QUALITY LABOR REDUCTION

Black Belt Project 2017

Define

Project Charter

General Project Information

Project Name	Quality Inspector Requirement Reduction
Project Sponsor	CEO
Project Manager	David Jolley
Email Address	djolley@xxyyzz.com
Phone Number	875-805-8356
Organizational Unit	Quality
Process Impacted	Annual Quality Costs
Expected Start Date	July 23, 2017
Expected Completion Date	December 14, 2017
Expected Savings	**$111,000**
Estimated Costs	**$78,902**
Green Belts Assigned	
Black Belts Assigned	David Jolley

IMPORTANT REMINDER
A narrative written charter must be circulated and signed by the project sponsors. You can attach a completed version of this template to your narrative written charter in an effort to keep it short and concise.

Please make sure you meet with the project team and sponsors before completing this template. Much of the information required will need to come from a discussion with team members and sponsors.

Define

Describe the Problem or Issue, Goals, Objectives, and Deliverables of this Project	
Problem or Issue	As company grows, quality inspection requirements not scaling well. As more inspectors added, more equipment is needed to make room for more inspectors.
Purpose of Project	Reduce Quality inspection Requirements
Business Case	Current customer requirements dictate what product audits the company does. How these requirements are met is decided by the company. The model could be changed to reduce the annual cost of the quality inspection requirements. The cost savings should scale as the company grows also.
Goals / Metrics	Design and develop a complete set of solutions to address root causes of costs to Quality Inspection function. At the highest level, this includes funds to the Quality Inspection function. Determine the full extent of the problem through data analysis, interviews, and other tests. Develop solutions for improving the processes and monitor the results of the implemented solutions.
Expected Deliverables	Project Charter, Stakeholder Analysis, Pareto Chart of Errors in Cost Data, Attribute Measurement System Analysis, Root Cause Analysis, Hypothesis Testing, Statistical Process Control Charts, Proposed Solutions, Pilot Tests, Solutions Rating Matrix, Improvement Implementation Plan, and Project Summary Close Out

Define

Define the Project Scope and Schedule				
Within Scope	This project is limited to only those projects that are considered laboratory Quality Inspection.			
Outside of Scope	Receiving Inspection and dock audits are not being covered by this.			
Tentative Schedule	**Key Milestone**	**Start**		**Complete**
	Form Project Team / Preliminary Review / Scope	07/23/17		
	Finalize Project Plan / Charter / Kick Off			08/13/17
	Define Phase			08/31/17
	Measurement Phase			09/22/17
	Analysis Phase			10/23/17
	Improvement Phase			11/20/17
	Control Phase			12/07/17
	Project Summary Report and Close Out			12/14/17

Define

Define the Project Resources and Costs	
Project Team	David Jolley, Margie Robert, Josh Ross, and Brian Miles. Black Belt Support will come from David Jolley.
Support Resources	Company Management staff will provide some administrative help. Projects that are reviewed may get tasked to help with data gathering and collection.
Special Needs	At least two of the core team members will need network access to the Project Management System. The project will also need programming support to extract data from two other systems: Payroll and Financial Reporting.

Cost Type	Vendor / Labor Names	Rate	Qty	Amount
Labor	Data Collection - Margie Robert	$18.00	40	$720
Labor	Programmer - Brian Miles	$17.00	86	$1,462
Labor	IT - Josh Ross	$21.00	120	$2,520
Labor	Six Sigma - David Jolley	$40.00	80	$3,200
Hardware	Vision system - Sprint CMM	$71,000.00	1	$71,000
				$0
		Total Costs		$78,902

