty”, 3) “Enable targeted marketing”, and 4) “Decrease costs” may be recorded from the original cases. Each of these entries will be further grouped into like categories; entry one and two from the previous example will be grouped into a new subcategory named

“Increase”, entry three will be grouped into a new subcategory named “Enable” and entry four will be classified under a new subcategory of “Decrease”. Next, additional sub-subcategories will be developed to extract similar emerging concepts from the new subcategories. Table 4 is an example of the matrix developed in this phase of the data analysis.

Table 4. Concept Categories

Increase				
Concept	Profit	Customer Service	Cost Visibility	Knowledge Base
Original Data	Customer value	focus on customer	how much/where spent	needed information capture
Original Data	Customer analytic	personalized service	understand costs	customer transactions
Decrease				
Concept	Costs	Computer Systems	Variability	Other
Original Data	reduce costs	Replace legacy systems	standardized answers	Churn
Original Data	lower costs	Merge separate DSS	product defects	Confusion
Enable				
Concept	Service Delivery	Decisions	Improvement	Opportunity
Original Data	deliver better services	Decisions allow	continuous improvement	Identify opportunities
Original Data	customer requirements	analysis of products	improvement	develop costs for bids

The second part of this phase will consist of building a concept matrix from the concept categories. The matrix is similar to the Case Summary sheet; however, the original information transcribed from the case documents is replaced with the applicable

categories, subcategories, and sub-subcategories. Table 5 is an example of the Concept Matrix that will be developed in this part of the third phase of data analysis.

Table 5. Concept Matrix

Case	Public	Private	Why			How							
			Increase	Decrease	Enable	Software		Strategy	Process		Method	First Use	
						Yes	No		New	Improve		Yes	No
001		1	profit	costs	customization	1		customer focus	1		phased		1
002		1		computer systems	growth	1		customer focus	1	1	phased	1	
003		1			contract mgmt	1		knowledge mgmt		1	phased	1	
004		1	customer service		knowledge mgmt	1		customer focus		1		1	
005		1	profit		target marketing	1		customer focus	1	1			1

The fourth phase of the data analysis will be a process called concept grouping. In Concept Grouping, the data from the Concept Matrix will be tallied and a new count sheet will be built to record the frequency of occurrence of each categorized concept. Figure 18 is an example of the Concept Grouping product that will be built for this study.

Super Category: **Why**
Subcategory: **Increase**

Sector		cost visibility	customer service	profit	customer retention
Public	Concept Count	6	9		
Private	Concept Count	1	9	9	6

Figure 18. Concept Grouping

The Concept Grouping sheet will enable the last phase of data analysis, Concept Comparison. In the last phase of the data analysis, the author will compare all of the previously uncovered concepts and attempt to elucidate relationships.

It is important to note that in each step of the data analysis, if necessary, the author may have to collect more cases in order to sufficiently examine concept emergence or relationships. The grounded theory methodology calls this re-sampling “theoretical sampling” because the author will purposefully look for cases which demonstrate the particular concept.

Validity and Reliability

Trade offs between methods exist. Quantitative methods provide precise measurement whereas qualitative methods are more subjective and based on researcher interpretation. “The reliability, internal validity, and measurement precision available with rationalist approaches can only be obtained at the expense of the contextual and temporal richness that case and field studies offer. The explanatory power of rationalism is obtained by sacrificing the understanding gained through interpretivism” (Meredith, 1998:452). In Operations Management, studies traditionally focus on proving theory and are quantitative in nature. “That is why many scholars of research tend to believe that the rationalist methods are most appropriate for testing or verifying existing theory while the interpretive methods, such as case studies, are best for generating or extending theory” (Meredith, 1998:445).

The case study is used for a specific purpose of uncovering hidden meaning or discovering new relationships and statistical power derived from sample size is generally not sought as a result. “In a case study, we deal with only relational inference because

the case is not intended to represent a sample from a population” (Meredith, 1998:447).

Validity and reliability are still required in case study research, as with any research, “But our intent in the case study is not to measure variables in the sample and statistically infer relationships because we can directly observe the processes and use logic to deduce or infer relationships” (Meredith, 1998:447).

Rigor in case study research is obtained similar to rational, quantitative methods. Meredith provides the following table demonstrating these similarities.

Table 6. Methods to Meet the Requirements for Rigor (Meredith, 1998:448).

Methods to meet the requirements for rigor				
	Controlled observation	Controlled deduction	Replicability	Generalizability
Rationalism	Laboratory or statistics	Mathematics	Results	Assumptive
Case	Natural	Logic	Theory	Theoretic

“A difficulty researchers conducting case studies in operations management often face is the common misperception that case research is not ‘rigorous’ because many of the variables may not be mathematically quantified and the independent variables cannot be manipulated at will” (Meredith, 1998:448). Yin (2003) argues the case study method is just as rigorous as the scientific method; however, it is much harder to quantify and measure. In confronting the arguments purporting case study results can not be generalized Yin states “...cases studies, like experiments, are generalizable to theoretical propositions and not to populations or universes. In this sense, the case study, like the experiment, does not represent a “sample,” and in doing a case study, your goal will be to expand and generalize theories (analytic generalization) and not to enumerate frequencies (statistical generalization)” (Yin, 2003:10). “While there are no concise measures such as

correlation coefficients or F values, nonetheless thorough reporting of information should give confidence that the theory is valid” (Eisenhardt, 1989:548).

Other authors find applying the quantitative term of rigor to qualitative studies is not appropriate. “We challenge this assumption and suggest that these processes have little to do with the actual attainment of reliability and validity. Contrary to current practices, rigor does not rely on special procedures external to the research process itself” (Morse, Barret, Mayan, Olson, & Spiers,2002:6). “Moreover, we suggest that the terms reliability and validity remain pertinent in qualitative inquiry and should be maintained. We are concerned that introducing parallel terminology and criteria marginalizes qualitative inquiry from mainstream science and scientific legitimacy” (Morse et. al, 2002:8).

The argument continues and Morse et al. (2002) posit the analysis is self correcting if the principles of qualitative inquiry are followed. Due to the nature of qualitative designs, the research is iterative as opposed to linear, “...so that a good qualitative researcher moves back and forth between design and implementation to ensure congruence among question formulation, literature, recruitment, data collection strategies, and analysis” (Morse et. al, 2002:10). Throughout the research process, work of analysis and interpretation are constantly monitored and confirmed. Verification strategies are provided to help the researcher “...identify when to continue, stop or modify the research process in order to achieve reliability and validity and ensure rigor” (Morse et. al, 2002:10). Because of the structured method of inquiry itself, “...verification strategies that ensure both reliability and validity of data are activities such as ensuring methodological coherence, sampling sufficiency, developing a dynamic

relationship between sampling, data collection and analysis, thinking theoretically, and theory development” (Morse et. al, 2002:11). Table 7 provides a more detailed explanation of Morse et al.’s strategies for attaining validity and reliability.

Table 7. Explanation of Ways to Ensure Validity and Reliability

Method	Explanation
Methodological coherence	Ensure congruence between research question and components of the method. Interdependence of qualitative research demands that the question match the method, which matches the data and the analytic procedures.
Sample must be appropriate	Sampling adequacy means sufficient data to account for all aspects of the phenomenon have been obtained. Inclusion of negative cases is essential, ensuring validity by indicating aspects of developing analysis initially less than obvious. By definition, saturating data ensures replication in categories; replication verifies, and ensures comprehension and completeness.
Collecting and analyzing data concurrently	Forms mutual interaction between what is known and what one needs to know. Pacing and iterative interaction between data and analysis is the essence of attaining reliability and validity.
Thinking theoretically	Ideas emerging from data are reconfirmed in new data; this gives rise to new ideas that, in turn, must be verified in data already collected. Theoretical thinking requires macro-micro perspectives.
Theory development	Move with deliberation between micro perspective of data and macro conceptual/theoretical understanding. Theory is developed through two mechanisms: (1) as an outcome of the research process, rather than being adopted as a framework to move the analysis along; (2) as a template for comparison and further development of the theory.

“Together, all of these verification strategies incrementally and interactively contribute to and build reliability and validity, thus ensuring rigor. Thus, the rigor of qualitative

inquiry should thus be beyond question, beyond challenge, and provide pragmatic scientific evidence that must be integrated into our developing knowledge base” (Morse et. al, 2002:13).

The most difficult requirement, generalizability, is also known as ‘external validity’ and is just a difficult in quantitative methods. Yin provides a definition of generalizability as “...the domain to which a study’s findings or presumed causal relationships can be generalized” (2003:34). Meredith did not uncover a particular definition which could be applied to both the rational and case study methods and therefore termed “...the former ‘assumptive generalizability’ and the latter ‘theoretic generalizability’”. Assumptive generalizability represents those rationalist studies, especially descriptive and normative models such as econometric analyses, optimization studies, and simulations, where the assumptions precisely identify the environment parameters and variables being studied” (1998:449). According to Meredith, theoretic generalizability represents interpretivist studies like case research and field research, “...where the theory itself indicates that it would be applicable in a particular situation. That is, the parameters and variables in the theory give an indication as to its range of generalizability” (1998:450).

Due to the broad scope of this research project and the inductive case study grounded theory strategies to be employed, according to the various authors reviewed, if the methodology is sufficiently adhered to, this research will demonstrate both validity and reliability.

Summary and Conclusion

This chapter established the methodological framework in which this research will be accomplished. The goal of this research is to uncover principles of how public-sector entities implement customer-focused business practice improvements compared to private-sector firms implement customer-focused business practice improvements and therefore requires a broad and holistic approach in design. Evidence was provided which supports the selection of the inductive, multiple case study grounded theory design used to achieve the research goal. The next chapter will provide the analysis and results of this research.

IV. Analysis and Results

Chapter Overview

The previous chapter established the methodological framework in which this research was accomplished. The goal of this research was to uncover how public-sector entities compare to private-sector firms when implementing customer-focused business practice improvements. A broad and holistic approach was required in the research design for this study. Evidence was provided which supported the selection of the inductive, multiple case study grounded theory design used to achieve the research goal. This chapter will provide a narrative description of the data analysis process and the results of the research.

Each of the five investigative questions were answered during the course of this research and together provided the answer to the overarching research question. Investigative question one was answered through the literature review and investigative question three was answered during the initial data collection phase of the analysis. Investigative questions two, four, and five were answered through the data analysis. The results of investigative question one are presented first and a discussion of the data collection process and analysis follows.

