




# VHA Project through Quality Companion

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## Team 2 -

Shiyun Han, Abhishek Goswami, Yuchen Guo, Guowei Hou,  
Navya Sree Peddu, Mahmoud Hamwi



# Beginning A Project

The screenshot displays the Quality Companion software interface. The title bar reads "Untitled - Quality Companion - [Project Today]". The menu bar includes "File", "Edit", "View", "Tools", "Window", and "Help". The toolbar contains various icons for file operations and navigation. The "Project Manager" pane on the left shows a tree view with "12 Step Project Management" expanded, and "Project Today" and "Team Members" highlighted with a red box. Below this are sections for "Tasks", "Financial Data", "Process Map Data", "Y Metrics", "Related Documents", and "Custom Categories". The "Roadmap" section lists 12 steps, with "1: Project Selection and Scoping" through "12: Implement Process Controls" visible. The main dashboard area shows the date "Sunday, April 3, 2016" and a "Customize Project Today" link. It features several sections: "Welcome" with links for "Get Started", "Learn More", and "View Webcasts"; "Status" with a table showing project details; "Financial Data" with a table for tracking period and savings; "Tasks" with a message about no assigned tasks; "Variables" with a message about 0 variables; and "Ballots" with a message about no assigned ballots.

Project Manager

- 12 Step Project Management
  - Project Today
  - Team Members
  - Tasks
  - Financial Data
  - Process Map Data
  - Y Metrics
  - Related Documents
  - Custom Categories
- Roadmap
  - 1: Project Selection and Scoping
  - 2: Defect Definition
  - 3: Measurement System Evaluation
  - 4: Baseline Process Performance
  - 5: Establish Goals
  - 6: Identify Potential Xs
  - 7: Identify Potential Leverage Variables
  - 8: Determine Optimal Solution
  - 9: Implement Improvements
  - 10: Reassess Measurement System Evaluation
  - 11: Improved State Process Performance
  - 12: Implement Process Controls

Sunday, April 3, 2016 [Customize Project Today >>](#)

**Welcome**

- Get Started**
  - Overview
  - Start a project
  - Add a tool
  - Getting Started (.pdf & files)
- Learn More**
  - About templates
  - About data
  - About data sharing
  - Import Visio files
- View Webcasts**
  - View online Webcasts to see how to make the most of Quality Companion.

**Status**

Project	Planned start date	Due date	% Complete	Status	Assigned to
12 Step Project	None	None	0	Not Started	None

No tools assigned to you - [Add a Tool](#)

**Financial Data >>**

Tracking Period: 12 months

	Estimated	Final
Hard Savings	0	0
Soft Savings	0	0
Implementation Cost	0	0

**Tasks >>**

No tasks assigned to you - [Manage Tasks](#)

**Variables >>**

0 X variables 0 Y variables

**Ballots**

No ballots assigned to you - [Add a Ballot](#)

# Adding Team Members

The screenshot displays a software application window titled "Project Manager" with a tree view on the left and a table on the right. The tree view shows a project structure under "12 Step Project", including "Management" (Project Today, Team Members, Tasks, Financial Data, Process Map Data, Y Metrics, Related Documents, Custom Categories) and "Roadmap" (12 numbered steps). The table on the right has columns for Name, Job Title, Department, E-mail, and Business Phone. A "Team Member Properties" dialog box is open, showing the "General" tab with the following fields:

- Name: Lucy Han
- Job title: Engineer
- Department: Team 2
- Role: Project Leader

Buttons for "Help", "OK", and "Cancel" are visible at the bottom of the dialog.

