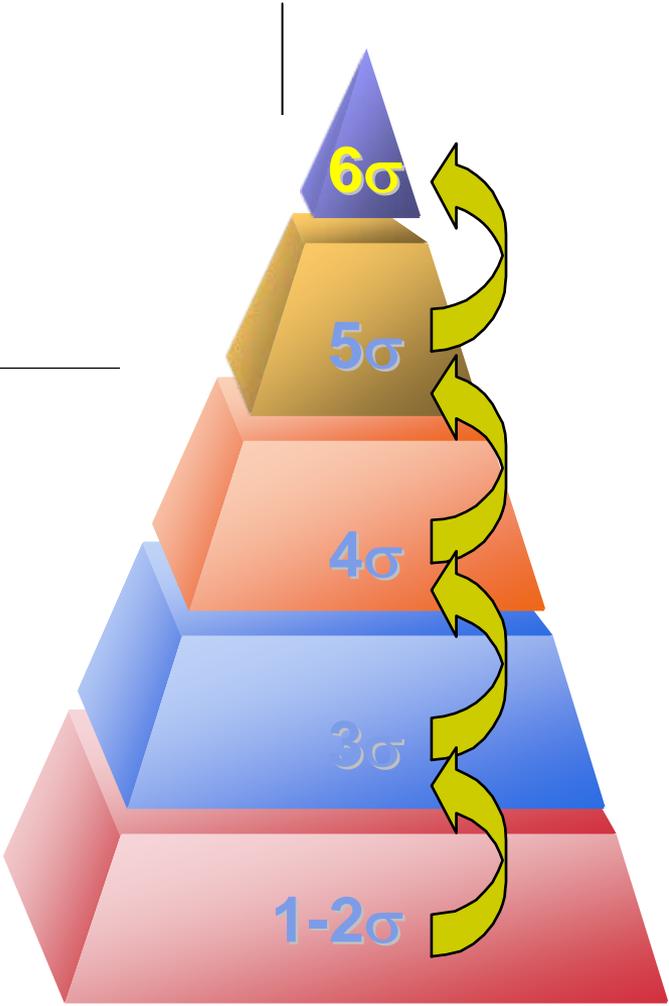


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**Project: Project Charter Review  
IDDOV Presentations**



# Overview of Design for Six Sigma IDDOV Steps



## Identify

1. Develop project charter
2. Perform stakeholder analysis
3. Develop project plan.

## Define

4. Collect VOC
5. Identify CTS measures and targets
6. Translate VOC into technical requirements

## Design

8. Identify process elements
9. Design process
10. Identify potential risks and inefficiencies

## Optimize

11. Implement pilot process
12. Assess process capabilities
16. Optimize design

## Validate

17. Validate process
18. Assess performance failure modes and risks
19. Iterate design and finalize



# Identify Phase

# Project Review Process Design



**Project Name:** Project Review Process Design

## 1. Develop Project Charter

**Problem Statement:** To design a process for the area to review Project Charters to determine if the project should move forward to the next phase. Project charters are the project initiation document that identifies a need in the business to perform information systems work.

**Customer/Stakeholders:** Management team, project leaders, Process and Metrics team, business customers, Program Management Office (PMO).

**What is important to these customers – CTS (Critical to Satisfaction):** All necessary fields are completed; provide accurate information to make decisions; project review is timely. Obtain approval to continue with the project.

**Goal of the Project:** To provide a process that provides a timely and complete review and decision to continue (or not) of the project charter.

**Scope Statement:** This process includes the review of project charters at an area level. Includes project review of the project charter, provides review of the format and content of the project charter, and provides approval of the project at appropriate management levels. Link this process to the Quality goals of the organization. This process is just for the identified Area.

**Financial and other benefit (s):** Consistent process, visibility of projects across area to identify overlap and resource sharing.

**Project Deliverables:** Project Charter review process; scorecard and metrics with baseline and target goals, and appropriate visibility reporting requirements.

**Potential Risks:** Being perceived as a bureaucratic instead of value added process; acceptance and adherence of process of area; timeliness of review.

# Project Review Process Design



## 1. Develop Project Charter

Potential Risks	Probability of Risk (H/M/L)	Impact of Risk (H/M/L)	Risk Mitigation Strategy
Not having time to get buy in from key stakeholders.	H	H	Create a simple process, which can be enhanced. Identify key stakeholders, and get input quickly.
Communication of the new process is not complete and high quality.	L	M	Identify key stakeholders and create communication and change strategy.
Need to consider needed training and roll out.	H	H	Create training and roll out strategy.
Being perceived as a bureaucratic instead of value added process.	H	H	Alignment with business and project strategies, with value clearly defined. Projects that aren't resourced or aligned shouldn't move forward.
Acceptance and adherence of process.	H	M	Develop change management strategy.
Timeliness of review. Program reviews every 2 weeks, instead of weekly. Potential maximum impact to project = 3 weeks	H	H	Clearly document the process and procedures to help ensure better planning. Contingency process steps may be needed.

# Stakeholder Analysis



## 2. Perform Stakeholder Analysis

	Stakeholders	Who Are They?	Potential Impact or Concerns	
P R I M A R Y	Management team	VPS, directors, team managers who manage the development teams	<ul style="list-style-type: none"> <li>Simple process</li> <li>Timely process</li> <li>Project visibility</li> <li>Meet business' needs</li> </ul>	+ + +
	Project leaders	Application Development team leaders.	<ul style="list-style-type: none"> <li>Approval to continue with the projects</li> <li>Timely process</li> <li>Manageable process</li> </ul>	+ + +
	Process and Metrics team	Responsible for improving the internal application development life cycle processes, and providing metrics to ensure quality and timeliness of project deliverables.	<ul style="list-style-type: none"> <li>Simple process</li> <li>Measurable process</li> <li>High quality process</li> </ul>	+ + +

# Stakeholder Analysis



## 2. Perform Stakeholder Analysis

	Stakeholders	Who Are They?	Potential Impact or Concerns	
SECONDARY	Business Customers	Internal customers who are provided information systems to meet their business needs.	<ul style="list-style-type: none"> <li>Deliver needed functionality</li> <li>Delivery in a timely manner</li> </ul>	<p>+</p> <p>+</p>
	Program Management Office	Division Program Management Office who provides application development life cycle standards, training and mentoring.	<ul style="list-style-type: none"> <li>Consistent process is followed</li> </ul>	+

# Stakeholder Analysis



## 2. Perform Stakeholder Analysis

Stakeholders	Strongly Against	Moderate Against	Neutral	Moderate Support	Strongly Support	
Management team					X O	
Project Leaders		X	—————→			O
Process and metrics team					X O	
Business customers			X O			
PMO			X	—————→		O

*X = Current      O = Future*

# Project Plan



## 3. Develop Project Plan



Following are the phase milestones extracted from the detailed project plan:

- Identify: 5 days
- Define: 31 days
- Design: 9 days
- Optimize: 70 days
- Validate: 35.5 days



# Define Phase

# Data Collection Plan



## 4. Collect VOC

Critical to Satisfaction (CTS)	Metric	Data collection mechanism (survey, interview, focus group, etc.)	Analysis mechanism (statistics, statistical tests, etc.)	Sampling plan (sample size, sample frequency)	Sampling instructions (who, where, when, how)
Timely Process	Area Council review is held 1 <sup>st</sup> & 3 <sup>rd</sup> Tuesday of month	Track schedule of reviews	Counts of reviews	All reviews	None
High Quality Process with metrics	Content quality percentage	Scorecard with content quality criteria and score; stakeholder interviews	Percentage received against grading criteria; control chart	All project charters for each review within SVP area	See scorecard procedures
	Format quality percentage	Scorecard with format criteria and score, stakeholder interviews	Percentage received against grading criteria; control chart	All project charters for each review within SVP area	See scorecard procedures
Accurate information	Content quality percentage	Scorecard with content quality criteria and score	Percentage received against grading criteria; control chart	All project charters for each review within SVP area	See scorecard procedures
Ability to make decisions, go/no go on projects	Percent projects decided on in each meeting	Agenda approval record, stakeholder interviews	Percentage	Each Area Council project review meeting	See review procedures
Visibility to program/project relationships	Count of projects related to programs	Scorecard item on format scorecard, stakeholder interviews	Count	All projects reviewed	See scorecard procedures

# Voice of Customer



## 4. Collect VOC



Summary of interviews by stakeholder group:

- Senior VP, VPs, Directors:
  - Ensure program is on budget, have resources, and key sponsors
  - Be able to decide to do the work or not
  - How programs/projects affect other teams?
  - Are we working on the right things?
  - Tell me when we have a problem
  - Periodic review of work

# Voice of Customer



## 4. Collect VOC



- SVP, VPs, Directors: Summary of questions asked during Program Review meeting (2/19)
  - What is scope of processes in project?
  - Buy vs. build
  - What is impact to business?
  - Outsource assessment
  - Engagement from business?
  - What business resources will be required?
  - Is there an existing process that they're enhancing?
  - Is infrastructure needed?
  - Is it development or support?
  - Need to review resources across programs.