Investigative Question One

The first investigative question, “What are the recent customer-focused business practices used to improve operations?” was answered through the literature review. During the review, the author found there have been four major customer-focused

business practices for improvement developed and used over the past three decades: 1) Quality, 2) Activity-Based Costing (ABC), 3) Customer Profitability Analysis (CPA), and 4) Customer Relationship Management (CRM).

Quality is a philosophy which leads to specific management techniques in order to achieve improvements throughout an organization. Beginning in the 1950's, Dr. W. Edwards Deming and Dr. Joseph Juran taught Japanese corporations how to use statistical process control and how to be quality oriented. Their teachings spurred an industrial revolution in Japan, enabled Japan-based businesses to compete head-to-head with American corporations, and forced American businesses to seek improvement. According to the literature, the idea of quality came to America in the early 1970s.

Activity-Based Costing (ABC) developed due to increased competition in the private sector. Private-sector firms began looking to other areas for improvement as competition was determined less by labor and machine efficiency than in the past. Managers found ABC to be a way of providing more accurate cost information than traditional accounting processes provided. Costs, under the ABC methodology, are assigned to objects based on the amount of resources the objects consume. This new way of tracking costs provided managers a clearer picture about the costs of processes, products, and customers. According to Kaplan and Cooper (1998), ABC systems emerged in the mid-1980s to meet this need for accurate cost information.

Customer Profitability Analysis (CPA) was the next business practice used to seek out improvement. The paradigm shift from a product-cost focus to a customer-cost focus was enabled by the use of ABC. The main idea of CPA is to analyze customer costs and revenues and determine which customers are profitable, which customers are

not profitable, and why. Customers are then ranked by profit contribution, customer profit profiles are established, and analyses to determine why unprofitable relationships exist are conducted. Unprofitable customers are not necessarily arbitrarily dropped from the firm's list of clients. Firms have learned how to transform unprofitable customers into profitable ones through discriminatory pricing, service level or ordering arrangements, and payment terms. Firms use CPA to establish the link between customers and costs.

The last business practice studied in this research was Customer Relationship Management (CRM). The intense customer level focus used in CPA grew into the concept of CRM. The analyses of unprofitable customers led to the one-to-one marketing strategy used in CRM. In one-to-one marketing, firms market their products or services to their customers one at a time. This process in CRM has four objectives: gain customer, sell to customer, provide item sold to customer, and provide service to the customer after the sale. Firms attempt to optimize profit through each of the four CRM objectives. The advent of information technologies such as data warehousing and data mining have led to the capabilities firms needed to fully reap the benefits of CRM. The "personal" relationship in CRM is the unit of analysis and once the customer level relationship is established, data from transactions is collected and analyzed.

It was discovered through the literature review that these methods incrementally evolved and each philosophy builds on the previously developed method. It was also discovered that ABC, CPA, and CRM developed over a rather close interval; CPA and CRM appear to have evolved especially close because CRM is used to analyze the results

of CPA. The current strategies of CRM now include CPA as a step in the process. In summary, the answer to the first investigative question is Quality, ABC, CPA, and CRM.

Data Analysis

The data analysis phase of this research followed a grounded theory approach. The analysis was accomplished according to the plan presented in the previous chapter and was divided into five distinct phases: 1) Initial data collection and analysis, 2) Case study summary, 3) Concept Coding, 4) Concept Grouping, and 5) Concept Comparison.

The first phase, initial data collection, maintained a broad and non-restrictive approach and cases were selected according to the previously defined Case Selection Criteria. Cases were sought which discussed implementations of the business improvement techniques Quality, ABC, CPA, and CRM. These methods or philosophies were determined during the literature review to be the major techniques used over the past three decades. To be included in this first phase of data collection, according to the case selection criteria established by the author earlier in the study, the cases also had to explain why the implementation was initiated, how the implementation was accomplished, and discuss either a private-sector firm or public-sector government agency. The original goal of obtaining at least 100 cases was exceeded as a total of 138 cases were initially selected as meeting the criteria.

The second phase of analysis, Case Summary, consisted of transcribing the relevant data from each case into a spreadsheet which provided a catalog of data according to sixteen broad categorical headings. The headings were subjectively determined during the transcription of the case study data. Some headings were used to simply organize the cases for later cross reference if needed while other categories

surfaced during the logging of the data. The categories used for this phase of analysis were Case Id, Authors, Publication, Year Used, What Method, Public, Private, Who, Industry, Customer Targeted, Why Pursued, How Implemented, Other, First Use, Results, and Cost. The complete Case Summary sheet developed and used in this study is attached at the end of this research as Appendix A. Table 8 demonstrates an excerpt from the Case Summary sheet.

Table 8. Excerpt of Case Summary Sheet

Case ID	Authors	Publication	Year Used	What Method	Pub	Pri	Who	Industry	Customer Targeted	Why Pursued
001	Zaino, J. & Marlin, S.	Information Week	2001	CRM	1		Fleet Boston Financial	Banking	B2B	Help relationship managers better drive corporate customer value, segmenting clients into categories ranging from high-value to be retained to lower-tier where goal was reduce costs
002	Schmerken, I.	Wall Street and Technology	1999	CRM	1		Quick & Reilly	Brokerage	Retail	Part of Y2K project to replace legacy systems
003	Schmerken, I.	Wall Street and Technology	2003	CRM	1		Mellon Financial Corp	Investment	Retail	Sales force / contract management
004	Bearing Point (formerly KPMG consulting)	White Paper	2003	CRM	1		various	Aerospace and Defense	Retail	Focus on customer touch points: service, support, business intelligence, sales, marketing; streamline customer data

During the case summary phase, more than half of the original selections were excluded because they did not have enough information to be of use. There were 60 cases included to be examined during this research with 19 from the public sector and 41 from the private sector. Table 9 represents the business practice saturation of the studies included as the data set in this research. During this phase, the author had to conduct a

theoretical sampling in search of more Quality implementations because only three cases from the original collection were included. It is important to note that although only one case of ABC was included for the private sector, strategies of ABC are utilized in CRM. Additionally, CPA and CRM were combined because the philosophies are very closely related and CPA strategies are now actually incorporated into applications of CRM.

Table 9. Business Practice Coverage

Sector	Improvement Method			Total
	Quality	ABC	CPA/CRM	
Public	8	7	4	19
Private	4	1	36	41
Total	12	8	40	60

The private sector cases included in this study represented a variety of industries including banking, manufacturing, entertainment, communications, and retailing while the public sector cases included healthcare, defense, government services, and education.

Investigative Question Three

The third investigative question, “Which of the recent customer-focused business practices determined from the answer to investigative question one have been implemented by public-sector agencies?” was answered during the case selection process of this study. The cases selected from the public sector included government agencies that have utilized the common business practices of Quality, ABC, or CRM.

No evidence was found during the search for cases of any government agency which had used CPA. There were 18 cases which were pertinent to this question, one less than the 19 public sector cases used because one of the public sector cases included was a non-profit healthcare facility. The case was excluded from this question because it

was not a government agency; however, it was included in the overall study because of the organization's non-profit status and use of customer-focused business practices. Table 10 shows the frequency of the improvement methods according to the cases included in this study. The table represents the frequency of occurrence out of the total number of government agency cases included.

Table 10. Government Agency Business Practice Adoption

	Improvement Method			Total
	Quality	ABC	CPA/CRM	
Government Agencies	7	7	4	18

In summary, the answer to investigative question three is government agencies have adopted the recent customer-focused business practices of Quality, ABC, and CRM.

Concept Development

Now that the data had been collected and summarized, the next phase of data analysis, concept coding, could proceed. This phase had two parts. The first part consisted of examining the information recorded on the Case Summary sheet and then establishing a list of subcategories derived for each main category. As discussed earlier, two main, or super categories, were developed at the outset of this study in order to enable the case selection process. This part of the concept coding phase established lower-level subcategories to facilitate the subsequent levels of analysis.

Three subcategories surfaced from the case summaries under the super category "Why": increase, decrease, and enable. These subcategories became evident shortly into the examination of the case summaries and apply to every case studied. In each

occurrence of implementation, organizations desired to increase something such as profit, decrease something like costs, or to enable something to occur such as growth.

The other super category, “How,” proved to be a little harder to further subdivide. Ultimately, five subcategories were established with three of the subcategories also having subcategories (sub-subcategories). In this step, eleven total subcategories were defined. The subcategories established under the super category “How” were software, strategy, process, method, and first use.

The subcategory “software” classified whether the implementation used software or not. Two subcategories, “yes” and “no,” were established under “software” in order to record the proper response. The subcategory “strategy” was established to record the philosophy which guided the implementing organization during business practice implementation. This subcategory typically had responses like “knowledge management” or “customer focus.” The subcategory “process” was established to record whether the implementation led to new processes or improvements of old processes. Two sub-subcategories, “new” and “improve,” were established to classify what happened to the organization’s business processes. The subcategory “method” was established to record the actual implementation method used to execute the business practice implementation. A “phased approach” was the typical response under this subcategory. The last subcategory developed at this point was “first use.” The subcategory “first use” was established to track whether the implementation reported in the case study was the organization’s first attempt at implementation or not. Two sub-subcategories, “yes and no,” were established to record responses under this subcategory.

Figure 19 shows the categories established during this part of the concept coding phase of the data analysis.

Figure 19. Categories Established During Part One of Concept Coding

Why			How							
Increase	Decrease	Enable	Software		Strategy	Process		Method	First Use	
			Yes	No		New	Improve		Yes	No

The specific items of interest within the subcategories “increase,” “decrease,” “enable,” and “strategy” required further categorization.

Concept categories emerged from the case summaries within the subcategories. This phase proved particularly difficult and required interpretive judgments to be made in order to discern what the author of any particular case study intended as a meaning. More specifically, the items of interest were interpreted and classified under a higher concept. For example, under the super category “Why,” subcategory “increase,” phrases transcribed from the case document read “increase customer value” or “increase customer revenue analytics” or, more simply, “increase profit.” Each of these entries was interpreted as referring to the concept “profit” and a concept category of “profit” was established. This process was accomplished for the subcategories of “increase,” “decrease,” “enable,” and “strategy.” Table 11 demonstrates an excerpt from the Concept Categories sheet established during this part of the concept coding process.