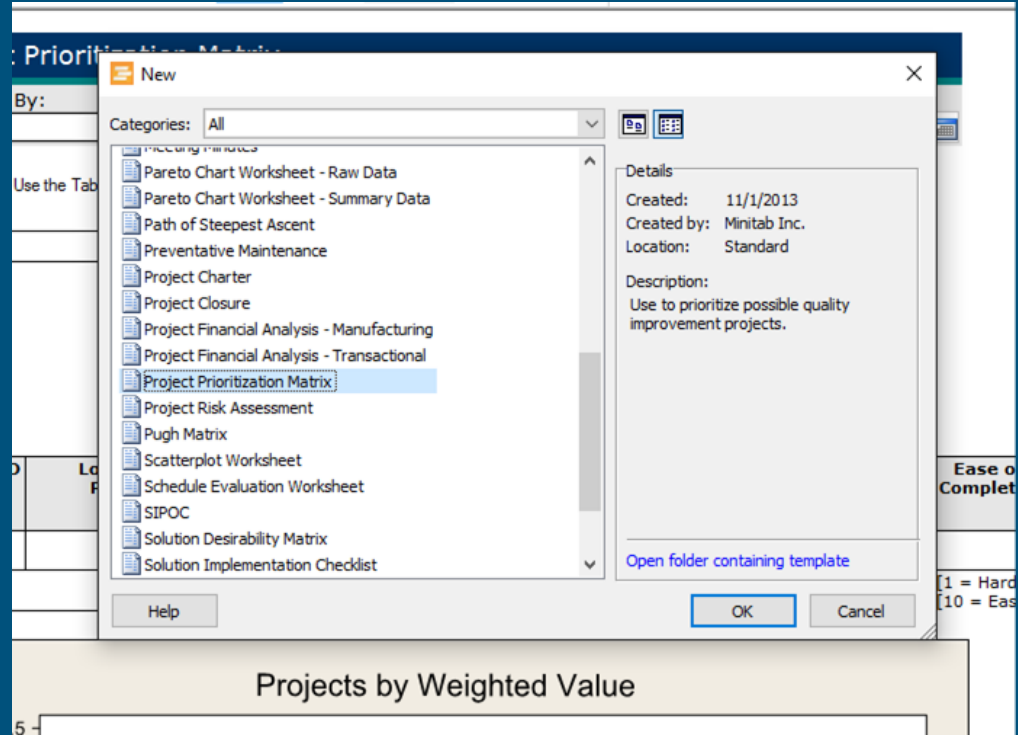
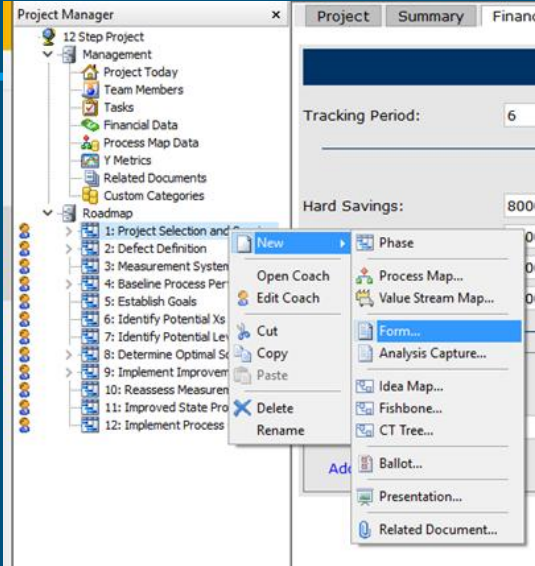
# Creating Financial Data

The screenshot displays the 'Project Manager' application interface. On the left, a tree view shows the project structure under '12 Step Project', with 'Financial Data' selected and highlighted by a red box. The main window has tabs for 'Project', 'Summary', 'Financial Data', and 'Capability Metrics', with 'Financial Data' being the active tab. The 'Financial Data' section includes a 'Tracking Period' of 6 months. Below this is a table with two columns: 'Estimate' and 'Final'. The table contains the following data:

	Estimate	Final
Hard Savings:	8000000	0
Soft Savings:	1000000	0
Implementation Costs:	5000000	0
Cash Flow:	10000000	0

Below the table is a section titled 'Custom Financial Data' with a text input field and a red box containing the text 'Add additional Fields here' and 'Add...'.

# Selecting tools from the Roadmap



Projects by Weighted Value

# Project Prioritization Matrix

mfe634Qual.qcp - Quality Companion - [Project Prioritization Matrix]

File Edit View Insert Format Actions Tools Window Help

(Apply a format)

Project Manager

12 Step Project

Management

Project Today

Team Members

Tasks

Financial Data

Process Map Data

Y Metrics

Related Documents

Custom Categories

Roadmap

1: Project Selection and

2: Defect Definition

3: Measurement System

4: Baseline Process Perf

5: Establish Goals

Project Prioritization Mat

Project Prioritization

6: Identify Potential Xs

7: Identify Potential Lev

8: Determine Optimal So

9: Implement Improvem

10: Reassess Measurem

11: Improved State Prox

12: Implement Process C

**Project Prioritization Matrix**

Prepared By: Navya Sree Peddu Date:

How to Use the Table

Project ID	Location / Process	Process Owner	Estimated Benefits (\$K)	Project Name	Weighted Value by Project	Ease of Completion	Value * EOC	
1	VHA	Hospital Managem	80000	Overhaul of Management Policies	6	6	5	30
2	VHA	Faculty Director	5000	Audit Resource Allocation	5	5	1	5
3	VHA	Feedback Director	3000	Agency wide Survey	4	4	2	8
4	VHA	Feedback Supervis	10000	Anonymous Phone Complaint System	3	3	5	15
5	VHA	Improvement Office	50000	Re-design the appointment system	2	2	8	16
6	VHA	Hospital Schedulers	2000	Co-ordinate Appointment Database	1	1	3	3
Importance of Each Criteria					1			
Selection Criteria								
Weighted Effect on Each Criteria					21			

[1 = Hard] [10 = Easy]

mfe634Qual.qcp - Quality Companion - [Project Prioritization Matrix]

File Edit View Insert Format Actions Tools Window Help

(Apply a format)