# Voice of Customer



## 4. Collect VOC



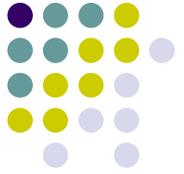
Summary of interviews by stakeholder group:

- Program Leaders/Project Leaders:
  - Resource allocation
  - Program management
  - Resource management

# Voice of Customer



## 4. Collect VOC



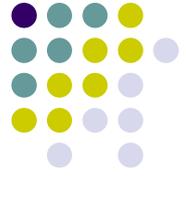
Summary of interviews by stakeholder group:

- Process & Metrics team:
  - Simple process
  - Metrics-based
  - Encourages continuous improvement
  - Has stakeholder buy-in

# Voice of Customer



## 4. Collect VOC



- Summary of interviews by stakeholder group:
  - Architects:
    - Impact of adding projects and evaluate impact to the business and ISD.
    - See program interdependencies and interactions
    - Periodic program updates
    - Program changes
    - Program changes
    - Resource management
  - PMO: wants a review to follow ISDLC process

# Critical to Satisfaction



## 4. Collect VOC



- Timely Process
- High Quality Process with metrics
- Accurate information
- Ability to make decisions, go/no go on projects
- Visibility to program/project relationships

# CTS, Metrics, Targets



## 5. Identify CTS & Targets

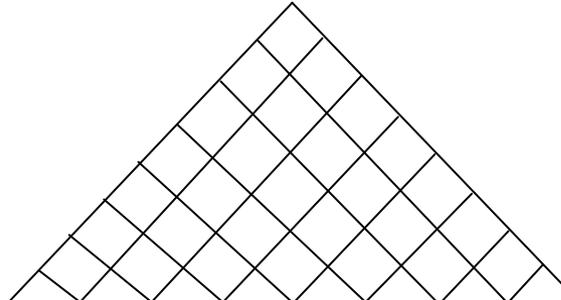
CTS	Metric	Operational Definition	Target
Timely Process	Project charter review process time	Time from project Charter being entered into Area Council Sharepoint to Approve or Reject decision is made	Average = 2 weeks Range = 1 to 3 weeks
High Quality Process with metrics	Scorecard Format percentage	Percent of fields complete the first time	100% within 3 months
	Content quality percentage	Percent of criteria rated 4 or 5 on a scale of 1 to 5.	80% within 3 months
Accurate Information	Content quality percentage	All fields filled in.	100% within 3 months
Ability to make decision, go/no go on projects.	Program Review % of project charters can decide first time	Percent of charters that go through the Program Review that they can decide to approve or reject the first time	Target 95% within 3 Months
Visibility to program/project relationships	% of Programs identified correctly on project charter	Percent of Programs identified in program field on project Charter correctly	Target 80% within 6 Months

# Translate VOC: QFD



Project Name:

Project Review Process



<i>Technical Requirements</i>
<i>Customer Requirements</i>
<b>Timley process</b>
<b>High quality process with metrics</b>
<b>Accurate information</b>
<b>Ability to make go/no go decisions on projects</b>
<b>Visibility to programs/project relationships</b>

Importance	Simple process	Scorecard	P&M team review of format/content	Process workshops	Stakeholder survey	Area Council Sharepoint	Procedures & Process map	Executive Approval
10	9	9		9		9	9	9
9		9	9	9		9	9	
6				9	5	9	9	
8	9		9			5		9
7								9

Absolute weight

Relative weight

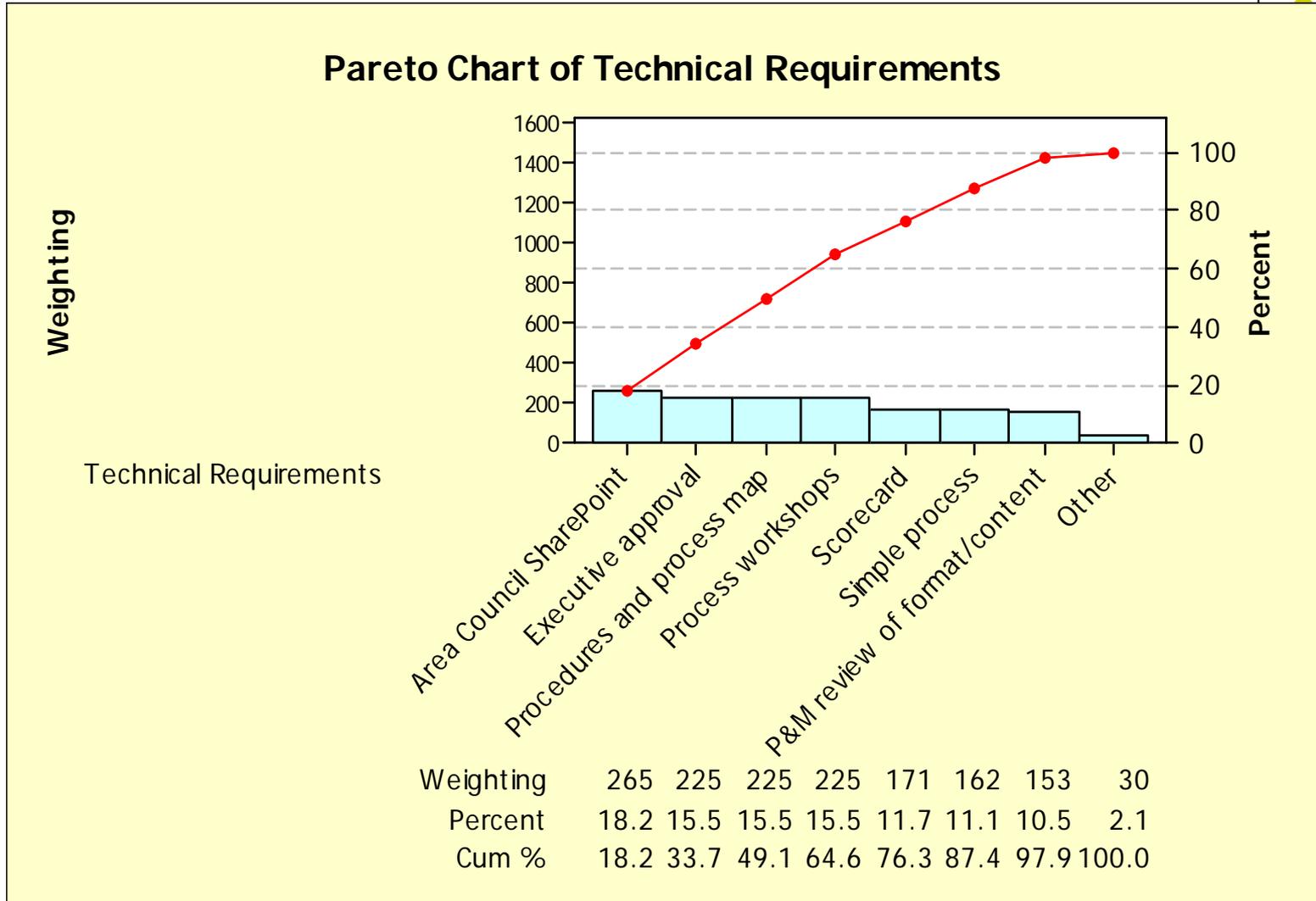
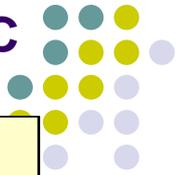
162	171	153	225	30	265	225	225
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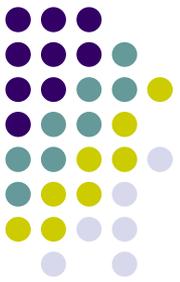
5	4	6	2	7	1	2	2
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# Translate VOC: QFD