Table 11. Concept Categories

Increase				
Concept	Profit	Customer Service	Cost Visibility	Knowledge Base
Original Data	Customer value	focus on customer	how much/where spent	needed information capture
Original Data	Customer analytic	Personalized service	understand costs	customer transactions
Decrease				
Concept	Costs	Computer Systems	Variability	Other
Original Data	reduce costs	Replace legacy systems	standardized answers	Churn
Original Data	lower costs	Merge separate DSS	product defects	Confusion
Enable				
Concept	Service Delivery	Decisions	Improvement	Opportunity
Original Data	deliver better services	Decisions	continuous improvement	Identify opportunities

The second part of this phase consisted of building a concept matrix from the concept categories. The matrix was similar to the Case Summary sheet; however, the original information transcribed from the case documents was replaced with the applicable categories, subcategories, and sub-subcategories. Table 12 is an example of the Concept Matrix that was developed in this part of the third phase of data analysis. The Concept Matrix can be found in its entirety in Appendix B at the end of this study.

Table 12. Concept Matrix

Case	Public		Why		Strategy	How		Method
	Private	Increase	Decrease	Enable		Policy	Process	
						New	Improve	
001	Private	profit	costs		customer focus	1	1	phased
002	Private	loyalty		targeted marketing	knowledge management	1		phased
003	Public	customer satisfaction	costs	service delivery	customer focus		1	phased

The excerpt above shows the tiered arrangement of categories and subcategories. Also shown is the “new” data now used to describe each case included in this research. Under the subcategory “Process,” the sub-subcategories (New, Improve) can be seen and under each sub-subcategory is a recorded response. The number “one” was used in the binary sense and simply recorded a yes response. The author used this method to aid frequency counts that were conducted later in the data analysis.

The fourth phase of the data analysis was a process called concept grouping. In Concept Grouping, the data from the Concept Matrix was tallied and a new count sheet built to record the frequency of occurrence of each categorized concept. Figure 20 is an excerpt from the Concept Grouping sheet that was built for this study.

Figure 20. Concept Grouping

Super Category: **Why**
 Subcategory: **Increase**

Sector					
Public	Concept Count	cost visibility 6	customer service 9		
Private	Concept Count	cost visibility 1	customer service 9	profit 9	customer retention 6

The Concept Grouping excerpt above shows the super category “Why” and lower tier subcategory “Increase” with counts of the category concepts grouped by Public or Private sector. The Concept Grouping sheet enabled the last phase of data analysis, Concept Comparison. In the last phase of the data analysis, all of the previously uncovered concepts and categories were compared. The comparison was private sector versus public sector in order to elucidate sector-related differences and similarities.

In summary, the first four phases of the data analysis focused on collecting and reducing the data. The data used in this research was extracted from case studies which met a broad criterion of inclusion according to a previously established case selection definition. The author began with 138 instances of common business practice implementations and ultimately included 60 cases in the research. The 60 cases were cataloged and summarized. The next phase required the case summaries to be examined for emerging concepts. The concepts which emerged were classified into categories and grouped into a tally sheet to facilitate further analysis which was required to answer investigative questions two, four, and five.

Investigative Question Two

The second investigative question, “What are the common principles of recent customer-focused business practice implementations in private-sector entities?” was answered during the fifth phase of data analysis in this research.

The frequency of occurrence of each concept category was computed within each subcategory. The private sector cases showed a strong tendency to implement improvement techniques in order to increase or enable. The subcategory comparison showed 35 cases exhibited “increase” and 41 cases, every case, specified the improvement method was to enable something. Only 8 cases reported the reason for implementation was to decrease something. Closer examination of the concept categories under each subcategory provided further explanation.

“Profit” and “customer service” were the top two concepts private-sector firms sought to increase through an implementation of an improvement method. Under the subcategory “enable,” private-sector firms sought to enable the concepts “customization” and “targeted marketing” as the top two reasons for implementing a business practice. The subcategory “decrease” did not seem to be important to private-sector firms as only 8 of 41 cases included the category. Table 13 shows the common principles found through this study in reference to why implementations were accomplished in the private sector.

Table 13. Private Sector: Principles “Why” Business Practices Implemented

Super Category	Why			
Subcategory	Increase	count	total	percentage
Concept	Customer Service	9	35	25.7%
Concept	Profit	9	35	25.7%
Concept	Knowledge Base	7	35	20.0%
Concept	Customer Retention	6	35	17.1%
Concept	Other	3	35	8.6%
Concept	Cost Visibility	1	35	2.9%
Subcategory	Decrease			
Concept	Computer Systems	3	8	37.5%
Concept	Variability	2	8	25.0%
Concept	Other	2	8	25.0%
Concept	Costs	1	8	12.5%
Subcategory	Enable			
Concept	Customization	8	41	19.5%
Concept	Target Marketing	7	41	17.1%
Concept	Knowledge Management	6	41	14.6%
Concept	Other	5	41	12.2%
Concept	Opportunity	4	41	9.8%
Concept	Service Delivery	3	41	7.3%
Concept	Improvement	3	41	7.3%
Concept	Growth	3	41	7.3%
Concept	Decisions	2	41	4.9%

Table 13 displays the frequencies of occurrence of concept categories referring to “Why” improvement methods were implemented in the private sector. The “count” column is the raw number of occurrences for the concept while the “total” column represents the number of cases which referenced the subcategory. For example, under the subcategory “Increase,” the concept “customer service” is shown as having a count of 9 and a total of 35. The values indicate 35 of the private-sector cases included in this study referenced “increasing” something as a reason for implementation. Additionally, 9 of those 35 cases specifically referenced customer service as the item of interest which was to be increased. Each of the tables which follow were constructed in the same manner.

The next super category examined was “How” implementations were executed. The frequency of occurrence of each concept category was again computed within each subcategory. The private sector cases showed a strong tendency to include software, create new processes, and use a phased method during implementations of improvement techniques.

The concept frequencies showed 23 of the 25 cases which referenced software included it in the implementation. An even stronger tendency was found in the “process” subcategory where 37 of 41, the total number of private sector cases studied, discussed creating new processes in the implementation of improvement techniques. The subcategory “method” was referenced in 24 cases, and each of those cases specified the implementation was phased. The findings in this subcategory were re-examined and no other implementation method was uncovered in the cases included in this study. It may be that in the 17 cases that neglected to mention a method that full implementation was accomplished in a manner which was not consistent with a phased approach. There was no information available in this subcategory in 2 of 19 cases. The subcategory “strategy” was referenced in every case as well, but there appeared to be a difference of preference as to which concept was used: 19 of 41 referenced a “customer focus” strategy while 13 of 41 referenced a “knowledge management” strategy. Also of note was the subcategory “first use”: 35 of 41 cases were first time users of the improvement method and 6 of 41 cases indicated the implementation was a subsequent attempt. Table 14 shows the common principles found through this study in reference to how implementations were accomplished in the private sector.

Table 14. Private Sector: Principles “How” Business Practices Implemented

Super Category	How			
Subcategory	Software	count	total	percentage
Sub-subcategory	Yes	23	25	92.0%
Sub-subcategory	No	2	25	8.0%
Subcategory	Process			
Sub-subcategory	New	37	41	90.2%
Sub-subcategory	Improve	29	41	70.7%
Subcategory	First Use			
Sub-subcategory	Yes	35	41	85.4%
Sub-subcategory	No	6	41	14.6%
Subcategory	Method of Implementation			
Concept	Phased	24	24	100.0%
Subcategory	Strategy			
Concept	Customer Focus	19	41	46.3%
Concept	Knowledge Management	13	41	31.7%
Concept	Six Sigma	3	41	7.3%
Concept	Other	3	41	7.3%
Concept	Model Activities	1	41	2.4%
Concept	Web Based	1	41	2.4%
Concept	Baldrige Model	1	41	2.4%
Concept	TQM	0	41	0.0%

During the course of the data analysis, the Case Summary sheet heading “Results” was added as a category with two subcategories: “increase” and “decrease.” Two concepts emerged under the subcategories. It was found that results were reported in terms of the concepts “money” or “efficiency.”

Upon analysis of the “results” category, the subcategory “increase” was the most referenced as it was discovered in 25 cases while the subcategory “decrease” was found in 9 cases. The concept “efficiency” was found to be the most common method used to report results in the cases which included information about results of the implementation of the improvement technique. There were 23 of 25 cases in the subcategory “increase” and 9 of 9 cases in the subcategory “decrease” which referenced the concept “efficiency.” Table 15 displays the concept categories related to results which were reported by private-sector organizations after the implementation of an improvement technique.

Table 15. Private Sector: Principles “Results” Reported After Implementation

Super Category	Results			
Subcategory	Increase	count	total	percentage
Concept	Efficiency	23	25	92.0%
Concept	Money	14	25	56.0%
Subcategory	Decrease			
Concept	Efficiency (time, inventory)	9	9	100.0%
Concept	Money (costs)	1	9	11.1%

The analysis of this investigative question led to the discovery of the common principles discussed in this section which were found in private-sector implementations of customer-focused sector business practices. Figure 21 provides a summary of the common principles found in implementations of customer-focused business practice improvement techniques in the private sector.

Figure 21. Summary of Common Principles in Private-Sector Implementations

Why:	Increase: profit and customer service
	Enable: customization, targeted marketing, and knowledge management
How:	Software: yes
	Method: phased
	Processes: new
	First Use: yes
	Strategy: customer focus and knowledge management
Reported Results:	Increase: efficiency
	Decrease: efficiency

Investigative Question Four

The fourth investigative question, “What are the common principles of recent customer-focused business practice implementations in public-sector entities?” was

answered during the fifth phase of the data analysis in this research. The approach used to answer this question was the same as the process used to answer the second investigative question.

The public sector cases showed a strong tendency to implement improvement techniques in order to increase or enable. The subcategory comparison showed 15 cases exhibited “increase” and 19 cases, every case, specified the improvement method was to enable something. Only 8 cases reported the reason for implementation was to decrease something. Closer examination of the concept categories under each subcategory provided further explanation.

Customer service and cost visibility were the top two concepts public-sector firms sought to increase through an implementation of an improvement method. Under the subcategory “enable,” public-sector organizations sought to enable the concept “service delivery” was the top reason for implementing a business practice. The subcategory “decrease” did seem to be important to public-sector firms but not overly important as only 8 cases, less than 50%, included the category. Five of the cases which included the subcategory “decrease” sought to decrease the concept “costs.” Table 16 shows the common principles found through this study in reference to why implementations were accomplished in the public sector.