Project Manager

12 Step Project

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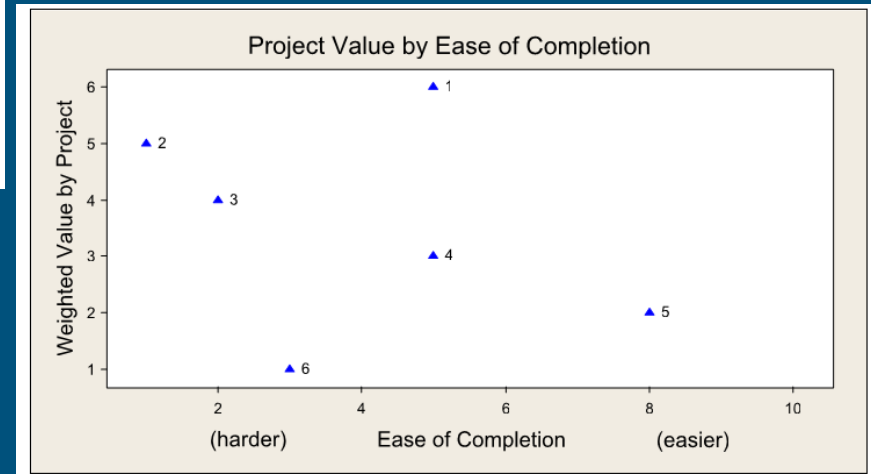
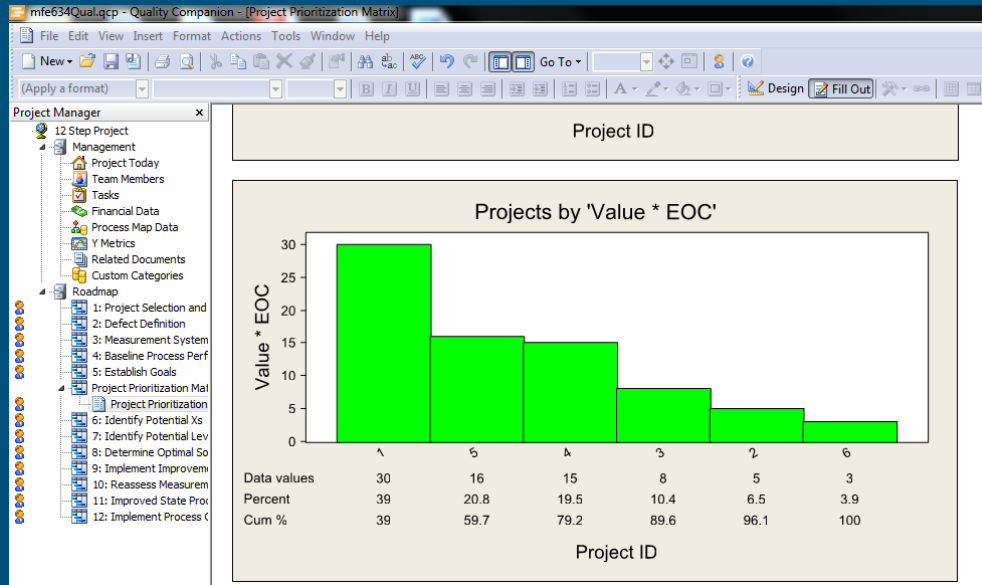
12: Implement Process C

**Projects by Weighted Value**

Project ID	Weighted Value
1	6
2	5
3	4
4	3
5	2
6	1

Data values	6	5	4	3	2	1
Percent	28.6	23.8	19	14.3	9.5	4.8
Cum %	28.6	52.4	71.4	85.7	95.2	100

# Project Prioritization cont.



# Creating Project Charter After Project Selection

**Project Manager**

- Veterans Administration Healthcare System
  - Management
    - Project Today
    - Team Members
    - Tasks
    - Financial Data
    - Process Map Data
    - Y Metrics
    - Related Documents
    - Custom Categories
  - Roadmap
    - 1: Project Selection and Scoping
      - Overview
      - Project Charter**
      - 2: Defect Definition
        - Audit Plan
        - Fishbone
      - 3: Measurement System Evaluation
      - 4: Baseline Process Performance
      - 5: Establish Goals
      - 6: Identify Potential Xs
      - 7: Identify Potential Leverage Variables
      - 8: Determine Optimal Solution
      - 9: Implement Improvements
      - 10: Reassess Measurement System Evaluation
      - 11: Improved State Process Performance
      - 12: Implement Process Controls

**Project Charter**

**Project Authorization**

Organization: Veterans Health Care Administr	Champion: Professor J. Romeu	Process Owner: Team 2
Project: Veterans Administration Healthcare System	Project #:	
Problem Statement: <b>Since 2014, 43% of appointments scheduled by the VHA has exceeded the 14 day wait time goal.</b>		
Project Objective: <b>Reduce the number of appointments with wait times exceeding the 14 day goal from 43% to less than 10%.</b>		
Estimated Defect Level: Major	Initial Goal: New oversight and accountability policies	Estimated Benefits: \$9,000,000
Approval Date: 4/6/2016	Champion Signature: Prof. Romeu	Process Owner Signature: Shiyun
Estimated Completion Date: 5/5/2016	Project Leader: Shiyun Han	Financial Analyst: Abhishek Goswami

**Project Team**

Name	Role	Comments	Phone
Shiyun Han	Project Leader		
Abhishek Goswami	Financial Analyst		
Guowei Hou	Black Belt		
Mahmoud Hamwi	Black Belt		
Navya Sree Peddu	Health and Safety Rep		
Yuchen Guo	Green Belt		