## 6. Translate VOC





# Design Phase

# Process Map



## 7. Identify Process Elements

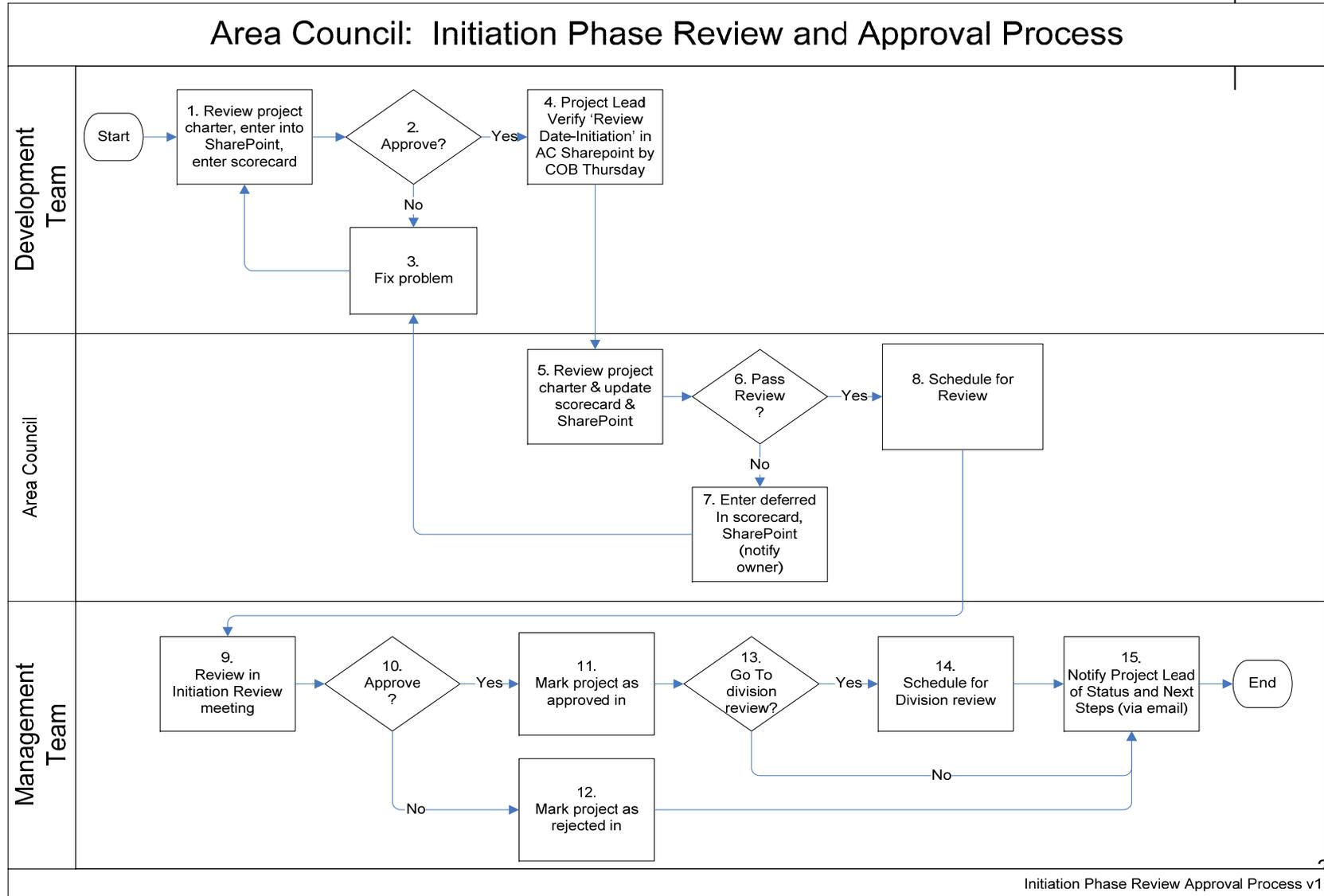
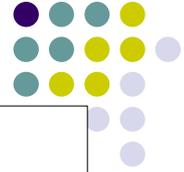


- Quick review and turnaround
- Centralized website to view project charters to be reviewed
- Ability to assess quality of content and format completeness
- Ensure completeness before SVP, VP, Director review

# Process Map



## 8. Design Process



# Failure Mode & Effect Analysis



## 9. Identify Potential Risks



Process Step	Potential Failure Mode	Potential Effects of Failure	S E V E R I T Y	Potential Causes of Failure	O C C U R R E N C E	Current Process Controls	D E T E C T I O N	R P N	Recommended Action
Review Project Charter, Enter into Area Council (AC) SharePoint, Enter Scorecard	Submit the project charter without getting it reviewed with their team.	Project charter has errors. Project charter does not explain the problem or identify the scope	5	Lack of training	2	None	9	90	Incorporate director review
	May not identify all errors	Project charter is not high quality	5	Lack of training	10	None	1	50	Scorecard
Fix problem	Preparer may not fix the problem properly	Project charter is not high quality	5	Lack of training	2	None	1	10	Scorecard

# Failure Mode & Effect Analysis



## 9. Identify Potential Risks

Process Step	Potential Failure Mode	Potential Effects of Failure	SEV E R I T Y	Potential Causes of Failure	O C C U R R E N C E	Current Process Controls	D E T E C T I O N	R P N	Recommended Action
Project Lead Verify Review Date Initiation in Area Council SharePoint by COB Thursday	Project lead puts in wrong date.	Project charter does not get reviewed		6 Not reading procedures	2	None	5	60	Training
Review Project Charter & update scorecard and SharePoint.	Project lead does not create the scorecard	Doesn't catch errors.	10	Not reading procedures	10	None	1	100	Verify before review, in procedure
Enter in scorecard, SharePoint (notify owner)	Project lead doesn't correct error	Project charter isn't high quality	10	Lack of engagement	8	None	1	80	Scorecard
Schedule for Area Council (notify project lead to complete project charter Action Item)	Reviewer misses the project charter, and doesn't get the project on the agenda.	Project can be delayed	10	Lack of training	1	None	4	40	Training and procedure