Table 16. Public Sector: Principles “Why” Business Practices Implemented

Super Category	Why	count	total	percentage
Subcategory	Increase			
Concept	Customer Service	9	15	60.0%
Concept	Cost Visibility	6	15	40.0%
Subcategory	Decrease			
Concept	Costs	5	8	62.5%
Concept	Other	3	8	37.5%
Subcategory	Enable			
Concept	Service Delivery	10	19	52.6%
Concept	Decisions	4	19	21.1%
Concept	Improvement	4	19	21.1%
Concept	Opportunity	1	19	5.3%

Table 16 displays the frequencies of occurrence of concept categories referring to “Why” improvement methods were implemented in the public sector. The “count” column is the raw number of occurrences for the concept and the “total” column represents the number of cases which referenced the subcategory. For example, under the subcategory “Increase,” the concept “customer service” is shown as having a count of 9 and a total of 15. The values indicate 15 of the public-sector cases included in this study referenced “increasing” something as a reason for implementing an improvement technique. Additionally, 9 of those 15 cases specifically referenced customer service as the item of interest which was to be increased. Each of the tables which follow were constructed in the same manner.

The next super category examined was “How” implementations were executed. The frequency of occurrence of each concept category was again computed within each subcategory. The public-sector cases showed a slight tendency to include software, a

strong tendency to improve existing processes, and a 100% use of a phased method during implementations of improvement techniques.

The concept frequencies showed 8 of the 14 cases which referenced software included it in the implementation. A stronger tendency was found in the process subcategory where 15 of 16 cases discussed improving existing processes in the implementation of improvement techniques. The subcategory “method” was referenced in 17 of 19 cases and each of those cases specified the implementation was phased. In parallel to the results of this concept in the private sector cases, no other implementation method was reported in the cases examined. There was no information available in this subcategory in 2 of 19 cases. The subcategory “strategy” was referenced in every case as well, but there appeared to be a difference of preference as to which concept was used: 19 of 41 referenced a customer focus strategy while 13 of 41 referenced a knowledge management strategy. Also of note was the subcategory “first use”: 17 of 19 cases were first time users of the improvement method and 2 of 19 cases represented the effort was a subsequent attempt. Table 17 shows the common principles found through this study in reference to how implementations were accomplished in the public sector.

Table 17. Public Sector: Principles “How” Business Practices Implemented

Super Category	How	count	total	percentage
Subcategory	Software			
Concept	Yes	8	14	57.1%
Concept	No	6	14	42.9%
Subcategory	Process			
Concept	Improve	15	16	93.8%
Concept	New	12	16	75.0%
Subcategory	First Use			
Concept	Yes	17	19	89.5%
Concept	No	2	19	10.5%
Subcategory	Method of Implementation			
Concept	Phased	17	17	100.0%
Subcategory	Strategy			
Concept	Model Activities	7	19	36.8%
Concept	Customer Focus	5	19	26.3%
Concept	TQM	3	19	15.8%
Concept	Other	2	19	10.5%
Concept	Web Based	1	19	5.3%
Concept	Six Sigma	1	19	5.3%
Concept	Baldrige Model	1	19	5.3%

It was found that results of implementations were reported in terms of the concepts “money” or “efficiency.” Upon analysis of the “results” super category, the subcategory “increase” was referenced in 9 cases, the subcategory “decrease” was referenced in 9 cases, and both subcategories were referenced in 5 cases.

The concept “efficiency” was found to be the most used method of reporting results under the subcategory “increase” and was found in 8 of 9 cases. The most used method of reporting results classified in the subcategory “decrease” was the concept “money.” This concept indicated a cost savings was reported in 6 of the 9 cases which referenced the “decrease” subcategory. Table 18 displays the concept categories related to results which were reported by public-sector agencies after the implementation of an improvement technique.

Table 18. Public Sector: Principles “Results” Reported After Implementation

Super Category	Results			
Subcategory	Increase	count	total	percentage
Concept	Efficiency	8	9	88.9%
Concept	Money	1	9	11.1%
Subcategory	Decrease			
Concept	Money (costs)	6	9	66.7%
Concept	Efficiency (time, inventory)	5	9	55.6%

The analysis of this investigative question led to the discovery of the common principles discussed in this section which were found in public-sector agency implementations of customer-focused sector business practices. Figure 22 provides a summary of the common principles found in implementations of customer-focused business practice improvement techniques in the public sector.

Figure 22. Summary of Common Principles in Public-Sector Implementations

Why:	Increase: customer service and cost visibility
	Enable: service delivery
How:	Software: half the time
	Method: phased
	Processes: improved
	First Use: yes
	Strategy: model activities and follow private sector models
Reported Results:	Increase: efficiency
	Decrease: costs and efficiency

Investigative Question Five

The last investigative question, “Do the common principles of customer-focused implementations match principles of implementations in public-sector entities?” was answered during the fifth phase of the data analysis in this research. This question required a comparison of the common concepts of implementation which emerged from the analysis of private-sector implementations in investigative question two and public-sector implementations in investigative question four. The analysis for this question was accomplished in three parts: why, how, and results.

The first area compared was the category concepts under the super category “Why.” It was found during analysis for investigative question two that private-sector firms implement improvement techniques in order to increase or enable. Common concepts emerged within these subcategories.

“Profit” and “customer service” were the top two concepts private-sector firms sought to increase through an implementation of an improvement method. Under the subcategory “enable,” private-sector firms sought to enable the concepts “customization” and “targeted marketing” as the top two reasons for implementing a business practice. The subcategory “decrease” did not seem to be important to private-sector firms as only 8 of 41 cases included the category.

During the analysis for investigative question four, it was found that public-sector agencies implement customer-focused business practices in order to increase or enable. Customer service and cost visibility were the top two concepts public-sector firms sought to increase through an implementation of an improvement method. Under the subcategory “enable,” public-sector organizations sought to enable the concept “service

delivery” was the top reason for implementing a business practice. The subcategory “decrease” did seem to be important to public-sector firms but not overly important as only 8 cases, less than 50%, included the category. Five of the cases which included the subcategory “decrease” sought to decrease the concept “costs.” Table 19 shows the concept-category comparison of why private and public-sector organizations pursued implementation of recent customer-focused business practice improvement techniques.

Table 19. Why Common Business Practices Implemented

Super Category	Why	Public			Private		
Subcategory		count	total	percentage	count	total	percentage
Concept	Increase						
Concept	Customer Service	9	15	60.0%	9	35	25.7%
Concept	Cost Visibility	6	15	40.0%	1	35	2.9%
Concept	Profit	0	15	0.0%	9	35	25.7%
Concept	Customer Retention	0	15	0.0%	6	35	17.1%
Subcategory	Decrease						
Concept	Costs	5	8	62.5%	1	8	12.5%
Concept	Other	3	8	37.5%	2	8	25.0%
Concept	Computer Systems	0	8	0.0%	3	8	37.5%
Subcategory	Enable						
Concept	Service Delivery	10	19	52.6%	3	41	7.3%
Concept	Decisions	4	19	21.1%	2	41	4.9%
Concept	Improvement	4	19	21.1%	3	41	7.3%
Concept	Knowledge Management	0	19	0.0%	6	41	14.6%
Concept	Customization	0	19	0.0%	8	41	19.5%
Concept	Target Marketing	0	19	0.0%	7	41	17.1%

Public-sector agencies implemented improvement methods to increase customer service, decrease costs, and enable service delivery while the private sector implemented to increase profits or customer service, combine computer systems and enable customization and targeted marketing.

The next area compared was the category concepts under the super category “How.” It was found during analysis for investigative question two that private-sector firms’ cases showed a strong tendency to include software, create new processes, and use a phased method during implementations of improvement techniques.

The concept frequencies showed 23 of the 25 cases which referenced software included it in the implementation. An even stronger tendency was found in the “process” subcategory where 37 of 41, the total number of private sector cases studied, discussed creating new processes in the implementation of improvement techniques. The subcategory “method” was referenced in 24 cases, and each of those cases specified the implementation was phased. The subcategory “strategy” was referenced in every case as well, but there appeared to be a difference of preference as to which concept was used: 19 of 41 referenced a “customer focus” strategy while 13 of 41 referenced a “knowledge management” strategy. Also of note was the subcategory “first use”: 35 of 41 cases were first time users of the improvement method and 6 of 41 cases indicated the implementation was a subsequent attempt.

During the analysis for investigative question four, it was found that public-sector agency implementations of customer-focused business practices showed a slight tendency to include software, a strong tendency to improve existing processes, and a 100% use of a phased method during implementation execution.

The concept frequencies showed 8 of the 14 cases which referenced software included it in the implementation. A stronger tendency was found in the process subcategory where 15 of 16 cases discussed improving existing processes in the implementation of improvement techniques. The subcategory “method” was referenced in 17 of 19 cases and each of those cases specified the implementation was phased. The subcategory “strategy” was referenced in every case as well, but there appeared to be a difference of preference as to which concept was used: 19 of 41 referenced a customer focus strategy while 13 of 41 referenced a knowledge management strategy. Also of note

was the subcategory “first use”: 17 of 19 cases were first time users of the improvement method and 2 of 19 cases represented the effort was a subsequent attempt. Table 20 shows the concept-category comparison of how private and public-sector organizations executed implementation of recent customer-focused business practice improvement techniques.

Table 20. How Common Business Practices Implemented

Super Category	How	Public			Private		
Subcategory		count	total	percentage	count	total	percentage
Concept	Software						
Concept	Yes	8	14	57.1%	23	25	92.0%
Concept	No	6	14	42.9%	2	25	8.0%
Subcategory	Process						
Concept	Improve	15	16	93.8%	29	41	70.7%
Concept	New	12	16	75.0%	37	41	90.2%
Subcategory	First Use						
Concept	Yes	17	19	89.5%	35	41	85.4%
Concept	No	2	19	10.5%	6	41	14.6%
Subcategory	Method of Implementation						
Concept	Phased	17	17	100.0%	24	24	100.0%
Subcategory	Strategy						
Concept	Model Activities	7	19	36.8%	1	41	2.4%
Concept	Customer Focus	5	19	26.3%	19	41	46.3%
Concept	Knowledge Management	0	19	0.0%	13	41	31.7%

The public sector usually used the improvement method for the first time and pursued a phased implementation method just like the private sector; however, public sector implementations were less likely to use software and tended to improve current processes while the private sector almost always used software and created new processes. Strategies differed markedly. The public sector used the strategy of modeling activities and applying improvement method models while the private sector utilized a strategy of customer focus or knowledge management.

The last area compared was the category concepts under the super category “Results.” It was found during analysis for investigative question two that in private-sector firms, the subcategory “increase” was the most referenced as it was discovered in 25 cases while the subcategory “decrease” was found in 9 cases. The concept “efficiency” was found to be the most common method used to report results by private-sector firms. There were 23 of 25 cases in the subcategory “increase” and 9 of 9 cases in the subcategory “decrease” which referenced the concept “efficiency.”