**Project Definition and Scoping**

Metrics (unit of measure):  
**% reduction of long wait time appointments**

Critical to Satisfaction (linkage to customer):  
Yes





# Defect Definition - Audit Plan

Project Manager

Veterans Administration Healthcare System

- Management
  - Project Today
  - Team Members
  - Tasks
  - Financial Data
  - Process Map Data
  - Y Metrics
  - Related Documents
  - Custom Categories
- Roadmap
  - 1: Project Selection and Scoping
    - Overview
  - 2: Defect Definition
    - Audit Plan**
    - Fishbone
  - 3: Measurement System Evaluation
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## Audit Plan

Project:	Veterans Administration Healthcare System	Document #:	25 A.S.
Location:	Syracuse, NY	Revision:	0
Process Owner:	Team 2	Revision Date:	
Prepared By:	Abhishek Gowami	Approved By:	Lucy Han
		Date:	4/5/2016

### The Audits Table

When establishing a plan for a single audit, which may check multiple items/criteria, complete a row for each audit item/criteria using the same audit number. The audit number is typically obtained from the auditing function.

**Frequency:** How often the audit should be performed. For example, Perform an audit every 4 weeks, Perform an audit every 2000 cycles, Randomly once every three months.

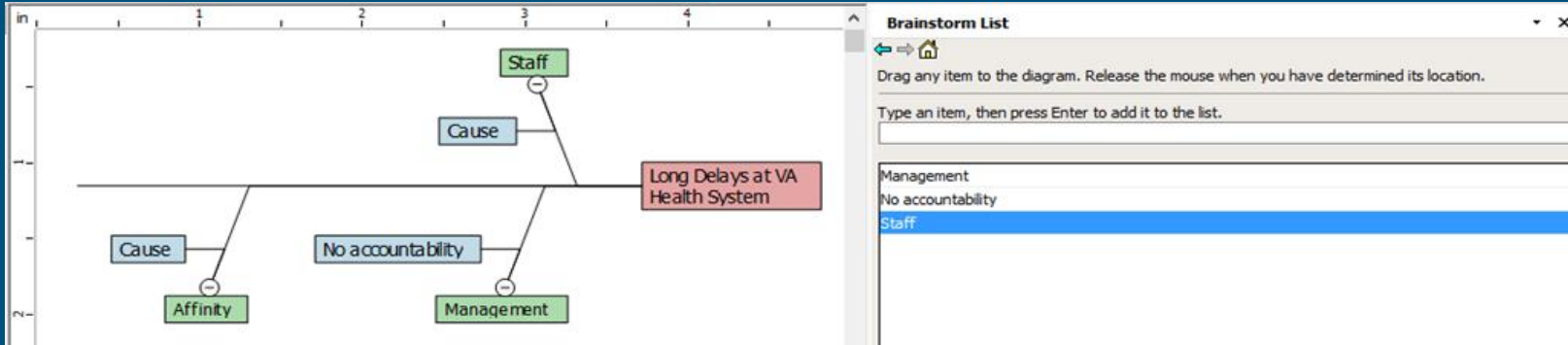
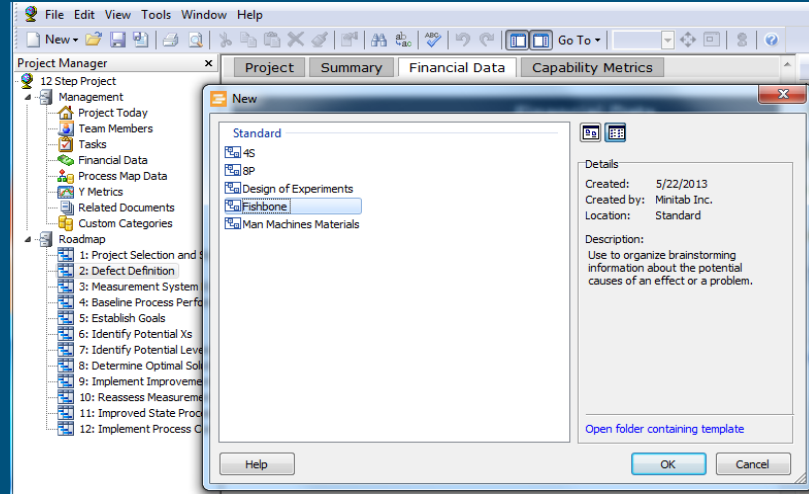
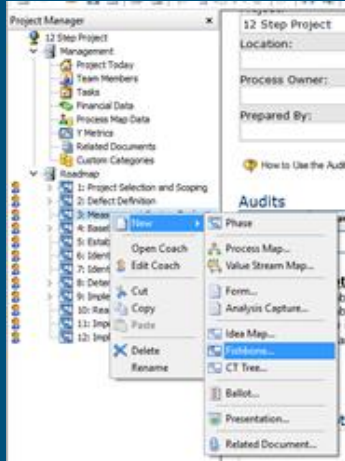
**Description/Scope:** The item(s) you are auditing. For example, Operator training or SOP manuals.

**Criteria:** The standards which will be used to gauge whether the audit passes or fails. For example, "Has the operator been trained using the online training system and have the records of the training been posted to the training database?" or "Is the SOP manual up to date and placed at the workstation in clear view of the operator?"

