

IT463

**Project Quality Management Plan  
&  
Conversion Strategy**

GradBird Consultants



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**PROJECT NAME:** IT Strategic plan, City of Mequon

**TEAM NAME:** GradBird Consultants

**Project Lead:** [REDACTED]

**Monitor:** [REDACTED]

**Broker:** [REDACTED]

**Mentor:** [REDACTED]

## **PROJECT DESCRIPTION:**

The City of Mequon, WI, is the largest city in Ozaukee County and the third largest city in land area in the state of Wisconsin. The City of Mequon provides public and information services to the citizens that enhance the quality of life in the community. The city has 4 primary facilities, namely City Hall, Public Safety Building, East Side Fire Station, and Public Works Safety. These facilities have various departments which include City Administrator's Office, City Clerk's Office, Finance, Public Works, Community Development, Police Department, and Fire Department.

This project is started in request to the City of Mequon seeking assistance in developing the ICT Infrastructure Plan. The proposed plan focuses on developing an Information Technology Plan that guides the organization in planning, designing, implementing, and maintaining the present and future technology requirements, so the city will have a more reliable, available, secure, and improved usability in a cost-effective way over the next 3-4 years. As a result, citizens and employees will be able to enjoy and use the system more effectively.

The budget for this project has been reduced from \$110,000 to \$88,000. An IT Security Consultant has been added to enhance system security. The addition of the IT Security Consultant has brought the project over budget and over schedule. The project WBS has been revised to make sure that the project is back within the schedule and the revised budget. A quality management plan is being proposed to ensure the quality of the project and the MOV is being achieved.

## MEASURABLE ORGANIZATIONAL VALUE (MOV):

The City of Mequon is striving to improve and maintain the current IT technologies used by the city. The project will focus upon creating a cost-effective plan with the highest benefits. A cost-effective plan will efficiently use the city resources to improve and maintain the existing IT technologies during the next 4 years. Incremental changes to the buildings Wi-Fi routers and network switches will upgrade the wireless and wired networks resulting in higher wireless network speed and while also maintaining wired network stability. To ensure reliability, the workstations and laptops will be incrementally replaced with newer and more powerful workstations. All backup data will be relocated from the backup servers to the cloud to ensure that it is always available, free of viruses, threats, and more secure (AWS guarantees 100% security). Relocating the backup data to the cloud is also a very cost-effective move. A software security company will be added to improve on-premises systems security. The servers will be replaced to ensure highly operational servers with continued reliability. All current software licenses will be renewed. The purpose of these cost-effective upgrades is to provide a highly beneficial system so that the city can continue to provide cost-effective services to the citizens of Mequon.

The table below describes the Desired Areas of Impact:

Organizational Impact	Value	Metric	Time Frame
Customer	Provide a better IT System to the city so the citizens can continue having low-cost services	Fewer complaints from citizens. 10% reduction (current count- 200 complaints estimated)	Annual Survey
		Improving citizen satisfaction with website access and interaction (increased annual survey satisfaction numbers)	Annual Survey

<b>Financial</b>	Effectively spending the city resources to improve or maintain the current IT system	Within Budget \$88,000 with possible savings of 10%	Annual Budget
<b>Operational</b>	A more efficient IT system that is more available, reliable, secure, and faster.	Reduced downtimes by 10%, improved performance (2x faster), higher usability (increase in citizen usage by 10% and increased staff satisfaction), better security (AWS guarantees 100% security of the backup data)	Annual Survey

The City of Mequon serves more than 24,000 citizens. The city strives to provide quality services to the citizens while maintaining low tax rates. The plan focuses upon implementing upgrades and improvements that will be cost-effective while improving efficiency, security, and reliability during the next 4 years. The plan includes considerations for anticipated city growth and unanticipated changes.

#### **DESIRED VALUE OF IMPACT:**

The planned IT system changes will decrease the number of IT help desk complaints because the upgraded and improved systems will be easier to use and more stable. The upgraded system will be more secure, which will reduce security threats and improve reliability. The project team anticipates an improved IT system will increase user satisfaction, which means more citizens will utilize online resources. The success of the plan will be validated by annual surveys of citizens and city employees verifying satisfaction with the IT system changes.

# QUALITY MANAGEMENT PLAN

## OBJECTIVE:

The GradBird Consulting project team will strive to complete the project within budget and on time. The project team will also strive to implement the project above the expectations of the City of Mequon's staff and citizens. Exceeding expectations will be guaranteed by providing a more reliable, secure, and cost-effective system. The upgraded system will reduce downtimes and increase accessibility. The GradBird Consultants will prioritize maintaining positive relationships between the team and the City of Mequon staff to provide quality service to achieve the MOV. This will be achieved by our team operating in an agile mode and cooperative manner. Our project team will provide excellent support, maintenance, training, and documentation of the upgraded system.