During the analysis for investigative question four, it was found upon analysis of the “results” super category for public-sector agencies that the subcategory “increase” was referenced in 9 cases, the subcategory “decrease” was referenced in 9 cases, and both subcategories were referenced in 5 cases.

The concept “efficiency” was found to be the most used method of reporting results under the subcategory “increase” and was found in 8 of 9 cases. The most used method of reporting results classified in the subcategory “decrease” was the concept “money.” This concept indicated a cost savings was reported by public-sector firms in 6 of the 9 cases which referenced the “decrease” subcategory. Table 21 shows the concept-category comparison of results-reporting methods used by private and public-sector organizations which executed implementation of recent customer-focused business practice improvement techniques.

Table 21. Reported Results After Common Business Practices Implemented

Super Category	Results	Public			Private		
Subcategory		count	total	percentage	count	total	percentage
Concept	Increase Efficiency	8	9	88.9%	23	25	92.0%
Concept	Money	1	9	11.1%	14	25	56.0%
Subcategory	Decrease						
Concept	Money (costs)	6	9	66.7%	1	9	11.1%
Concept	Efficiency (time, inventory)	5	9	55.6%	9	9	100.0%

Reporting of results slightly differed in that public sector reported cost savings and efficiency gains while the private sector almost exclusively reported efficiency gains.

Research Findings

This research sought to determine how common generalizable principles of private-sector customer-focused business practice implementations compared to public-sector agency implementations. The analysis results show that public sector implementation is similar to the private sector, but differences do exist.

Analysis of the private-sector cases included in this research showed improvement methods are implemented with a profit-based motive to increase customer service, profit or customer retention; combine computer systems; and enable knowledge management, product or service customization or targeted marketing. It was normally the first try for use of the program and it was implemented with software in a phased approach with a customer focus or knowledge management strategy. The implementation led to creation of new processes and the results of the implementation were almost exclusively reported as efficiency savings.

Analysis of the public-sector cases included in this research showed improvement methods were implemented to increase customer service or cost visibility; decrease costs; and enable service delivery, decision making, or improvement. It was normally the first time for the program and it was implemented with or without software in a phased approach with a strategy of modeling activities or a customer focus. The implementation led to the improvement of processes and the results of the implementation were reported as efficiency or cost savings.

It is intuitive that the private sector would adopt improvement methods to increase profit-that is their reason for existence-and it should not be a surprise that public-sector agencies implement to cut costs and increase service. The differences highlighted by the comparison of reported results also are not much surprise as the private sector translates efficiency gains as profit gains and public-sector organizations should be expected to report whether the goals of implementation were achieved. The differences this author believes are of interest are within the comparison of how the improvement methods were implemented.

Summary

This chapter provided a narrative description of the analysis and results of the research. The investigative questions were answered as well as the overall research question. A summary of the findings was also presented. The next chapter will discuss the limitations and findings of this research and provide the author's recommendations for future research brought to light by this study.

V. Discussion

Chapter Overview

The previous chapter provided a narrative description of the analysis and results of the research. The investigative questions were answered as well as the overall research question. A summary of the findings was also presented. This chapter will discuss the findings and limitations of this research, provide managerial significance and the author's recommendations for future research brought to light by this study.

Findings

This research evaluated a variety of documented cases of customer-focused business practice initiatives to discern common principles of implementation within the private and public sectors. The business practices Quality, Activity-Based Costing (ABC), Customer Profitability Analysis (CPA), and Customer Relationship Management (CRM) were found to be the major techniques utilized over the past three decades by improvement-seeking organizations. Cases were collected which documented implementations of these customer-focused business practices in the private and public sectors. The cases were collected from various sources according to a broad-based case selection criterion.

Using grounded theory methodology, the implementations were analyzed for emerging concepts. The concepts were coded and categorized then grouped and tallied in order to establish a framework of customer-focused business practice implementation (See Figure 23).

Private Sector Common Principles

Analysis of the private-sector cases included in this research showed improvement methods are implemented with a profit-based motive to increase customer service, profit or customer retention; combine computer systems; and enable knowledge management, product or service customization or targeted marketing. It was normally the first try for use of the program and it was implemented with software in a phased approach with a customer focus or knowledge management strategy. The implementation led to creation of new processes and the results of the implementation were almost exclusively reported as efficiency savings.

Public Sector Common Principles

Analysis of the public-sector cases included in this research showed improvement methods were implemented to increase customer service or cost visibility; decrease costs; and enable service delivery, decision making, or improvement. It was normally the first time for the program and it was implemented with or without software in a phased approach with a strategy of modeling activities or a customer focus. The implementation led to the improvement of processes and the results of the implementation were reported as efficiency or cost savings.

Figure 23. Common Principles of Implementation

The concepts uncovered were then further analyzed through a comparison of private and public sector implementations. This research revealed similarities and differences between the implementations in the private and public sectors and provides a framework of common generalizable principles for further testing.

Limitations

The scope of this research was limited to evaluating existing case studies of customer-focused business practice implementations in private and public-sector organizations. Due to the focus on existing case studies, the results may be applicable to only the implementations studied. Additionally, as this was a qualitative study, the

researcher was the instrument for data collection and analysis. This introduces the aspect of researcher bias as a limitation. This bias was recognized as a concern during the research design phase of this study and was attempted to be minimized by the methodical grounded theory approach used in this study. Another limitation is in the data used for this study. The data was extracted from case studies documented by other authors and is therefore secondary data. The cases used were not verified for factual integrity and were assumed to be factual representations.

Managerial Significance

The concepts which emerged are of particular interest to government managers seeking improvement in their organization. Managers can use the information discovered in this research to increase their knowledge of a basic conceptual framework in which implementations of customer-focused business practices were conducted.

The analysis revealed that private sector cases showed a strong tendency to include software, create new processes, and use a phased method during implementations of improvement techniques. The public-sector cases showed a slight tendency to include software, a strong tendency to improve existing processes, and a phased method during implementations of improvement techniques. The main difference between the private and public sectors highlighted by the analysis was how processes were affected by the implementation.

While the private sector created new processes, the public sector changed or improved existing processes. The author believed this finding may be of significance in determining the success or failure of improvement method implementation. At this point, the author went back to the original cases to investigate the reported success or failure of

each implementation. Although this research was not aimed at discovery of factors leading to successful implementations, it seemed at this point that at least a cursory look was required.

The author found that some indicator of success or failure could be established 39 of the 41 private-sector cases and 17 of the 19 public-sector cases. (A cautionary note here is the validity of such a conclusion; however, this investigation was performed to seek out a possible relationship, not claim it as fact). In most instances, the judgment was purely subjective; however, there was evidence in each examination to support the ultimate classification.

In the private-sector cases, no failures could be established; 39 of 39 were classified as successful. Of the 39 successful implementations, 37 cases showed new processes were created. In the public-sector cases, 11 were classed as successes and 6 were labeled as failures. Of the 11 successful implementations, 8 showed new processes were created and 11 showed processes were improved. Of the 6 failures in the public-sector cases, there were 3 cases which showed new processes were created and 5 where processes were improved. Is there a relationship here between process strategy and success of implementation? This research can not claim there is or there is not. This question will need to be answered through further research.

The next difference uncovered during the analysis was in the strategy used to approach the implementation. The public sector uses the strategy of modeling activities and applying improvement method models while the private sector utilizes a strategy of customer focus or knowledge management. It may be intuitive that since the private sector creates or first uses the improvement method and the public sector uses what the

private sector developed the strategies would differ. This analysis showed the strategies do differ. The practical value of the results of this study is it provides managers seeking to implement improvement techniques some common concepts which have emerged from other implementations.

This author speculates there exists an "ideal" combination of the concepts uncovered in this research which organizations need to achieve in order to experience a successful implementation. The private sector's competitive environment fosters an expectation that leadership will leverage every resource available to achieve the combination of concepts which lead to success. The public sector, on the other hand, operates in an environment where regulatory requirements restrict leadership's "field-of-play" and therefore public-sector organizations can not achieve the same "ideal" combination of concepts. The private sector's environment leads to risk taking and process creation while the public sector's regulated environment disallows process creation and limits implementations to "safer" process improvement. Customer-focused business initiative implementation success is therefore hampered in the public sector due to prescribed operating requirements which must be adhered to by organization leaders.

Recommendations for Future Research

A few topics for additional research were discovered during the analysis of results in this study. The author's recommendations for further research center around the investigation of the process and strategy differences which surfaced during the course of this research.

1. Are the common concepts of implementation discovered in this research factors in determining the success or failure business practice implementations?

2. Is there a relationship between process creation or improvement and the success of a customer-focused business practice implementation?
3. What effect does the restrictive public-sector environment have on implementation success or failure of overlaying private-sector models?
4. Should the public sector develop unique improvement methods separate from the private sector which are more conducive to the regulatory nature of public-sector organizations?

Research Summary

This research evaluated a variety of documented cases of business practice implementations to discern common principles of implementation within the private and public sectors. It was shown that the main improvement techniques utilized over the past three decades were Quality, ABC, CPA, and CRM. The evolution of these techniques was traced and presented in the literature review. Cases were collected which documented implementation of the improvement techniques in the private and public sectors. The implementations were then analyzed for emerging concepts. The concepts uncovered in the study were further analyzed through a comparison of private and public sector implementations. Managers can use the information found in this research to increase their understanding of how the implementations of the improvement methods were conducted.