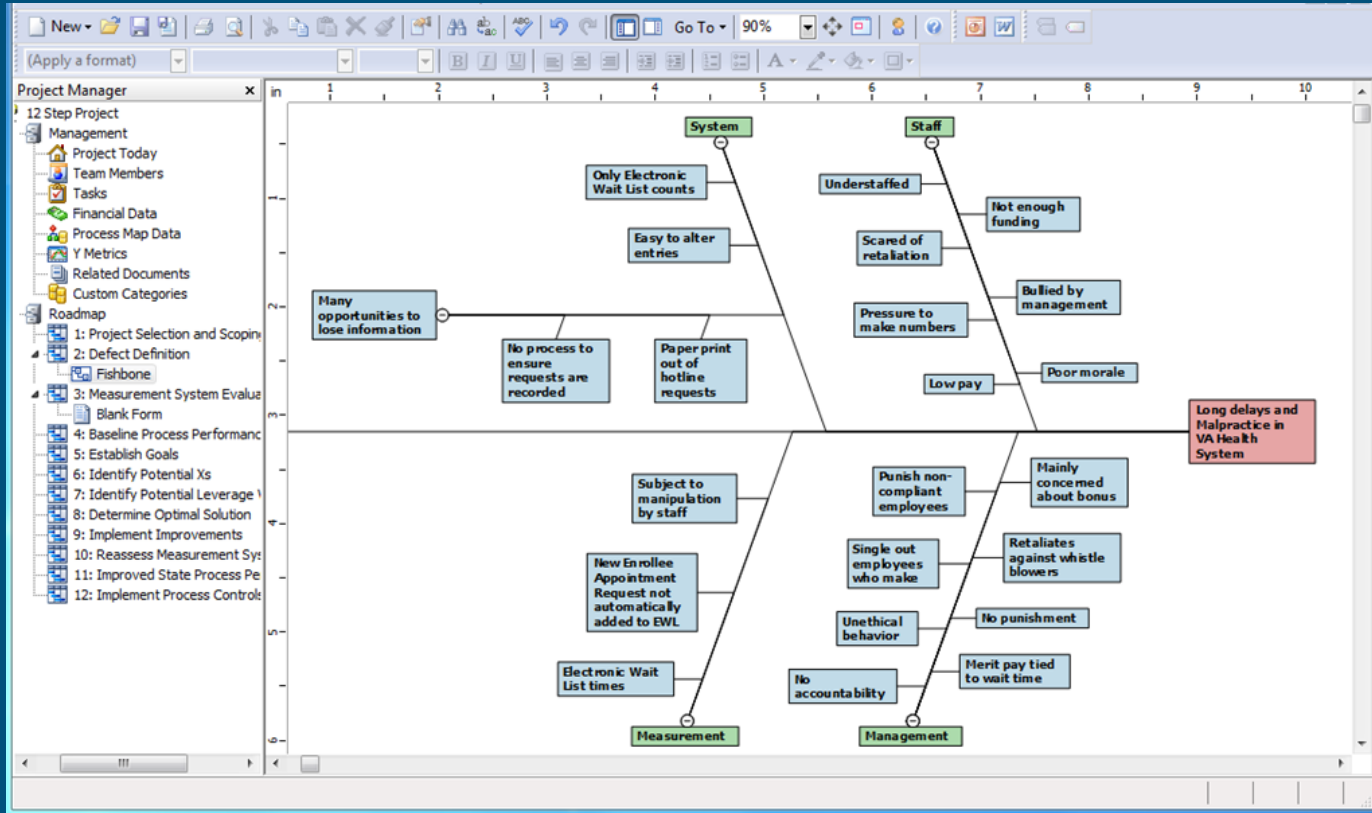
**Location of Data:** The location of supporting documents or data for the audit criteria. For example, H:\Server1\Training Database or L:\Procedures\Master SOP Files.

**Reference:** Any additional materials used for the audit item/criteria. For example, Online training materials or Master SOP files.

