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IN

COMPUTER INFORMATION SYSTEMS

Development of Project Management Application Suite

for Improved Communication & Project Development

PROFESSIONAL PROJECT PROPOSAL

Sherée Wiedeman

March 25, 2006

Executive Summary

The purpose of this project was to provide the client with a project management solution that provided for better communication between ITS and the community, while providing a place for projects to be proposed and stored, ensuring projects are not lost. This goal was achieved through a process of determining the client's business needs, examining their existing systems, preparing a formal project plan, and designing and implementing a solution.

The result was a solution that provided the community a location to improve communication on project status on a 24x7 basis. Through the design of a custom project management solution, all of the client's goals were achieved. The application worked with the client's current security system; guaranteeing all community users are able to access the system, without requiring a new username/password. The application also provided users the ability to finish a project proposal over multiple sessions, for projects to be prioritized, and phases to be added to each project with the ability to assign each phase to a project manager and team.

The project was a successful solution to the problems defined, with the success attributed to clearly defined goals. The project used commonly used internet technologies, which provided a solution easy to use and implement.

Table of Contents

Table of Figures

Preface

The project described in this report and the attached appendices is based upon work done at the main campus of a Denver educational facility. The design of the application came through research of project management solutions and technologies and through the client's needs. The client prefers to use in-house employees to create customer solutions that work with the communities specialized needs, rather than utilizing Off The Shelf (OTS) products.

During the duration of this report, the client's name has been removed to provide confidentiality to the client.

1.0.0 <u>Chapter One: Introduction</u>

1.1.0 <u>Statements of Business Problems and Business Needs</u>

The client, whose main campus is located in the western suburbs of Denver, is a 1,300 employee educational facility. There are eight campuses, six of which are in Colorado and two in Nevada. With this type of environment, it was difficult to determine the business needs of the community and with no solution in place for communicating project ideas to persons within the Information Technology Services (ITS) department; these needs tend to go unmeet. If and when these project ideas made it within ITS, they were not always communicated with the proper personal and many ideas simply would be forgotten or lost. Once projects began, communicating the project's process with everyone involved, or who needed to be involved was challenging.

The client felt secure remote access to the application would provide the best solution. With advisory groups that govern ITS projects, many employees working at home, telecommuting on a part-time basis or employed at another campus in Colorado or Nevada, it is a necessity that users have access to the application from any location at any time.

With these business needs in mind, the client met with the project manager to determine the project objectives, which were broken into project sections. These included:

- Proposal Entry

- Proposal Review

- Project Identification/Prioritization

- Project Management

- Project Reporting

- Project Administration

Each section above is a part of the project management process in which a proposed project would go through many of these stages throughout the project's progress.

1.2.0 Statement of Project Goals

Several goals for this project were discussed with the client, and based upon their business needs, the goals decided on were:

- Security – the solution must provide access to only members of the community, and will need to utilize the security already built into the current Intranet website

- Access – the solution must provide 24x7 access to the community member using the internet to provide this access

- Compatibility – the system must be compatible with client's current Intranet website, in order to be stored within this system during implementation

To meet these goals it was decided that the project would proceed as followed:

- Prepare a Project Plan – this plan detailed the goals and objectives, and will be the first deliverable in this project

- Design Project Screens – this will detail the database design and the actual project requirements required for each project proposal, the design will be the second deliverable in this project

- Build System – this was the process were the project manger constructed the project management system

- Testing – this is the process were the project manager and the client tested the system to ensure system functionality

- Implementation – this is when the project manager implemented the system with the client's web server.

1.3.0 Review of Existing Situation

In the past, project proposals were submitted in a variety of inconsistent manners. Some proposals were brought in a formal manner through one of the three advisory groups that govern the ITS department. A number of projects are called into the ITS Help Center as requests for service, others are established through goodwill on the part of the ITS department, and yet others are added to the plan in a political manner.

1.4.0 Barriers and Restraints

The project's objectives and goals have a number of constraints that helped to determine that a custom solution offered them the ability to have unique features while giving them a web-based project entry screen and project tracking utilizing a SQL database.

With projects coming from every direction, and not all persons employed in the same location, it was imperative that the project entry be available from the Internet but only to those belonging to the community. By belonging to the community, a user would already have a username and password given to them upon their entrance to the community in order to access computer resources.

The need for prioritizing project phases based upon 20 yes/no questions that are related to the community individually determine which projects would be the most beneficial to the community.

Project management/tracking was needed in order for advisory groups, project managers and administrators to add or review details about the project; and many customized reports were necessary in order to related to different individuals, groups and/or departments throughout the community.

1.5.0 <u>Summary</u>

The client was very precise and consistent in their requirements and the success of the project will ultimately be determined by the mainstream use of the

application. The title of the project was to be the "Digital Plant Portfolio" and is

intended to provide a detailed project entry screen that anyone belonging to the

community can enter in a project to be accessed by ITS and the advisory groups.

Another screen will be used to sort through project ideas and either approves or

denies projects, while being able to break the project into phases, assign project

managers and review reports. Finally, a screen was created to provide

administration for the administrators of the system itself.

2.0.0 <u>Chapter Two: Review of Literature/Research</u>

2.1.0 <u>Introduction</u>

This chapter provides an overview of the research and technologies that were examined as part of this project. The results were then used to design and develop the database tables and web screens of this project.

2.1.1 <u>What Is a Project?</u>

A project is a sequence of unique, complex and connected activities having one goal or purpose and that must be completed by a specific time, within budget and according to specification; and is the development of a number of activities that must be completed in some specific order or sequence. (EPM, 3-4)

A project is not the repetitive ordinary work that is to be completed on a daily basis, but is something that has a beginning and an end and produces a unique product, and generally run outside the normal, repetitive routine of business life. (Idiots, 5) Projects are often implemented as a way of achieving an organization's strategic plan and are important as they address problems that could be critical to an organization's success of operating outside of their normal limits. (PMI, 4)

2.1.2 <u>Basic Project Problems</u>

Poorly managed projects can run into delays and budget overruns and in some cases even abandoned. Most modern project management methods are

primarily concerned with preventing these types of problems. Preventing

problems is easier and less costly than solving them. Effective preventive

measures should locate problems and potential problems, early, resolve

problems before they get out of hand and plan for potential problems. A project

can encounter many problems, and should always be expected, these problems

could range from: (OTWB, 19-20)

- Incomplete, unclear or inadequate requirements

- Dependence on external sources

- Difficulties in concluding the project

- Frequent replacement of the development personnel

- Poor estimates

- Inadequate tracking and supervision

- Uncontrolled changes

- Poor testing procedures

- Poor development documentation

2.1.3 Project Requirements Problems

Project requirements specifications describe the project to be produced, if

the requirements are not adequately specified, then nothing short of pure luck will

assure that the product meets the needs of the client. (OTWB, 20-21)

Some problems related to poor requirements:

- Features missing, a client may feel that there are certain features missing that they felt were assured were to be included within the project

- Unnecessary features have been included, the development team added features they were sure the client would be overjoyed about, only for the client to find the added feature a burden

- Features work differently then expected, the development team interpreted the requirement according to their own interpretation rather than consulting with the client, producing a feature that does not quite work properly

- Necessary features not thought about, these are features that a developer may know about that a client may not have necessarily thought about

2.2.0 <u>Proposal Entry Screen</u>

If there were a place for a project to get into trouble, it would be in the very beginning. It is difficult oftentimes for people to understand what is being said to one another, and this leads to the problem of not having a clear understanding of exactly what needs to be done. If a project is going to be successful, it is essential that everyone involved be able to communicate. (EPM, 109)