Appendix A. Case Summary

Case ID	Authors	Publication	Year Used	What Method	Pub Pri	Who	Industry	Customer Targeted	Why Pursued	How Implemented	Other	First Use	Results	Cost
001	Zaino, J. & Marlin, S.	Information Week	2001	CRM	1	Fleet Boston	Financial Banking	B2B	Help relationship managers better drive corporate customer value, segmenting clients into categories ranging from high-value to be retained to lower-tier where goal was reduce costs	Siebel Systems and MicroStrategy Inc.	System implemented as a tool for existing employees (relationship managers). Learned from previous mistakes; moving slowly in developing and implementing; "CRM is about having strategy then using technology to execute"; seeking incremental victories because boosts confidence and payback can pay for rest of project	No	21% increase in products sold per customer, 14% increase in cross-selling fees	NA
002	Schmerken, I.	Wall Street and Technology	1999	CRM	1	Quick & Reilly	Brokerage	Retail	Part of Y2K project to replace legacy systems	Siebel Systems	System started as upgrade but project changed and firm expanded services; changed from discount broker to full service broker; phased implementation: phase 1 rolled out to employees, phase 2 was establishment of call center; consultants can quickly answer questions; daily transaction-operational aspects of firm moved to call center environment; teams, business process analysis, change mindset to customer focus; used technology to change some processes	Yes	350 call center agents use system, 900 financial consultants use system; new account opening process decreased time from 20 down to 6 minutes	\$4 M
003	Schmerken, I.	Wall Street and Technology	2003	CRM	1	Mellon Financial Corp	Investment	Retail	Sales force / contract management	Onyx	Implementing in small measurable chunks; chose Onyx over Siebel because interface is MS Outlook based and users like it; thought would be a smooth transition; specific ROI sales goals	Yes	to be done early 2004	\$10 M
004	Bearing Point (formerly KPMG consulting)	White Paper	2003	CRM	1	various	Aerospace and Defense	Retail	Focus on customer touch points: service, support, business intelligence, sales, marketing; streamline customer data	various	Automating contract management, pricing, opportunity management	NA	NA	NA

005	Nelson, K.	Bank Systems and Technology	1999 CRM	1	Credit Union of Texas	Banking	Retail	Initially started as marketing tool; has become customer analytic system to measure profitability by product, member, delivery channel, branch	Unica	no predefined payback; purpose changed through implementation	No	Used to build strategic modeling tool to determine effect of rate changes and fees; , measures customer behavior to predict lifetime value	NA
006	Noone, B.M., Kimes, S.E., Renagha n, L.M.	Journal of Revenue and Revenue Pricing	2003 CRM	1	Radisson International	Hotel	Retail	Recognition and personalized service, incentives, customized dialogue	NA	NA	Yes	NA	NA
007	Noone, B.M., Kimes, S.E., Renagha n, L.M.	Journal of Revenue and Revenue Pricing	2003 CRM	1	Wyndham International	Hotel	Retail	Enhance customer experience through customer profiles	NA	NA	Yes	NA	NA
008	Bielski, L.	ABA Banking Journal	1999 CRM	1	Commerce Bank	Banking	Retail	Wanted universal source of standardized answers to customer questions	Lotus Notes	Used to supplement call center employee training; 6 months to implement; used as knowledge management	Yes	Saved \$960 K in staff costs; reduced customer call backs	NA
009	Bielski, L.	ABA Banking Journal	NA CRM	1	Hewlett Packard	Computer	Retail / B2B	Improve customer facing to change the customer's experience	NA	Team, very supportive senior management; learned through trial and error; strategy important; implement slowly	No	NA	NA
010	Zaman, M.	Central Queensland University, Australia	2000 CPA	1	Major Bank in Sydney Australia	Banking	Retail	Market to customers based on profitability	NA	Higher risk customers charged more in order to be profitable	Yes	NA	NA
011	Goldsmith, S.	Harvard Business Review	1993 ABC	1	City of Indianapolis	Municipality	Retail	Needed to know what businesses city was in and how much was being spent; desired to deliver better services at a lower cost	KPMG Consulting	Developed models for determining true cost of activities; trained employees; established new commission composed of nine of the city's "best" business folks with a mandate of finding opportunities to open up city services to competition; mayor initiated; 5 phased approach: scope, cost allocation, cost information, ABC model, training	Yes	Found activities leading to great waste of resources; outsourcing where it made sense; saved 25% repairing streets; saved \$400K yearly on printing; saved \$65M on waste water treatment; projected total \$550M savings	NA
012	Amato-McCoy, D.	Bank Systems and Technology	2002 CRM	1	ATB Financial	Banking	Retail	Needed more information about customers	Seybold	200 seat call center; agents have direct access to customer accounts providing opportunity for gap analysis in products or needs; cross-selling; incremental implementation; technology makes it easier, but people must use it	Yes	NA	NA

013	Amato-McCoy, Bank Systems and Technology	2002 CRM	1	Fifth Third Bank	Banking	Retail	Customers were closing accounts due to poor service; needed focus of customer retention	Harte-Hank	Added function called SOS - save or sell to change focus to customer retention	Yes	Improved customer NA retention 50%, 1% reduction equals \$1M profit
014	Amato-McCoy, Bank Systems and Technology	2002 CRM	1	Kraft Foods Federal Credit Union	Banking	Retail	Increase responsiveness to members and productivity	Siebel Systems	System to combine information from several systems into central database; using Akbia Consulting for implementation management; adapting technology to business processes	Yes	Improve speed of transactions and increase cross-selling; increase revenue and profitability
015	MHS	1997 CRM	1	Hospital Group	Health Care	Retail	Improve profit through targeted marketing	NA	Used as event triggering system; tracked customer communication; 6 locations implemented system; focused on retention and acquisition	Yes	produced 5 to 1 profit/cost ratio; profit \$7M + \$1.4M
016	Swift, R.S.	2002 CRM	1	National Australia Bank	Banking	Retail	Optimize relationships	Internal	Highly analytical system internally developed to generate sales leads and targeted communications; maximizes customer profit opportunity; central knowledge base	Yes	Increased deposits and investments; increased profit by 19.8%
017	Swift, R.S.	2002 CRM	1	PelePhone	Telecommunications	Retail	Increase profit and customer value	NA	NA	Yes	Reduced churn, segmented to provide targeted marketing, reduced complaints, increased sales productivity
018	Swift, R.S.	2002 CRM	1	Federal Express	Delivery	Retail	Capture all customer transactions and requirements	NA	Business intelligence and customer focused analytical techniques	Yes	Exceeds customer expectations and beats competitors to market
019	Swift, R.S.	2002 CRM	1	Continental Airlines	Aerospace and Defense	Retail	Increase knowledge base	NA	Determines customer profitability, aircraft resource utilization, pricing, enhanced marketing, customer satisfaction	Yes	Created new knowledge base DSS
020	Swift, R.S.	2002 CRM	1	Sam's Club	Retailer	Retail	Retain and grow customers	Internal	developed outbound marketing communications; knowing customers	Yes	Increased business NA by billions per year
021	Swift, R.S.	1999 CRM	1	Harrah's Entertainment	Entertainment	Retail	Increase customer loyalty; track customer profits	Internal; SAS Institute; SPSS	Tracks 20 million guests; analyzes customer preferences, predicts, drives marketing campaigns; data warehousing	Yes	20% increase in customer growth in profitability

022	Swift, R.S.	Defying the Limits	2002 CRM	1	3M	Manufacturing	Retail	Merge separate DSS into single system	NA	Allows internal and external managers to analyze over 50,000 products through online web access	Yes	NA	NA
023	KPMG	Case Study	2000 ABC	1	USMC	Defense	Retail	Understand costs of doing business and identify opportunities for reducing costs	NA	Three phase plan; phase 1 built ABC models of processes; phase 2 process improvement; phase 3 outsourcing undesirable activities	Yes	Projected \$4M savings	NA
024	SSA	SSA: Market Measurement Program	1998 CRM	1	Social Security Agency	Government Service	Retail	Needed to develop a coordinated, systematic program of data collection to assist decision making in services and processes	Focus groups, surveys, comment cards	Initially used market research and analysis consultant	Yes	800 service improvement, one-stop service, redesign of documents, quicker resolution of appeals, single point of contact	NA
025	SafeHarbor	Access Washington	1998 CRM	1	State of Washington	State Government	Retail	Deliver self-service support that's accurate, continually updated, and easy to use	SafeHarbor	Mandated by governor; web-based, system tracks customer data; system added to existing capability to provide customer service	Yes	Saved 10,400 labor hours; \$265K yearly	NA
026	Rigby, D.K., Reichheld, F.F., Scheffer, P.	Harvard Business Review	1998 CRM	1	Monster.Com	Web-retailer	Retail	Integrate computer systems to boost efficiency of sales force	NA	System failed first time out; too slow, had to rebuild entire system	Yes	NA	\$1M+
027	Rigby, D.K., Reichheld, F.F., Scheffer, P.	Harvard Business Review	1988e CRM	1	New York Times	Newspaper	Retail	Increase circulation	Researched customer base for what was wanted in the product	Improved distribution network, decentralized product (enabled regional versions), automated subscription services; now implementing software based data warehouse for customer data	Yes	Increased circulation 2% in 2000; increased customer retention to 94%	NA
028	Rigby, D.K., Reichheld, F.F., Scheffer, P.	Harvard Business Review	1991 CRM	1	Square D	Manufacturing	Retail	Multiply revenues, double return on capital, increase sales per employee 33%	Reorganized first; then software	Changed structure; reorganized according to customer segment according to four main markets: industrial, residential, construction, OEM. Changed incentive structures to reflect customer focus: number customers and customer profit margins; software support for new ordering system based on production capabilities; months of training; program took 6 years minimum; implementation led by CEO	Yes	NA	\$75M
029	Rigby, D.K., Reichheld, F.F., Scheffer, P.	Harvard Business Review	NA	1	GE Capital Fleet Services	Finance	Retail	Improve customer processes	Six Sigma	Internal process changes to simplify customer interface; tied compensation to new process performance; increased sensitivity to customer needs	Yes	NA	NA

030	Day, G.S.	MIT Sloan Management Review	2002 CRM	1	GE Aircraft Engine Business Group	Aerospace and Defense	Retail	Improve customer satisfaction	Internal review	Surveyed customer wants in terms of responsiveness, reliability, value, productivity; changed metrics, sales and marketing reorganized; VP assigned to top 50 customers; performed customer site visits; implemented web based customer interface; integrated customer service metrics into employee compensation program	Yes	Increased customer satisfaction and customer productivity	NA
031	Day, G.S.	MIT Sloan Management Review	1999 CRM	1	Canadian Pacific Hotels	Hotel	Retail	Improve business traveler retention	Internal review	Surveyed business travelers using hotels; committed to make extraordinary service to frequent guest club members; management structure changed, put incentives for performance in place to ensure compliance	Yes	Increased market share 16%	NA
032	Breur, T.	NA	NA	1	ING Bank	Banking	Retail	To manage complexities of organizational processes	Internal review	Established CRM nerve center to aid in program implementation; more focus on process rather than software; targeted direct mail, credit scoring, cross-selling; aligned organizational goals; cross-functional team; process established first; broke out implementation into small blocks	Yes	NA	NA
033	Klein, M.	DLA News	2003 CRM	1	Defense Logistics Agency	Defense	Retail	Provide customer desired services and support	Part of larger business systems modernization	Strategic, phased implementation; processes matched to software; uses performance based agreements which are negotiated service agreements including products and services, quantities, time, and price	Yes	NA	NA
034	Cooper, R. & Kaplan, R.S.	Harvard Business Review	1990 ABC	1	unnamed equipment manufacturer	Manufacturing	Retail	Needed to figure out why company losing bids for products it could efficiently produce and winning bids for odd ball items which were costly	Internal analysis	Detailed ABC analysis performed to develop five new cost drivers; reviewed product mix, pricing, and process improvement decisions; established new low-volume product job shop	Yes	decreased part numbers 77%, setup hours 60%, support resources 21%	NA
035	Cooper, R. & Kaplan, R.S.	Harvard Business Review	1990 CPA	1	Kanthal	Manufacturing	Retail	NA	Internal analysis	Performed CPA on all customers to discern profitability; found 20% large volume customers were generating 225% profit; draining profits due to volume discounts and special handling requirements	Yes	Changed pricing structure, established minimum order sizes, transformed customers into strong profit contributors	NA