Define

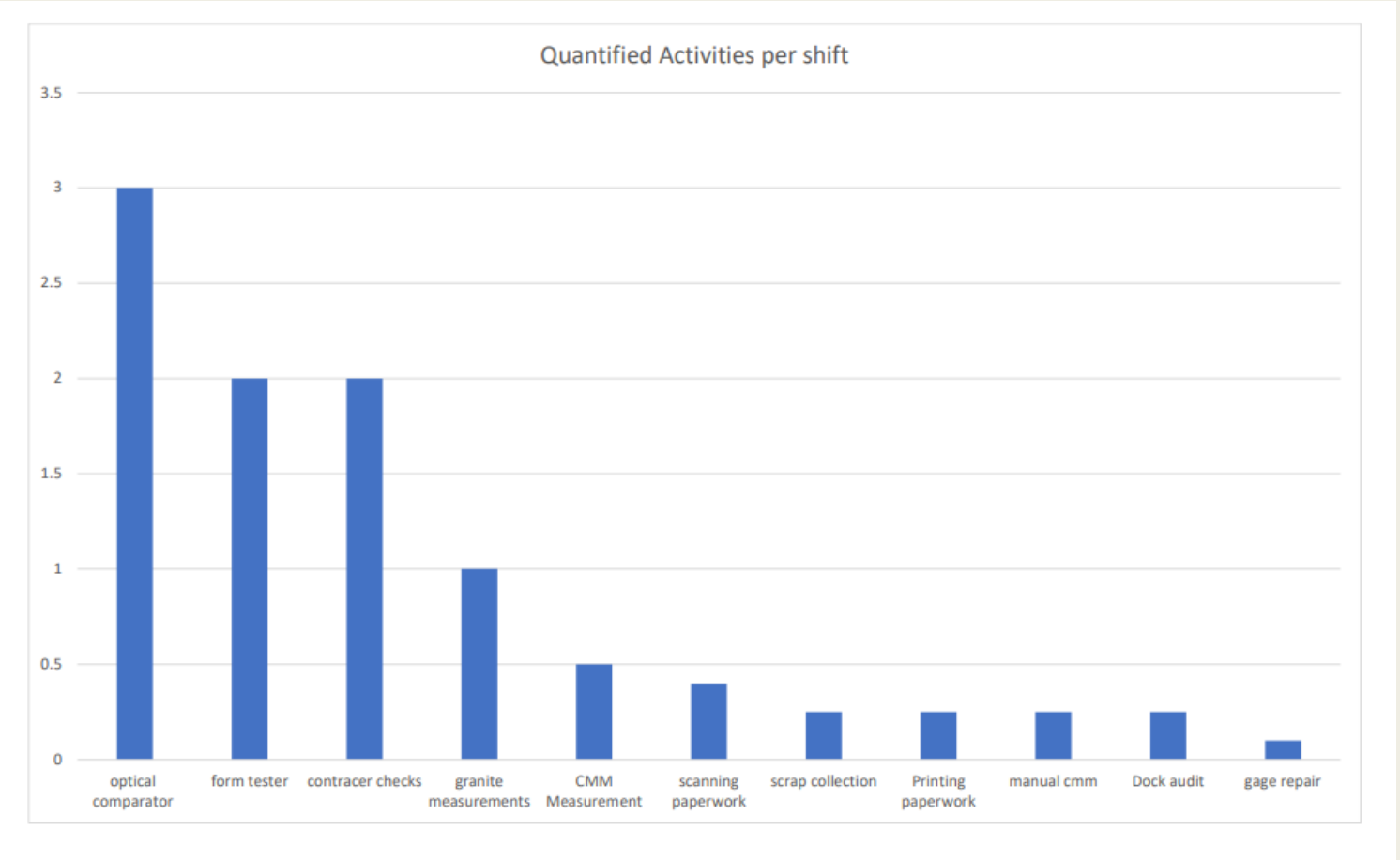
Define the Project Benefits and Customers	
Process Owner	The Director of Quality owns the overall process over cost performance reporting for Quality investments. Each Project Manager must make sure they follow a set of procedures for capturing and reporting actual costs correctly. The company provides oversight and support for the processes.
Key Stakeholders	All personnel assigned to Developmental Projects, including Project Managers, Project Analyst, Project Planners, Project Schedulers, and Budget Managers. All personnel who provide leadership support above the project level, including the Directors and Senior Managers.
Final Customer	CEO
Expected Benefits	Less costs related to Quality Inspection

Type of Benefit	Describe Basis of Estimate	Est Benefit
Specific Cost Savings	Labor reduction from 9 Inspectors to 6	$111,000
Enhanced Revenues	not applicable	$0
Higher Productivity (Soft)	not applicable	$0
Improved Compliance	not applicable	$0
Better Decision Making	not applicable	$0
Less Maintenance		$0
Other Costs Avoided		$0
		$111,000