# Failure Mode & Effect Analysis



## 9. Identify Potential Risks

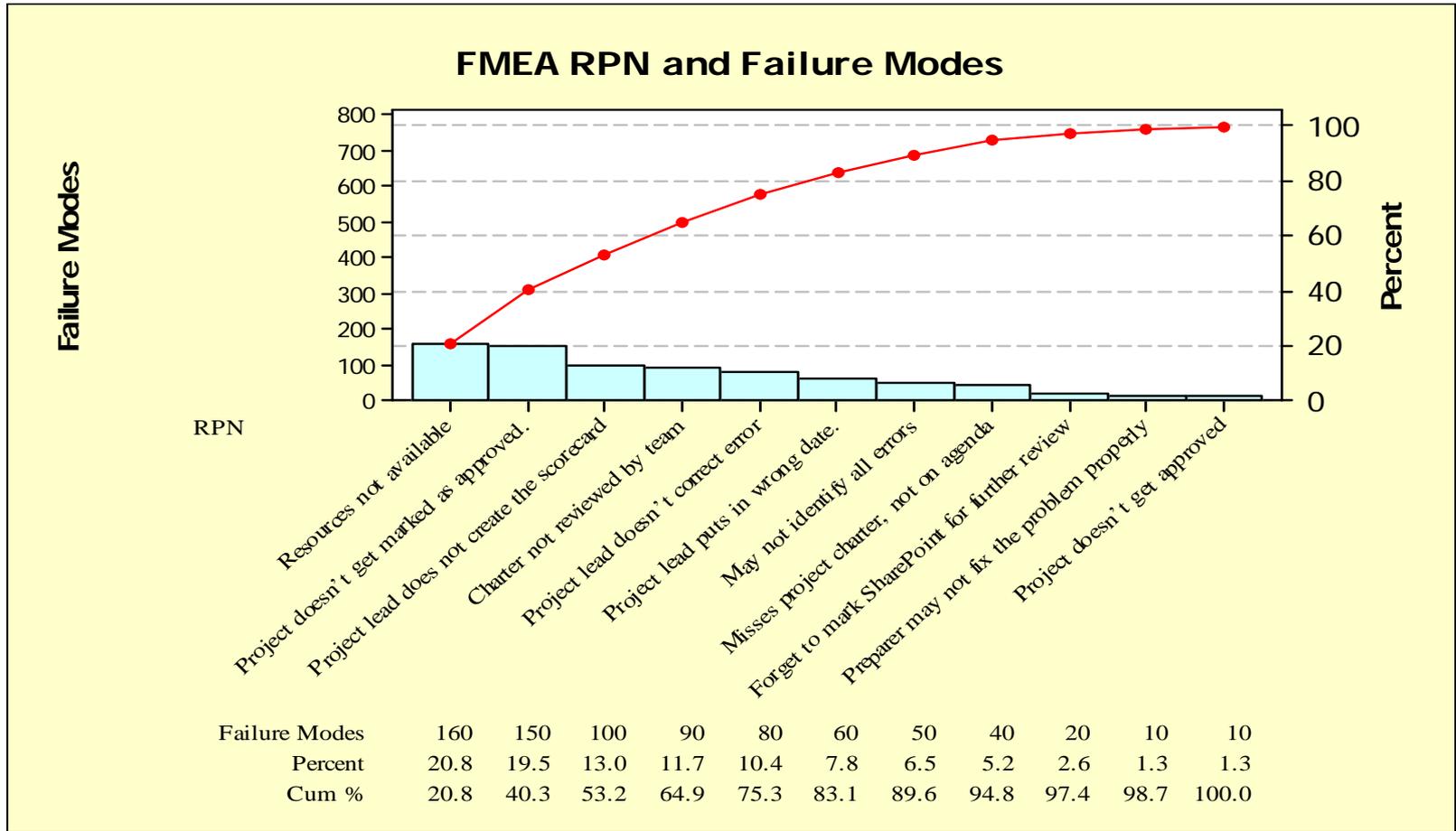


Process Step	Potential Failure Mode	Potential Effects of Failure	S E V E R I T Y	Potential Causes of Failure	O C C U R R E N C E	Current Process Controls	D E T E C T I O N	R P N	Recommended Action
Review in rea Council	Project doesn't get approved	Work so far is wasted	10	Poor scoping, lack of skills, no stakeholder engagement	1	None	1	10	Training
Review in Area Council	Resources not available	Customer is not satisfied	10	Lack of visibility or budget	8	None	2	160	Reporting
Mark project as approved in SharePoint & Clarity	Project doesn't get marked as approved.	Project is delayed and customer is not satisfied	10	Mistake	3	None	5	150	Training
Go To ISD Project Council?	Forget to mark SharePoint for further review	Cross-divisional dependencies may not be identified	5	Mistake	2	None	2	20	Verification step

# Failure Mode & Effect Analysis



## 9. Identify Potential Risks



# Waste Analysis



## 9. Identify Potential Risks



Process Step	Value Added	Non-Value Added	Type of Waste
Review Project Charter, Enter into Area Council (AC) SharePoint, Enter Scorecard		X Inspection	Processing
Fix problem		X Defect	Defect
Project Lead Verify Review Date-Initiation in Area Council SharePoint by COB Thursday		X Inspection	Processing
Review Project Charter & update scorecard and SharePoint.		X Inspection	Processing
Enter deferred in scorecard, SharePoint (notify owner)		X Inspection	Processing
Schedule for Area Council (notify project lead to complete project charter Action Item)		X Inspection	Processing
Review in Area Council (communicate value of project)	X		Processing
Mark project as approved, deferred or rejected in SharePoint & Clarity	X		
Schedule for Division's Project Council		X Inspection	Processing
Go To Division's Project Council?		X Inspection	Processing
Schedule for Division's Project Council		X Inspection	Processing
Notify Project Lead of Status and Next Steps (via email)	X		

# VOP Matrix



## 9. Identify Potential Risks



Critical to Satisfaction (CTS)	Process factors	Operational Definition	Metric	Target
Timely Process	Procedures followed Management commitment Resources available	Area council review is held on the scheduled dates, and projects that are scheduled for the agenda are reviewed during the review.	Area Council review is held when scheduled, and projects that are scheduled are reviewed.	100% of projects are reviewed in the identified area council review
High Quality Process with metrics	Training Process in place Procedures written , communicate and followed	Scorecard with content quality criteria and score (see scorecard) Scorecard with format criteria and score (see scorecard)	Content quality percentage Format percentage	Content quality: 80% within three months Format: 100% within three months
Accurate information	Training Procedures Relationship with business areas	Scorecard with content and format criteria	Content quality percentage Format percentage	Content quality: 80% within three months Format: 100% within three months
Ability to make decisions, go/no go on projects	Business knowledge of management Quality of project charter	Each project is approved, deferred, or rejected. This would measure the percent approved or rejected, compared to the percent deferred.	Percent of projects approved or rejected the first time (not deferred).	95% (within 3 months of process implementation) of projects that are approved or rejected the first time (0% deferred)
Visibility to program/project relationships	Program id is assigned Knowledge of scope of programs and projects	Count of projects that should be related to a program, have the program identified	Count of projects related to programs	80% (within 6 months) of projects that should be related to a program have the program id.



# Optimize Phase

# Implementation Plan



## 10. Implement Process

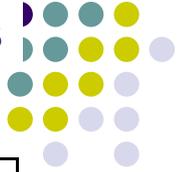


Activity	Responsible	Due Date	Stakeholders Impacted
Develop communication plan for key stakeholders	Process and metrics team	2/22	All
Distribute new process notice	Process and metrics team	2/29	All
Hold first Area Council	Process and metrics team	3/4	All
Assess results, and improvement ideas	Process and metrics team	3/18	All
Assess process capability	Process and metrics team	6/17	All
Implement re-designed process	Process and metrics team	7/17	All

# Communication Plan



## 10. Implement Process



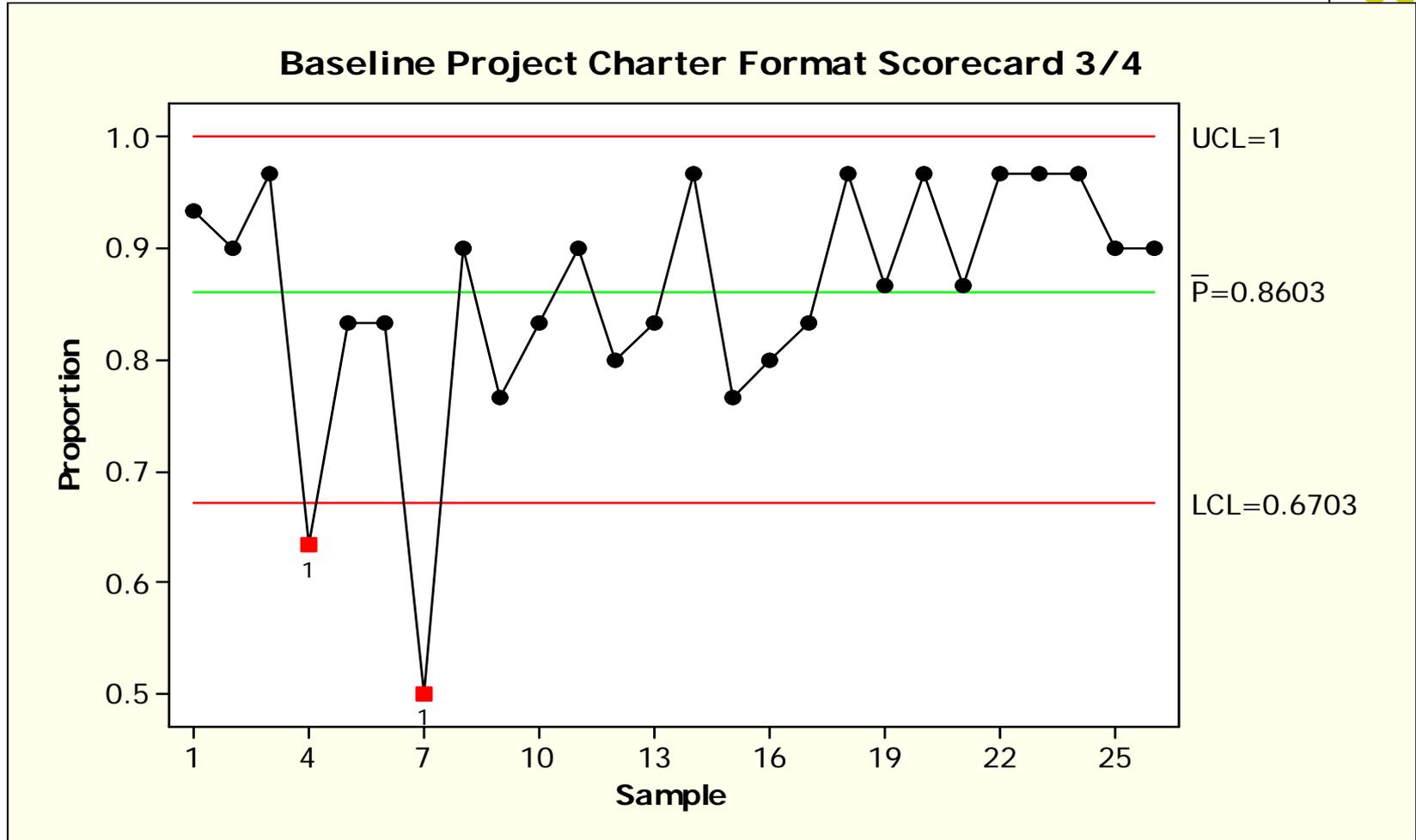
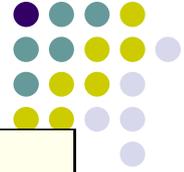
**Customers/Stakeholders Communication Plan**