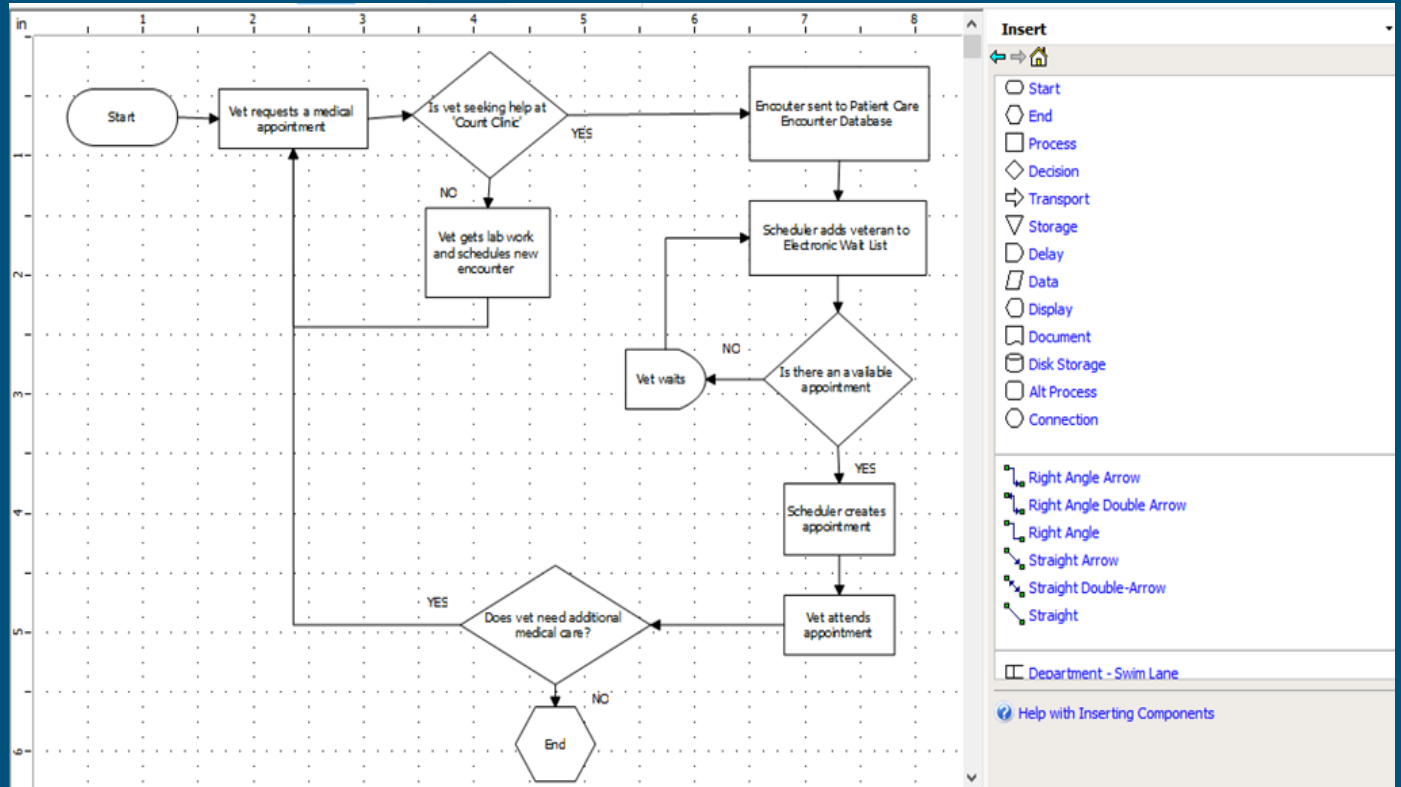
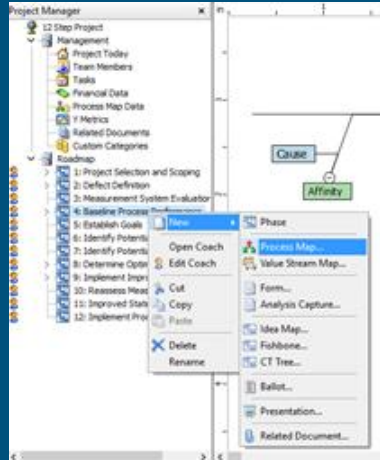
# Creating the Fishbone Diagram