## PROJECT QUALITY METRICS:

Category	Metrics	Description
Process	Financial Efficiency	This metric measures the annual actual cost vs. annual planned cost with a possible saving of 10%.
	Timely Task Accomplishment	This metric defines the number of tasks completed within schedule.
Product	Citizen Satisfaction	This metric defines how interactive and easy the system is for usage by the citizens.
	Low Network Latency	This metric measures the network performance in terms of speed with respect to Round Trip Time. (Due to installation of higher performance routers and switches).
Project	Return on Investment	This metric evaluates profitability of the project.
	Staff Satisfaction	This metric evaluates employee interactions with the upgraded system regarding higher

	Cost Performance Index (CPI)	<p>usability, reliability, and security.</p> <p>This metric measures the project performance of the earned value by actual value. It shows the percentage of work completed for a dollar spent. If ratio <math>&lt;1</math>, it shows that we are behind budget. If the ratio is <math>&gt;1</math> then it is ahead of budget and if it is 1, project is right on budget.</p>
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The Project Quality is measured by metrics for Process, Product and Project. The Process metrics will be measured by the Financial efficiency and Timely Task Accomplishment. The Financial efficiency metric measures the annual actual cost vs. annual planned cost with a possible saving of 10% by checking the cost of resources in the WBS. The project Manager will analyze and make sure that the cost will stay within the baseline budget. The Timely Task Accomplishment measures the number of tasks completed within schedule. The project manager will monitor the tasks and make sure they will be completed on time.

The Product metric is measured by Citizen Satisfaction and Low Network Latency metrics. The Citizen Satisfaction metric defines how interactive and easy the system is for usage by the citizens. The Low Network Latency metric measures the network performance in terms of speed with respective to Round Trip Time. Due to installation of higher performance routers and switches there will a faster performance. The project manager and Team will check the network speeds during the testing phase.

The Project metric is measured by Annual Return on Investment (ROI), Staff Satisfaction, and Cost Performance Index (CPI). The Annual ROI metric evaluates profitability of the project in percentage, and this is evaluated by the project sponsor. Staff Satisfaction metric evaluates the employee interactions with the upgraded system regarding higher usability, reliability, and security. Project Manager will be analyzing the survey results and system logs to make sure that the metric is met. Cost Performance Index (CPI) metric measures if a project will be difficult or not to be completed with the available budget. It shows the percentage of work completed for a

dollar spent. If ratio  $<1$ , it shows that we are behind budget. If the ratio is  $>1$  then it is ahead of budget and if it is 1, project is right on budget.

### VERIFICATION ACTIVITIES:

The following are a set of verification activities that our project team could implement to ensure quality.

1. The test case documents of each testing task will be reviewed and analyzed by our team and the staff to ensure that the test plan's system requirements are met.
2. The Trainings conducted by our Team to the end users will provide a walk-through of the upgraded system which allows them to ask questions and verify the usability and functionality of the system by reviewing the documents provided.
3. The Project manager reviews the WBS weekly to verify that the progress of the project is on schedule and within budget.
4. The sponsor will verify the business objectives (Scope, Budget, Schedule, Quality, Risk) are met by approving the Milestone documents of the deliverables.

### VALIDATION ACTIVITIES:

The following are a set of validation activities that our project team could implement to ensure quality.

1. The client will approve the Milestone at the end of each phase for validating the project with respect to the MOV provided.
2. The IT security consultant will validate the Security aspects of our system by conducting Security testing and analyzing the test results to ensure that they adhere to the MOV.
3. The Success and quality of the project will be validated by Annual Survey responses provided by the Citizens and Staff of the City of Mequon.



## CONVERSION STRATEGY:

Our Project Team will adopt the Phased conversion strategy to convert the current system to the new system. This strategy is implemented because the old system has to be up and running whilst we upgrade the system in different phases throughout the four different facilities. This allows the implementation of the project to be easily organized and managed. As our budget is annual, this Phased strategy is a perfect strategy for our cost-effective project to stay within budget. It is also a good strategy for scheduling which reduces the workload and allows for more planning.

Strategy for converting from old system to new system will be done annually for the next 4 years. Each phase will include hardware replacements, software upgrades and renewals, trainings, documentations, maintenance, and support.

