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**LEVERAGING INFORMATION TECHNOLOGY
WITHIN A ROMAN CATHOLIC DIOCESE**

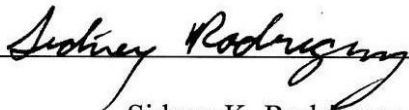
A THESIS

SUBMITTED ON 28 OF OCTOBER, 2010

TO THE DEPARTMENT OF INFORMATION SYSTEMS
OF THE SCHOOL OF COMPUTER & INFORMATION SCIENCES
OF REGIS UNIVERSITY

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS OF MASTER OF SCIENCE IN
COMPUTER AND INFORMATION TECHNOLOGY

BY



Sidney K. Rodriguez

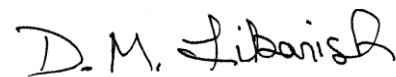
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LEVERAGING TECHNOLOGY IN A CATHOLIC DIOCESE

Abstract

Parishes within the Roman Catholic Church face many of the same concerns as any other non-profit organization. Dependencies on donations and volunteer help restrict the parish to leverage technology to gain efficiencies. Parishes have an additional concern. Although grouped under a Diocese, this hierarchical structure is not a standard, top-down directive organization. A Roman Catholic Diocese is a “subsidiarity”. Decisions are made at the lowest level, specifically; decisions on how to operate and administer the parish are given to the pastor or parish director of that parish. Acknowledging that leveraging technology is a way to gain efficiencies, the ability to leverage it in the current construct of the Catholic Church is difficult. Parish staff usually lacks the knowledge or time, or the parish itself lacks the financial resources to leverage new technologies. Assistance from the Diocese Information Technology department as well as from outside organizations like the Diocesan Information System Conference is minimal. Therefore, there must be a change to enable parishes to successfully leverage technology. In looking at other Dioceses within the United States, there are instances where the Diocese has stepped up and led efforts to standardize and/or consolidate services in order to gain efficiencies at both the Diocesan level and the parish level. It takes teamwork and salesmanship to implement changes. However, both the Diocese and the parishes can benefit.

Acknowledgements

As with all things, many people have assisted and supported this effort. I must specifically acknowledge Bishop Michael Sheridan of the Diocese of Colorado Springs as well as Monsignor Robert Jaeger for supporting this effort and allowing me to use the Diocese of Colorado Springs as the basis of my research. I also wish to acknowledge the priests, deacons and business managers who participated in this research. Their openness and candidness made the effort more complete. Thanks also go to the members of DISC who have paved a path for other Dioceses to follow, showing how to successfully leverage technology. Very special thanks go to three dear friends whose encouragement and prayers, kept me going. Lastly, and most importantly, much love and thanks go to my husband and sons who have patiently accepted my endeavor and allowed me time to pursue this effort.

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Chapter 1—Introduction

In today's economic situation many organizations, including non-profits, must investigate different avenues to save resources, including leveraging technology. Many organizations have an Information Technology (IT) staff or budget to support the entire organization and a hierarchical structure where changes are defined and directed from upper management. A Catholic Diocese does not have this type of structure. The individual parishes are responsible for determining how they will implement technology within their parish. These parishes may not have an IT budget or dedicated IT support. This research, entitled "Leveraging Information Technology within a Roman Catholic Diocese," presents an applied quantitative inquiry of the parishes within a small Roman Catholic Diocese to determine if IT can be leveraged to improve efficiencies within the individual parishes and determine what factors are preventing the parishes from moving forward.

The Diocese of Colorado Springs acknowledges the importance of technology. In its brochure entitled *Living the Mission, Transforming the Culture, 2010-2015 Pastoral Plan for the Diocese of Colorado Springs* (2010), concern with the use of technology is listed as the top external challenge. The plan states, "Technology has changed the way we communicate with one another. ... We (the Diocese) have not leveraged the new communication methods and channels to our best advantage in spreading the Gospel message" (Diocese of Colorado Springs Pastoral Plan, 2010, p. 10). As such, the plan recommends to parishes that they use technology to communicate better with their parishioners.

This research investigates the issues impacting a parish's ability to implement technology changes, the assistance that may exist for parishes to enable them to effectively leverage technology, the feasibility to leverage technology within a parish, and the overall issues with

moving forward. This research also looks at Dioceses who have effectively leveraged technology, allowing their Diocese and parishes to gain efficiencies. There are three areas that create a unique environment which can inhibit leveraging technology within and among the parishes. These three areas include the diversity of the parishes within the Diocese, the organizational culture of a Roman Catholic Diocese, and the implications of a parish as a non-profit organization.

Demographics of the Diocese of Colorado Springs

This research focuses on the Diocese of Colorado Springs, which was selected for its relatively small size but diverse demographics. The Diocese consists of 34 parishes, one quasi-parish, and seven missions. A quasi-parish is administered by a permanent deacon—there is no pastor assigned to the parish. A mission is a smaller parish that is administered through a larger parish. Within the Diocese of Colorado Springs, there are seven missions administered through five different parishes.

The topography of the Diocese varies greatly. The Diocese covers over 15,493 square miles encompassing parishes that range from large metropolitan parishes to small rural parishes (2010 Diocese of Colorado Springs Directory, 2010). The rural parishes reside in both the mountains and prairies. Of the 34 parishes, five parishes are in the mountainous region, four parishes and one quasi-parish is in the prairies, three are in the suburb of a major metropolitan area, and 21 are in or close to large metropolitan areas. When looking at the missions, three are located in mountainous regions, two are on the prairies, and two are in metropolitan areas. Because of the diversity of the communities, the needs and issues of the parishes in relation to leveraging technology will vary. This variance can influence the ability for a parish to leverage

technology effectively, especially through a consolidation or joining of efforts with other parishes.

Culture of a Roman Catholic Diocese

The diversity of the communities is only one aspect which makes leveraging technology within parishes of a Roman Catholic Diocese a challenge. Another aspect that impacts effectiveness of change is the culture and structure of the Roman Catholic Church. Although there is a hierarchical structure within a Diocese, it is also a subsidiary structure. One IT director from an eastern U. S. Diocese stated the Church is very hierarchical, but decisions are made at the lowest level—subsidiarity. Only certain things are mandated from the bishops; canonically, priests are to run their parishes (Diocese 1 Representative, Personal Communication, 20 August 2010).

The subsidiary nature of the Church draws decisions on operations of a parish to the lowest level. Therefore, neither the Bishop nor any other office within the Diocese has a directive nature towards the administration of the parish. The offices of the Diocese, to include the Information Technology Department, provide support to the Bishop and the staff of the Diocese. The IT department is available to provide some guidance to the parishes, but does not dictate or enforce how IT is provided to the parishes. Therefore, one of the key factors affecting successful change, strong directive leadership (Yourdon, E., 2004), is not naturally part of the administrative structure of the Church. Therefore change must be a collaborative effort, not a directive effort.

The administration aspects of a parish are the responsibility of the pastor and/or his administrative staff. The parish is responsible for obtaining the funds necessary to operate its

Church. Decisions like budget development, what software programs/applications usage, and how to complete their pastoral mission are the responsibility of the pastor and his staff. All financial support comes from donations to the parish. The Bishop provides his pastoral vision and the parishes must take that vision and determine how they will implement their part of the vision. Since the parishes operate independently, each plan is usually unique.

Parishes as a Non-profit

The third issue that can influence the successful implementation of technology within a parish is that a parish is a non-profit organization with a largely volunteer staff. Non-profits face three distinct issues: voluntary staff, limited funding (Kase, Carroll, Zhang, and Rosson, 2008) and lack of technology planning (Merkel, C., et al., 2007). Each of these issues will impact a non-profit's ability to successfully leverage technology.

A majority of support for a parish is through volunteers. Smaller parishes may rely on a single part-time paid staff with the majority of the administrative work done by volunteers. Larger parishes tend to have a larger percentage of paid staff and do not have to rely as much on volunteers to accomplish the main administrative functions of the parish.

Because non-profits rely heavily on volunteers, the technology used in the parish is usually based on the technical knowledge and experience of the volunteer. This could result in several problems associated with the use of technology within the parish. First, the technology implemented may not provide the most efficient and cost effective solution for the parish. Also, the volunteer may develop a unique program. This may be easy and efficient when implemented, but when the volunteer leaves, there may be no one who understands the program. This would cause problems if the system breaks or needs updating (Mathieson, K., 2006).

Non-profits also depend on donations for their operating budget. Many responsibilities such as building maintenance, mortgages, utilities, and salaries compete for funds. IT support must be merged into the budget along with many other priorities. If donations are short, IT funding may be cut. It is important that the business manager and pastor acknowledge and place an importance on maintaining IT.

Scope of Research

Before proceeding with the methodology of the research, the scope of the research and the definition of terms used within this paper will be provided.

As stated earlier, this paper focuses on leveraging technology to improve efficiencies within parishes of a Roman Catholic Diocese. The paper is not looking at means to improve efficiencies at the Diocesan level. However, because of the interrelationship of the Diocese and its parishes, it is feasible that tools and concepts implemented to support the parish can have a secondary effect on the efficiencies at the Diocesan level.

Second, this research will look at efficiencies in the administrative aspect of a parish that directly support the pastor and his administrative staff. The administrative staff, for purposes of this paper, consists of the priest(s), deacons and the personnel, both paid and volunteer, who handle the operations of the Church. This not only includes business managers, accountants/finance administrators, facility managers and administrative assistants, but also Religious Education Directors, Youth Ministers and heads of liturgical ministries. Volunteers such as religious education teachers (or catechists), volunteers who assist in the liturgical celebration, and other volunteers that do not directly relate to the operations and administration of the parish are not considered in this research. Also, for parishes that also operate schools, this research

does not look at efficiencies that can be gained at the school. However, as stated above, there could be corollary benefits at these parishes depending on how technology innovations are implemented. The administrative aspects of a parish include providing a place of worship, instructing parishioners with their faith and evangelizing or bringing information to the members of the community through different aspects of communication.

Another area requiring clarification is the term, “Diocese.” The term “Diocese” will be used to signify the Bishop and his entire staff that administer to the operations and mission of the Church within the area. When necessary the specific staff area will be named if the information pertains to just one area of the Diocese staff; for example, Bishop or Information Technology Department.