# Fishbone Diagram cont.



# Process Flow Chart



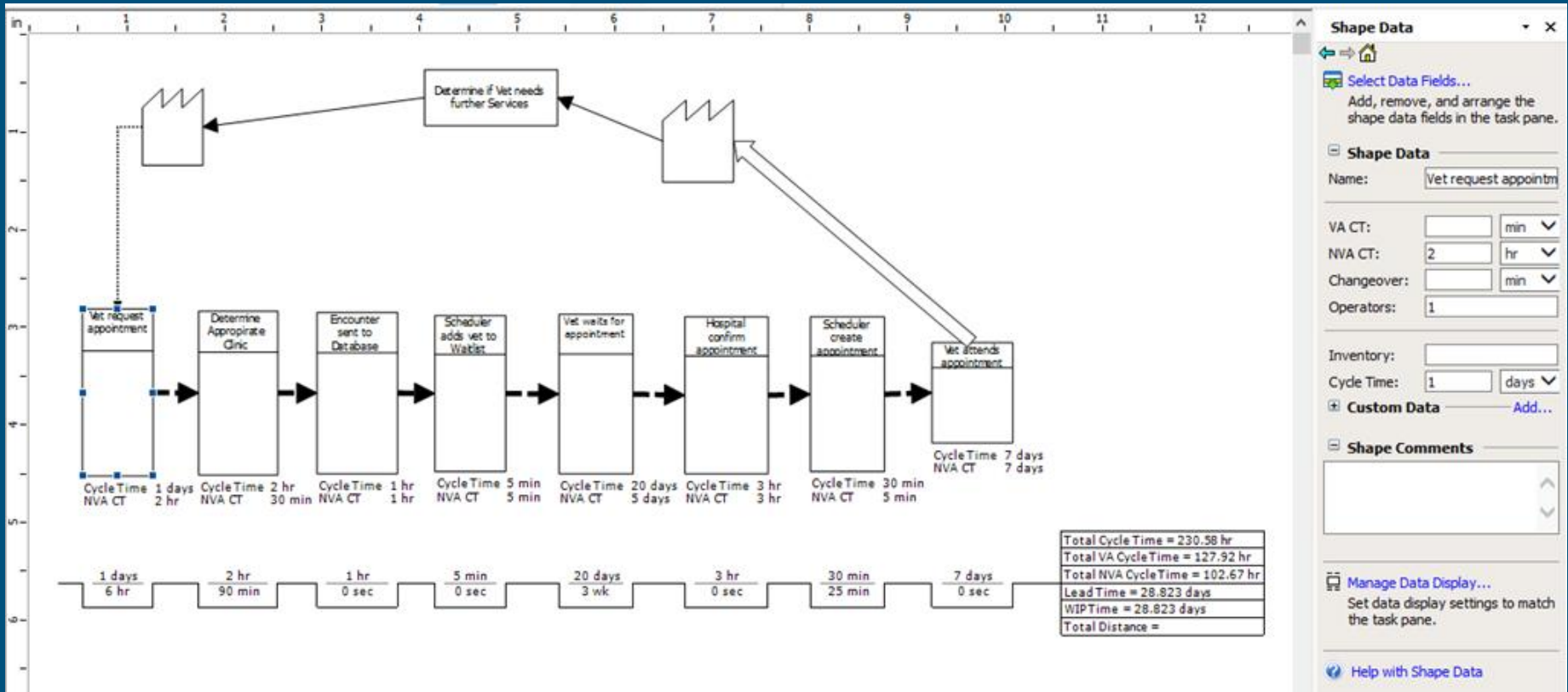
# Creating Value Stream Map

The screenshot displays a Value Stream Map (VSM) software interface. On the left, a 'Project Manager' tree shows a project structure with various folders and documents. A context menu is open over a 'Phase' element, listing options like 'Process Map...', 'Form...', and 'Analysis Capture...'. The main workspace shows a process flow diagram with a large rectangular process box and a data box containing the following metrics:

Total Cycle Time =
Total VA Cycle Time =
Total NVA Cycle Time =
Lead Time =
WIP Time =
Total Distance =

On the right, the 'Insert Shapes & Connect...' palette is visible, containing two sections: 'Shapes' and 'Connectors'. The 'Shapes' section includes icons for Process, Inventory, Outside Sources, Shipment, Information Supermarket, Buffer Stock, Kaizen Burst, Kanban Post, Withdrawal, Load Leveling, Signal Kanban, Production Kanban, Withdrawal Kanban, Batches Kanban, FIFO Seq Flow, Sequenced-Pull Ball, Operator, Go See Scheduling, and Text Box. The 'Connectors' section includes icons for Manual Info. Flow, Electronic Info. Flow, Kanban Path, Push Arrow, and Finished Goods.

# Value Stream Map cont.



# Capability Analysis

Project Manager

- 12 Step Project
  - Management
    - Project Today
    - Team Members
    - Tasks
    - Financial Data
    - Process Map Data
    - Y Metrics
    - Related Documents
    - Custom Categories
  - Roadmap
    - 1: Project Selection and Scoping
    - 2: Defect Definition
    - 3: Measurement System Evaluation
    - 4: Baseline Process Performance
      - Process Map
        - Capability Analysis (Normal)
    - 5: Establish Goals
    - 6: Identify Potential Xs
    - 7: Identify Potential Leverage Vari
    - 8: Determine Optimal Solution
    - 9: Implement Improvements
    - 10: Reassess Measurement System
    - 11: Improved State Process Perfor
    - 12: Implement Process Controls

## Capability Analysis (Normal)

Minitab: Stat > Quality Tools > Capability Analysis > Normal

Project:

12 Step Project

Project Leader:

Lucy Han

Date:

4/4/2016

Status of Process Evaluation:

Baseline

### Input

Variable Description:

Wait time between appointment request and a scheduled appointment date

Subgroup Size: Unit of Measure: LSL: Target: USL:

Unit of Measure: Days LSL: 0 Target: 7 USL: 14

### Checklist

Has the measurement system been validated?

Yes  No

Are there any hard boundaries and have they been applied?

Yes  No

Are the data reasonably normal?

Yes  No

If 'No', has the data been transformed? (e.g. Box-Cox)

Yes  No



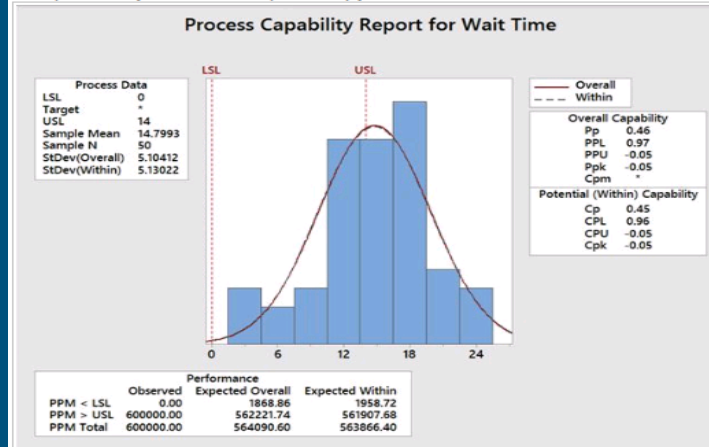
# Capability Analysis - Cont.