	PROGRAM	INITIATION	REQUIREMENTS	TECHNICAL	IMPLEMENTATION	POST IMPLEMENTATION
VP	- Area Program Review - Marc's staff meeting - VPs Staff meetings	- Area Council DOU Review - Marc's staff meeting - VP Staff meeting	- Area Council DOU Review - Marc's staff meeting - VP Staff meeting	- Area Council DOU Review - Marc's staff meeting - VP Staff meeting	- Area Council DOU Review - Marc's staff meeting - VP Staff meeting	- Area Council DOU Review - Marc's staff meeting - VP Staff meeting
Directors	- Area Program Review - Director's Staff meetings - Program Workshops	- Area Council DOU Review - Director's Staff meetings	- Area Council DOU Review - Director's Staff meetings	- Area Council DOU Review - Director's Staff meetings	- Area Council DOU Review - Director's Staff meetings	- Area Council DOU Review - Director's Staff meetings
Managers	- Director's Staff Meetings - Program Workshops	- Director's Staff Meetings	- Director's Staff Meetings	- Director's Staff Meetings	- Director's Staff Meetings	- Director's Staff Meetings
Development Team:						
Project lead	- Program workshops	- Program/project leader meeting???	- Program/project leader meeting???	- Program/project leader meeting???	- Program/project leader meeting???	- Program/project leader meeting???
Program Lead	- Program workshops	- Program/project leader meeting	- Program/project leader meeting	- Program/project leader meeting	- Program/project leader meeting	- Program/project leader meeting
Business Analysts		BA Bi-weekly meeting	BA Bi-weekly meeting	Email	BA Bi-weekly meeting	BA Bi-weekly meeting
Technical roles		-Project charter workshops	Gap	Email, Need Tech Meeting?	Email, Need Tech Meeting?	Email, Need Tech Meeting
Division project management office	- Staff meetings - Governance Committee - Area Council Steering Committee	- Staff meetings - Governance Committee - Area Council Steering Committee	- PMO Staff meetings - ISD Governance Committee - Area Council Steering Committee	- PMO Staff meetings - ISD Governance Committee - Area Council Steering Committee	- PMO Staff meetings - ISD Governance Committee - Area Council Steering Committee	- PMO Staff meetings - ISD Governance Committee - Area Council Steering Committee
Division process engineering	- Staff meetings - Governance Committee - Area Council Steering Committee	- Staff meetings - Governance Committee - Area Council Steering Committee	- ISDLC Staff meetings?? - ISD Governance Committee - Area Council Steering Committee	- ISDLC Staff meetings?? - ISD Governance Committee - Area Council Steering Committee	- ISDLC Staff meetings?? - ISD Governance Committee - Area Council Steering Committee	- ISDLC Staff meetings?? - ISD Governance Committee - Area Council Steering Committee
Other Areas in Division	- Governance Committee - Area Council Steering Committee	- Governance Committee - Area Council Steering Committee	- BA Bi-weekly meeting? - ISD Governance Committee - Area Council Steering Committee	- ISD Governance Committee - Area Council Steering Committee	- BA Bi-weekly meeting? - ISD Governance Committee - Area Council Steering Committee	- BA Bi-weekly meeting - ISD Governance Committee - Area Council Steering Committee