The first point of contact is the request for a project. At this point, two parties are brought together to define what the request is and what kind of

response is appropriate. Deliverables from this request are the Conditions of Satisfaction documents. (EPM, 109)

2.2.1 Types of Proposals

There are several types of proposals, but they can all be divided into two basic categories, solicited and unsolicited proposals. It is possible to have a combination of the two as the various ways companies are urged to submit requests. (OTWB, 44)

Solicited proposals are initiated by a client as a response to an invitation to submit the request as a formal Request for Proposal. The solicited report is often complete and detailed. Solicited reports must be capable of competing successfully with other proposals, and must be regarded as a mini-project within itself. (OTWB, 45)

Unsolicited proposals are much less formal and are no more than a first step leading to negotiations that are more formal. An unsolicited proposal is rarely accepted the first time around, and its main objective is to generate interest. (OTWB, 44- 45)

2.2.2 The Proposal Format

A good proposal should provide answers to six basic questions: who, what, when, how and how much. These questions refer to: (OTWB, 47)

1. Who is the organization/department/client submitting the proposal?

2. What is being proposed?

3. Why is the proposal being submitted?

4. When will it be developed and delivered?

5. How will the proposed work be implemented?

6. How much will it cost?

2.2.3 <u>Request for Proposal</u>

A Request for Proposal (RFP) is the beginning of the project selection process. This stage is where the idea behind a project crystallizes and takes form as decisions are made by senior management as to whether a project should proceed or not. (OTWB, 40-41)

A good request for a proposal is one that will bring in the best responses from senior management. In order to have a high-quality proposal that gets senior managements attention, it requires the cooperation of many people. An RFP should include the following sections: (OTWB, 41-43)

- A statement of the problem and project objectives – this section provides general background information, including the description of the problem, all relevant details necessary to understand the problem, including diagrams and reports should be included

- Technical requirements – this section describes specific technical requirements of the system such as interfaces to existing systems, database requirements, communication architectures and required standards

- Administrative information – this section provides information regarding the physical submission of the proposal, such as who may respond to the RFP or how to request additional information or clarification on a subject

- Cost requirements – this section addresses financial issues and includes the pricing structure required for the proposal, as well as any specific information that is to be addressed in the proposal

- Referenced documents – this section contains all the relevant documents addressed in the RFP, such as standards and existing system documentation

- Required deliverables – this section contains an initial version of the statement of work, mainly a list of main project deliverables such as software or training

- Required proposal format – this section includes the required format for the proposal, and includes the list of required content

- Submission schedule and decision schedule – this section describes the critical dates relating to the RFP, and includes the latest dates for submission of the proposal and the expected date the project will be complete

From this the Request for Proposal, a Project Overview Statement (POS) can be developed; this is where all the specifics of the project are concisely stated. Ideally, this short document explains what the project is suppose do, why it is to be done and what business values it will provide when completed. (EPM, 109-113)

2.2.4 <u>Project Overview Statement</u>

The main purpose of the POS is to secure project approval and the resources needed to develop a detailed project plan. Since this document may be seen by many parties, it should not contain technical jargon that would not usually be used across the company. Once approved, the POS becomes the foundation for future planning and execution of the project. (EPM, 113)

There are five parts of a Project Overview Statement, they are: (EPM, 113)

1. Problem/Opportunity

2. Project Goal

3. Project Objectives

4. Success Criteria

5. Assumptions, Risks, Obstacles

Stating the problem or opportunity is the first part of the POS, this statement is fact and does not need to be defined or defended. This is important, as it will set the precedence with which management will review the project, if it is a higher-priority area management may be more willing to read on. (EPM, 115-116)

Establishing the goal of the project is the second part of the POS, and its main goal is to get senior management to value the idea enough to read on. The goal gives purpose and direction to the project, and defines the final deliverables and outcome of the project. This is completed so that everyone involved understands in clear terms what is to be accomplished. (EPM, 118)

Defining the project objectives is the third part of the POS, and the purpose is to clarify the exact scope of the project. These current objective statements specify a future goal, and clarify that goal by providing details about it. The project objectives may change as the details of the project are defined. The result is to include project activities and tasks that extend beyond the

boundaries defined in the Project Overview Statement. When this happens, the planning session should end and it should be asked whether the newly proposed activity is outside the scope of the project. (EPM, 118)

An object statement should contain four parts: (EPM, 118)

1. An outcome: a statement of what is to be accomplished
2. A time frame: the expected completion date
3. A measure: how the project will be measured for success
4. An action: how the objective will be met

The fourth part of the Project Overview Statement is to Identify Success Criteria. This is the measurable business value that will result from doing the project. This statement will be what sells the project to senior management. It is essential that criteria for the project be quantifiable, measurable and expressed in business terms. (EPM, 119)

The fifth part lists the assumptions, risks and obstacles the project may face, as these may affect the outcome of the project. These details need to be brought to the attention of senior management, as they can use these factors to make compromises about the project or alert project managers to any factors that may interfere with their part of the project. These factors include environmental, technological, interpersonal, cultural or organization conditions that are relevant to the project. (EPM, 120-122)

2.2.5 <u>Financial Analysis</u>

There may be some additional information requested in addition to the Project Overview Statement, this could include financial analysis. This is some measure of the economic value of the proposed project, even though senior management realizes that this estimate may be little more than a guess. (EPM, 122)

2.3.0 <u>Proposal Review Screens</u>

After a proposal has been submitted, the review and selection process begins. A proposal selection is a group of people appointed to review and evaluate proposals. Many large organizations have formalized the proposal evaluation procedure, where each component of the proposal is graded according to a specific procedure, where the combination of these individual grades adds up to the final grade for the proposal. (OTWB, 50)

2.3.1 <u>Proposal Evaluation Method</u>

Most proposal evaluation methods are based on some variation of the weighted technique, where a number of factors score points that are then weighted and combined to provide an overall grade for the proposal. This is done to attach more importance to a specific proposal that would bring in more business value than other projects would. (OTWB, 51)

2.3.2 <u>Proposal Evaluation Issues</u>

A problem many clients face is how much detail to provide in the proposal. Too much detail could discourage may discourage proposers from offering their own solutions, but too much cold generate unsuitable solutions due to lack of information. If a client has strong ideas about how a project should be completed these details need to be outlined in the Request for Proposal. (OTWB, 53)

A client may have other issues that concern them, such as what happens when requirements change. How locked into a Request for Proposal are they and how difficult would it be to make changes if need be, or what if they do not have time to complete a good project proposal. A few issues should be addressed before the RFP is released. (OTWB, 53)

1. The degree of detail, if a problem is narrow or well-defined, then considerable detail should be provided in the RFP

2. Evaluating the proposals, at least two people should evaluate and score each item in the proposals in order to have an objective evaluation

3. Changes to the requirements, the formal project agreement should allow for a reasonable number of changes to happen early within the project, and can be included within the RFP

4. Gaining time, the process of completing and RFP, evaluating proposals and completing negotiations; in a few cases, projects

may need to begin immediately, by permitting development to begin immediately, developers can gain time when dealing with critical time frames

5. Joint proposals, joint proposals should have one overall responsible party, that way there is a clear definition of responsibility

2.3.3 <u>Proposal Evaluation Summary</u>

Without reviewing projects, a company runs the risk of wasting valuable resources on projects that do not really need to be done. All projects start as ideas or concepts, but there always more ideas in a business than there is time and resources to implement them, and not all ideas or concepts are good ones. (Idiots, 55-56)

2.4.0 <u>Project Identification/Prioritization Screens</u>

Identification and prioritization of projects is one of the first steps in the project initiation phase of the management process. In this stage, projects are prioritized into projects that need to be done now versus projects that can be done later. (Idiots, 56)

