

Six Sigma Black Belt Final Project Presentation

Grants Management
By Felicia Sherman

Define

Problem Statement

CT Flowdown

SIPOC

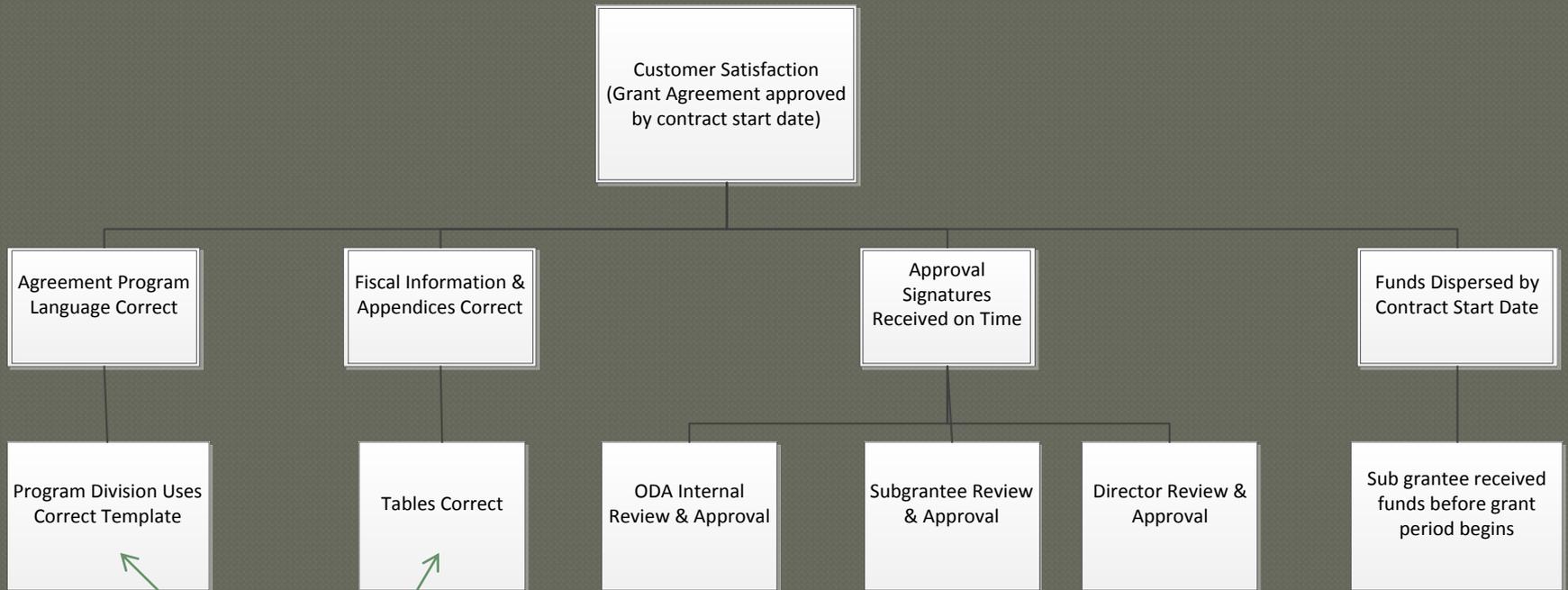
Problem Statement

- ODA's current grants management procedures take up to 55 business days to process a grant agreement from notice of grant award to distribution of funds
- The grants process needs to be streamlined to improve process flows and decrease total process time to free staff resources for other projects

Project Results and Findings

- Total internal process is expected to take <35 days
 - Average completion time is 37 days
- Difficult to pinpoint most significant process delays due to no formal tracking mechanism for full process (including external processing time)
 - Able to track pieces of process through document properties tracking in Word
 - On average, each division meets (and beats) timelines for draft and document reviews