# Baseline Format



## 11. Assess Process Capability

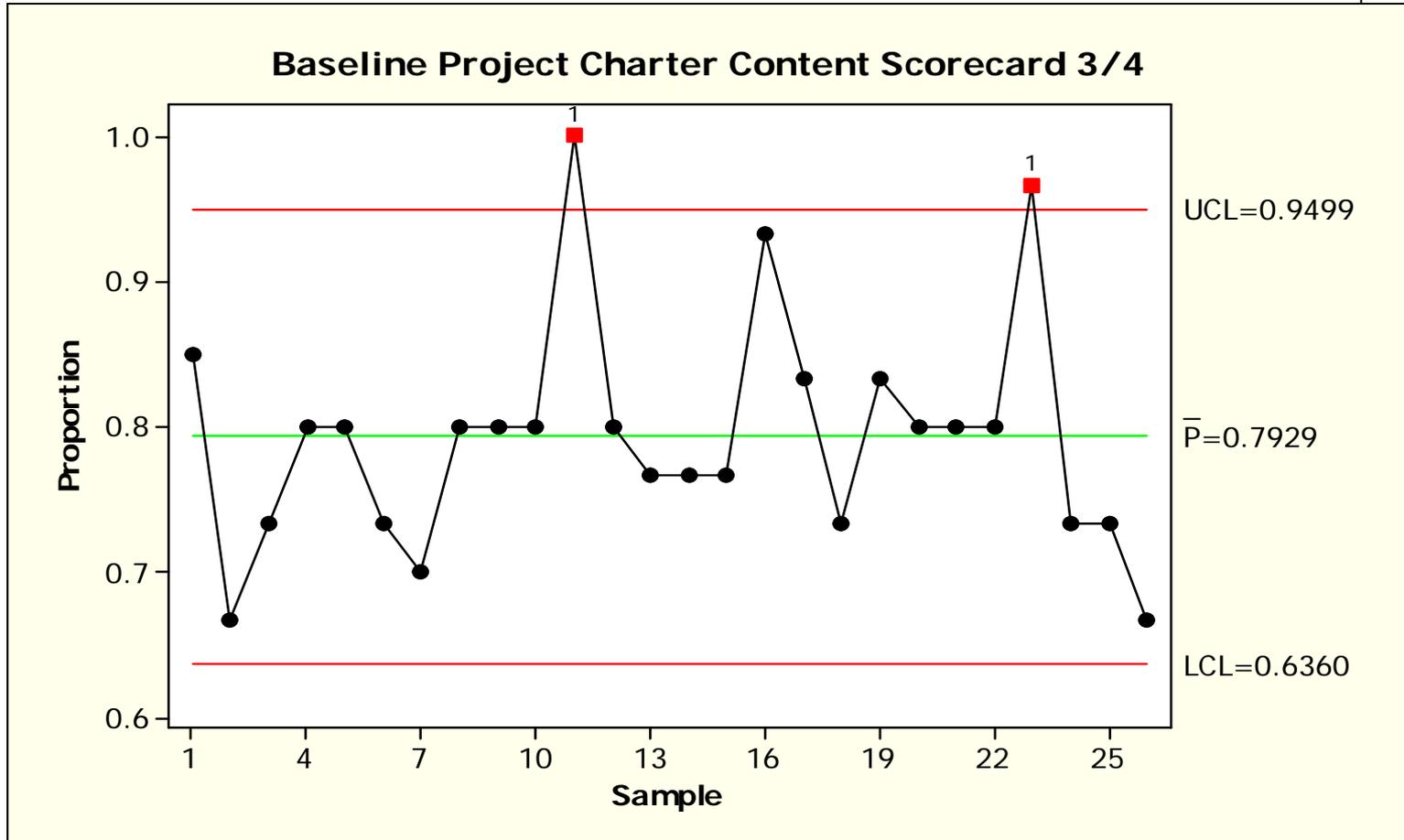


Baseline Format of Project Charter: 86%

# Baseline Content



## 11. Assess Process Capability

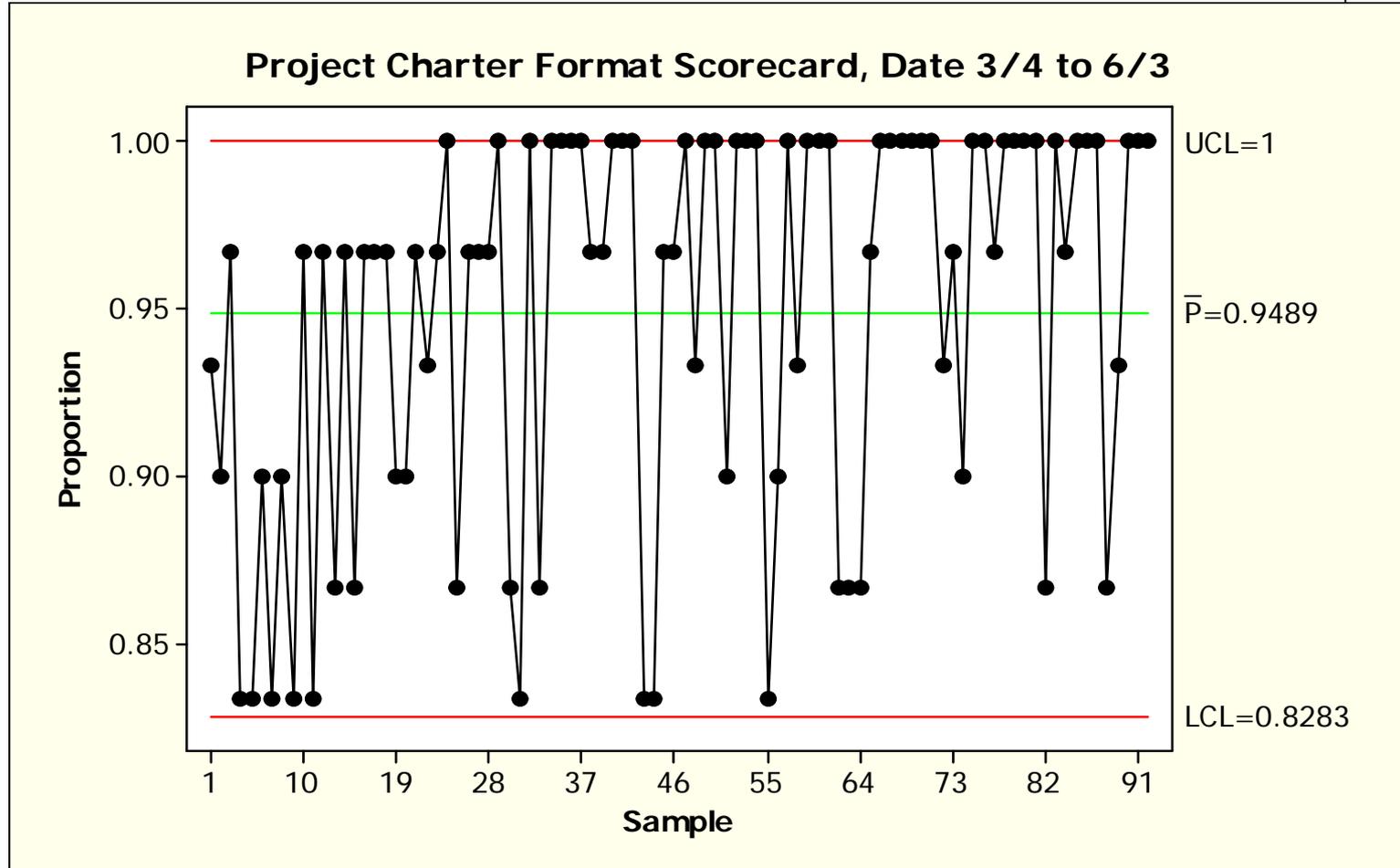
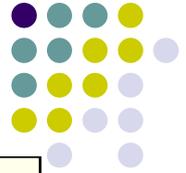


**Baseline Content of Project Charter: 79%**

# Format Process Capability



## 11. Assess Process Capability

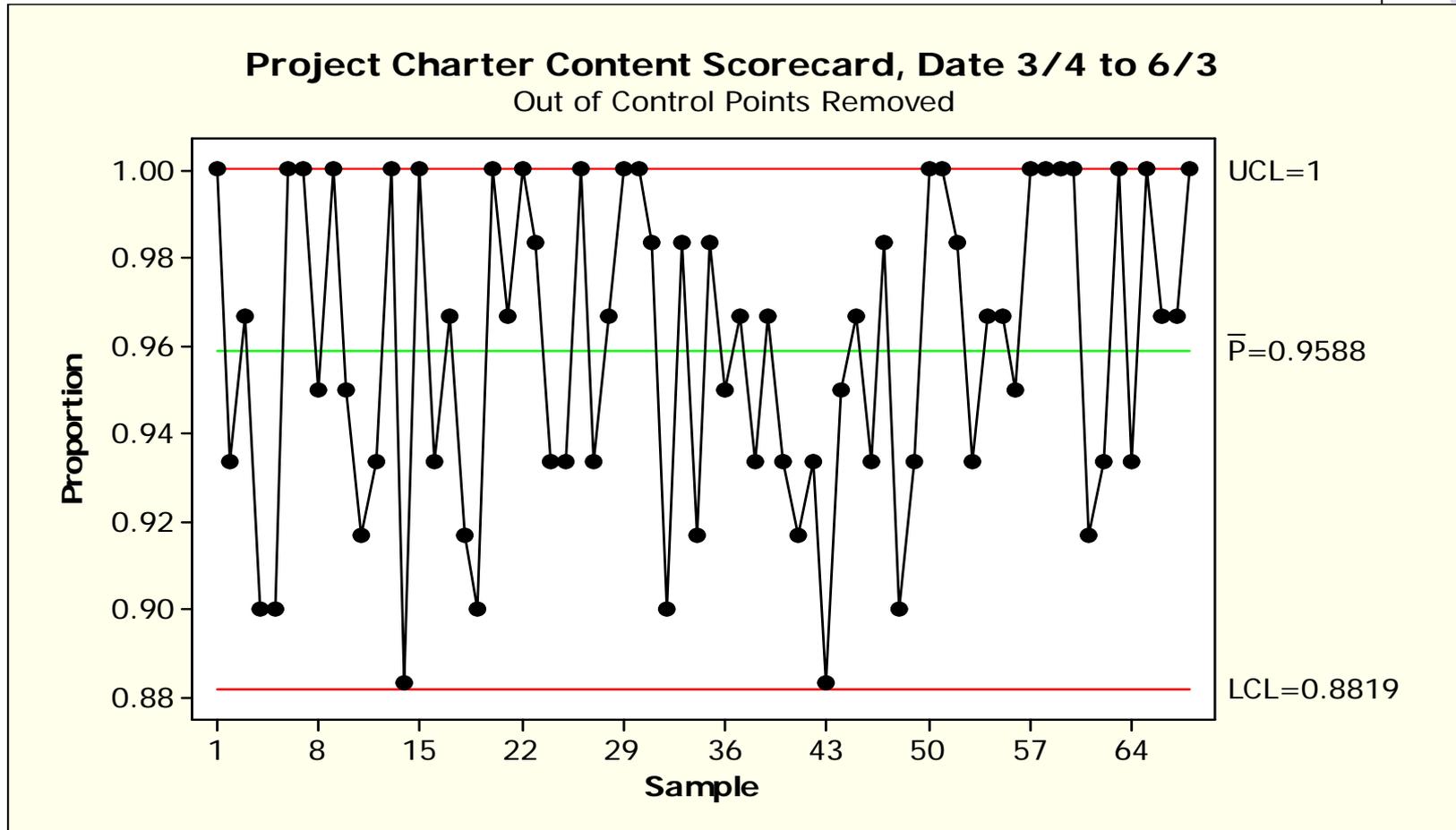
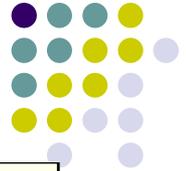