There are eight basic steps that one can use when choosing which project should be the most important. These steps are: (Idiots, 56-59)

1. List all current projects and project ideas, even new project ideas that come up as a result of this idea-generation phase

2. Determine the need or opportunity for each project on the list

3. Establish rough delivery dates and budgets for each project

4. Judge the overall feasibility of each project, if a project is beyond the scope of the companies resources than it may not be a good idea for the company to begin the project

5. Establish the risk of each project

6. Review the project list, objectives, feasibility and risks with appropriate personal to gain consensus on the projects

7. Eliminate inappropriate or unfeasible projects from the list

8. Select the most important projects and begin them first

Project identification stresses the selection of a project worth doing and the development of a vision, while establishing goals for the project. Many key individual will be brought together during this phase to form a core project team in order to start the planning process

2.4.1 Project Initiating

Once a project has been recognized as needing to be done, it needs to be determined what the project should accomplish. This is done by defining the overall project goals and the general expectations of the clients, management or any other appropriate personnel. The project scope is then defined and the initial

members of the project team are selected, agreeing on a statement of work or contract for the project. This process also includes establishing the rules for project including levels of authority, communication channels and a chain of command. (Idiots, 17)

2.5.0 <u>Project Management Screens</u>

Project management is accomplished with the processes as initiating, planning, executing, controlling and closing. The project team manages the work of the projects, which can include demands for scope, time, cost, risk and quality. They will need to manage stakeholders with differing needs and expectations, and identify final requirements. (PMI, 6)

Project management processes of the past are not enough to meet today's corporate challenges and meeting the demands requires a focus priorities, better tracking techniques and effective structures for communication. Companies need to streamline operations, reduce risk and improve overall productivity. Project management is simply a combination of steps and techniques for keeping goals, budgets and schedules in line. (Idiots, 14)

The project management toolbox for business includes manual and computerized processes that are directly applicable to improving performance and efficiency. Project management techniques offer proven methods for working with project teams. (Idiots, 14)

The beginning of the project management process is where the responsibility for a project is given to the project manager. Project management reduces the surprises a project might bring and makes it possible to bring the project in on time and within budget. (Idiots, 62)

2.5.1 <u>Work Breakdown Structure</u>

The Work Breakdown Structure (WBS) is a hierarchical description of the work that must be done to complete the project as defined in the Project Overview Statement. (EPM, 135)

The division of the project into basic work components is the idea behind the Work Breakdown Structure. A project needs to be broken down into manageable tasks that can be assigned, scheduled, tracked and organized. The total sum of these tasks will be all the components needed to complete the project successfully. Without some basic order in the assignment of work tasks, it is almost impossible to control the many people, materials and functions that are involved in the development process. (Idiots, 89-90) (OTWB, 121)

There are five reasons for organizing projects into smaller tasks, they are: (Idiots, 90)

1. Breaking projects into tasks can put the project in the most logical sequence for completion

2. Tasks are then modularized into manageable segments, which can be a way to access and control work done on a project

3. Skills and resources needed to complete the project can be determined

4. Work can be communicated to other team members with minimal details

5. Ensures that all work sequences are identified and understood

2.5.2 Project Resources

After the tasks have been defined and a basic communication network has been established, a complete list of resources can be developed. Seven fundamental resources will be required to implement almost any project, people, money, equipment, facilities, materials, information and technology. Once there is a list of resources, it can be determined what resources are already available for the project. (Idiots, 122)

2.5.3 Project Management Summary

Complex projects divided into simpler components make a project easier to handle. The decomposition of projects into smaller components is helpful in monitoring the activities assigned to various development teams and is a useful tool in defining the functional, design and work components of a project. By identifying and removing unnecessary tasks, work, costs and risks can be reduced without losing functionality or quality. (OTWB, 135-136)

2.6.0 <u>Project Reporting Screens</u>

Reports allow the project members to follow the project "roadmap" in order to stay on track. It is important to a projects success that team members, stakeholders, managers and clients stay informed and communicate on a timely basis. In addition to regular status reports, which contain information on the current progress of projects, other reports may be required to track specific aspects of the project. (Idiots, 252)

One of the most important operating procedures is a way to make progress visible to team members as work progresses, being able to see the movement toward the finish line is vital to maintain the morale and keep people focused on their contributions to the project. (Idiots, 255)

Project reporting should not be used as a substitute for one-on-one communication, too many reports bog down projects in unnecessary paperwork, which in the end affects quality, schedules and motivation. (Idiots, 319)

2.7.0 <u>Discussion of Other Products</u>

Off-the-shelf components are pieces of existing software that can be incorporated into a current project with little or no modification. The risk involved in using off-the-shelf components is minimal, there is still a risk as it is often the

case that it is needed for a project to adapt to the component rather than the component adapting to the project. (OTWB, 276)

2.7.1 <u>Microsoft Project</u>

Microsoft Project was a software application that was available to the client. This software fulfilled many of the client's needs out of the box, but there were also many other important needs this product did not supply.

The main drawback to Microsoft Project for the client is the need for all members of the community to be able to access the product from anywhere. Microsoft requires the application to be installed on any computer that wishes to access any information with the product, making it difficult for just anyone within the community to be able to access. Another drawback was the need for the application to be secure with different levels of access. With the client's organization, there are many levels of persons and departments involved in most projects and their need to be able to communicate on different levels of the project was essential. A third drawback to Microsoft Project was the client's need for customized reports that catered to committees and departments that require these reports in order to perform their jobs effectively.

2.7.1 <u>Other Products Summary</u>

With the three drawbacks stated, the client felt that Microsoft Project was not a good fit for them, and determined that a customized web-based application would be the ideal solution for them.

2.8.0 <u>Summary</u>

Many times people complain that the planning process takes too much time. They would rather skip this process and begin working on the project immediately. A good project plan helps eliminate common problems that can arise, even though not all. There is a chance though that with too many deviations the project might never reach your destination. The better the plan, the more likely adjustments can be made early in order to keep the project on course.

3.0.0 <u>Chapter Three: Project Methodology</u>

3.1.0 <u>Lifecycle Model</u>

The project was implemented using the Software Development Life Cycle (SDLC) over a two-month period with a completion date of November 30, 2004.

The design the client provided paralleled itself against the SDLC, which attributed to the following six phases: Phase I, Research & Analysis, Phase II, Design, Phase III, Construction, Phase IV, Testing & Approval, Phase V, Implementation, Phase VI, Maintenance.
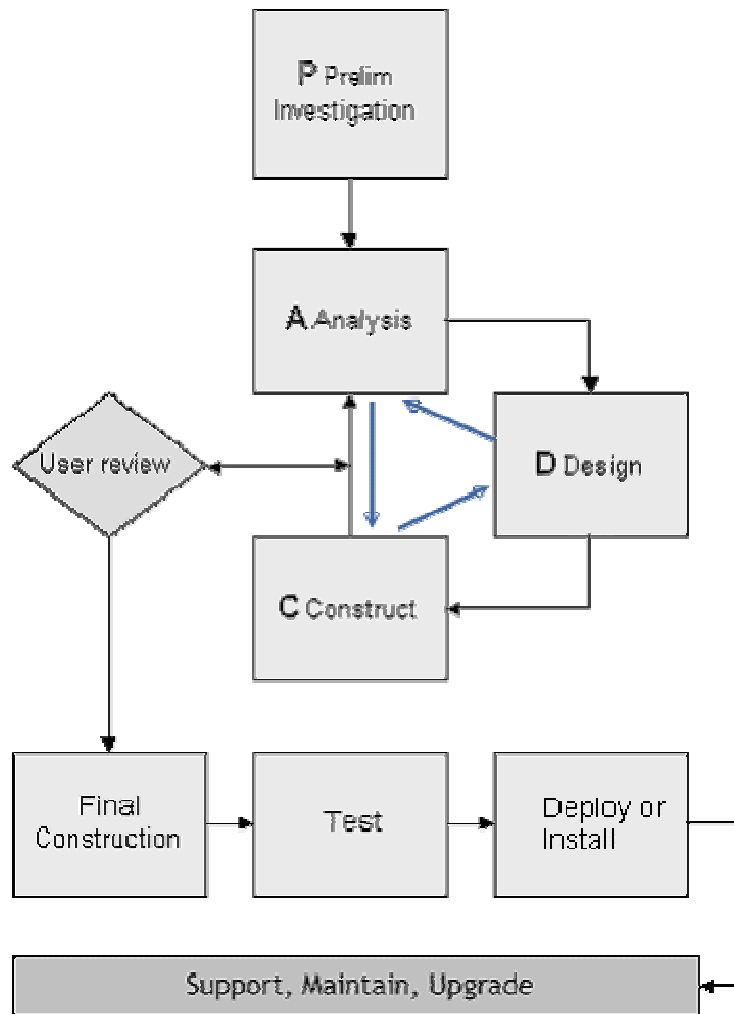
Figure 3.1 - Software Development Lifecycle