Chapter 2—Review of Literature and Research

When determining how to gain efficiencies through information technology, the term “technology” must be defined. For purposes of this research, information technology includes not only the system (hardware and software) and necessary connectivity, but also the support functions associated with the use of technology. Support functions include training, problem resolution support, purchasing vehicles/contracts, maintenance activities, and sustainment support. These items, grouped together, will be annotated as innovations. According to Klein, Conn and Sorra,

An innovation is a technology or practice that an organization is using for the first time, regardless of whether other organizations have previously used the technology or practice (Nord & Tucker, 1987). Innovation adaptation refers to an organization’s decision to install an innovation within the organization. Adoption is a decision point, a plan, or a purchase. Implementation follows adoption and is “the transition period during which targeted organizational members ideally become increasingly skillful, consistent, and committed in their use of an innovation (Klein & Sorra, 1996)”. (Klein, Conn and Sorra, 2001, p. 811)

Technology can be used to improve efficiency within an organization. Most technical changes are based on the implementation of “best of breed” processes. Literature research has documented effective ways to promote change within organizations. The effectiveness of technology change can be linked to the support of the organization’s management, the available financial resources, the organizational climate and their feelings toward the change, and the availability of policies and practices within the organization (Klein, Conn and Sorra, 2001). A

Catholic Diocese with their associated parishes does not fall into this type of favorable condition. Administrative direction comes from the parish priest, not the Diocese (neither the Bishop nor IT Director). Financial resources are tight within parishes—their source of funds is based on donations. Finally, organizations are cautious about changes. Although there is a hierarchical structure, the Roman Catholic Diocese is a subsidiarity—an organization where decisions are pushed to the lowest level and the parishes are basically an autonomous entity. This type of structure places constraints on the ability of an organization to effectively leverage technology. (Schwalbe, K., 2006)

Another area that impacts the success of technology change within an organization is technology resistance. Resistance to technology change exists because of the impact to the social organization of work, informal organizational structures, and potential bureaucratic control, among other concerns (Stam, Stanton, and Guzman, 2004). Other research has emphasized the socio-technical relationship between people and technology and the need to optimize their relationship (Wears and Berg, 2005). Also, research has looked at the impact of the technical, organizational and human aspects of a system to the efficient operation of a system (Leger, et al., 2008). The above research emphasizes the need to consider the human aspect of a technical change to increase the success of implementing technology changes within an organization. This human factor will be a key factor within this research since the organizational aspect of a Diocese does not provide the definitive management directive and guidance of a standard organization. Most people who work within a parish are volunteers or part time employees. Thus the resistance to change, especially if the person has worked or volunteered for a long time, will be real and must be factored into the implementation of an innovation.

Literature searches have yet to uncover research focused on the ability to affect technical change in organizations that have an organizational construct like a Catholic Diocese. Although organized under a Diocese, the individual parishes are operated independently. Though it is conceivable for parishes to pool financial and knowledge resources to implement technical changes, it does not appear, given the subsidiary nature of a Roman Catholic Diocese organizational structure, that this is a standard practice. Also, the uniqueness of this organization construct and the need to improve the use of technology within the parishes provides an area of research to determine if concepts for change used in hierarchical organizations can be used effectively to implement change within a Roman Catholic Diocese.

Though the need for change appears to be geared only towards improving the efficiencies for parishes, much emphasis has been placed in recent years on the need to improve technology use within the entire Roman Catholic Church, especially in the area of communication. Pope Benedict XVI has indicated on several occasions the importance of technology and new communication media. At a meeting with members of the Pontifical Council for Social Communications on October 29, 2009, Pope Benedict XVI stated, "New media are not just instruments for communicating, but they are having a huge impact on culture—on the way people interact and think" (Wooden, 2009). Also, in his message for the 2010 celebration of World Communications Day, Pope Benedict XVI asked priests around the world to use websites, videos, and blogs as tools for their pastoral ministry. The Pope stated, "Priests stand at the threshold of a new era: as new technologies create deeper forms of relationship across greater distances, they are called to respond pastorally by putting the media ever more effectively at the service of the Word." In an interview at World Communication Day, Archbishop Claudio Celli, president of the Pontifical Council for Social Communications, indicated that the Vatican was

not expecting every priest to create a blog or website. However, he indicated priests should make appropriate use of opportunities when they are presented. The Archbishop also indicated this will probably be easier for younger priests, who are already more involved in new media (Thavis, 2010).

This concern for the use of technology within the Roman Catholic Church filters down through all levels. In the 2010-2015 Pastoral Plan for the Diocese of Colorado Springs, the very first item under “External Challenges and Opportunities” states,

Technology has changed the way we communicate with one another. It has impacted the way we relate to one another and even the way we learn. We (the Diocese of Colorado Springs) have not leveraged the new communications methods and channels to our best advantage in spreading the Gospel message (2010-2015 Pastoral Plan, 2010, p. 10).

This challenges the parishes within the Diocese to look at their use of technology to see if it is sufficient to meet both current and future needs and to determine where they can improve their use of technology.

Although these articles focus on using communications media to spread the mission of the Catholic Church, an underlying need soon emerges when the use of communications is looked at more closely. If a parish is not leveraging technology appropriately through improved hardware, support services, training, etc., then the ability to pursue what Pope Benedict XVI and the Bishop have outlined will be impeded.

In order to effectively implement technology within their parishes, priests and pastoral councils should develop a technology plan. For the Diocese that is the subject of this research, the Diocesan Pastoral Plan was released in June 2010. Parishes are required to develop a pastoral plan for their parish. Once the parish has produced their pastoral plan, it should develop

a technology plan to document how it will use technology to support the implementation of their plan. However, research has shown that there is a lack of technology planning at non-profit organizations. This is mainly due to the resource limitations of the organization as well as failure to realize that technology is strongly tied to their goals (Merkel, et al., 2007).

Chapter 3—Methodology

In determining if leveraging information technology can gain efficiencies within parishes of a Roman Catholic Diocese, three basic questions were investigated: 1) Is there a need and desire at the parish level to leverage technology to gain efficiencies; 2) Is there assistance at the parish and/or the Diocesan level or through outside organizations to improve technology usage; and 3) Is it feasible to leverage technology to gain efficiencies at parishes? To answer these questions, surveys were sent to parishes. The survey included a request for a follow-up interview. Interviews were also conducted with the Diocese IT Director and a member of the Diocesan Information System Conference (DISC). Finally, interviews were conducted with IT directors from outside Dioceses who have successfully initiated efforts to consolidate IT services within their Diocese.

Parish Survey

Changes can only be effective if there is a need for the change as well as a desire from the organization to change. To determine if there was a desire or need at the parishes to leverage technology, a survey was sent to the 34 parishes and one quasi-parish within the Diocese of Colorado Springs. A copy of the survey is at Appendix A. The survey consisted of 15 questions which could be answered by either the pastor or the business manager. The survey was grouped into three areas: Church Demographics, Current Technology Usage in the Parish, and Potential IT Changes. An optional section on the demographics of the priest was included. The purpose of the questions was to determine the size of the parish and make-up of the parish staff; how effectively the parish was utilizing technology, including the comfort level of the staff

with using technology; and if the parish had interests in improving technology and, if so, in what way. Demographics of priests were gathered to determine if there was a relationship to age and the comfortableness of the priest with computers, which could potentially have impact on the willingness to implement technology change.

Of the 35 surveys sent out, 19 were returned. At the end of the survey a follow-up interview was requested. The questions used for the follow-on interviews are at Appendix B. If the survey participant indicated “yes” to a follow-up interview, time was scheduled to discuss further their concerns or needs. Of the 19 surveys, four declined additional interviews and of the remaining 15, ten interviews were accomplished. Four of the interviews were with the pastor of the parish, one with the parish director and five were with the parish business administrators or IT directors. The interview questions expanded on the survey questions as well as asked if the parish had considered writing a technology plan to complement the parish pastoral plan and the acceptance or concern with consolidating or centralizing services at the Diocesan level.

Support from Diocese and DISC

Once it was determined that a need existed, research turned to investigating if support for innovation already existed. Two organizations were researched to determine if support was available to the parishes. The first organization researched was the Diocese Information Technology Department; the second was DISC.

The interview with the Diocesan IT Director was conducted to clarify his role as the IT Director for the Diocese, the mission of the IT department and the relationship and support his office provides the parishes within the Diocese. Included in the interview were discussions on

recent, ongoing and future projects the IT department was implementing. A copy of the interview questions is at Appendix C.

The second organization researched was DISC. DISC is an organization consisting of IT directors of 76 Dioceses across Canada and the United States. An interview was conducted with an officer from DISC. The interview covered the purpose, mission, and membership of DISC. It also discussed the type of support DISC provides to its members and how concerns of its members are vetted and worked within the organization. A copy of the interview questions is at Appendix D. The main purpose the interview was to determine if DISC could support efforts to leverage technology at the parish level.

Diocesan-Level Consolidation Efforts

The last area researched investigated the feasibility of Diocesan-level consolidation or centralization as a means to leverage technology to benefit the parishes. The Information Technology Directors of two Dioceses and the Financial Manager of a third Diocese were interviewed to discuss ongoing or completed IT service consolidation projects within their Diocese. The questionnaire also requested the status and success of the project and any lessons learned. A copy of the interview questions is at Appendix E. This last step would determine if consolidation of IT services at the Diocesan level would be a means of successfully leveraging technology to gain efficiencies at the parish level.

Chapter 4 —Results

As indicated in the introduction, the research focused on answering three specific questions. The first question, “Is there a need and desire to leverage technology at the parish level in order to gain efficiencies,” was answered through the use of the surveys to the parishes, along with the follow-up interviews. The complete results of the parish survey are in Table 5 located in Appendix F. The second question, “Is there assistance from parishes, the Diocese or from DISC to assist in determining and implementing ways to leverage technology,” was answered through the survey and follow-up interviews with the parishes and interviews with the Diocesan IT Director and the representative from DISC. Finally, the third question, “Is it feasible to leverage technology across the parishes in order to gain efficiencies and save resources” was answered through questionnaires sent to the IT directors of other Dioceses that have pursued consolidation of IT services at the Diocese level.