036	Whiting, R., & Sweat, J. Information Week	1999 CPA and CRM	1	Fingerhut	Retailer	Retail	Create models for identifying customers with highest potential for targeted marketing campaigns	IBM and SAS Institute	Strategy earlier established of letting customers buy on credit; data warehouse provides means with which to data mine for targeted marketing;	Yes	NA	NA
037	Whiting, R., & Sweat, J. Information Week	1999 CRM	1	First National Bank Dakota	Banking	Retail	Needed to know what services were provided to what customers; profit contribution of customer	Lotus Notes	Combined separate data systems into one customer view established relationship managers to interact with customers; compensation is customer profit based; developed custom analysis to identify most profitable customers	Yes	Now focusing on unprofitable customers in order to make them profitable	NA
038	Selden, L & Colvin, G. Fortune Magazine	2002 CPA and CRM	1	Fidelity Investments	Finance	Retail	Needed to identify unprofitable customers	Internal; NA	Identified low use high resource consuming customers; taught customers how to use cheaper modes of service (web and automated phones); developed automated phone systems which identified such customers and routed them to a longer queue	Yes	Customer satisfaction increased; unprofitables became profitable; 96% retention; increased operating profit	NA
039	Selden, L & Colvin, G. Fortune Magazine	1995 CPA and CRM	1	Royal Bank of Canada	Banking	Retail	Losing clients	Internal analysis	Reorganized around customer segments; developed new estate services	Yes	Increased asset retention 20%; attracted 25% more new assets; profit increased 25%	\$100M
040	Moore, K.R. ACSC, Maxwell AFB	2000 ABC	1	3 unnamed DoD organizations A, B, C	Defense	Retail	NA	Internal analysis using ABC Technologies OROS	Team of five to develop 24 ABC models; leader, 3 A/C Maint, 1 IT; 2 organizations did not implement models; 3 did	Yes	Found email consumed a lot of resources; initiated email reduction; improved other administrative processes; other findings relating to high production costs not changed due to lack of authority; top down approach inhibited low level involvement	\$700K
041	Wrona, J.M. & Memminger, M.	1999 ABC	1	AFRL	Defense	Retail	To gain cost information on support activities	Internal Analysis	ABC model determined at higher level headquarters; lower levels filled the squares; data compiled upward for briefing charts; limited training; limited involvement to only financial personnel; costs extracted from legacy systems and input into excel spreadsheets; inconsistent reporting periods of monthly versus quarterly; implementation viewed as tasking from higher levels	Yes	data not used for any decision making or cost reduction; results used to determine where to apply costs; models provided new look at costs and increased managers visibility of costs	NA

042	Niece, J.A. AFIT Jr. & Scribner, V.L.	1995 ABC	1	Defense Logistics Agency	Defense	Retail	Provide managers a useful working tool to access costs involved in processes as decision support	Internal Analysis	Phased implementation; initially defined organizational activities and used model from other DLA organization as prototype; interviews conducted by ABC team with functionals to determine amounts of activities and costs calculated; limited training; model design dictated from top management; management not integral, dictated to lower levels, no lower level ownership; perception model was built to cut people and expenditures; limited time provided to implement, no time to debug and evaluate	Yes	many overhead costs not allocated; cost of goods sold excluded; model not being used to support decision making activities; model identified process, not outputs; cost information provided inadequate; complicated model provided little information; costs broken down to the lowest level; managers didn't know what costs of include; budgets always provided as needed	NA
043	Battaglia, D. NPS C.	2000 ABC	1	Marine Corps Base Hawaii	Defense	Retail	Improve business operations and reduce operating costs	Internal Analysis; Granton Thorton LLP; ABC Technologies	Implementation directed top down; 21 week program began in 2000; model to be updated annually; team and contractors worked together; responsibility given to see project through; training provided base wide by team; model refined through use; software used separate from legacy financial systems stand alone for ABC	Yes	using cost information to make real cost effective decisions that affect everyday budget decisions; housing and finance changed processes to reduce costs and improve efficiencies and customer service	NA

Gray, S.W.	NPS	2000 ABC	1	Unnamed Government Bureau	Law Enforcement	Retail	Decrease costs due to budget cuts	Internal Analysis; ABC software package	Upper management decision to implement after series of discussions and training among mid-level managers; personnel trained, developed small models, presented perceived benefits to director then go ahead received to pursue implementation; each section developed and used unique model; output measures developed for activities; validated models; no preconceived outcomes enabled non-threatening environment; models in software used as guides; managers, staff, and employees reviewed models collectively; some areas fizzled out due to lack of sustained focus and other work requirements; those trained were assigned to other tasks; consultant provided neutral outside point of view; unstable work processes found were difficult to gauge for non-value added steps	Yes	3 week process reduced to 2 days; non-value added steps in processes deleted; high cost manual tasks automated; achieved change in primary work processes; use of funds illuminated; costs used to remove bias in decisions; accurate costs added validity to funding requests for automation	NA
Bergemann, E.J.	ACSC, Maxwell AFB	1989 Quality	1	United States Air Force	Defense	Organization	DoD direction according to executive order (predecessor to GPRA)	Cultural change into continuously improving organization	Initial quality efforts not implemented Air Force wide; manufacturing and acquisition communities, logistics and engineering research and development, through the reliability and maintainability efforts, were impacted; USAF leaders directed to give this endeavor full support; senior leader commitment in 1991; USAF Total Quality Center formed to provide tools, methods, and advice; QAF implemented 1992; exhaustive training; models broadened to fit organization due to unsatisfactory unexpected results	Yes	Process model implemented in unstable environment; results and accountability based environment eroded; quality values calashed with profession of arms; produced unsatisfactory and unexpected results	NA

046	Shenn, J. American Banker	2001 CRM	1	National City Bank Home Equity Group	Banking	Internal	Needed to organize data and streamline data access	Internal Analysis; GuideMark Systems LLC; SalesLogix	Tailored third party software to fit firm and come up with processes for using it; began implementation in 2001 and finished in late 2002; bottom up approach; phased installation; testing throughout initial; low level employee buy-in stressed;	Yes	Account executives able to advise loan officers; all information accessible from one point; segmented analysis; training deficiencies illuminated; increased productivity of sales calls; success led to corporate-wide \$120M program	NA
047	Pelczynski, A.S.	1994 Quality	1	Texas Instruments	Manufacturing	Internal	Reduce product defects	Modeled after Motorola	Implemented a six-sigma standard of product defects; reduced number of components; increased reliability of parts; reduced number of steps in processes; eliminated non-value added steps; automated and trained; incorporated quality aspects into design; required suppliers to do the same; encouraged creative thinking	Yes	Reduced cycle time; less than 3.4 defects per million; more responsive to customer demands	NA
048	Kelley, D.L. DEOMI Directorate of Research	1996 Quality	1	Defense Equal Opportunity Management Institute	Defense	Internal	Self-assessment of organization's quality status	Modeled after Malcolm Baldrige criteria	Performed self assessment according to Baldrige criteria; developed strategic plan; authored Total Quality Plan manual;	Yes	NA	NA
049	Ulfaider, S. CIO Magazine	2001 CRM	1	Florida Department of Business and Professional Regulation	Government Service	Internal	Consolidate licensing systems; improve customer service	Accenture; Siebel	17 databases merged into a single web-based portal; linked to new call center; agency owned all the data;	Yes	Average wait time for approval for a renewal now less than five minutes (previous was up to 45 days);	NA

050	Bannon, K.J.	B to B	2003 CRM	1	United States Plastics Corp	Manufacturing	Internal	Needed to track emails between customer service agents and customers; couldn't track efficiency or history	Deerfield.Com	All inbound and outbound e-mail communications routed through new web based system; routes email to correct person like a call router	Yes	Main benefit is response time; customers get answers within one to three hours instead of 24 to 48 hours; improved e-mail quality because management can review every message and e-mail, agents take more care with their work; the agents who answer e-mail have an easier time doing their job because all e-mail correspondence from a particular customer is routed to the same person.	NA
051	LeBrasseur, R., Whissell, R., Ojha, A.	Australian Journal of Management	1994 Quality	1	Canadian Hospital X	Health Care	Internal	National Accreditation requirement	Internal Analysis	Implementation took place in parallel with introduction of new organization structure around identifiable patient groups; CQI plan followed from other successful hospitals; systematically educated senior management, designed line budget, creation of new coordinator position, launch of three pilot projects, education and communication; CEO actively championed effort; quality council formed.	Yes	Organization new of importance 2 years into implementation, but no real results	\$100K/ year
052	LeBrasseur, R., Whissell, R., Ojha, A.	Australian Journal of Management	1993 Quality	1	Canadian Hospital Y	Health Care	Internal	National Accreditation requirement	Internal Analysis	Program started by quality assurance section; director dual halted; existing budgets expected to cover expenses; training not standardized; senior management minimized involvement; work on program stopped after 3 year accreditation received	Yes	Organization quality program lost momentum and became fragmented 2 years into implementation; no indication it would continue	NA

unnamed HNC Software case study 2001 CPA and CRM Bank of America Banking Retail Needed decision support tool for determining best course of action for phone calls to customer service retention unit HNC Retention Optimizer Accounts handled by HNC Retention Optimizer showed progressively increasing levels of performance compared to existing methods; increased acceptance of retention offers by 33%; increased balances average of \$45; profit increased \$9.65 per account NA

Technology implemented as a tool for personnel; provides optimal decision at each point of customer lifecycle; models expected customer behavior using existing data; software overlaid onto existing customer database system