(http://www.classanytime.com/mis310/ Hand-SDLC.html)

The SDLC and the project plan are further expanded upon in the following sections.

3.1.1 <u>Research and Analysis</u>

The details of this phase are covered under Phase I of the Project Plan. This step was carried out between the project manager and the client in

response to project management related problems. With completion of Phase I, the definition of the business requirements, project scope and objectives were complete.

3.1.2 <u>Design</u>

Phase II was the design phase of the project, covered under Phase II of the Project Plan, where database tables and fields were decided upon and the initial screens designs were developed. The completion and acceptance of these designs marked the beginning of Phase III.

3.1.3 <u>Construction</u>

During this phase, the construction of the project was completed. The details of which are covered in Phase III of the Project Plan. The documentation from this phase was provided during the final phase of the SDLC.

3.1.4 <u>Testing & Approval</u>

This completion of this phase marked the completion of the project and system implementation marked the acceptance of the project, which is included in Phase IV of the Project Plan. The documentation from this phase was provided during the final phase of the SDLC.

3.1.5 <u>Implementation</u>

This phase was completed with the completion of Phase IV of the Project Plan with the acceptance of the project, and final implementation of the application.

3.1.6 <u>Maintenance</u>

The documentation developed during Phase III and Phase IV provided information necessary to maintain the project management system. This included information on how to access the many screen sections as well as working with the screens. The details of this phase will be provided in Phase VI of the Project Plan.

3.2.0 <u>Project Phases</u>

The project consisted of six phases, were Phase I began in September 2004 and ended in November 2004.

3.2.1 <u>Phase I – Research & Analysis</u>

Phase I, Research and Analysis, consisted of two segments, problem analysis and decision analysis. Throughout the problem analysis segment, the client and project manager discussed the problem at hand and requirements for a customized project management system. During the decision analysis segment, the client made the decision to move forward with the project plan as intended.

3.2.1.1 Problem Analysis

In order to determine a new solution for a project management system, a series of meetings were conducted between the client and the project manager. During the problem analysis segment, the initial meeting between the project manager and the client resulted in a complete understand of the current project management system, from project initiation to project completion. This meeting provided the information required to refine the project goals and objectives that formed the basis of the project plan.

During subsequent meetings, reviewing the existing system provided an understanding of where problems lie and where the barriers and constraints that needed to be addressed in the project plan, as well as the future design of the project.

The information reviewed during the problem analysis segment helped produced the project plan. The project plan, which is included within this report as Appendix A. was a document that clearly defined the project. The acceptance of the project plan allowed for development of Phase II.

3.2.1.2 Decision Analysis

During the decision analysis segment, the decision was made to move ahead with a customized project management system that would be developed

in house. The information in the project plan was used to move forward with

Phase II.

3.2.2 Phase II - Design

The design phase included the main design of the system entry screens

along with the database design. Phase II progressed with the following order:

- Design database tables

- Design Web Application Interfaces

  o Design proposal entry screens

  o Design project review screens

  o Design project identification/prioritization screens

  o Design project management screens

  o Design administration entry screen

The majority of the design was written with the assumption that many

types of users with varying levels of computer experience will be using the

system. The design was to be simple and easy to understand, as well as being

easy to access by all in the community.

Research was performed by the project manager as to which project

management solutions existed that would provide the best design for gathering

the needed information from the community in order to get a project started. The

conclusion of this research is included in Chapter Two of this report.

3.2.2.1 <u>Design Database Tables/Fields</u>

In order for the web application interface to be designed, the database fields were decided upon, as the tables designed and screen designs needed to correspond with the these fields and the project requirements. This was done through a series of meetings with the client and research on part of the project manager, the results of which are in Appendix B of this report.

3.2.2.2 <u>Web Application Interface</u>

The design of the web application interface was derived from information gathered during the database design section and the research performed by the project manager. The design of the web application was to be simple in order to assure that little or no training of the community users was needed. Any required information that may be unclear to a user will be defined through definitions built into the system.

3.2.2.3 <u>Summary</u>

The submission and acceptance by the client of the project design lead to the beginning of Phase III, the construction of the application itself.

3.2.3 <u>Phase III - Construction</u>

The construction phase mainly consisted of building the system to specifications outlined in the Project Plan, while utilizing the design submitted in Phase II.

3.2.3.1 <u>Use Design Phase Outputs</u>

The design was simple, requiring a login that all community members would already have, in order to access all other community resources. Once logged into the system, community members would be able to access a web page that would give them three options. The options include:

- Propose a New Project

- Continue with a Project Proposal

- View Project in Progress

Proposing a new project would give the community member a screen that would allow them to begin entering in project requirements needed to get a project proposed to the community, in order to gain acceptance by them. Continuing with a Project Proposal would allow the person who began the project proposal to continue with adding requirements if they were not able to complete them in one sitting. This allows the community to have all the time they need to gather their requirements. After the required fields have been completed, the user will then be able to submit the project proposal for review. Once the project has been submitted, the user will then have the option to review certain aspects of the project progress.

As soon as the project proposal has been submitted, it can be reviewed by limited members of the community. This allows these members to collaborate on the projects and determine if the proposal is ready to become a project, if it should be returned to the user for clarifications, or if the project proposal should be declined altogether.

When the project proposal has been approved, it then will become a project within the system, from here the project can be prioritized with other projects that currently exist within the system, this prioritization will be based upon a point scale, which is thus based upon 20 questions that will need to be answered about each project.

After the project has been prioritized, project managers can be assigned to the project and phases can be added. Communication about the project will be done through the system, allowing all persons involved with the project to review everything being discussed about the project at any given time.

There is also and administration area where system administrators will be able to maintain the system, this will allow administrators to change project proposal users if someone where to leave the community in the middle of the project proposal. They can change a number of other items related to the project

that may change over time. The administrators will also be able maintain the system by deleting older projects that they no longer wish to keep a record of.

The administration area will also allow a limited amount of community members to access several reports that can be run on demand from the database. This will give them current detailed information on the projects within the system, in the format required by the different committees across the community.

3.2.3.2 Build System

Building the system the project manager utilized many common resources readily available to the internet. This includes using HTML, ASP (Active Server Pages) with VBScript and JavaScript to produce the web pages, and utilizing SQL Server to store the data.

3.2.4 Phase IV – Testing and Approval

During the testing phase, the client provided several examples of projects that were being proposed at the time. This provided the project manager with real-time business needs that the community already had.