Process Capability Format of Project Charter: 95%

# Content Process Capability



## 11. Assess Process Capability

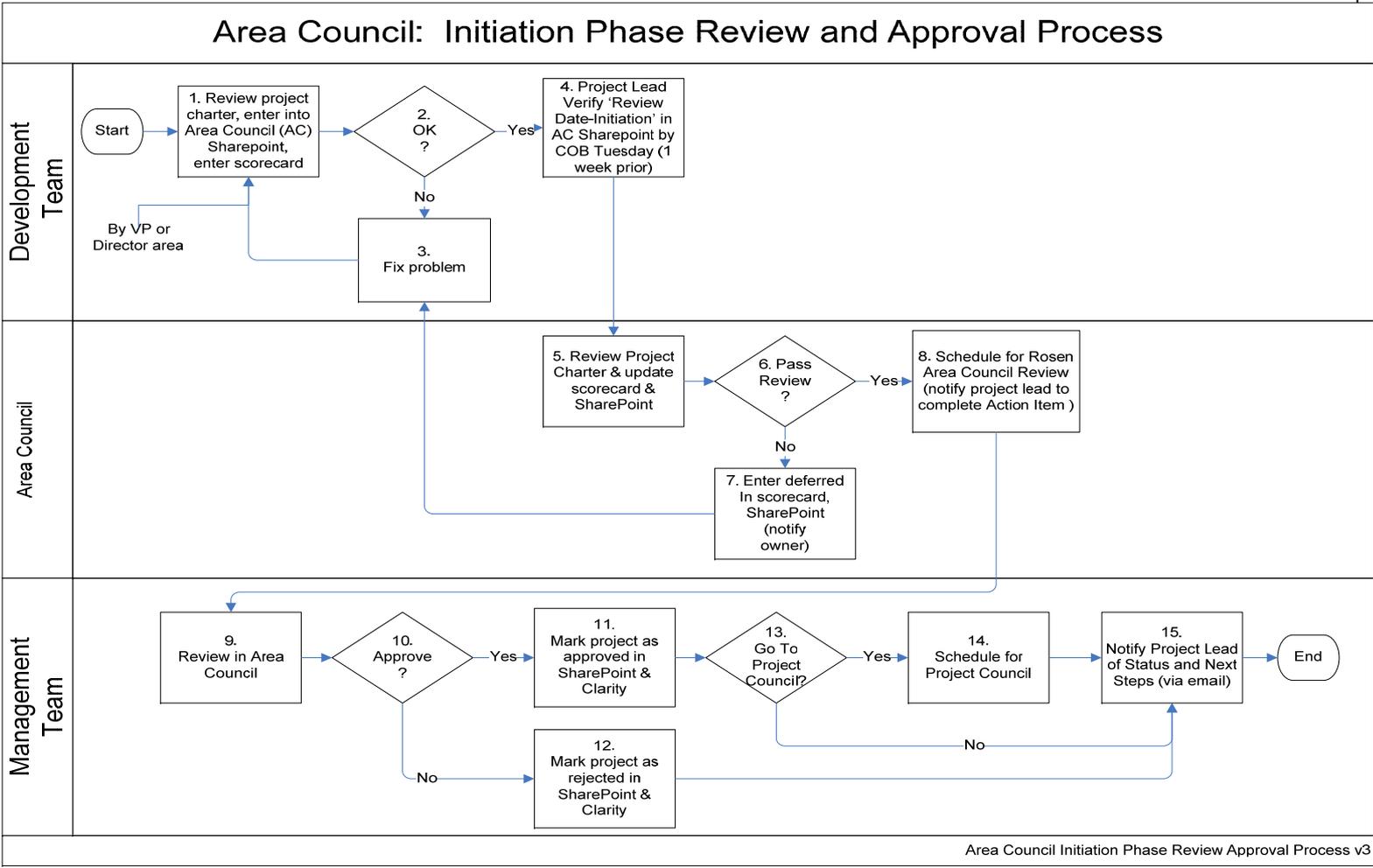


Process Capability Content of Project Charter: 96%

# Revised Process Map



## 12. Optimize Design





# Validate Phase

# Dashboard



## 13. Validate Process



**Format: All fields complete**

● **Baseline: 86.3%**      **96.51% (+10.23%)**

**Content: Meaningful entries in fields**

● **Baseline: 79.3%**      **93.73% (+14.41%)**

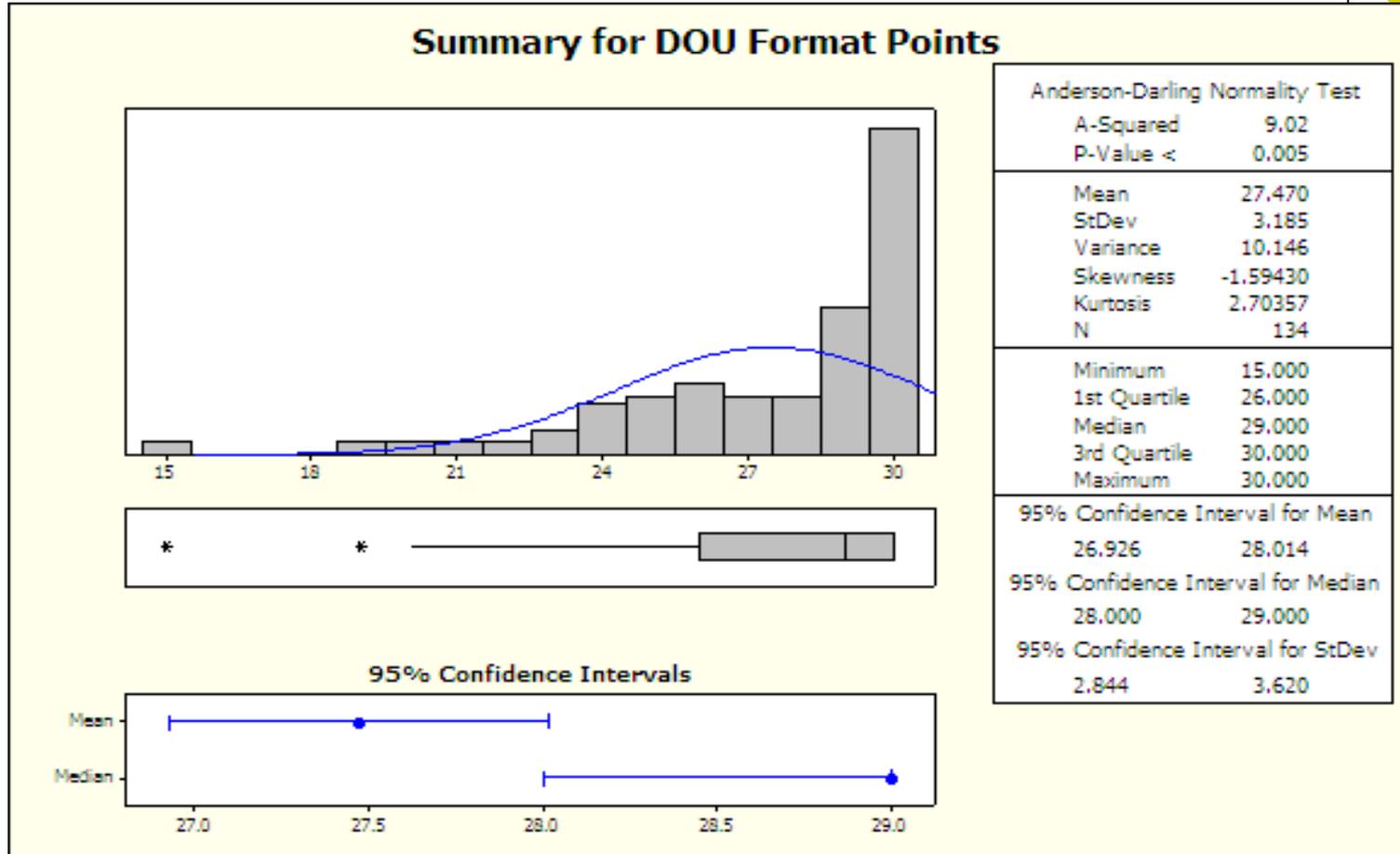
**Number Total Perfect Project Charters: 18**