054 unnamed Quality, MBA Publishing, Cummins 1979 Quality Cummins Manufacturing Internal Rapid process improvement from a range of key elements across the organization to significantly improve its business processes Six Sigma Initially sought to benchmark; noticed Komatsu was much more efficient; sent employees at all levels to Japan to study Komatsu; Six Sigma latest phase of continuous improvement process at company; statistical tools and data as a base for analysis and a disciplined, logical approach; training; incorporated into business plan; single business operating system known as COS - Cummins Operating System - a structured, measurable approach ensures that Cummins values and mission are faithfully executed across all departments and business units; Yes \$400M corporate savings in 3 years; quality is customer driven NA

056	Clark, T., Walz, L., Turner, G., Miszuk, B.	Quality	1988 Quality	1	Intel	Manufacturing	Internal	Redefine processes in organization and shift focus to customer	Internal Analysis	Multiple attempts, first was 1988; 18 month program called managing for value; 1990 established quality tech group with goal of applying for Malcolm Baldrige award; group had specific goals to transform company; developed training for entire company; management by planning program established; 1991 refocused with limited senior management; reduced measures from 200 to 2 to gain focus; 3 process improvement leaders responsible to keep company on track; top down approach abandoned and bottom up instituted; functional teams met weekly to solve problems; progress reviews mandatory; reward system established	Yes	M4V failed to produce lasting change; crises redirected management and all diverted back to the old way; tactics again failed due to efforts to do too much at once; 3rd program worked; customer satisfaction raised from 70/80 to 95%; customer downtime decreased from 25 hours to 11 hours;	NA
057	Mani, B.G.	Review of Public Personnel Administration	1985 Quality	1	IRS	Government Service	Internal	Better serve the needs of customers	Internal Analysis; Myers-Briggs Type Indicator	Employee education and involvement at all levels; top leadership support; program for lower level employees to advance to management positions; rules to sensibly apply regulations; employees expected to think creatively to identify problems and seek change; MBTI used as tool for manager candidates to identify their style	Yes	Received Presidential Award for Quality in 1991; went from chaos to TQM organization;	NA
057	Douglas-Thomerson, L.	Quality Congress	1998 Quality	1	Commonwealth Corporation	Health Care	Internal	Become recognized by employees, customers, and competitors as the unquestioned leader in care and services	Internal Analysis; Six Sigma through GE Medical Systems Healthcare Solutions	1997 senior leaders met with GE leaders and learned of program; 1998 program implementation began; training; step-by-step process; company wide focus on four principles: customer satisfaction, quality of care/services, timeliness/speed/convenience, cost; CEO met with senior leaders, word and support provided for all employees; four phases	No	\$1.2M in savings; increased throughput 33%; decreased cost 21.5%	

058	Rago, W.V.	Public Administration Review	1992 Quality	1	Texas Department of Mental Health and Mental Retardation	Government Service	Internal	Improve customer satisfaction	Internal Analysis	Worked over four years implementing facets of TQM; followed other TQM models; consumers empowered to make choices; force field analysis; senior leader support; corporate wide goals established; managers philosophy changed to leaders	Yes	Agency culture more sensitive to needs, desires, and perspectives of customers;	NA
059	Goldberg, J.S., Cole, B.R.	The Quality Management Journal	1992 Quality	1	Brazosport ISD	Education	Internal	Improve student performance	Internal Analysis, DOW chemical assistance	Superintendent attended Deming course; other managers trained; top leadership involvement with diversified group of high commitment employees; studied teacher's methods in high performing classes at low performing school; other teachers trained on successful methods; after two years of success, program implemented district wide; teachers empowered to make curriculum decisions; students counseled on progress at regular intervals according to a achievement goals; all decisions based on data	Yes	Schools received awards from Texas Education Agency; scores went from 70's to high 90's; admin costs reduced and funds per student increased; district received the Texas Quality Award in 1998	NA

060	Irani, Z., Choudrie, J., Love, P., ED., Gunasekaran, A.	International Journal of Quality & Reliability Management	1985 Quality	1	Neptune Engineering LTD	Manufacturing	Internal	Form employees into noncompetitive teams working together instead of against each other	Internal Analysis, SDWT model	Extension of original TQM which was certified by UK in 1988; senior management directed; in-house education of all employees; teamwork exercises; skills training for job enrichment allowing movement from team to team; step-by-step process implemented for improvements in workplace;	No	Reduced bottlenecks; production throughput increased; the synergy between best practice and motivated employees resulted in a workforce capable of generating new and innovative ideas	NA
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Appendix B. Concept Matrix

Case	Public	Private	Increase	Why		Software		How		Process		First Use		Results	
				Decrease	Enable	Yes	No	Strategy	New	Improve	Method	Yes	No	Money	Efficiency
001	1		profit	costs	customization	1		customer focus	1	phased	1	1	14% fees	21% products	
002	1		computer systems	computer systems	growth	1		customer focus	1	phased	1	1	1250 users	14 minutes	
003	1		customer service		contract mgmt	1		knowledge mgmt	1	phased	1	1			
004	1		customer service		knowledge mgmt	1		customer focus	1		1	1			
005	1		profit		target marketing	1		customer focus	1		1	1	prediction		
006	1		customer service		customization	1		customer focus	1		1	1			
007	1		customer service		customization	1		customer focus	1		1	1			
008	1		customer service	variability	knowledge mgmt	1		knowledge mgmt	1	phased	1	1			\$960K call backs
009	1		customer service		customization	1		trial and error	1	phased	1	1			
010	1		profit		target marketing	1		customer focus	1		1	1			
011	1		cost visibility		service delivery	1		model activities	1	phased	1	1	services		\$550M
012	1		knowledge base	costs	target marketing	1		knowledge mgmt	1	phased	1	1			
013	1		customer retention		stability	1		customer focus	1		1	1	\$millions revenue	50% retention	
014	1		customer service		responsiveness	1		customer focus	1		1	1	transactions		
015	1		profit		target marketing	1		event triggers	1	phased	1	1	retention		
016	1		profit		target marketing	1		knowledge mgmt	1		1	1	productivity		complaints
017	1		profit	churn	target marketing	1		customer focus	1		1	1	expectations		competition
018	1		knowledge base		service delivery	1		customer focus	1		1	1	knowledge		
019	1		knowledge base		decisions	1		knowledge mgmt	1		1	1			
020	1		customer retention		growth	1		customer focus	1		1	1	\$billions		
021	1		customer retention		knowledge mgmt	1		knowledge mgmt	1		1	1	20% growth		
022	1		computer systems	computer systems	decisions	1		knowledge mgmt	1		1	1			
023	1		cost visibility	costs	opportunity	1		model activities	1	phased	1	1			
024	1		customer service	county options	service delivery	1		customer focus	1	phased	1	1	1-800 service		\$4M
025	1		customer service	phone calls	service delivery	1		web based help	1		1	1			\$256K
026	1		sales efficiency	computer systems	knowledge mgmt	1		web based data	1		1	1			
027	1		sales		customization	1		knowledge mgmt	1	phased	1	1	2% circulation		
028	1		profit		knowledge mgmt	1		customer focus	1	phased	1	1			
029	1		customer service		service delivery	1		Six Sigma	1	phased	1	1			
030	1		customer service		growth	1		customer focus	1	phased	1	1	customer productivity		
031	1		customer retention		customization	1		customer focus	1	phased	1	1	16% market		
032	1		knowledge base	confusion	opportunity	1		customer focus	1	phased	1	1			
033	1		customer service		service delivery	1		customer focus	1	phased	1	1			
034	1		cost visibility		opportunity	1		model activities	1	phased	1	1			parts 77%, setup 60%, support 21%
035	1		profit		opportunity	1		customer focus	1	phased	1	1	changed pricing		
036	1		knowledge base		target marketing	1		knowledge mgmt	1		1	1	structure		



037	1	profit	1	1	1	1	1	1	1	1	1	1	1	1	96% retention, satisfaction retention 20%	email
038	1	knowledge base	1	1	1	1	1	1	1	1	1	1	1	1	profit 25%	costs
039	1	customer retention	1	1	1	1	1	1	1	1	1	1	1	1	customer service productivity	costs
040	1	cost visibility	1	1	1	1	1	1	1	1	1	1	1	1	customer service productivity	costs
041	1	cost visibility	1	1	1	1	1	1	1	1	1	1	1	1	customer service productivity	costs
042	1	cost visibility	1	1	1	1	1	1	1	1	1	1	1	1	customer service productivity	costs
043	1	cost visibility	1	1	1	1	1	1	1	1	1	1	1	1	customer service productivity	costs
044	1	costs	1	1	1	1	1	1	1	1	1	1	1	1	customer service productivity	costs
045	1	costs	1	1	1	1	1	1	1	1	1	1	1	1	customer service productivity	costs
046	1	customer service	1	1	1	1	1	1	1	1	1	1	1	1	customer service productivity	costs
047	1	variability	1	1	1	1	1	1	1	1	1	1	1	1	responsiveness	< 3.4 DPM
048	1	customer service	1	1	1	1	1	1	1	1	1	1	1	1	responsiveness	wait time 45 days to 5 minutes
049	1	bureaucracy	1	1	1	1	1	1	1	1	1	1	1	1	responsiveness	24 - 48 hrs to 1 - 3 hrs
050	1	knowledge base	1	1	1	1	1	1	1	1	1	1	1	1	responsiveness	25 hrs to 11 hrs
051	1	customer retention	1	1	1	1	1	1	1	1	1	1	1	1	responsiveness	25 hrs to 11 hrs
052	1	customer retention	1	1	1	1	1	1	1	1	1	1	1	1	responsiveness	25 hrs to 11 hrs
053	1	customer retention	1	1	1	1	1	1	1	1	1	1	1	1	responsiveness	25 hrs to 11 hrs
054	1	customer service	1	1	1	1	1	1	1	1	1	1	1	1	responsiveness	25 hrs to 11 hrs
055	1	customer service	1	1	1	1	1	1	1	1	1	1	1	1	responsiveness	25 hrs to 11 hrs
056	1	customer service	1	1	1	1	1	1	1	1	1	1	1	1	responsiveness	25 hrs to 11 hrs
057	1	customer service	1	1	1	1	1	1	1	1	1	1	1	1	responsiveness	25 hrs to 11 hrs
058	1	customer service	1	1	1	1	1	1	1	1	1	1	1	1	responsiveness	25 hrs to 11 hrs
059	1	customer service	1	1	1	1	1	1	1	1	1	1	1	1	responsiveness	25 hrs to 11 hrs
060	1	organization	1	1	1	1	1	1	1	1	1	1	1	1	responsiveness	25 hrs to 11 hrs

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