### **Hardware Replacements:**

- 2 Servers will be replaced in parallel every year while the remaining old servers will still be working. This will iterate throughout the 4-year plan so that the new server system takes over by the end of fourth year.
- 10 workstations – 5 desktops and 5 laptops will be replaced every year and will be integrated into the department workstations according to schedule.
- 5 Wireless routers will be replaced one facility per year with the other three facility old routers functioning until all four facilities routers are replaced by the end of last year.
- 2 switches for wired networks will be replaced every year which will iterate replacement of wired networks for all the facilities.
- Removing the backup servers by migrating the backup data to AWS per facility per year.

### **Software Renewals:**

Every year, all the software's will be upgraded with their licenses renewed. The following are all the software's which are being used by the City of Mequon Current IT System.

- Microsoft Office 365
- MS Windows Server (OS)
- MS Windows Pro
- Muni Code
- Arc GIS

- AutoCAD Civil 3D
- AutoCAD LT
- WatchGuard
- Others

### **Testing:**

Hardware and Software Testing will be performed on all the cost-effective upgrades implemented in the new system to ensure the functionality and quality of the replaced systems. System testing and Security testing will be conducted, and test results will be analyzed and if any defects occur will be fixed.

### **Training, Documentations, Maintenance and Support:**

A two-day training will be conducted to train the staff in order to ensure that they are accustomed to the new system. Documentation will be provided to the client for reference. Maintenance and support will be provided to mitigate any defects as and when they occur.

The new system will take over the old system by the end of four years after the above strategies are fully implemented.

## **PROJECT CLOSURE CHECKLIST:**

The following is the checklist that the project team will ensure that the project has been closed properly:

<b>PROJECT CLOSURE CHECKLIST</b>				
	Title	Description	YES	NO
1.	Initialization Phase	Does the MOV provide value to the organization?	✓	
		Is the Project's Business Case well documented?	✓	
		Has the Client approved the Business Case Milestone?	✓	
2.	Planning Phase	Is the Project charter approved by the stakeholders?	✓	
		Is the Scope Management plan approved by the Stakeholders?	✓	
		Does the project scope support MOV?	✓	

		Is the new budget reasonable?		✕
3.	Execution Phase	Are the system requirements and security requirements well analyzed and documented?	✓	
		Does the Deliverable Structure Chart align with the organizational strategy?	✓	
		Are all hardware installations and upgrades done properly?	✓	
		Are all security requirements met for the backup storage migration?	✓	
		Was the testing of all new installed hardware successful?	✓	
		Are the test results well analyzed and documented?	✓	
		Are the trainings conducted enough for the employees?	✓	
		Are all the project manual documentations handed over to the client?	✓	
		Did key personnel leave the project?		✕
4.	Project Closure	Are all project closure reports approved?	✓	
		Are all the tasks completed as planned?	✓	
		Is the project report approved by the client?	✓	
		Are all the work /task payables been paid?	✓	

The closure checklist ensures that the project has been closed properly. This is conducted by the Project Team. However, Project sponsor with the help of an external auditor will also conduct the project closure checklist.

## PROJECT EVALUATION:

Our project MOV will be evaluated in the following steps:

**Step 1:** Evaluate Reliability and Performance: The system's reliability and performance will be evaluated by staff and customer annual surveys. The project tech team will annually assess these during the system testing.

**Step 2:** Evaluate Security: The IT Security Consultant will evaluate the security capabilities of the project under the Security testing.

**Step 3:** Evaluate Cost Effectiveness: The project manager will annually analyze the budget.

**Step 4:** Evaluate Usability: The system's usability will be evaluated annually by staff and customer surveys.

The project success depends upon a successful achievement of the MOV. The team will be annually evaluating the success during the Project Evaluation phase. The reliability, performance and usability will be evaluated by conducting and assessing annual staff and customer surveys. The staff surveys will give us an insight on how reliable the system is and how the staff is interacting with the new system. The customer survey responses will give us invaluable feedback about how satisfied the citizens are with the upgraded system's reliability, performance, usability, and security.

The MOV's customer aspect will include evaluating system's usability with respect to the citizens interaction with the system. The goal is to reduce citizen complaints by 10 % and increase their usage of the system. This will be verified by annual surveys and system log checks by the Project Team.

The MOV's financial aspect will be evaluated by analyzing the annual budgets to compare costs with funds to check if the project stays within the budget of \$88,000 with a possible savings of 10%. This will be checked by the project manager.

The MOV's operational goal for reliability is to reduce downtimes by 10% and for usability is to increase citizen's usage by 10%. These will be checked annually by surveys and system log checks.

Also, the MOV operational goal for security is to provide better system security. This will be checked by analyzing the system security capabilities and test results by the IT Security Consultant and the project team.

Verification and acceptance of the MOV will indicate that it supports the organization's vision, mission, strategy and the business objectives.