**VP Scorecard bi-weekly reviews**

# Histogram of Format Scores



## 14. Assess Performance



Histogram: Not a Normal Distribution

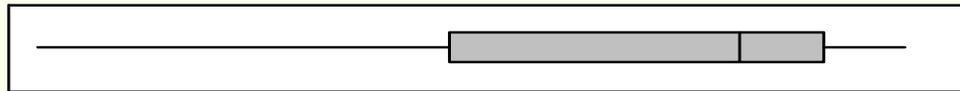
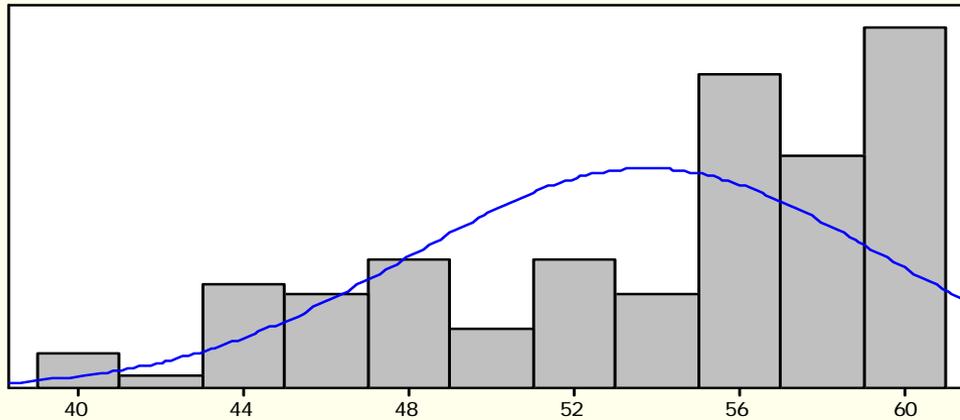
# Histogram of Content Scores



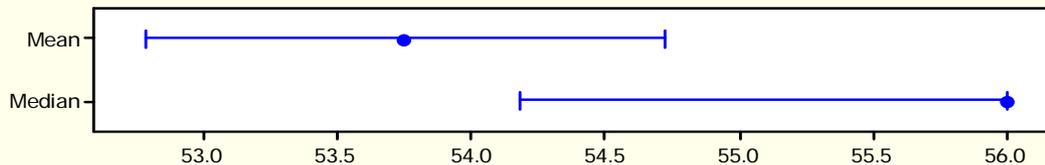
## 14. Assess Performance



### Summary for DOU Content Points



### 95% Confidence Intervals



### Anderson-Darling Normality Test

A-Squared	4.83
P-Value <	0.005
Mean	53.754
StDev	5.668
Variance	32.127
Skewness	-0.742418
Kurtosis	-0.566227
N	134
Minimum	39.000
1st Quartile	49.000
Median	56.000
3rd Quartile	58.000
Maximum	60.000
95% Confidence Interval for Mean	52.785 54.722
95% Confidence Interval for Median	54.178 56.000
95% Confidence Interval for StDev	5.061 6.442

Histogram: Not a Normal Distribution

# Hypothesis Test by VP Area



## 14. Assess Performance

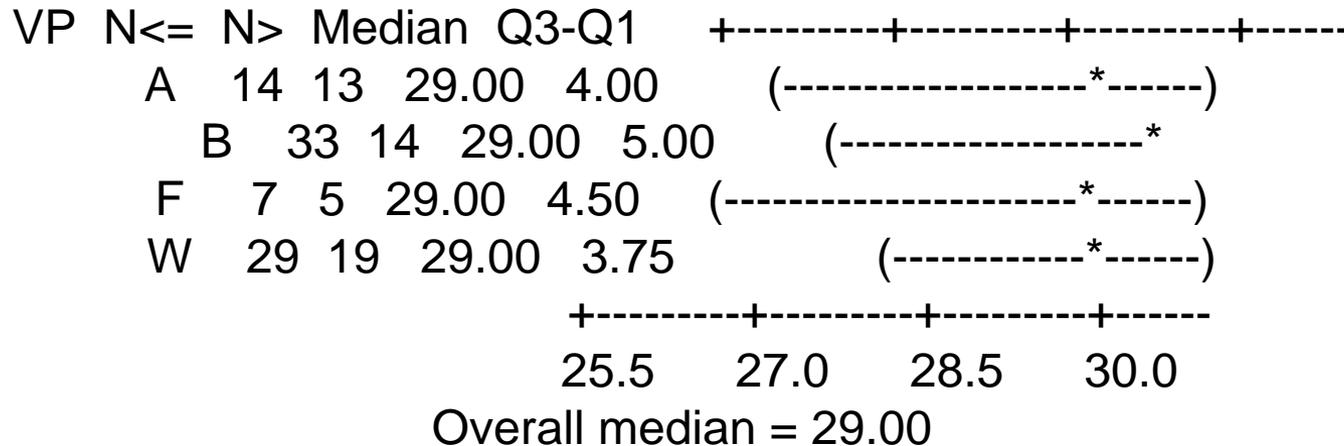


### Mood Median Test: Format Points versus VP

Mood median test for DOU Format Points

Chi-Square = 2.64 DF = 3 P = 0.450

Individual 95.0% CIs



No significant difference between  
Format Scores in VP Area

# Hypothesis Test by VP Area



## 14. Assess Performance

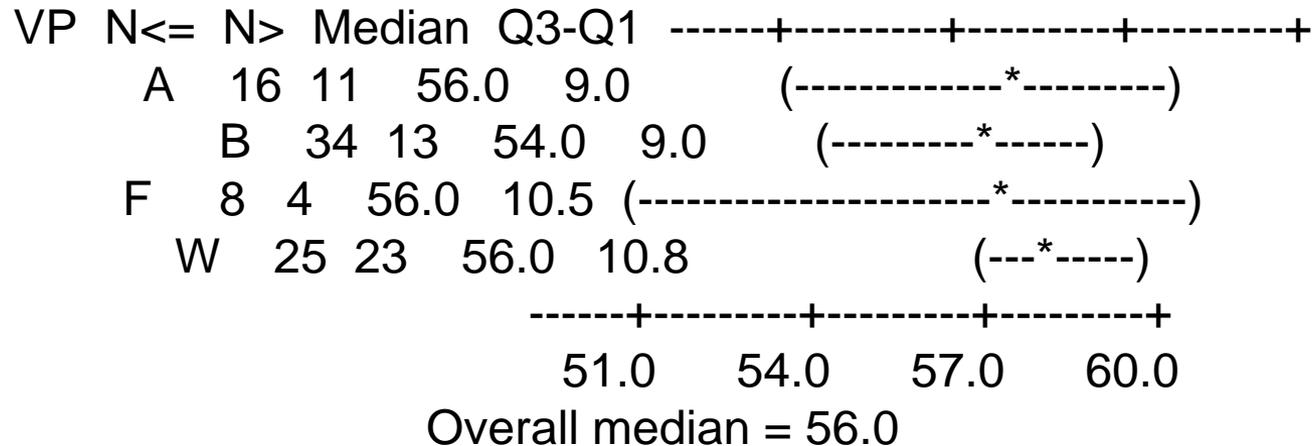


### Mood Median Test: Content Points versus VP

Mood median test for DOU Content Points

Chi-Square = 4.33    DF = 3    P = 0.228

Individual 95.0% CIs



No significant difference between  
Content Scores in VP Area

# Difference from Baseline



## 14. Assess Performance



### Mann-Whitney Test and CI: Format 3 /4, Format 5/6 to 6/17

N Median

DOU Format 3 4 26 26.500

DOU Format Rest 59 30.000

Point estimate for ETA1-ETA2 is -3.000

95.1 Percent CI for ETA1-ETA2 is (-4.001,-1.001)

W = 631.0

Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0000

The test is significant at 0.0000 (adjusted for ties)

Format scores improved since baseline

Baseline average score: 26.5

Improved average score: 30.0

# Difference from Baseline



## 14. Assess Performance



### Mann-Whitney Test and CI: Content 3/ 4, Content 5 /6 to 6/17

N Median

DOU Content 3 4 26 48.000

DOU Content Rest 59 57.000

Point estimate for ETA1-ETA2 is -10.000

95.1 Percent CI for ETA1-ETA2 is (-12.000,-8.000)

W = 496.5

Test of ETA1 = ETA2 vs ETA1 not = ETA2 is significant at 0.0000

The test is significant at 0.0000 (adjusted for ties)

Content scores improved since baseline

Baseline average score: 48.0

Improved average score: 57.0

# Replication Opportunities



## 15. Iterate Design and Finalize



Process was adopted in other areas in the division, and eventually for the entire division