3.2.4.1 Use Construction Phase Outputs

Testing consisted of entering in a project proposal and taking it through every step of the project proposal process, ensuring that every aspect of the system was well defined and working properly.

Once the project proposal entry/review phase was complete, the project manager tested the prioritization of the project. This process concluded that the calculations needed to determine the point level of the project was working properly. This process was tested by both the project manager and the client. Once satisfied the project manager moved on to testing, the addition of phases and phase details to projects, utilizing information provided by the client.

3.2.4.2 Test System

The final test of the system was for the client to enter in all the details of their current project list. The client took the time to enter in the details of each project, from project proposal to marking completed projects as complete. This also provided the client with a record of all project produced by their department.

With the approval of the project by the client, the project was able to move into Phase V, with the project being announced to the community on a schedule that worked for the client.

3.2.5 Phase V – Implementation

Implementation of the project management system was simple, and required minimal time. Most of the time spent in this phase was testing the system for the last time in the systems final location.

3.2.5.1 Use Testing Phase Outputs

Using the same inputs and outputs from the testing phase to approve the project while in development was used to test the project in its final location. This was to ensure that any settings on the client's current system did not interfere with the project itself, and to ensure that the security of the system was working properly.

3.2.5.2 Deliver Product

Implementation of the project required adding the project management system to the client's current computer systems, and creating a URL that would allow community members to access the system.

From here, the client was able to utilize the link, sending it to a limited group to introduce the system to the community slowly. The client was then able roll out the system as they saw fit to the rest of the community.

3.2.6 Phase VI - Maintenance

The maintenance of the system will be provided by the client through the administration section of the project management system. Here the client can

delete projects the administration does not want to keep in the system and make necessary changes in order to maintain individual projects.

3.3.0 <u>System Requirements</u>

The requirements for the project will be the personal hours used to complete the project. The work required to complete the entire project will be completed by a single individual, for the exception of the testing phase, where the client helped to test the system by entering community projects that have already been proposed.

3.3.1 <u>Phase I – Research & Analysis</u>

- 40 hours project manager
- Interviews with client
- Documentation of client's existing solutions
- Research materials of project management solutions

3.3.2 <u>Phase II – Design</u>

- 40 hours project manager
- Interviews with client
- Required project information for database and web site design

3.3.3 <u>Phase III – Construction</u>

- 160 hours project manager

- Reports and report formats needed by committees

3.3.4 Phase IV – Testing & Approval

- 80 hours project manager

- 10 hours client

- Current business needs proposed to by the community

3.3.5 Phase V – Implementation

- 20 hours project manager

- Space for project management system

- URL to project management system

3.3.6 Phase VI – Maintenance

- 20 hours project manager

- Project administrators

3.4.0 Project Deliverables

There are four deliverables for this project, two of which are the project plan and the project design, both available in this report as Appendix A and Appendix B respectively. The other two deliverables are the final project and the project location that the community members can use to propose their projects.

4.0.0 <u>Chapter Four: Project History</u>

4.1.0 <u>Project Initiation</u>

The project was formally initiated as a need that was recognized by many within the community. A meeting between the client and the project manager was set up to get the project started. The purpose of the first meeting was to:

- Establish current manners of project proposals

- Communicate project goals and scope

- Communicate project deliverables

The outcomes of the meeting were:

- Current manners of project proposals

    o Projects are brought to one of three IT advisory groups

    o Projects are called into ITS Help Center as requests for service

    o Projects are established through goodwill on part of the ITS department

    o Projects are added to the plan in political manners

- Project Goals and Scope

  - Proposal Entry

    o Creates a clearing house for any and all ideas that the community may have

      ▪ Requires login to ensure community request

- Provided to all users of the community on a 24x7 basis, using the internet

- Captures username and date of submission

- Provides for text entries in response to specific changes

- Allows completion over multiple sessions

- Stored data retrievable in subsequent review and management stages

- Proposal Review

  - Allows projects to be reviewed by an administrator and advisory groups, then either approved or denied

    - Requires login to limited group

    - Allows for completion over multiple sessions

    - Provides text entry for approval/denial reasons

    - If denied, allow for modification and resubmission at a later date

- Project Identification/Prioritization

  - Projects are prioritized based on provided questions that help to determine the business value of the project

    - Requires login to very limited group

    - Provides 20 questions with yes/no capabilities, that automatically calculates a total to help determine project priorities

- Project Management
    - Projects are divided into logical steps by the administrator, called phases, can be viewed by ITS managers, project mangers and advisory groups
        - Requires login to very limited group
- Project Reporting
    - Projects are tracked, providing various reports
        - Requires login to very limited group
- Project Administration
    - Provides an area where the administrator can manage details about the project such as delete old projects, change project managers and add users to the system
        - Requires login to very limited group
        - Allow users to input project proposals over multiple sessions
        - Allow users to view specific aspects of the proposal/project
- Project Deliverables

There were four deliverables produced from this project, the project plan, the project design, the project itself, and the location of the project (the project URL). The project plan contained a detailed outline of what the project was to consist of, while the project design detailed the requirements of project proposals. The final project itself

consisted of all the project goals and objectives stated in the project plan and the project design. The final deliverable is the location of the project, which would be the URL that would be passed out to community members.

The initial meeting concluded with the following requirements being set:

- The project manager was to begin immediately on the project plan with the client

- The project manager was to begin researching project management solutions/techniques

Weekly meetings were scheduled between the project manager and the client to discuss the project's progress and any other issues that may arise during the project. Submission of the project plan was one week after the initial meeting with the client.

4.2.0 Project Management Plan

A project management plan developed at the initial meeting was based upon the project deliverables and project meetings that were between the client and the project manager.

4.2.1 Project Management Plan - Milestones

The project was divided into six different phases, Phase I – Research & Analysis, Phase II – Design, Phase III – Construction, Phase IV – Testing & Approval, Phase V – Implementation and Phase VI – Maintenance. Phase I, II and III all have deliverables that required the acceptance of the client before completion. Phase IV did not require a deliverable, but required the client's approval before the project manager was able to move to the next phase, and implement the system. Phase V and VI also did not require deliverables

4.2.2 Project Management Plan - Meetings

The client and project manager discussed weekly meetings to ensure the projects progression and to clear up any issues the project manger encountered during the project. These meetings were in addition to the open lines of communication the client and the project manager had established.

4.3.0 Project Plan

The project plan accepted by the client is included in Appendix A of this report.

4.3.1 How the Project Ended

When the project was complete and the client approved the application, it was simply loaded onto the client's web server and linked into the client's Intranet web site. When the project was loaded and the client was given the location of the project, the project was considered complete.

4.3.2 <u>Project Changes</u>

Once the project plan was complete, there were no changes to the goals, scope or objectives of this project. This allowed the project to progress on schedule.

4.3.2 <u>Project Plan Goals Met</u>

All the goals and objectives outlined in the project were met with this project. These goals and objectives included:

- Required login, utilizing login information that community members already possessed

- Compatible with client's system, in order to utilize the client's existing security implementations

- Access to system on a 24x7 basis, utilizing client's current web server

- Allows for completion of project proposal over multiple sessions, and also allows users to view their project's progress

- Allows for project prioritization

- Limits access to applications sections to limited members of the community

- Projects can be broken into logical groups, called phases

4.4.0 <u>Project Evaluation</u>

4.4.1 <u>Evaluation of Final Project</u>

The final design for this project provides community members the ability to add projects proposals to the ITS project list, if they are approved. The users can connect to the system through a link on the community's Intranet web site, utilizing their community login information. Once connected the users will have the ability to login to the application, add a project proposal, continuously be able to update the project proposal over multiple sessions until all required project requirements have been added. When the users are through adding project details, they will have the capability submit the project for review.