Need/Desire to Leverage Technology

Research has shown that one of the aspects that may affect an organization’s ability to successfully effect change is the make-up of the organization. A non-profit organization relies heavily on volunteers. The reliance on volunteers can cause multiple issues associated with the change. In looking at the demographics of the Diocese of Colorado Springs, it is apparent that the demographics of the parishes can impact the need to leverage technology. Smaller, more remote parishes could potentially have a greater need to leverage technology in order to make their organization more efficient.

Parish Demographics

As indicated, the responses from the survey came from diverse parishes. The Diocese of Colorado Springs covers 15,493 square miles across 10 counties. It is divided into five regional areas called deaneries. The Western Deanery is located in the mountainous region of the Diocese and contains three parishes and one mission. The Eastern Deanery is located of the sparsely populated plains region of the Diocese. It consists of three parishes and four missions. The Northern Deanery covers the northern section of the Diocese. This deanery encompasses five parishes within the suburbs of a major metropolitan city and surrounding towns. The last two deaneries—the Metro North and Metro South Deaneries encompasses 19 parishes, one quasi-parish, and five missions. These deaneries cover the Colorado Springs metropolitan area and surrounding area (Diocese of Colorado Springs Directory, 2010). Of these 34 parishes and one quasi-parish, 19 responded to the survey—at least one from each of the deaneries. Of the 19 parishes that responded, six parishes are categorized as small (< 750 families), six are categorized as medium (750-1200 families), and seven are considered large (>1200 families). Three parishes were in mountain communities, two were in a large suburban area, two were small communities on the prairies, and 14 were located in large suburban or metropolitan areas.

The size and makeup of the office staff of the parishes usually correspond to the size of the parish. Large parishes had large full time paid staff members. The comfort level of the office staff are indicated as “comfortable” or “very comfortable.” Large parishes were more apt to have outsourced their IT needs. Small parishes, on the other hand, had smaller staffs, with the majority of the staff being either paid part-time or volunteer. The staff’s comfort level associated with the use of technology was “comfortable.” However, their IT support usually relies on staff

or volunteers versus hired staff. Hired organizations would have the basic competency to efficiently work IT issues. Details of the parish demographics are listed in Table 1.

Table 1: Parish Demographics

ID #	Size # of Families	# Pd Full time	# Pd Part time	# Volunteer	Staff Comfort Level w/IT	Tech in Budget?	Day-to-day IT mngt	Webpage/ Web Services	Problem Resolution	Potential for IT Improvement
1	300	0	4	0	C	Y	Pd Staff	Other	Other	Some Imp
2	1500	3	2	100	C	Y	Hired	Pd Staff	Hired/other	No Impr
3	850	10	0	5	V/C	Y	Pd Staff	Pd Staff	Pd Staff/Other	Some Impr
4	1,000	1	4	1	C	Y	Pd Staff/ Vol	Vol	Pd Staff/Other	Many areas to impr
5	976	6	2	0	T	N	Hired	Vol	Pd Staff/Other	Many areas to impr
6	1942	12	2	many	C	Y	Pd Staff	Hired	Pd Staff/ Other	Some Impr
7	2300	8	12	varies	V/C	Y	Hired	Pd Staff	Pd Staff/ Hired/ Other	Some Impr
8	1700	7	7	0	V/C	Y	Pd Staff	Vol	Hired	Some Impr
9	2100	7	10	10	C	Y	Hired	Hired	Hired	Some Impr
10	125	0	1	0	V/C	Y	Vol	Other	Vol	Many areas to impr
11	131	1	0	0	V/C	Y	Vol	Vol	Vol	Many areas to impr
12	800	6	2	2/3	C	Y	Pd Staff	Pd Staff	Pd Staff	Some Impr
13	850	4	4	0	C	Y	Hired	Pd Staff	Hired	Many areas to impr
14	1933	11	7	3	C	Y	Pd Staff	Pd Staff	Hired	Many areas to impr
15	422	0	1	0	C	Y	Pd Staff/ Vol	Hired	Pd Staff	Many areas to impr
16	647	3	2	2	C	Y	Pd Staff/ Vol	Pd Staff/ Vol	Pd Staff/ Vol	Some Impr
17	1400	37	3	110	C	Y	Pd Staff	Vol	Hired	Many areas to impr
18	900	5	0	0	C	Y	Hired	Vol	Hired	Some Impr
19	148	0	1	45	C	N	Vol/ Hired	Vol	Hired	Many areas to impr

The parish pastors and administrators were also asked if they felt their parish utilized technology. Table 1, shows the results of these questions. Eighteen out of 19 parishes indicated there were *some* areas that they could improve the use of technology; nine indicated that they felt there were *many* areas where they could potentially improve the use of technology.

Table 2. Priest Demographics

Age	#	Ave Yrs as Priest	Comfort Level				Career		
			Very Comf	Comf	Toler	Uncomf	Very Uncomf	Y	N
<40	3	10	1	1	1	0	0	0	3
40—55	6	11	3	1	2	0	0	4	2
>55	8	26	0	2	3	3	0	4	4

When considering change, the age and comfort level of the priests at the parishes can potentially impact the use of technology and the readiness to change their use of technology. Of the 19 parishes that responded, 15 provided the demographics of their priests. Two parishes have a Parochial Vicar (a second priest to assist the pastor). Thus, the demographics of 17 priests are provided. This information is provided in Table 2. In looking at the age of the priests, three are under the age of 40 with an average of 10 years as a priest; six are between the ages of 40 to 55 with an average of 11 years as a priest; and the remaining eight priest are over the age of 55 with an average of 26 years as a priest. Eight of the priests had careers prior to joining the priesthood, while the remaining nine did not have a previous career. These careers ranged from highly technical (electrical engineer) to non-technical (retail). When asked about their comfort level with computers and information technology, the priests in the over-55 age group were on the lower end of the comfort zone with six of the eight priests indicating they are tolerant or uncomfortable with using technology; none of the priests over the age of 55 felt very comfortable using technology. For the two remaining age groups, six of the nine priests felt

comfortable or very comfortable using technology. The remaining three priests felt tolerant with using technology. If the pastor is uncomfortable with using technology, he may be more hesitant to pursue changes in the use of technology within his parish.

Parish Desire for Change

Once the demographics of the parishes were determined, research investigated the desire for a parish to leverage technology. From the survey and follow-up interviews, several parishes indicated desires to improve the administrative work of their parish.

The location and make-up of the community influenced concerns of a parish. Parishes that had administrators or volunteers with strong information technology backgrounds felt comfortable with their systems. One mountain parish is in a community that has many retired executives and summer homes for middle and upper class families. The knowledge and support from the parishioners and local community is strong (Parish 1 Representative, Personal Communication, 4 August 2010). Another parish in the southern part of the major city is mainly tech-savvy young families—highly interactive with technology. The parish has multiple ways of communicating to their parishioners as well as other technical capabilities. Besides a standard paper bulletin and webpage, they have a list server, kiosk, etc. (Parish 6 Representative, Personal Communication, 5 August 2010). These parishes were very comfortable with how they have implemented and use technology. Other parishes were located in rural areas of the Diocese away from technically savvy communities. These communities had minimal use of technology; some were even without a webpage for their parish.

In looking more closely at both the need and desire of a parish to leverage technology, 10 parishes felt they were using technology very well with all but one indicating there was room for

improvement. The remaining nine parishes indicated they felt there were many areas for improvement.

One of these areas for improvement was training. Fourteen of the 19 parishes that responded indicated that training on existing software applications would be beneficial. The majority of those were focusing on training for the parish registration management system used by the majority of parishes within the Diocese. The majority of parishes use Parish Data System (PDS) for this purpose. The main complaint is that the system is not user friendly or intuitive. One parish sent two staff members to the PDS conference. They came back indicating that through the training at the conference, they received a lot of helpful information that they did not know before. However, they also acknowledged that the full extent of the program was still unknown (Parish 6 Representative, Personal Communication, 5 August 2010).

Table 3 Potential IT Usage in Parish

IT Option	Very Interested	Somewhat Interested	Not Interested	Need More Information
New Technology				
Computer Conferencing	2	7	8	1
Online Tool Kit/ Information Repository	3	13	1	1
Training on Computers & Software Programs	4	11	2	1
Parish Management Tools	6	7	2	3
Standard Software Set	5	5	5	0
Consolidation efforts				
Web Services	5	3	6	4
Equipment/Supply Purchasing	7	9	0	2
Tech Support	8	5	2	2
Training	9	6	2	1

Questions on how to leverage technology were divided into two areas: 1) Ways to better utilize their technology and 2) Working with other parishes to consolidate efforts to gain efficiencies. The first area looked at using computer conferencing, an online toolkit that contained software tools, training, a document/policy repository, and standard training. The second focused on consolidation efforts with other parishes. These services included webpage hosting, purchasing supplies and equipment, technical support, and training programs/classes. The results of these two questions are in Table 3.

Another area that hindered parishes was locating available information and help on the Diocese's intranet. Several parish business administrators indicated that they tried to find information, but it was not apparent or easy to find. Some even gave up looking at it. This frustration from parish staff members when they attempt to use existing resources, but are unable to use it as evidence that parishes do have a desire to use technology more efficiently.

Finally, the survey asked what is preventing the parish from leveraging technology. Five areas were listed: 1) Lack of funds; 2) Not enough time; 3) Knowledge of available technology; 4) Having people with knowledge; or 5) Available people to research and implement the innovation. Of the 19 parishes responding, the categories of "Lack of Funds", "Lack of Time", "Knowledge of Available Technology", and "Lack of People with Knowledge" were selected by 11 of the parishes. Many parish staff members are too busy to research new capabilities; other parish staff members are not "technically savvy." As one staff member said, "We don't know what we don't know" (Parish 13 Representative, Personal Communication, 30 September 2010). Nine had indicated "Lack of Available People" as a concern. Six parishes actually indicated that all five concerns hindered their ability to leverage technology.