Define

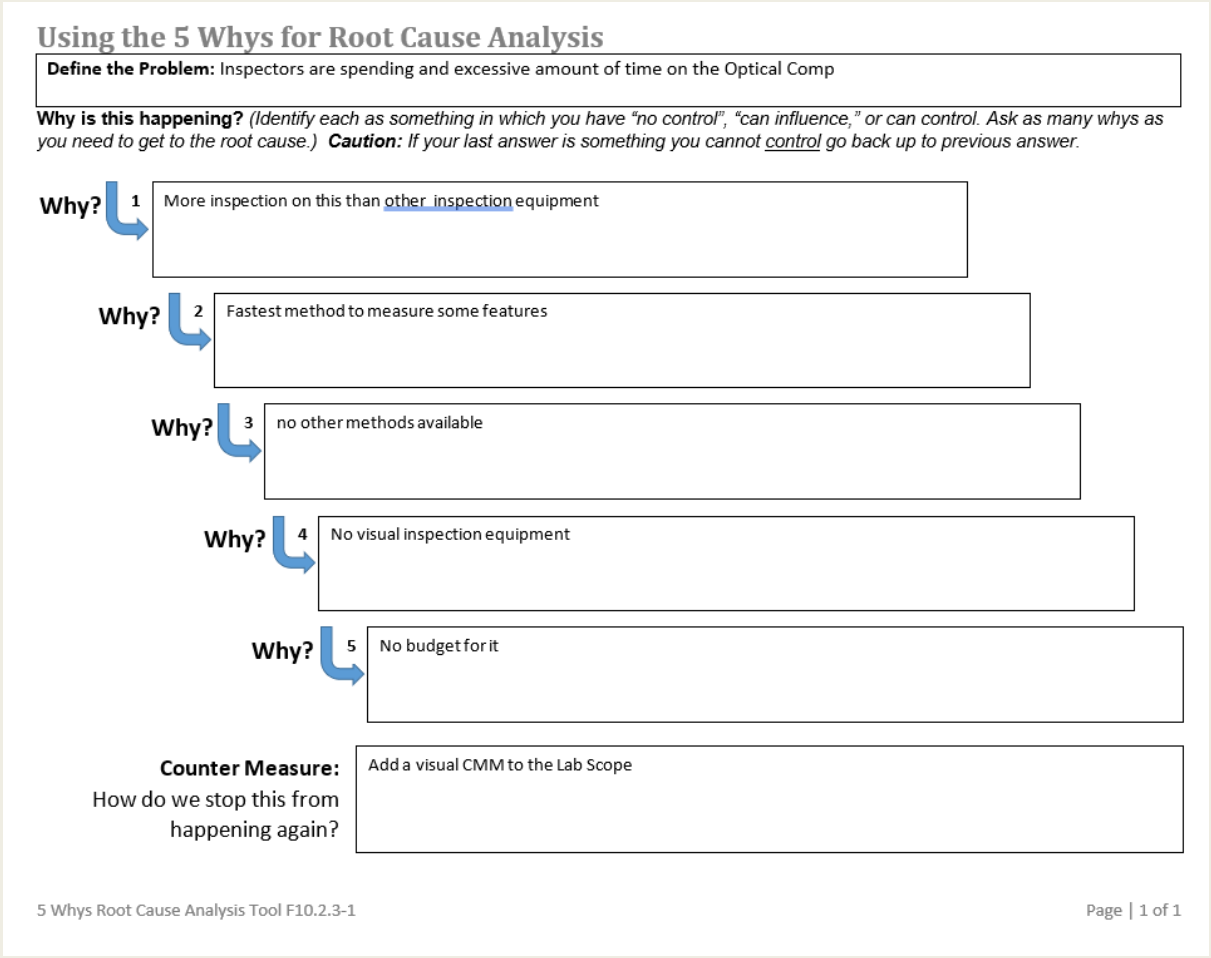
Describe Project Risks, Constraints, and Assumptions	
Risks	1. Changes to Project Scope - Project needs to stay focused on root causes behind the source data and not expand the project into developing system requirements for problems with various applications. 2. Bad Data - The availability of cost data within the company may be so poor that even a basic level of performance cannot be established. 3. Implementation of Solutions - This project will most likely require changes in how the company currently capture and process cost data. In some cases, Project Managers may resist and refuse to adopt these new procedures and recommendations. Thus, the problem with bad cost data will continue
Constraints	1. Resources will be constrained to Quality lab only. The company does not have the budget to fund any additional resources at this time. 2. The project team will have direct access to Six Sigma Black Belts, but the project will be constrained by the fact that a Black Belt is not assigned full time to this project. 3. Programming support will be limited for the project and pulling extracts of data from source systems could be slow since a System Request must be submitted if canned extracts or queries are not available.
Assumptions	1. The project is following a Six Sigma DMAIC approach. The company has limited experience in doing projects according to this methodology. This project assumes that all stakeholders will understand and accept the six sigma related work products and deliverables. 2. This project has support from the CEO and the Directors. This project assumes that this sponsorship and support is sufficient to push successful implementation of solutions that result from this project.
Prepared by:	David Jolley Date: August 13, 2017