The design allows for a limited amount of community users to have restricted access to other parts of the application, this provides them the ability to review projects, prioritize them, add project phases and administer the projects themselves. The added benefit of the project allows new community members, who are also new to projects currently in progress, to review them with minimal efforts.

The web page designs were designed with simplicity in mind, with differing levels of computer/internet knowledge it was necessary that the web pages be easily accessible and easily understandable. This also required that the project requirements be easily understandable, in order for the users to understand the information that was required from them. All information that was required was

defined within the system so that there was no misunderstanding on any required details.

The design of the system was fully compatible with the client's existing infrastructure, and was seamlessly implemented into the client's web system; in turn, it has reduced turn around time and increased project margins due to increased communication and productivity.

Based on the above, it can be shown that the proposed design meets all of the goals and objectives of the project plan, in that it provides secure 24x7 access to the system and compatible with the client's current system.

4.4.2 Reasons for Successes or Failures

There were two main reasons for the success of this project, the goals and objectives of this project were clearly defined in the beginning of this project and the second was the goals and objectives were maintained throughout the project. This helped to prevent common failures that can result during re-structuring of project goals and objectives throughout the project lifecycle.

Another success of this project was the compatibility of the project with the client's current system. When users login they were able to use their existing community login information to login to this application.

4.5.0 <u>Project Summary and Analysis</u>

In general, the progression of the project went smoothly and on schedule, largely attributed to the clearly defined project goals and objectives. The project focused on selecting and integrating proven technologies that served the client's needs rather than finding and implementing the latest and greatest software available on the market. By focusing on the client's needs, the project delivered resulted in an application that succeeded in working with the client's business needs.

5.0.0 <u>Chapter Five: Lessons Learned, Next Evaluation of Project</u>

5.1.0 <u>Lessons Learned</u>

5.1.1 <u>Was the Project Successful?</u>

As stated in sections 4.3.2 to 4.5.0, all of the objectives for the success criteria for the completion of the project, were fully met.

5.1.2 <u>What Alternatives Could Have Been Considered?</u>

Two alternatives could have been considered for this project. The first being the current system that the ITS Help Center used to enter in project request, this being a software system called Clientele. This product could have been modified to work with the client's needs, but would not have been done without difficulty and this product would still not provide all of the required needs of the client. Although this product could be given access to the community and could be made available online, it would have to be done so at a price. This software requires user licenses that are expensive to come by. The ITS currently had 15 licenses and it would be required to have a minimum of several hundred to allow access to the whole community at any one time. Clientele is also not an easy application to use, and would require training of the community in order to gain access and enter project ideas.

Microsoft Project is another application that is currently available on the market. The first problem with this software application lies in the accessibility of this application over the internet. This already possess a problem as many of the

community users will never step foot on the main campus. Another major problem with this application is the usability of the product. This is a type of product requires users to take classes in order to get full access out of the system. With thousands of potential users throughout the community, this type of training is just not possible.

5.1.3 <u>What Lessons Learned could be Applied to Future Projects?</u>

One of the overall lessons learned during this project was having clearly defined project goals and objectives helped to maintain these goals and objectives throughout the project. This allowed the project to progress smoothly and to be completed on time. This was a lesson that was re-enforced through the research on behalf of the project manager. As one of the overall goal of this project, was to create a project management system that helps community users clearly define their future project goals and objectives.

Another lesson learned during this project that was also re-enforced through the project manager's research was that a project progressed effortlessly with well-defined phases and deliverables. The methodology of setting clear criteria for phase completion and devising a plan that requires the completion of one phase before the continuation of the next phase is an important lesson to learn. Detailing each step of the project this way proved that this technique worked, and could be utilized within the system itself. Users could also have project phases overlap each other if the need for this were to arise.

An additional lesson learned was the proven project management solutions/techniques that helped to gain detailed project goals and objectives from users. The information gained for this project can be utilized in other projects that the project manager may manage, and were utilized to develop the project in this report.

Final lessons learned during this project were the lessons learned about JavaScript. The project manager has had little time in the past to work with JavaScript, and with every project that requires the use of JavaScript allows the project manager the ability to learn more about this language. The information learned can be used with future projects that would require the use of JavaScript.

5.2.0 Next Evolution

The client was in the process of installing a portal that would replace the community's Intranet system, called Sharepoint. The client thought it would be nice to have this application work within this portal system. This could possibly require a rewrite of the project management system to the Sharepoint system using ASP.Net.

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<u>Appendix A</u>

Phase I – Project Plan

Project Management Application

A.1 <u>Introduction</u>

For a project management system to be successful within this community, it must provide the users with access to the system 24x7 and from other locations than the main campus. In order to achieve this type of access, it was planned to utilize the internet and the security systems already available within the community. This will give users access to the system wherever the internet is available, while allowing the security of the community to be available.

To meet the objectives of this project, a project plan has been developed to design a project management system that consists of these four sections:

- An analysis of business needs

- A statement of objectives that the system must achieve

- A phased project plan defining the scope of each phase

- A project schedule

A.2 <u>Business Needs</u>

In consultation with the client, an overall statement of business needs was produced. This will be used as a guide to evaluate and determine the goals and objectives of the project management solution. The following is a statement of the business needs.

The client has over 1,000 employees, but not all of the employees are employed within the same location or even within the same state. The

employees of this organization are highly mobile, with as many as 30-40% of the employees either working from another location or working from home.

Community members had many ways for submitting project proposals, but other community members were not even aware of these processes. Many community members may have felt as if they were jumping through hoops to figure out how to propose a project.

Without the ability for community members to propose a project, the productivity of the organization suffers as a whole, as the productivity of the individual members of the community suffer. For this reason, a project management system was deemed a necessary business need.

A.3 <u>System Objectives</u>

During the initial meeting with the client and interim meetings, it was determined that the project must meet the following objectives:

- Remote access must be available 24 hours a day, 7 days a week
- System is available via the internet, in order to provide maximum coverage to all users
- Limited users have access to different parts of the system
- Users must be able to use the system with minimal to no training
- Project was to have a grading system implementation to help determine project importance

A.4 <u>Project Phases</u>

The overall implementation of the system will involve 6 phases:

- Phase I contained the analysis of the business needs, system objectives, development of a project plan, research of technologies and was finalized by acceptance of the report by the client

- Phase II covered the development of the system design, this included the web page layouts and the arrangement of the system parts; the acceptance of the design marked the end of Phase II

- Phase III, the construction of the system encompassed the design of the project and business needs

- Phase IV was the testing of the system and concluded with the client testing the system by entering in information from projects that were currently in progress and following the process through the whole system, while getting the desired results

- Phase V covered the implementation of the system

- Phase VI was the maintenance section, which included the development of the project administration section, where the administrators can maintain the project management system

A.5 <u>Project Schedule</u>

The proposed schedule for the project management system:

Phase	September	October	November
Phase I (40 hours)	→→→		
Phase II (40 hours)	→→→		
Phase III (160 hours)	→→	→→→→→→	
Phase IV (80 hours)		→	→→→
Phase V (20 hours)			→→
Phase VI (20 hours)			→→

Appendix B

Phase II – Project Design

Project Management Application

B.1 <u>Design Overview</u>

The proposed design provided access to the system on a 24 hour by 7 day a week basis through the internet. All users are authenticated using the current security system in place, in which users can log in to the Intranet system and access services already in place; the project was implemented as one of these services.