Table 4. Reasons Preventing Technology Change

Parish #	Lack of Funds	Lack of Time	Knowledge of Available Technology	Lack of People w/ Knowledge	Lack of Available People
1	-	X	-	X	-
2	-	-	-	X	-
3	X	X	-	-	-
4	-	X	X	-	X
5	X	-	-	X	X
6	-	-	X	-	-
7	-	-	-	X	X
8	-	-	X	-	X
9	X	X	X	X	-
10	X	X	X	X	X
11	X	X	X	X	X
12	-	X	X	-	-
13	X	X	-	-	-
14	X	X	X	X	X
15	-	-	-	X	-
16	X	X	-	-	-
17	X	X	X	X	X
18	X	-	X	-	-
19	X	X	X	X	X

There was a desire from the parishes for the Diocese to play a more active role in improving technology use. One parish indicated that they had no clue what the Diocese was doing. When asked if the staff member is familiar with the Diocesan efforts associated with webpage hosting and/or equipment purchasing, several indicated that they were unfamiliar. One parish business administrator recommended that the Diocese IT Director host a meeting and ask the parishes what they need versus implementing a system or capability and telling the parishes that it is there if they want to use it (Parish 9 Representative, Personal Communication, 22 July 2010).

Is There Assistance to Leverage Technology?

There are three organizations that could assist parishes in leveraging technology. They are other parishes, the Diocese IT department, and DISC. Each of these organizations has potential to assist parishes to leverage technology. However, current organizational constraints, such as the defined organizational responsibilities or lack of available resources or knowledge can impede this assistance from occurring.

Assistance from Other Parishes

The first group that could provide assistance in leveraging technology is the parishes themselves. Conceptually, parishes assist each other to consolidate efforts or to share information on how they accomplish different tasks. They can work together to set up training or to explore new innovations. Success in helping each other is evident today with one parish providing assistance to a smaller parish by managing the smaller parish's accounting and finance duties (Parish 15 Representative, Personal Communication, 14 September 2010). Also, one parish within the Diocese brought in a trainer for PDS and offered the training to other parishes (Parish 14 Representative, Personal Communication, 20 July 2010). These are prime examples of how parishes could work together to assist one another. However, many pastors and business administrators are not willing to lead efforts of this nature. Basically a pastor must agree to spend his limited resources to set up training or investigate new technologies without reimbursement from other parishes.

However, the reasons for not pursuing joint efforts in leveraging technology are the same reasons parishes do not implement technology changes individually. As indicated previously in Table 4, parishes indicated lack of time, knowledge, people, and funds as reasons why they are

unable to analyze innovations, to share information concerning these innovations, and subsequently to implement the innovations. As one pastor indicated, his staff does not have the time to research potential innovations or the time to experiment with different innovations (Parish 13 Representative, Personal Communication, 30 September, 2010). Another pastor asked why he should have his paid staff investigate a new innovation and determine how to implement that innovation among multiple parishes when he has plenty of work internal to his own parish. Basically his paid staff would be working for other parishes for free, while his required work would be set aside (Parish 12 Representative, Personal Communication, 29 July 2010). Because of these reasons, parishes receiving assistance from other parishes are not prevalent.

Assistance from Diocese IT Department

The second potential source for assistance is from the Diocese's IT department. There are two ways the Diocese IT department could assist in leveraging technology. The first is by providing IT consultation and other capabilities or services. The second is to have the IT department lead an effort to centralize or consolidate a service under the Diocese for use by the parishes.

One of the main reasons stated by the parishes for not leveraging technology is lack of knowledge/ not knowing what is available. The Diocese IT department has the ability to assist the parishes by providing consultation services. According to the Diocese IT Director, the support his department provides to individual parishes is limited. However his department can provide some consultation service to the parishes, including contract negotiation assistance. The Diocese also has a computer buying service, though not widely known among parishes and thus

not used to its fullest extent. The Diocese IT department is also investigating ways to accomplish information sharing among the different parishes. However, the primary mission of the IT department is to provide support for the Diocesan offices, not the parishes. The IT Director has been in his position for approximately one year. His focus has been to upgrade the Diocesan network, to include new webpage hosting software (a capability that can be utilized by parishes, if desired). He has many plans to improve the IT within the Diocese to include better communication with the parishes. The IT Director has indicated that his office could provide limited consultation if requested by the parish (Diocese IT Director, Personal Communication, 20 July 2010). Three parishes indicated that they are in need of a consultation; however, they have not pursued talking with the Diocese IT department.

A second way the Diocese IT department could assist parishes is by leading efforts to consolidate or centralize services. This requires the IT department to initiate innovations that will provide a consolidated or centralized service for the parishes. The IT Director is pursuing one such effort. The Diocese is hosting a new centralized accounting system. Financial reports from the parish will roll up into the Diocese. It contains centralized parish data system and census software. The sharing of data across parishes will provide more accurate data, improving mailing lists, and uncovering parishioners registered in multiple parishes, as well as allowing for better demographics to assist in decision makings at both the Diocese and parish level (Diocese IT Director, Personal Communication, 20 July 2010). Once implemented, the Diocese IT Director must “sell” this capability to the parishes in order for it to be effective.

To “sell” this capability to the parishes, the IT manager must overcome concerns of the parish business administrators and/or pastors. As one pastor indicated, consolidation is a good idea. However, concerns over security of the data must be address. Data security must address

both the transmission of the data between the parish and the host site as well as preventing unauthorized access of data by both other parishes as well as the Diocese. The parish should be the owner of the data (Parish 6 Representative, Personal Communication, 5 August 2010).

Assistance from DISC

The final organization that has the potential to assist parishes is the Diocesan Information System Conference (DISC). DISC serves the Catholic Church through leadership in technology. The membership of DISC consists of IT directors and finance people for 76 Dioceses across the United States and Canada.

DISC was established to serve the Catholic Church by providing technology leadership to the Diocese members. Its mission is to promote the integration of technology into the work of the Church. DISC does this by building a community that facilitates the open exchange of ideas and information, and by communicating with Church leaders at all levels about the trends, benefits, risks, and challenges of technology. It also builds relationships with other organizations that enhance the value of technology to its members (DISC Representative, Personal Communication, 20 August 2010).

DISC's primary focus is the Diocesan level. They do not assist parishes directly. Assistance from DISC comes more in the form of providing case studies and networking than direct technical services. The main assistance is through providing a network for Diocesan IT directors and Chief Information Officers to exchange ideas and lessons learned on IT issues they face. DISC hosts an annual conference where a Diocese can present the efforts they are working on or have implemented. Members can also request different topics to be presented by businesses or other professionals. DISC does not provide a direct service to Dioceses and their

parishes. Instead DISC provides a means for IT managers of member Dioceses to network and hear how other Diocese have tackled problems and implemented solutions (DISC Representative, Personal Communication, 20 August 2010).

In summary, though the need is recognized, there is no single group or organization whose focus is specifically on improving the use of technology within or across different parishes. In most instances, parishes do not have the time, personnel, funding, or knowledge to actively pursue efforts to leverage technology either internally or among a group of parishes. Though the Diocese IT department provides some support to the parishes within the Diocese, its primary mission is to support the Dioceses—support to the parishes is secondary. Finally, a national organization like DISC focuses on the Diocesan-level and not the local parish level.

Is Technology Change Feasible

Of the two methods for leveraging technology (parishes working together or Diocese taking the lead for an IT consolidation effort), parishes working together is least feasible. As noted above, parishes have limited resources and knowledge to pursue a collaborative effort with other parishes. The second method, a Diocesan-lead consolidation effort, is more feasible to occur and has a higher probability for success.

Though research indicates both a need and a desire exist among the parishes to leverage technology to gain efficiencies and save resources, there is a potential standstill between the Diocese and parish in how to proceed. The highest potential of making administration of parishes more efficient is through the consolidation or centralization of a service. This, however, may be a difficult project to pursue. Nine of the 19 parishes that responded considered consolidation at the Diocese level to be feasible, though three stated concerns about the security

and confidentiality of the data. However they would look to the Diocese to lead the effort. On the other side, two parishes voiced concerns against service consolidation at the Diocese. One pastor stated:

I am leaning towards being more autonomous and handling things on a parish level.

Sometimes the Diocese does not always have similar processes or ways of proceeding that might work well here but perhaps not for them. So, though I would be open to using the resources of the Diocese, I would be more comfortable in being more autonomous as a parish (Parish 15 Representative, Personal Correspondence, 14 September 2010).

The unknown in this research is the 16 parishes that chose not to participate in the research. Depending on their support or opposition, a consolidation effort could go either way.

However, several Dioceses within the United States have initiated or have completed efforts to leverage technology through consolidation or centralization of administrative type functions in order to make things more efficient for both the individual parishes and the Diocese. The efforts of three Dioceses are presented below. Interviews were done with either the Chief Information Officer or the Chief Financial Administrator of the Diocese. Each effort has provided favorable results for both the Diocese and the parishes.

Example—Diocese 1

The first example is from a large Diocese in the Eastern United States. Diocese 1 has 161 parishes and missions, 71 schools, and approximately 486,000 parishioners (Website. Archdiocese of Baltimore). When the IT Director arrived in 2000, he found majority of communication was via fax machine. His first project was to implement email. He also initiated a data management analysis. Through this analysis he found that the Diocese and its associated

parishes had multiple databases containing information on people, places, and other pertinent items. This caused multiple occurrences of identical information. He focused on categories of people, specifically, student, parishioners, and employees, and the information that was required to support each group. For students, he found that each school was run independently. As a result there was no standard grading system, curriculum or tracking attendance. The CIO looked at a consolidated approach like a public school district. For parishioner management, he looked at standardizing common support and training at Diocese. The information on parishioners would be synchronized at the Diocesan level. This would assist in annual campaigns, mapping of parishes and parishioners and provide demographic information to aid in decision making at the Diocesan and parish level. Third, he looked at impact to employees. Diocese 1 has 7000 employees. When he arrived, the human resources department was tracking everything via an Excel spreadsheet. The Diocese installed a Human Resource Management System as well as incorporated business operations. (Diocese 1 Representative, Personal Communication, 20 August 2010)

Through his research the IT Director found voids in the data which he worked to fill. For example, he implemented a common accounting system. The Diocese now has staff accountants and the parishes “outsource” their accounting to the Diocese. Each accountant manages three to four locations, but parishes get quality service while meeting the Diocesan level of service requested by the Diocese. In other words, the parishes are ensured that the product provided is what the Diocese is looking for—minimizing the potential for rework and the Diocese receives the quality product they are looking for from the parishes (Diocese 1 Representative, Personal Communication, 20 August 2010). Another effort accomplished at Diocese 1 is to provide IT services to the parishes. This is done through a formal agreement between the Diocese and

parish or school. The IT Director dubbed it a “Geek Squad” for parishes and schools. The organization is called ArchTech. It operates similar to a fee-for-service organization. He has the staff in place and he is able to justify his staff through the parish billing and payment process.