Measure



Inspectors time was studied for a period.

Analyze



Using the 5 Whys for Root Cause Analysis

Define the Problem: Inspectors are spending and excessive amount of time on the Optical Comp

Why is this happening? *(Identify each as something in which you have "no control", "can influence," or can control. Ask as many whys as you need to get to the root cause.)* ***Caution:*** *If your last answer is something you cannot control go back up to previous answer.*

Why? 1 More inspection on this than other inspection equipment

Why? 2 Fastest method to measure some features

Why? 3 no other methods available

Why? 4 No visual inspection equipment

Why? 5 No budget for it

Counter Measure: How do we stop this from happening again?

Add a visual CMM to the Lab Scope

5 Whys Root Cause Analysis Tool F10.2.3-1

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The time study was analyzed for root causes.

Analyze

Solutions Ratings Matrix
Improvements
Quality Inspection Reduction Project

	Step 1 - Establish Criteria for Rating Your Solutions	**Step 2 - Describe each rating from lowest to highest for each of the criteria in Step 1**				
		1 = Lowest	*2 = Somewhat Low*	*3 = Moderate*	*4 = Somewhat High*	*5 = Highest*
1.1	Easy to Implement	Very difficult to implement across projects	Difficult, some projects may not comply with the change	Somewhat difficult, but all projects comply over time	Within one year, all projects should easily comply	Extremely easy, projects should comply quickly
1.2	Easy to Maintain	Very high support levels needed to implement	A permanent level of support is needed to implement	Some continuing support will be needed to implement	Only modest levels of support are needed to implement	Very little if any support is needed to implement
1.3	Significant Impact	No significant impact on improving the process	Modest impact on improving the process	Some gains will be realized	Very solid improvements	Complete turnaround of the process
1.4	Minimal Cost and Time	Very high costs and time are involved	Additional costs and time will be required	Some modest costs and time are needed	Relatively low costs and time are involved	No measurable costs or time are required
1.5	Senior Management Support	Management does not support this solution	Limited support for this solution	Support exists, but some are doubtful	Good buy-in from management on this solution	Full and complete support from management
1.6	Solution can be Automated	Solution must be done manually	Solution might be automated, but very costly	Solution can be automated, but requires change	Automated solutions exist, some changes are needed	Fully automated solutions are available
1.7						
1.8						