The design of the project management system has the following components:

- Proposal entry screens

  o The proposal entry screens was the first stage, and exists to create a clearinghouse for all of the client's community ideas

  o Users have the ability to enter project details over multiple sessions, with the ability to submit the project details at their discretion

  o Users can access the proposal entry screens to access their project and review details that have been entered by project members

- Proposal review screens

  o The proposal review screens was the second stage, and its purpose is to allow for advisory groups to approve proposal that are worthy of whatever resources that might be demanded

- Alternatively, projects not deemed worthy in the advisory process can be denied

- Rejected projects remain on the project proposals list, with the ability to return to the proposal to strengthen project details for additional review or be withdrawn and removed by the administrator

- Project identification/prioritization screens

  - The project identification/prioritization screens was the third stage where proposals are prioritized by the advisory group based on their qualitative assessment of executive priority, local priority, university impact and local impact

  - Points are assigned according to a set of questions the advisory group answers, and projects with the most points receive the highest priority

  - The project identification/prioritization screens also divided the proposals into logical steps by project managers assigned to the projects

- Project Management Screens

  - The project management screens was the fourth stage where customized reports can be created in order to easily monitor project status

- System administration screens

- The system administration screens was the fifth stage where the system is maintained

- Provides the ability to change the person who proposed the project, the project manager or advisory group members in case project members change

B.2 Project Management System Screen/Database Details

B.2.1 Project Management System Flow Chart
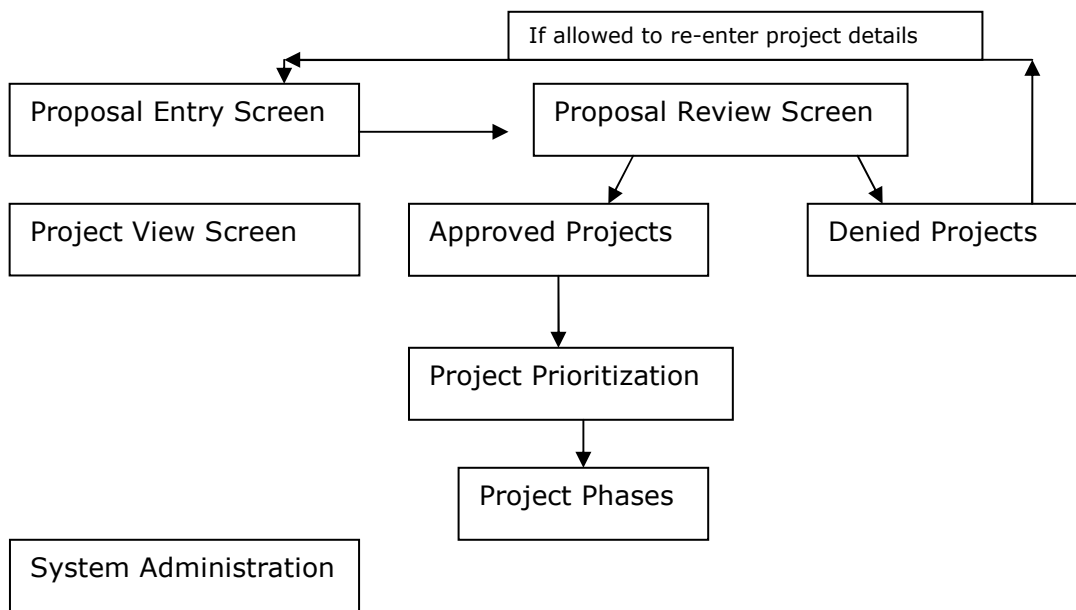
B.2.2 Proposal Entry Screens

The proposal entry screen is accessible by all authenticated community members who currently have access to the community Intranet. Proposals can remain proposals for an indefinite period until the project sponsor, the person who enters the project proposal, submits the proposal for review. Once

submitted the project proposal becomes read-only to the project sponsor. Help text is also provided onscreen for all form fields, in order to provide assistance as to what is being required of them.

When a proposal is entered, there are many fields captured into the database, these fields include:

- Project Title
    - 130 characters maximum
    - Project sponsor can select the name of the project, this helps them to identify the project easier at a later time if they need to continue adding details to the project proposal or view the project details that are in progress
- Description of Problem, Goals and Objectives
    - No character limit
    - This is a brief description of what is being proposed, so that others can understand the business intent, as well as state the project goal, including what can be done to address the problem
- Project Sponsor
    - Auto-fill from login name
    - This is the username of the project sponsor, including any additional users the project sponsor would like to have access to the project details

- Anticipated Completion Date

    o MM/DD/YYYY

    o Auto-fill from server date

    o This is the date the project sponsor would like to see the project finished by if approved, this is used to help determine the project's priority

- Business Benefit

    o No character limit

    o This is the tangible and intangible benefits in terms of process improvements, new products or markets, increased revenue, cost reduction, and increased customer satisfaction

    o This is where the project sponsor can cite references to support the business benefit of the proposal

- Business Alignment

    o No character limit

    o This is where the proposal contribution and alignment of the department/organization objectives, goals and strategy are stated

- Project Required

    o No character limit

    o This is to specify whether the project sponsor finds the project to be required, and the reasons for the requirement, such as legal or regulatory reasons

- Assumptions
  - No character limit
  - This lists the circumstances or events that must occur for the proposal to be successful, such as budget approval, completion of another project, workforce increase, etc.
- Risks/Obstacles:
  - No character limit
  - These are the external circumstances or events that would be a major impediment to the success of the project
  - Project sponsors are encouraged to enter in their ideas about how they would respond to these risks or obstacles
- Consequences/Urgency
  - No character limit
  - The consequences of not performing the work of the project proposed
- Startup Costs
  - Currency, 8 figures
  - These are the cost details to startup the project, these are necessarily required to be accurate as this is mostly the opinion of the project sponsor, but they should try to be as accurate as they can be
- Support Costs
  - Currency, 8 figures

- o The cost details the project sponsor feels would be required to support the project
- Proposal Stage
  - o Drop Down Selection
  - o Once the project sponsor have completed all required fields, they can then select the project to be submitted for review or if they have not finished all field select to save the project for completion at another time
- Review Date
  - o Auto-fill from server date
  - o This is the date the project proposal was submitted for review by the advisory groups
- There are a few other fields that are automatically entered into the database for information that can be used at a later date
  - o ID
    - ▪ Auto-fill from database control
    - ▪ This is the primary key of the project, this provide each project with a unique number, for database control
  - o Initial Entry Date
    - ▪ MM/DD/YYYY
    - ▪ Auto-fill from server date

- ▪ This is the date that the project proposal was first started

Once the project has been submitted and accepted by the advisory group, the project sponsor can then view many different details of their project. These details include:

- All project details that the project sponsor entered, along with any updates to the to these details the advisory group, system administrator, or project manager have added
- Project sponsors can view the phases that the project has been divided into, these details include:
  - o Phase Number
  - o Phase Start Dates
  - o Phase End Dates
  - o Phase Project Manager
  - o Phase Advisory Group
  - o Phase Description
  - o Phase Requirements

B.2.3 <u>Project Review Screens</u>

The project review screens are only accessible by a limited amount of users; these include the system administrators, members of the advisory group leaders, project managers and project members.

Project review begins when a project sponsor submits a project for review, once the project has been submitted it can then be evaluated by members of the community advisory groups to ensure project potential. If the details within the proposal are not complete enough or unclear, the advisory group can send the proposal back to the project sponsor for more details or clarification. If the advisory groups feel that the proposal should not become a project it can then be flagged as denied, removed from the project listing and stored for later retrieval. If a project is accepted, it then becomes a project, is prioritized and given resources to begin.