(Diocese 1 Representative, Personal Communication, 20 August 2010)

The IT Director for Diocese 1 indicated everything is on a voluntary basis. Currently 80% of the parishes within the Diocese comply with this effort and are trained. He expects that the remaining 20% will continue to work on their own. When he started, he looked for champions among the parishes and made them successful—“Peer pressure works.” He has also given his staff a specific rule—anytime you ask for information, make sure no one has asked before, give back something of value, and have a legitimate reason for asking for the data.

(Diocese 1 Representative, Personal Communication, 20 August 2010)

Example Diocese 2

The second Diocese researched is a smaller Diocese in southeastern United States. This Diocese consists of 57 active parishes and missions with approximately 27000 families. The IT Director has been in her position since May 2008. Her initial efforts focused on disaster recovery. She wants to have files kept on site and be duplicated to a separate off-site system. The IT Director’s goal is to make access to any data no longer location specific. She initiated efforts to move all parishes to a web-based parish management program and offers it as an alternative for the parishes. The Diocese also hosts websites for 20-25 % of their parishes and provides email to most of their parishes and schools. They also have a terminal server cluster where they maintain the parish accounting software. The goal of the IT Director is for the

Diocese IT department to become the first-stop resource for any technical questions. (Diocese 2 Representative, Personal Communication, 16 September 2010)

The IT Director indicated there are some parishes that prefer to find their own solutions while others have some trepidation regarding their perceived loss of control. Some parishes, on the other hand, were quite enthusiastic that the Diocese was offering cost-effective, secure solutions. One of the key areas that helped parishes to accept the new system is that the Diocese stressed that the parishes controlled their own data. Another selling point was that the parish could revert back to their old system if they chose. Much like Diocese 1, Diocese 2 also selected a few pilot parishes and let the pastors of those parishes “sell” the idea to others. The IT department also met one-on-one with pastors to discuss the initiatives and discussed the pastors’ concerns. (Diocese 2 Representative, Personal Communication, 16 September 2010)

So far, Diocese 2 has seen favorable results. With this consolidation, benefits are found at both the parish and Diocesan level. For the parishes, hardware replacement costs disappear, maintenance time is eliminated, and climate control settings in former server rooms can now be relaxed saving the parishes in energy costs. Additional benefits of this project include the security of external servers, the ease of access to the data, and the security of remote data back-ups. Additionally parishes came to realize that even older equipment would work better in a web-hosted environment, deferring hardware upgrade costs (Diocese 2 Representative, Personal Communication, 16 September 2010).

Example—Diocese 3

The last Diocese researched is an archdiocese in the northeastern United States. The archdiocese consists of 87 parishes, 39 schools and approximately 450,000 parishioners. The

Finance Director was brought in 4 years ago after an instance of embezzlement within the Archdiocese in 2006. There was a direct need to re-engineer the Archdiocese's financial tools. The Finance Director looked into the financial systems used by the parishes and decided that they must standardize the software across the parishes and install an IT platform to assist in the effort. He chose a web-hosting platform. Since accounting software and LAN management are not core competencies of the Roman Catholic Church, he looked to outsource to a company in which these were core competencies (Diocese 3 Representative, Personal Communication, 30 September 2010).

Like the other two Dioceses, the first reaction of the parishes was that of no trust. The information that was input into the system could be seen by the Diocese real-time. However, it took salesmanship to convince the parishes the new financial system would be beneficial to them. The Diocese held meetings around the Diocese where all parishes were invited. The Diocese presented case studies for the project. They developed a presentation showing the inefficiencies within the parishes, opportunities, what the change could do and the cost of not changing. There were "nay-sayers." But using the meetings and presentations, they were able to explain to the parishes the benefits (Diocese 3 Representative, Personal Communication, 30 September 2010).

One key factor is that this effort was not a consolidation or centralization effort, but a software standardization effort. The parishes were standardized on a web-based application. They still own and control the data. It is the parish's responsibility to input and maintain the data. However, since the system is web-based, the Diocese could see the information real-time with permission from the parish. Now, the Diocese can better support the parishes real-time by

running trend reports and offering better, timely support. The new system eventually received unanimous support (Diocese 3 Representative, Personal Communication, 30 September 2010).

There are several benefits of the new system. First, the parishes have a real-time back-up of their data. The Financial Director spoke of two parishes whose rectories were recently struck by lightning. One had no back-up of their data; the second had a backup on a second computer in the same building. When lightning struck the rectories, the computers were knocked out, even the backup computer at the second parish. The result was a loss of their parish records. The second benefit of the new system is the real-time access to financial data at both the parish and Diocese level. Previously reports were done every six to nine months. Parishes and the Diocese could not see that the parish was in financial trouble until it was too late. With real-time information, the Diocese and the associated parishes can track the financial status of the parish more efficiently, working financial issues before they become problems. This also carried over to making informed decisions on facility and construction projects (Diocese 3 Representative, Personal Communication, 30 September 2010).

Summary of Feasibility

The interest and need for a type of consolidation or standardization is apparent and has proven in these examples to be successful. Bishops, Diocesan IT directors, and financial directors are looking for solutions. As the IT Director for Diocese 1 indicated, “The Bishops want to do something, but they do not know what to do” (Diocese 1 Representative, Personal Communication, 20 August 2010). Also, the success of the efforts from Diocese 3 has become a showcase on how to consolidate efforts. Though not called a consolidation, the concept of

standardizing software across the parishes and hosting it on a web-based system while giving the Diocese direct access into the information is a way to provide real-time data access to the Diocese while keeping ownership and management of the data at the parish level (Diocese 3 Representative, Personal Communication, 30 September 2010). In either example, efficiencies were seen in leveraging technology at both the parish as well as the Diocesan level.

Chapter 5—Conclusions

Parishes in a Roman Catholic Diocese face the unique situation where they are non-profits that operate independently of each other. Also, their size, locations, and budgets vary dramatically, resulting in different capabilities and needs. However, regardless of their unique needs, they all have one common need—the need to save resources, both time and money. Leveraging technology is a way to save these scarce resources. To successfully implement a change, there must be both a need and a desire to leverage technology. Also, there must be the actual ability to implement the change. The subsidiary nature of a Roman Catholic Diocese makes it difficult for parishes to successfully leverage technology. However, if a Diocese becomes more involved in leading efforts to leverage technology, the potential for success within the parishes will increase.

Conclusion from the Applied Quantitative Inquiry

Through research, the parishes in this applied quantitative inquiry recognize that technology can make the administration of their parish more efficient. However, most parishes do not have time, financial resources or knowledge to pursue IT innovations. The Diocese IT department's mission is focused on supporting the Diocese. A secondary mission is to assist the parish. Without a strong directive leadership, an organization must rely on the collaboration among the subordinate units. Because of the primary focus of the Diocese IT department is to support the Diocese. Parishes must look amongst themselves to administer change unless the Diocese takes a more active role in supporting the parishes in regards to IT innovations.

Research brought to light several issues. First is the need to share information. Most parishes do not have people who have the time or who are technically savvy to provide independent solutions. During the interview portion of this research several instances came up where one parish had a concern or issue and another parish had a solution. However, there was no way for parishes to vet concerns, issues, or solutions. For example, in the first instance, one parish was looking for an inexpensive way to upgrade their software (Parish 11 Representative, Personal Communication, 2 August 2010) while another parish had knowledge of an organization that sold software at a very low price to religious institutions (Parish 14 Representative, Personal Communication, 20 July 2010). In a second instance, a parish was investigating different web-hosting software packages (Parish 1 Representative, Personal Communication, 4 August 2010). Meanwhile, the Diocese had implemented web-hosting software that could support the parish (Diocese IT Director, Personal Communication, 20 July 2010). These are just two instances where a means to share concerns and lessons learned would benefit the parishes.

Several parish administrators expressed the desire to change the way they administer the parish, but their lack of time and knowledge was preventing them from determining how to leverage technology. Many business administrators questioned why the Diocese IT department does not get more involved. As one interviewee stated, the Diocese should call everyone together and have an open forum to answer the question, “what do the parishes need” and determine how to satisfy their needs. The business administrator felt the Diocese IT department would implement different programs then offer them to the parishes to use if they wish. The administrator questioned why the Diocese would not have a meeting to discuss the desires of the parishes. (Parish 9 Representative, Personal Communication, 22 July 2010). A meeting hosted

by the Diocese IT department with the pastors and administrators of the parishes would enable parish needs and requirements to be vetted and efforts made to improve the use of technology within the parishes.

The second issue is how to leverage technology. Even in a collaboration type environment, there must be a leader or leaders who will step up and take the initiative to research and recommend solutions. Because of lack of time, money, and knowledge, it is highly unlikely that having an effort at the parish level will be successful. Parishes have many good ideas, but no one steps up to lead the effort.

To overcome this, the Diocese can step in to lead efforts to implement IT innovations. However, leading efforts to provide IT solutions to the parish is not the top priority of the Diocese in this applied quantitative inquiry. In order for consolidation efforts to be successful, a Diocese should step up to lead the effort. This would take commitment and personnel. When considering which organization would be best suited to lead consolidation or centralization efforts, the Diocese is best to provide a crosscutting look at the issue. However, the Diocese must be careful to keep the subsidiary nature of a Diocese intact. The initiative must insure the autonomy of the parishes. This can be accomplished by ensuring the parishes remain the owners and maintainers of the data. Other areas such as requiring the Diocese to ask permission from the parish before running reports is important in ensuring the ownership of the data. Also, the Diocese must remain in the facilitator and consultant role when defining the new innovation for the parishes. They should focus on parish needs such as security and parish control of the data. It is a fine line to support the parishes in this effort while keeping the subsidiary aspect of the Roman Catholic organization intact.