Studied possible solutions

Analyze

Step 3 - Describe each solution and assign a rating as defined in Steps 1 & 2

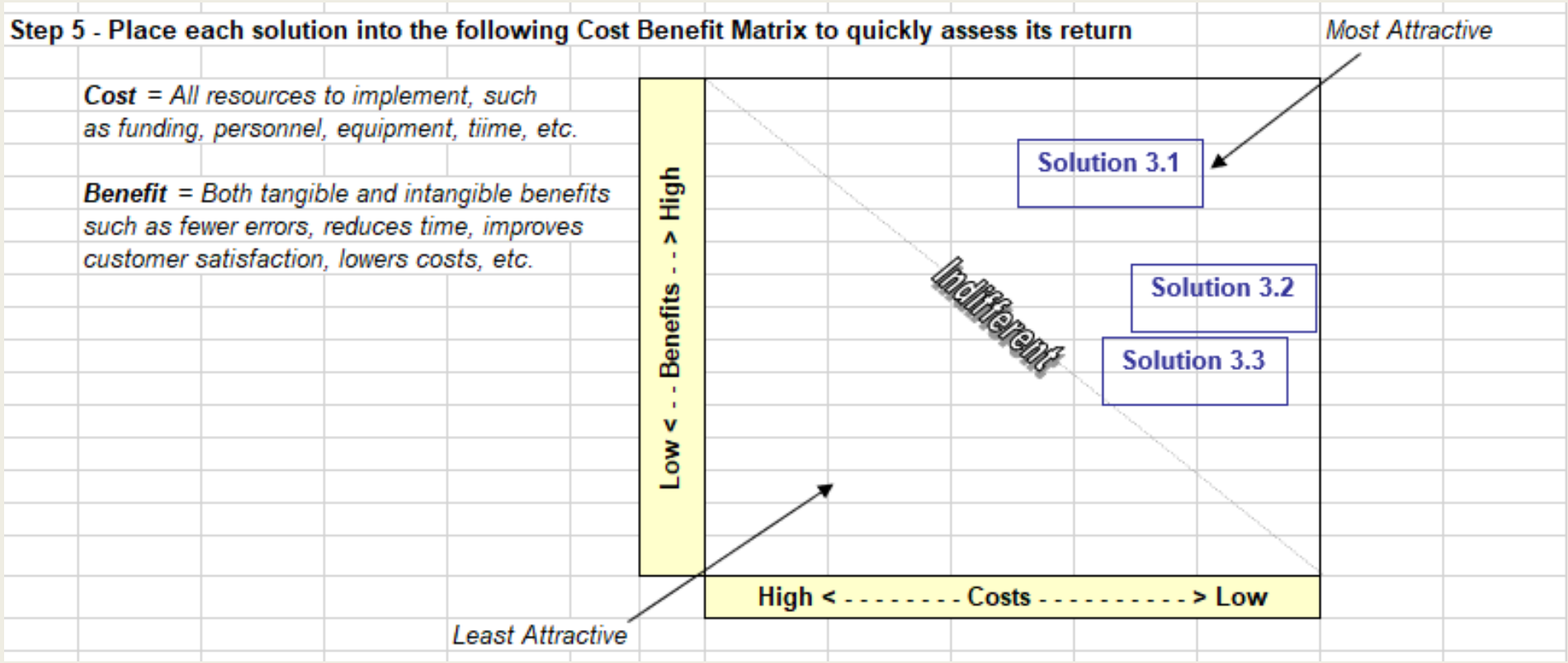
		Criteria 1.1	Criteria 1.2	Criteria 1.3	Criteria 1.4	Criteria 1.5	Criteria 1.6	Criteria 1.7	Criteria 1.8	TOTAL RATING
3.1	Buy and Program vision cmm	4	3	4	1	5	3			20
3.2	Automate more cmm programs	3	3	2	4	4	1			17
3.3	Go paperless on inspection forms	3	4	3	3	5	4			22
3.4										0
3.5										0

Step 4 - If you want to weight the criteria so that some criteria are more heavily considered than others, then assign weights and recalculate the ratings

		Criteria 1.1	Criteria 1.2	Criteria 1.3	Criteria 1.4	Criteria 1.5	Criteria 1.6	Criteria 1.7	Criteria 1.8	TOTAL WGHT RATING
	Weight Assigned >	100%	50%	75%	50%	100%	75%			
3.1	Buy and Program vision cmm	4	1.5	3	0.5	5	2.25	0	0	16.25
3.2	Automate more cmm programs	3	1.5	1.5	2	4	0.75	0	0	12.75
3.3	Go paperless on inspection forms	3	2	2.25	1.5	5	3	0	0	16.75
3.4	0	0	0	0	0	0	0	0	0	0
3.5	0	0	0	0	0	0	0	0	0	0

Studied possible solutions

Analyze



Buying a vision cmm, installing, and programming was the chosen solution.

Improve

A vision CMM was installed and programmed. Inspectors were trained on its use.

Control

Project Closeout Report

Cost Data Integrity Project

VERSION: 1.0 REVISION DATE: November 28, 2017

Approval of the Project Closeout Report indicates an understanding that this project is now considered closed by the Project Team, its sponsors.

Approver Name	Title	Signature	Date
David Jolley	Project Manager		
Carl Malone	CEO		

The project was reviewed for close out.