These are the fields used within the project review stage

- All fields discussed in section B.2.2 are up for review by the advisory groups, if incomplete or unclear proposal is returned to the proposal sponsor for clarification
- Additional fields are required to handle denied proposals these fields include:
  - Project Denier
    - Auto-fill from login
    - This is the username of the person who denied the proposal
  - Denied Date
    - MM/DD/YYYY

- - Auto-fill from server date

    - The date the proposal was denied

  - Reason Denied

    - No character limit

    - The detailed explanation why the proposal was denied

- Further fields are required to handle proposals that were approved as projects, these fields include:

  - Project Approver

    - Auto-fill from login

    - This is the username of the person who approved the project

  - Approved Date

    - MM/DD/YYYY

    - Auto-fill from server date

    - This is the date when the proposal was approved as a project

  - Comments

    - No character limit

    - Any additional comments that many be necessary to add to the project details that are not already included

- One more field required for proposals that are approved, but put on hold for the moment

- o Proposal Stage
    - Details of which were discussed in section B 2.2
- o On-Hold Date
    - MM/DD/YYYY
    - Auto-fill from server date
    - The date the advisory group put the project on hold

B.2.4 <u>Project Identification/Prioritization Screens</u>

The project identification/prioritization screens are accessible by a limited amount of users; this includes only the system administrators and the advisory group leaders.

Once a proposal has been accepted the project begins, the advisory groups then analyze the merits of the project proposal in relation to the strategic plans and concerns of the community. In addition, it provides a qualitative assessment of the strain that the project will place upon IT resources.

These plans and concerns are outlined by the questions displayed below, where upon each is given a point if selected:

- Does the proposed initiative or resource create or complement the academic/technological resources that improve teaching and enhance learning?

- Does the proposed initiative enable the University faculty to use the blended, technology rich learning expected by 21st century students?

- Does the proposed initiative facilitate the efficient delivery of knowledge resources in a technology-ready environment?

- Will the proposed initiative or resources better prepare Regis graduates to "make it a better world?"

- Does the proposed initiative or resource broaden and enhance service to make our academic offerings more attractive?

- Does the proposed initiative or resource facilitate automated routine service, allowing more time and resources for high touch service where it is most appropriate?

- Does the proposed initiative or resource provide better service to students, or to the faculty?

- Does the proposed initiative foster an outlook that positions the University to offer Web-based services based on customer preferences?

- Does the proposed initiative enable the University to serve well the student and faculty, accessing multiple Regis campuses throughout the world?

- Does the proposed initiative enable the back-end integration of front-end services such as marketing/admission, online-based

classrooms, student registration, student tuition, financial aid, library systems or other University systems?

- Does the proposed initiative support interaction and mutuality among other Universities?

- Does the proposed initiative increase or enhance image and marketing applications and resources as we grow?

- Does the proposed initiative support systems and resources provide for increased student populations, increased University enrollments or increased effectiveness in student retention?

- Is the proposed initiative or resource scalable, mobile and/or flexible enough to ensure that the University will not meet the impassable thresholds on the path of continuous growth (e.g. students, faculty and alumni who are distant from the main campus)

- Does the proposed initiative or resource help expand one or more of the University's "customer" bases?

- Does the proposed initiative or resource introduce potential for increased academic/instructional effectiveness?

- Does the proposed initiative or resource integrate with existing project plans and investments?

- Will the proposed initiative or resource deliver return on existing project investments?

- Is the proposed initiative or resource a feasible complement given existing constraints?

The details of the questions are then entered into a field that calculates the total of all the questions selected above. Each question is given a Yes (Y) or No (N) answer and given a point for each question answered as Yes.

- Project Query Total
  - 100 character limit
  - Automatically calculates the questions selected or unselected and enters this total into the database when the users selects the acceptance of their answers
    - Uses onChange function for dynamic calculations

There are three additional questions that to be answered, these questions are given 7 points, 3 points or 0 points depending upon the rating level given to each question:

- Project Priority
  - 50 character limit
  - This is the level of the project priority
    - High – 7 points
    - Medium – 3 points
    - Low – 0 points
- Project Impact
  - 50 character limit
  - The level of impact the project will produce

- High – 7 points

- Medium - 3 points

- Low – 0 points

- Project Resources

  o 50 character limit

  o The amount of resources need for the project

  - High – 0 points

  - Medium – 3 points

  - Low – 7 points

B.2.5 Project Management Screens

The project management screens are used to divide the project into logical phases where project members can be assigned. These screens will be accessible to system administrators, advisory group leaders, project managers and project members. Advisory group members, project managers and project members will have further restricted access to only projects and/or phases to which they have been assigned.

There are additional fields within the database that pertain to the project's division into phases, these include:

- Phase ID

  o Auto-filled by database control

- This provides each phase with a unique number for database control

- Phase Status

  - Drop down of predetermined statuses

  - This is where the project status, such as if the phase waiting to start, in progress, on hold, closed, or closed – no longer viable

- Phase Number

  - Numeric value

  - The phase number within the project, allows for phase changes if priorities change in the future

- Phase Title

  - 120 character total

  - The title of the phase, making it easier to communicate project ideas

- Phase Description

  - No character limit

  - The detail description of the phase

- Phase Project Manager

  - Community username, entered by project administrator or advisory group leaders

- Advisory Group

  - Drop down list of predefined advisory groups

- o This allows for members of specific advisory groups to access the phase details

- Anticipated Start Date

  - o MM/DD/YYYY

  - o Anticipated date the phase is to begin

- Anticipated End Date

  - o MM/DD/YYYY

  - o Anticipated date the phase is to end

- Actual Start Date

  - o MM/DD/YYYY

  - o Auto-fill from server date

  - o Actual date the phase began, automatically filled when the phase status is submitted as in progress

- Actual End Date

  - o MM/DD/YYYY

  - o Auto-fill from server date

  - o Actual date the phase ended automatically filled when the phase status is submitted as phase complete

- Phase Requirements

  - o No character limit

  - o Details, assumptions or risks that phase may encounter

- Phase Comments

  - o No character limit

- o Any additional information other project member may need to know about the project phase that is not already listed.

An additional section within each phase is the cost itemization for the phase. Here is where cost details can be added to determine budget details and a purchase order can be created from the details. These fields include:

- Phase ID
  - o Details of which are discussed above
  - o Used for database connection
- Cost Entered Date
  - o MM/DD/YYYY
  - o Auto-filled with server date
  - o Date the cost estimates were entered into the phase description
- Item Description
  - o No character limit
  - o Description of item
- Vendor Name
  - o 100 character limit
  - o Name of product vendor, used for product clarification
- Item Quantity
  - o Numeric value
  - o Number of items required

- Item Quantity Received

    - Numeric Value

    - Number of items actually received

- Item Cost

    - Currency, 8 figures

    - Cost of item

- Line Total

    - Currency, 8 figures

    - Total amount of item quantity plus the item cost

- Invoice Total

    - Currency, 8 figures

    - Total amount of all items on the invoice

Once a project has been is complete, the project status is marked as complete. When this happens one more field is then updated, this field is:

- Completion Date

    - MM/DD/YYYY

    - Auto-filled from server date

    - This field is describes the date when the project was completed and is automatically entered when the project status drop down is marked as complete

Within the project management section, users can also run customized reports that are based upon predefined values, such as queries on dates and project priorities. The reports are designed to conform to the formats requested by the advisory groups and project managers who use these reports to communicate project information with others.

B.2.6 <u>System Administration Screens</u>

The system administration screens allows for the system administrator to view all project proposals that have not yet been submitted, all project proposals that have been denied and all completed projects. From here, proposals and projects can be deleted in order to maintain the system over long periods.

Another section of the administration section allows the system administrator to make many changes to the system itself, such as time periods that can occur in the future and advisory groups that are not already part of the system

One last change that an administrator can make to the system is to change the advisory group members, project managers and project sponsors if members of the community change.