Another finding from this research is that a Diocese can successfully lead efforts to leverage technology that gain efficiencies not only at the parish level, but also at the Diocesan level. One main area this has occurred is in the consolidation or standardization of services across the Diocese. Consolidation is a good concept, but there must be an organization to lead the effort. Parishes do not have the time, people, and, in some instances, the technical knowledge to lead an effort such as this. A Diocese IT Department can facilitate discussions with the parishes on their needs and accomplish research to determine the best way to assist the parishes while supporting the Diocese's needs. From this analysis the IT Department can develop solutions and implementation plans for technology innovations for the Diocese and parishes. This has been successfully accomplished in other Dioceses across the United States, but it takes the Diocese to step forward and lead the project.

Creating Successful Technology Change

The ability to leverage technology to improve efficiencies at a parish has been proven in projects at other Dioceses. The key to the success at those Dioceses was an active leadership role from the Diocese IT department to determine what innovations would benefit not only the Diocese's operation but also the parishes. It takes salesmanship as well a conscious consideration of the concerns of the subsidiarity nature of the parishes to enable the success of their innovation implementation. Ensuring that the parishes remain in control of their data was a major selling point for the innovations.

The concern to leverage technology is not just from the parish level but also at the Diocesan level. Bishops and Diocese IT directors are reaching out to other Diocese to find out what they have done to successfully leverage technology to find efficiencies in both the parish

and Diocese level. The IT Director for Diocese 1 indicated he is receiving more and more requests from Bishops to come to their Diocese to discuss what he did to see if it would be beneficial to their Diocese. The IT Director indicated the Bishops “want to do something but do not know what to do.” If requested, the IT Director for Diocese 1 will do consultations for a Diocese to find shortcomings (Diocese 1 Representative, Personal Communication, 20 August 2010).

The success of the consolidation/standardization initiatives across the different Dioceses was a result of a mindset change. To go from an independent mindset to the trusting relationship to allow another organization to provide the support is crucial for success. There must be buy-in from the parishes to accept the consolidation and allow the Diocese to be able to see their information, and there must be an acceptance of risk from the Diocese to spend the resources upfront with the objective to save time in the future. This type of mindset change from both sides is critical. Setting up a fee-for-service type organization enables the consolidation to be done under the guidance of the Diocese, but funded by the parishes (Diocese 1 Representative, Personal Communication, 20 August 2010).

Another area that can lead to success is better communication. Parishes have lessons learned that can be beneficial to other parishes. However, they have no mechanism to share this data. Also, some parishes would like more support from the Diocese, but they feel they are never asked what they need. If lines of communication were open, the information sharing can begin providing a means for parishes and the Diocese to support each other.

Recommended Follow-up Research

The Roman Catholic Church has a unique organizational structure and its operations provide many areas for continued research. When this research was initiated, there was research for non-profit organizations, but none specifically focused on the Roman Catholic Church with its subsidiary construct. This provides several opportunities for follow-on research. This research can provide insight into ways to successfully implement technology innovations within organizations that are not a standard hierarchical structure.

One potential research area is a follow-up analysis of the Diocese of Colorado Springs. When this research commenced, the Diocese was in a time of change. The Diocesan IT Director was hired over one year ago. He had a list of projects he was pursuing, including improving lines of communication and establishing a webpage service. The Diocese also published their new pastoral plan while this research was ongoing. The pastoral plan listed the changes in technology as the first external challenge it must address. Also, as a result of the pastoral plan, the IT Director was planning to develop a corresponding technology plan to outline how technology could assist the Diocese in meeting their goals.

A second area of research would investigate the Dioceses that have consolidated or standardized services. This research only interviewed three Dioceses. There are approximately 250 Dioceses within Canada and the United States. Two of the Dioceses interviewed in this research indicated that have had numerous Bishops, IT directors and financial managers request them to visit their parishes to explain their efforts (Diocese 1 Representative, Personal Communication, 20 August 2010; Diocese 3 Representative, Personal Communication, 30 September 2010). Diocesan leadership is looking for ways to leverage technology at the Diocesan level, but they do not know where to start. However, if they would include parish

needs within their research, much benefit could be found on both levels. Follow-on research should investigate the Dioceses across North America to see which Dioceses have worked to leverage technology through consolidation or standardization. The research should investigate the causes for success or failure of the initiative and document the lessons learned. This research would benefit other Dioceses investigating ways to support their parishes. This research would also provide insight into the impact organizational involvement and culture would have on the leveraging of technology within other organizations with subsidiary construct.

Finally, research should investigate the Dioceses that have successfully consolidated or standardized different IT services and determine if any of the lessons learned could be applied to industry, government, or other non-profit organizations to improve the implementation of IT innovations.

Organizations are constantly trying to improve operations. This usually drives change. Follow-on research can provide valuable lessons learned for organizations with hierarchical directive structures or ones that are subsidiary in nature.

References

- Kase, S., Carroll, J. M., Zhang, Y., & Rosson, M. B. (2008). Sustainable Information IT Learning in Community-based Non-profits. Retrieved from <http://delivery.acm.org.dml.regis.edu/10.1145/1360000/1358870/p3435-kase.pdf?key1=1358870&key2=9891497821&coll=ACM&dl=ACM&CFID=107118657&CFTOKEN=92861436>
- Klein, K. J., Conn, A. B. & Sorra, J. S. (2001). Implementing Computerized Technology: An Organizational Analysis. Retrieved from http://www-management.wharton.upenn.edu/klein/documents/Klein_Conn_Sorra_2001.pdf
- Leger, A., Farret, R., Duval, C., Levrat, E., Weber, P., & Iung, B (2008). A Safety Barriers-Based Approach for the Risk Analysis of Socio-technical Systems. Retrieved from <http://www.nt.ntnu.no/users/skoge/prost/proceedings/ifac2008/data/papers/2413.pdf>
- Mathieson, K (2006). Using Volunteers for IT Work: Research Questions. Retrieved from <http://delivery.acm.org.dml.regis.edu/10.1145/1130000/1125226/p230-mathieson.pdf?key1=1125226&key2=9271497821&coll=ACM&dl=ACM&CFID=107118261&CFTOKEN=53634122>
- Merriam Webster's Deluxe Dictionary (10th Collegiate Ed)* (1998). Pleasantville, NY: Merriam-Webster, Incorporated.
- Merkel, C., Farooq, U., Xiao, L., Ganoe, C., Rosson, M. B., & Carroll, J. M. (2007). Managing Technology Use and Learning in Non-profit Community Organizations: Methodological Challenges and Opportunities. Retrieved from <http://delivery.acm.org.dml.regis.edu/10.1145/1240000/1234783/a8-merkel.pdf?key1=1234783&key2=1827648721&coll=ACM&dl=ACM&CFID=94075631&CFTOKEN=67943387>

- Schwalbe, K. (2006). *Information Technology Project Management (4th Ed)*. Boston, Massachusetts: Thomson Course Technology.
- Stam, K. R., Stanton, J. M. & Guzman, I. R. (2004). Employee Resistance to Digital Information and Information in a Social Service Agency: A Membership Category Approach. Retrieved from <https://journals.tdl.org/jodi/article/viewArticle/150/148>
- Thavis, J. (2010, January 23). Pope Asks Priests to Get Online, Spread the Gospel. Catholic News Service. Retrieved from <http://www.catholicnews.com/data/stories/cns/1000321.htm>
- The Colorado Catholic Herald (2009) 2010 Diocese of Colorado Springs Directory. Colorado Springs, Colorado: The Colorado Catholic Herald.
- The Diocese of Colorado Springs. (2010). Living the Mission, Transforming the Culture, 2010-2015 Pastoral Plan for the Diocese of Colorado Springs [Brochure]. Colorado Springs, CO: Author.
- Wears, R. L. MD & Berg, M MD (2005). Computer Technology and Clinical Work. Retrieved from <http://jama.ama-assn.org/cgi/content/full/293/10/1261>
- Website: The Archdiocese of Baltimore. Last viewed 17 September 2010 at <http://archbalt.org>
- Website: Catholic Reference. Retrieved from <http://www.catholicreference.net>
- Website: The Catholic Diocese of Colorado Springs. Retrieved from <http://www.diocs.org>
- Website: Diocesan Information System Conference. Retrieved from <http://www.discinfo.org>
- Website: Parish Data System. Retrieved from <http://www.parishdata.com>
- Wooden, C. (2009, October 29). Church Must Adapt to the Way Media Are Impacting Culture, Pope Says. Catholic News Service. Retrieved from <http://www.catholicnews.com/data/stories/cns/0904827.htm>

Yourdon, E. (2004). *Death March (2nd Ed.)* Upper Saddle River, New Jersey: Prentice Hall
Professional Technical Reference.

Appendix A

Parish Survey

Use of Technology within a Parish

The following questionnaire is to support thesis work investigating the use of technology within the parishes of the Diocese of Colorado Springs. Please fill out and mail back to Sidney Rodriguez in the enclosed envelope. Please ensure that you have signed and send back with the survey the Informed Consent Form that is included in the package.