Control

Section 1. General Information

Project Name			Date
Quality Inspection Reduction			November 28, 2017
Organizational Unit			
Quality			
Project Manager	**Phone**	**Email**	**Fax**
David Jolley	875-805-8356	djolley@xxyyzz.com	

Section 2. Goals / Objectives / Expectations of Project

Describe specific goals and objectives of this project. For each, indicate if the project was successful in meeting the goal or objective.

Item	Project Goal or Objective	Met?
2.1	Reduce the Quality Inspection requirements and still meet the customers' demands	Yes ☒ No ☐

The project was reviewed.

Control

Section 3. Project Risks and Issues

Indicate if any risk per the Risk Management Plan occurred and turned into an issue. Describe how the issue was resolved or indicate if the issue is still open.

Item	Risk per Project Plan	Open Issue
3.1	Scope Creep – Requirements may change during the course of the project, such as System Requirements for project. **Final Disposition** > Never occurred, high level functional requirements were described and turned over to the CEO to pursue.	Yes ☐ No ☒
3.2	Access to company Records – In order for this project to be successful, it was critical to have quick access to both company data. **Final Disposition** > Thanks to high level sponsorship of this project, these obstacles never occurred. System Administrators were more than helpful in providing all of the data requests submitted by the project team.	Yes ☐ No ☒
3.3	Team Resources – There was an initial concern that project staff would not be available to take on all of the tasks associated with this project. **Final Disposition** > This never materialized despite the fact that the staff was pulled off the project several times. The Project Manager was able to meet the project schedule primarily due to the straight forward solutions needed to re-engineer the processes.	Yes ☐ No ☒
3.4	Bad Data – There was a risk that the data that was received from Quality would contain errors. **Final Disposition** > There were inconsistencies in how the data was recorded. However, overall the project team did not detect errors, missing data or other types of errors in the source data.	Yes ☐ No ☒
3.5	Implementing Solutions – There is an overall risk that changes to procedures would be difficult to implement. This would include additional work on project teams regarding new control procedures. **Final Disposition** > There were no major difficulties with meeting the new requirements.	Yes ☐ No ☒

The project was reviewed.

Control

Section 5. Project Costs and Schedule

Using Earned Value Management, what was the final project performance in terms of costs and schedule?

EMV Parameter	Value	Comments
Actual Cost	$ 75,100	$3802 under budget
Planned Value	$ 78,902	where we expected to be
ROI	9 months	
Annual Savings after ROI	$ 111,000	Labor of 3 Quality Inspectors
Cost Performance Index	1.05	Project required less resources to complete
Schedule Performance Index	1.13	Solutions was faster to implement than planned
Note:		

The project results were reviewed.

Control

Section 6. Resources Deployed and Released

List the resources used during this project and indicate if they have been transferred, reassigned, terminated or planned disposition including effective date.

Resource	Resource Disposition	Effective Date
David Jolley – Project Manager	Released	11/28/2017
Margie Robert – QA Supervisor	Released back to Quality	11/28/2017
Brian Miles – CMM Programmer	Released back to Quality	11/28/2017
Josh Ross – IT	Released back to IT	11/28/2017

The team was given the results of their efforts and released from the project..

Control

Section 7. Project Files

Indicate the location of various artifacts created by this project. This would include all work products, deliverables, minutes, memo's and all information that would enable someone else to start this project back up with relative ease.

Work Product / File Name	Location	Point of Contact
All project files are centrally located on the Network Shared Drive for Quality Improvements	SharePoint -Quality Data	Josh Ross

The project files were archived for future reference by all.

Control

Section 8. Project Lessons Learned

Identify lessons learned specifically for the project. State the lessons learned in terms of a problem (issue). Describe the problem and include any project documentation references (e.g., Project Plan, Issues Log) that provide additional details. Identify recommended improvements to correct a similar problem in the future.

Problem or Issue	References	Recommended Changes
CMM programs were not efficiently written, and some were incorrect	See root causes	CMM programs should be checked by someone who did not write them for proper programming

Lessons learned were reviewed.

Control

Section 9. Post-Implementation Plans

Identify plans for completing post-implementation activities after project closeout.

Action	Planned Date	Assigned To	Frequency
None			

Section 10. Open Issues

Describe any open issues and plans for resolution within the context of project closeout.

Issue	Planned Resolution
none	

No further activities open. The project is closed.