## Output

PPM LT (Expected):  Ppk:   
(Expected Overall DPMO)

PPM LT (Observed):  Pp:   
(Actual Overall DPMO)

Graphical (Process Capability):



## Conclusion

Observations:

- The process capability analysis shows that the process is not capable.
- Other facilities in different states should be used for benchmarking.
- Management overhaul is required to improve the scheduling process and reduce waiting times.

# Gauge RR

The screenshot displays the Minitab Project Manager interface. On the left, a tree view shows the project structure under 'VHA waiting time gauge R&R'. The 'Roadmap' section is expanded to show 12 steps, with '3: Measurement System Evaluation' containing the 'Gage R&R Study (Crossed)'. The main panel on the right shows the configuration for this study.

**Project Manager**

- VHA waiting time gauge R&R
  - Management
    - Project Today
    - Team Members
    - Tasks
    - Financial Data
    - Process Map Data
    - Y Metrics
    - Related Documents
    - Custom Categories
  - Roadmap
    - 1: Project Selection and Scoping
    - 2: Defect Definition
    - 3: Measurement System Evaluation
      - Gage R&R Study (Crossed)
    - 4: Baseline Process Performance
      - Analysis capture
      - Capability Analysis (Nonnormal) 1
      - Value Stream Map
    - 5: Establish Goals
      - Project Prioritization Matrix
    - 6: Identify Potential Xs
    - 7: Identify Potential Leverage Variables
    - 8: Determine Optimal Solution
    - 9: Implement Improvements
    - 10: Reassess Measurement System Evaluation
    - 11: Improved State Process Performance
    - 12: Implement Process Controls

**Gage R&R Study (Crossed)**

Minitab: Stat > Quality Tools > Gage Study > Gage R&R Study (Crossed)

Project: VHA waiting time gauge R&R

Project Leader: Lucy Han Date: 4/4/2016

**Input**

Variable Description: Waiting time

**Study Parameters**

# of Samples: 90 # of Appraisers: 3

# of Trials: 3 Randomized?  Yes  No

**Appraisers**

Name or Identification:

All qualified?  Yes  No

**Inspection Capability**

Is there a desire to evaluate the Gage System to determine if it can be safely used to accept/reject output?  Yes  No

If 'Yes', enter the Process Tolerance [USL-LSL] into Minitab - Options.

Process Tolerance: 14-0

**Quality of Sample**

Does the variation of the selected samples fairly represent the variation of the process?  Yes  No

If 'Yes', explain rationale:

Random sample was generated through minitab.

If 'No', enter a historical or estimated Process Standard Deviation into Minitab - Options.

Historical Process SDev:

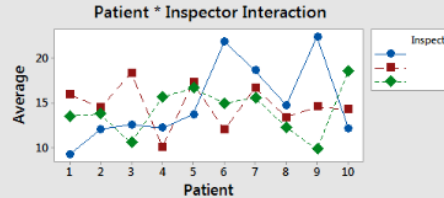
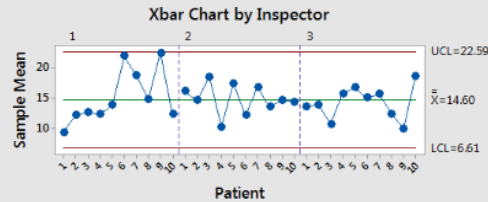
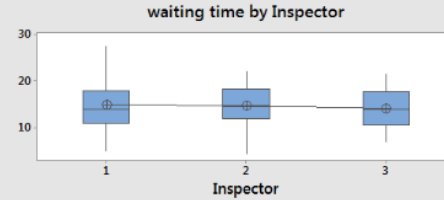
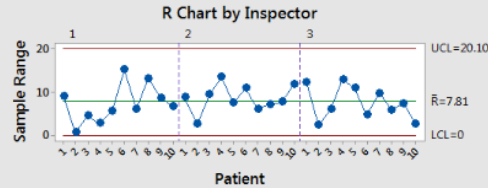
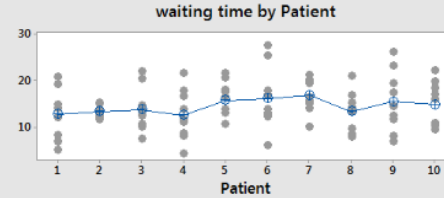
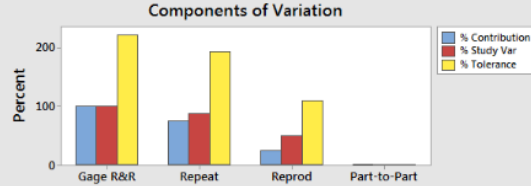
# Gauge RR

Graphical (Gage R&R (ANOVA or Xbar-R)) (optional):

## Gauge R&R for Waiting time measurement VA

Gage name: Data collection system  
Date of study: 4/4/16

Reported by: Mahmoud Hamwi  
Tolerance:  
Misc:



### Conclusion

Generally accepted guidelines for evaluating all the % R&R values in the "Total Gage R&R" row (%SV, SV/Toler, and SV/Proc):  
<10% Ideal, 10 to 30% Marginal, >30% Not Acceptable

- Gauge variation is too high, the measurement system should be re-evaluated.



**Thank You**