PARISH DEMOGRAPHICS

- 1. What is the size of your parish (number of families)? _____**
- 2. How large is your office staff?**
 - a. Paid (full) _____
 - b. Paid (part time) _____
 - c. Volunteer _____

CURRENT TECHNOLOGY USAGE IN THE PARISH

- 3. What best describes your staff's comfort level in using computer systems and/or software programs?**
 - Very comfortable
 - Comfortable
 - Tolerate
 - Uncomfortable
 - Very uncomfortable

4. **Is your computer technology part of the parish's basic budget?** Yes No

5. **How is your computer technology managed?**

a. **Day-to-day management (email, applications, upgrades, routine maintenance) is done by:**

Paid office staff Volunteer Hired person/company Other (explain)

b. **The parish webpage and/or web services is done by:**

Paid office staff Volunteer Hired person/company Other (explain)

c. **Urgent or emergency problem resolution is done by:**

Paid office staff Volunteer Hired person/company Other (explain)

6. **How old is your computer equipment (indicate all categories that apply)?**

Less than 1 year 1—3 years 4—5 years Over 5 years

IT POTENTIAL IN THE PARISH**7. How well do you feel your parish is using its technology?**

- Very well, does not need improvement
- Very well, but can be improved
- OK but there are many areas for improvement
- Not well
- Uncertain

8. Do you feel you/ your office staff would better utilize your computer system if you had more training? Yes No Unsure**9. Indicate your interest in the following ideas to better utilize your computer technology:****a. Computer conferencing (meetings or web conferences over the internet)**

- Very interested
- Somewhat interested
- Not interested
- Need more information

b. An online toolkit/information repository for different software tools, training material, policies, etc, that would be helpful to your parish operations

- Very interested
- Somewhat interested
- Not interested
- Need more information

c. Training on how to use the computer or different software tools for either you or your staff

- Very interested
- Somewhat interested
- Not interested
- Need more information

d. Tools to support managing the parish (facility, building planning, growth projection, fund raising, etc)

- Very interested
- Somewhat interested
- Not interested
- Need more information

e. Creating a set of software tools to be used at all parishes

- Very interested
- Somewhat interested
- Not interested
- Need more information

10. Would you be interested in joining with other parishes to combine technical and financial resources in order to save resources or improve support in the following areas:

a. Web Services (websites, emails, blogs, etc)

- Very interested
- Somewhat interested
- Not interested
- Need more information

b. Purchasing equipment or supplies

- Very interested
- Somewhat interested
- Not interested
- Need more information

c. **Technical support**

- Very interested
- Somewhat interested
- Not interested
- Need more information

d. **Training (use of programs, computer basics, computer security, etc)**

- Very interested
- Somewhat interested
- Not interested
- Need more information

11. **Do you feel you would be more inclined to use computer tools if you had better training or a place to go for questions (i.e., a help desk)?** Yes No

12. **What are the main areas that are preventing you from improving your use of technology (indicate all that apply)?**

- Lack of funding
- Not enough time
- Knowledge of what is available
- People (staff or volunteer) knowledgeable enough to implement new technology
- Available people (staff or volunteer) to maintain the new system or software program

13. Is there anything that you currently use your computer system for that you feel needs to change? The desire to change can be because the program is too complex to use, does not accomplish the complete job, or may not be the best, most efficient way of doing the task. If yes, please explain.

14. Is there any capability you utilize that you think would be beneficial to other parishes? If yes, please explain.

15. Is there any capability, training, or technology you wish you could implement at your parish? If yes, please explain.

(Optional) Demographics of Priest:

Priest 1:

- How long have you been a priest? _____

- What is your age group?

Less than 40 40—55 Over 55

- How comfortable are you with computers?

Very comfortable Comfortable Tolerate Uncomfortable Very uncomfortable

- Did you have a previous career prior to becoming a priest? If yes, what was your previous job?

No Yes, _____

Priest 2 (If there is a second priest at the parish):

- How long have you been a priest? _____

- What is your age group?

Less than 40 40 - 55 Over 55

- How comfortable are you with computers?

Very comfortable Comfortable Tolerate Uncomfortable Very uncomfortable

- Did you have a previous career prior to becoming a priest? If yes, what was your previous job?

No Yes, _____

Appendix B

Follow-on Interview

INTRODUCTION:

PURPOSE: If a parish has offered to provide additional information associated with the parish survey, the following questions will be used to further research the parish's concerns and needs.

Some questions will assist in gathering firsthand observations during parish visits. Depending on the results of the parish survey, questions will focus on areas of interest/concerns annotated by the parish.

QUESTIONS:

- 1) What is your position within the parish?
- 2) Did you assist in the response to the survey? (if not, then provide a summary of the research project)
- 3) Are you paid staff or volunteer? Full time or part time? If part time, roughly how many hours to you spend doing your duties?
- 4) What are some of your concerns/issues associated with your duties?
- 5) What is your comfort-level in using computers?
- 6) What do you feel will make your job easier/more productive?

The parish survey asked if the parish had interest in areas such as computer conferencing, online toolkits/information repository, training, software tools and standardizes software. The following questions will be asked for each area interest indicated. The questions will focus on determining the parish's understanding of the areas of interest and why they would be interested

in that area. The questions are only asked for areas that indicate interest or need more information. If need be, an explanation of the capability will be provided.

- 7) Why did you indicate this area is of interest? Is there a specific need within the parish you feel this capability could help improve?
- 8) Why do you think this capability will benefit you and your parish?
- 9) Is this something that you would consider joining other parishes in implementing?
(i.e., pooling resources or centrally managing)
- 10) Are there other areas you may have interest in that you did not indicate on the survey.

Appendix C

IT Director Interview Questions

INTRODUCTION:

The purpose of this interview is to discuss the mission of the Diocese of Colorado Springs IT Department and the support the department provides to the individual parishes within the Diocese. The goal of the interview is to determine the type of support the Diocese currently and/or plans to provide the parishes. It also asks if parishes are open to assistance from the Diocese and if the Diocese is able to provide support if requested from the parishes. Finally the interview requests the IT Manager's impression of what may be some of the parishes' concerns with implementing IT changes.

QUESTIONS:

- 1) What is the mission of the Diocese of Colorado Springs IT department? What is the primary focus of your department?
- 2) What are your roles and responsibilities as the Diocese's IT Manager? How long have you been in this position?
- 3) What type of support does your department provide to parishes within the Diocese?
- 4) Are the parishes required to implement recommendations from your department?
- 5) Are there any information systems the Diocese currently makes available to the parishes to use? If yes, tell me about the purpose of the system? What type of response have you received from the parishes—are they open to using the system or is there some hesitation?

- 6) Are you currently considering or developing systems/capabilities that can improve operations at individual parishes? When are these systems/capabilities expected to be available? Were these ideas initiated by your department, or a result of requests from the parishes?
- 7) How do you market the capabilities you have developed for the parish?
- 8) Have the parishes been open/acceptable to the assistance from the Diocese? If no, what do you feel is their concern? In your opinion, what are the main issues/concerns the parishes have that prevent them from using these systems?
- 9) For the parishes that are using these systems, have you received feedback on how well the systems are working for them? If things are working, why do you feel things are working? If not, do you have an idea as to why things are not working?
- 10) Are you familiar with the Diocesan Information System Conference (DISC)?
- 11) What types of support can they/do they provide the Diocese of Colorado Springs? Can they provide support directly to the parishes? If so, what type of support do you feel they can provide?
- 12) Is there any additional information you wish to add that may help in this research?
- 13) Do you have any questions for me concerning the research?

Appendix D

DISC Interview Questions

INTRODUCTION:

The purpose of this interview is to obtain an understanding of the mission of DISC. The interview will also look at the type of support DISC has provided in the past to different Dioceses and parishes and any type of future support they are investigating. The interview will include questions concerning lessons learned from support DISC has provided to other Dioceses and parishes. Understanding the mission of DISC and the type of support DISC can provide to different parishes will assist in understanding ways individual or groups of parishes within the Diocese of Colorado Springs can leverage technology.

QUESTIONS:

- 1) What is the purpose of DISC? What is its mission?
- 2) What is your position/role in DISC? How long have you been associated with DISC?
- 3) Who are the members of DISC? How does someone become a member?
- 4) Do you have relationships with business and academia?
- 5) What type of support does DSIC provide Dioceses who are members?
- 6) Do you provide assistance to individual parishes or only through their associated Diocese?
- 7) Do you have specific examples you can share to show how DSIC has supported other Diocese/Parishes?
- 8) How do Dioceses vet their needs/concerns to DISC?

- 9) Do you feel your organization provides a much needed service to Diocese and parishes?
- 10) Typically, do you see Dioceses easily accepting recommendations from DISC? Are there times when recommendations are met with resistance? How do you overcome those times of resistance?
- 11) What are some of the future goals, objectives, projects that DISC is considering?
- 12) Is there any other information that has not been discussed that you feel may be beneficial to this research?
- 13) Do you have any questions related to this research?

Appendix E
OTHER DIOCESES
INTERVIEW QUESTIONS

INTRODUCTION:

The purpose of this interview is to obtain information from other Diocese that have consolidated or are in the process of consolidating IT services within their Diocese. The following questions will be asked to gather information on the successfulness of consolidating services and lessons learned from the effort.

QUESTIONS:

- 1) What is your position within the Diocese? How long have you been in this position?
- 2) How large is the Diocese you work for (number of parishes and families)?
- 3) Is your Diocese in the process of consolidating IT services from parishes to the Diocesan level?
- 4) If so, when did you start the effort? Do you have an expected time of completion?
- 5) Can you explain the details of your effort (what is being consolidated, what process did you use to start the effort, etc)
- 6) Was there hesitancy from the parishes to support this effort?
- 7) How did you get them to change their mind?
- 8) How is the effort going? Have there been any successful transitions of parishes to the service?

- 9) Have you seen savings or efficiencies within the parishes and/or the Diocese related to this effort?
- 10) What type of roadblocks did you have to overcome?
- 11) Do you have any lessons learned that would be beneficial for other Diocese trying to accomplish a project like this?
- 12) Is there anything you like to add?
- 13) Do you have any questions for me?

Appendix F

Parish Survey Results

Table 5. Parish Survey Results by Parish

Parish #	# of Families	Staff Make-up			Staff Comfort Level w/Technology	Technology Budget?
		Paid/ Full	Paid/ Part	Vol		
1	300	0	4	0	Comf	Y
2	1500	3, 1	2	100	Comf	Y
3	850	10	0	5	Very Comf	Y
4	1,000	1	4	1	Comf	Y
5	976	6	2	0	Toler	Y
6	1942	12	2	many	Comf	Y
7	2300	8	12	varies	Very Comf	Y
8	1700	7	7	0	Very Comf	Y
9	2100	7	10	10	Comf	Y
10	125	0	1	0	Very Comf	Y
11	131	1	0	0	Very Comf	Y
12	800	6	2	2or3	Comf	Y
13	850	4	4	0	Comf	Y
14	1933	11	7	3	Comf	Y
15	422	0	X	0	Comf	Y
16	647	3	2	2	Comf	Y
17	1400	37	3	110	Comf	-
18	900	5	0	0	Comf	Y
19	148	0	1	45	Comf	N

Table 5 (cont)

Parish #	Technical Support			Equip Age				Potential for IT Improvement
	Day-to-day IT mngt	Webpage/web services	Problem Resolution	<1 yrs	1 - 3 yrs	3 - 5 yrs	>5 yrs	
1	Pd Staff	Other	Pd Staff/ Other	-	X	-	-	Some Improvement
2	Hired	Pd Staff	Hired/ Other	-	X	-	-	No Improvement
3	Pd Staff	Pd Staff	Other	X	X	X	-	Some Improvement
4	Pd Staff/ Vol	Vol	Pd Staff/ Other	X	X	X	-	Many Areas to Improve
5	Hired	Vol	Pd Staff/ Other	X	-	-	-	Many Areas to Improve
6	Pd Staff	Hired	Pd Staff/ Other	X	X	-	-	Some Improvement
7	Hired	Pd Staff	Pd Staff/ Hired/ Other	X	X	-	-	Some Improvement
8	Pd Staff	Vol	Hired	-	-	-	X	Some Improvement
9	Hired	Hired	Hired	-	X	-	-	Some Improvement
10	Vol	Other	Vol	-	-	-	X	Many Areas to Improve
11	Vol	Vol	Vol	-	-	-	X	Many Areas to Improve
12	Pd Staff	Pd Staff	Pd Staff	-	X	X	-	Some Improvement
13	Hired	Pd Staff	Hired	-	X	X	-	Many Areas to Improve
14	Pd Staff	Pd Staff	Hired	-	X	X	X	Many Areas to Improve
15	Pd Staff/ Vol	Hired	Pd Staff	-	X	-	-	Many Areas to Improve
16	Pd Staff/ Vol	Pd Staff/ Vol	Pd Staff/ Vol	-	X	X	-	Some Improvement
17	Pd Staff	Vol	Hired	X	X	X	X	Many Areas to Improve
18	Hired	Vol	Hired	-	X	X	-	Some Improvement
19	Vol/ Hired	Vol	Hired	-	X	-	-	Many Areas to Improve

Table 5 (cont)

Parish #	Will Training Help	Areas of Improvement Interest Level				
		Computer Conferencing	Online Toolkit	Computer & Software Training	Management Tools	Standard Software Toolset
1	Y	Somewhat Interested	Somewhat Interested	Somewhat Interested	Not Interested	Somewhat Interested
2	N	Not Interested	Somewhat Interested	Not Interested	Somewhat Interested	Not Interested
3	Y	Somewhat Interested	Somewhat Interested	Somewhat Interested	Very Interested	Somewhat Interested
4	Y	Very Interested	Somewhat Interested	Very Interested	Very Interested	Very Interested
5	Unc	Somewhat Interested	Somewhat Interested	Very Interested	Very Interested	Somewhat Interested
6	Y	Not Interested	Somewhat Interested	Somewhat Interested	Not Interested	Somewhat Interested
7	Y	Somewhat Interested	Somewhat Interested	Very Interested	Very Interested	Very Interested
8	Unc	Not Interested	Very Interested	Somewhat Interested	Somewhat Interested	Somewhat Interested
9	Y	Very Interested	Very Interested	Very Interested	Very Interested	Very Interested
10	Y	Somewhat Interested	Need Information	Need Information	Need Information	Very Interested
11	Y	Not Interested	Somewhat Interested	Somewhat Interested	Very Interested	Very Interested
12	N	Somewhat Interested	Somewhat Interested	Somewhat Interested	Somewhat Interested	Very Interested
13	Y	Somewhat Interested	Somewhat Interested	Somewhat Interested	Somewhat Interested	Not Interested
14	Y	Not Interested	Very Interested	Somewhat Interested	Somewhat Interested	Somewhat Interested
15	Y	Not Interested	Somewhat Interested	Somewhat Interested	Somewhat Interested	Need Information
16	Y	Not Interested	Somewhat Interested	Somewhat Interested	Somewhat Interested	Not Interested
17	Y	Somewhat Interested	Somewhat Interested	Somewhat Interested	Need Information	Not Interested
18	Unc	Need Information	Not Interested	Not Interested	Not Interested	Need Information
19	Y	Not Interested	Somewhat Interested	Somewhat Interested	Need More Information	Not Interested

Table 5 (cont)

Parish #	Interest Working w/ Other Parishes				Training Improve Computer Usage
	Web Services	Equip/ Supply Purchasing	Tech Support	Training	
1	Very Interested	Somewhat Interested	Not Interested	Somewhat Interested	Y
2	Not Interested	Somewhat Interested	Somewhat Interested	Somewhat Interested	N
3	Very Interested	Very Interested	Not Interested	Very Interested	Y
4	Very Interested	Very Interested	Very Interested	Very Interested	Y
5	Need Information	Very Interested	Very Interested	Very Interested	Y
6	Not Interested	Need Information	Somewhat Interested	Somewhat Interested	Y
7	Very Interested	Very Interested	Very Interested	Very Interested	N
8	Not Interested	Very Interested	Very Interested	Very Interested	Y
9	Somewhat Interested	Somewhat Interested	Somewhat Interested	Very Interested	Y
10	Need Information	Need Information	Need Information	Need Information	Y
11	Very Interested	Very Interested	Very Interested	Very Interested	Y
12	Very Interested	Very Interested	Very Interested	Very Interested	N
13	Not Interested	Somewhat Interested	Not Interested	Somewhat Interested	Y
14	Somewhat Interested	Somewhat Interested	Very Interested	Very Interested	Y
15	Not Interested	Somewhat Interested	Somewhat Interested	Somewhat Interested	Y
16	Not Interested	Somewhat Interested	Somewhat Interested	Not Interested	N
17	Need Information	Somewhat Interested	Very Interested	Somewhat Interested	Y
18	Need Information	Somewhat Interested	Need Information	Not Interested	N
19	Somewhat Interested	Somewhat Interested	Somewhat Interested	Somewhat Interested	Y

Table 5 (cont)

Parish #	Reasons Preventing Technology Change				
	Lack of Funds	Not Enough Time	Knowledge of avail tech	People w/ Knowledge	Avail People
1	-	X	-	X	-
2	-	-	-	X	-
3	X	X	-	-	-
4	-	X	X	-	X
5	X	-	-	X	X
6	-	-	X	-	-
7	-	-	-	X	X
8	-	-	X	-	X
9	X	X	X	X	-
10	X	X	X	X	X
11	X	X	X	X	X
12	-	X	X	-	-
13	X	X	-	-	-
14	X	X	X	X	X
15	-	-	-	X	-
16	X	X	-	-	-
17	X	X	X	X	X
18	X	-	X	-	-
19	X	X	X	X	X

Table 5 (cont)

Parish #	Areas Parishes Feel Needs To Change	Anything Parishes Have That Will Benefit Other Parishes
1	We need a website	I scanned thousands of Church documents onto the computer (Vatican, Bishops, Popes, etc) I can do searches on them. However, "origins" now offers some of this capability
2	No Answer	No Answer
3	No Answer	No Answer
4	Graphic Design for Kiosk LCD Board—Power Point just doesn't cut it all	Sharing of IT support and information
5	Need a facilities scheduling software	No Answer
6	No	Not Sure
7	No Answer	Plasma screen running PowerPoint. Slideshow loop; website, e-mail blasts
8	No Answer	No Answer
9	No Answer	No Answer
10	No Answer	No Answer
11	The Parish Data Systems is not very intuitive to use, and costly for monthly support that we have yet to use.	n/a
12	No Answer	No Answer
13	No Answer	No Answer
14	Our database works well for much of the time but it often has glitches. It would be nice to share data with the other parishes and the Diocese	Our website is managed by a company—they set it up and maintain it and we (staff) makes all changes to content. Changes are immediate. Remote access through a remote server—we are asked to work from home
15	Could use more training in Power Point	
16	No	Ministry Scheduling Software
17	No	No
18	Parish Data System (PDS) cumbersome and not covering all our database/accounting needs	N/A
19	The Parish Data System, although comprehensive, is difficult to isolate the information that is needed and I struggle to get the required information. The parameters are often too broad and there are several steps—if you miss one step it gives you garbage and if you back track to correct it you basically have to start over again.	None

Table 5 (cont)

Parish #	Areas Parishes Wish To Improve
1	Website and maybe something like listserv
2	No Answer
3	No Answer
4	Cross reference of parish members between parishes—Church hoppers. Go to church at one facility and education at another. This relates to how to support programs between parishes
5	No Answer
6	Not really, open to what might be available
7	Podcasting; improved capability from PDS (Parish Data Systems) database system
8	No Answer
9	More training on the software that we use
10	No Answer
11	unknown
12	No Answer
13	No Answer
14	No Answer
15	How to access new website when it is up and running
16	Areas parishes wish to improve
17	Newer Equipment
18	Parish Data Systems Software (currently Using)
19	N/A

Glossary

Deacon: A man specially ordained to the service of the Church's ministry. The role of deacons is to assist priests in preaching, the conferral of baptism, performance of marriage, the administration of parishes, and similar duties. (Website: Catholic Reference)

Diocese: The territory over which a bishop exercises ecclesiastical jurisdiction (Website: Catholic Reference)

Diocesan Information System Conference (DISC): An organization which encourages the development of professional relationships among its members; facilitates the free exchange of ideas and information; and provides data processing, information technology expertise and professional services to the local and national Roman Catholic Church. Members of DISC are Diocesan IT Directors or Financial Managers). (Website: DISC)

Information technology (IT): The system (hardware and software) and necessary connectivity, along with the support functions associated with the use of technology. Support functions include training, problem resolution support, purchasing vehicles/contracts, maintenance activities and sustainment support

Innovations: A technology or practice that an organization is using for the first time, regardless of whether other organizations have previously used the technology or practice (Nord & Tucker, 1987)

Innovation Implementation: the transition period during which targeted organizational members ideally become increasingly skillful, consistent, and committed in their use of an innovation (Klein & Sorra, 1996; Klein, Conn & Sorra, 2001)

Mission: A local church or parish dependent on a larger religious organization (or parish) for direction or financial support (Merriam Webster's Deluxe Dictionary, 1998)

Quasi Parish: A parish that has a deacon as the parish director; there is no permanent pastor assigned to the parish (Website: Catholic Reference)

Parish: In a Diocese, a definite territorial division that has been assigned its own church, a determined group of the faithful, and its own distinct pastor who is charged with the care of souls (Website: Catholic Reference)

Pastor: An individual priest or a corporate person (religious order or community) to whom a parish has been entrusted by a bishop, with the rights and responsibilities conferred by canon law and the statutes of the Dioceses (Website: Catholic Reference)

(Parish Data System (PDS): A software program that manages the administrative aspects of a parish, such as registration, scheduling, etc. (Website: PDS)