CT Flowdown



Majority of errors occur affecting process timeline

SIPOC

SIPOC Diagram

Grants Management Approval Process

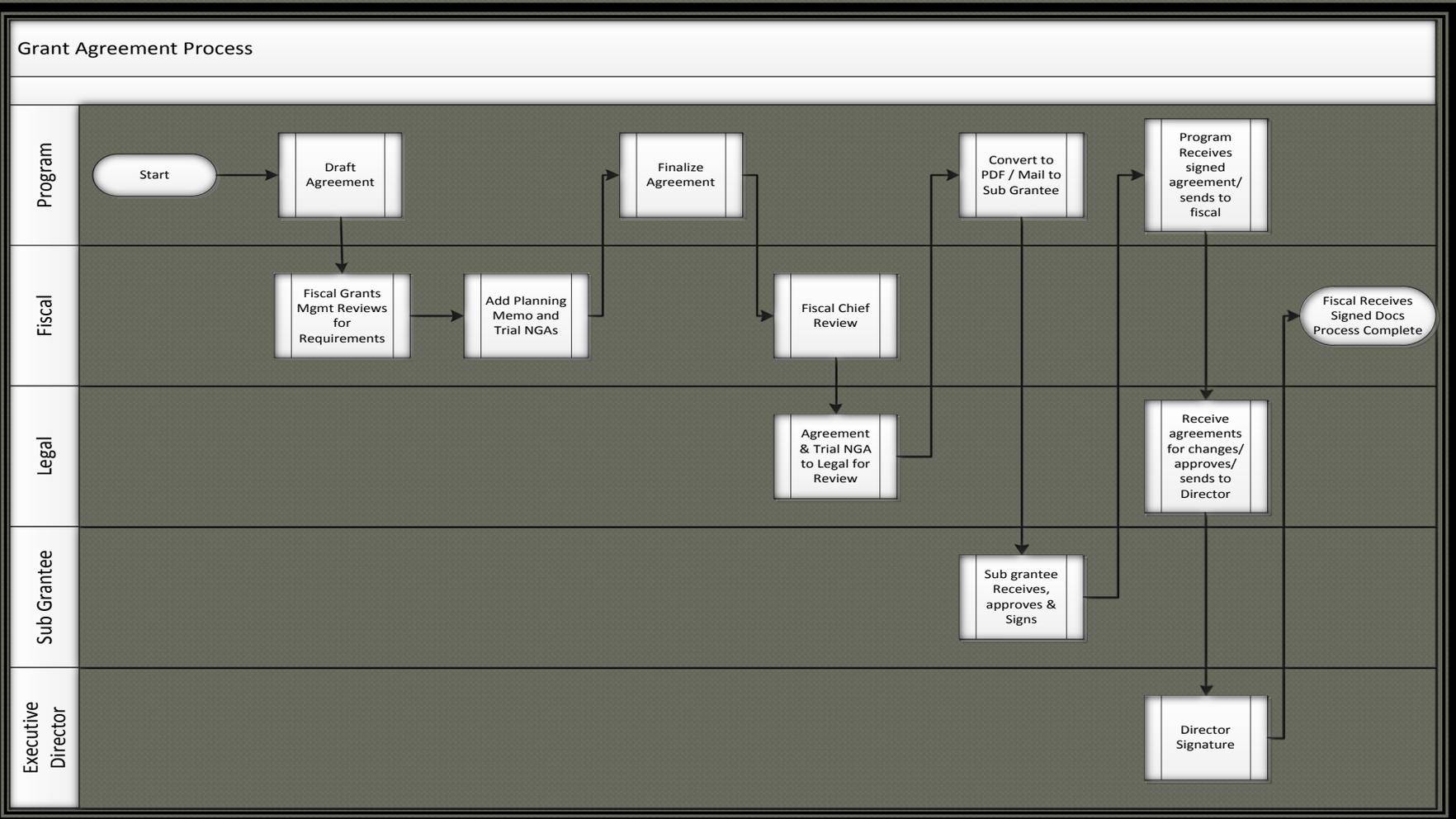
Internal

External

Suppliers	Input	Process	Output	Customers
Project Manager Fiscal Grants Manager	Draft Agreement Template Add Fiscal Tables	Develop Agreement Template	Electronic Draft Agreement Final Draft Template	Fiscal Grants Manager Project Manager
Project Manager/Chief Legal Chief	Final Formatted Template	Review/Concurrence	Program Concurrence Fiscal Concurrence Legal Concurrence	Fiscal Chief Legal Chief Fiscal Grants Manager
Fiscal	Template with revisions	Final Form Drafted & Mailed	Final PDF Form	Project Manager/Sub Grantee
Sub Grantee/Fiscal	PDF Form	Director Signs/Approval to Distribute Funds		
			NGA	Fiscal/Sub Grantee

High Level Process Map

Grant Agreement Process



Measure

Current Performance Levels

Limitations of Data Collection

- No formal tracking mechanism in place to track when process actually begins
- Limited data set of <30 data points
- Missing data points
- No formal tracking mechanisms in place to evaluate full process from start to finish
- Used document properties to track beginning dates for each phase
- Used signed dates in agreement to track ending dates

Y is a Function of X

- Y = Process Time
- Critical X's
 - Days in Program Division
 - Days in Legal Review
 - Days in Fiscal Processing
 - Days until Sub grantee Signs & Returns Final Agreement

Current Performance Levels

- Total Process Time ≤ 55 days
 - Internal Agreement Prep Time ≤ 37 days
 - External Process (Sub Grantee Review, Sign, Return) estimated at > 20 days

C&E Matrix

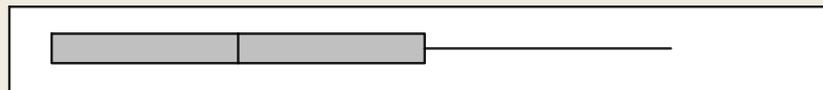
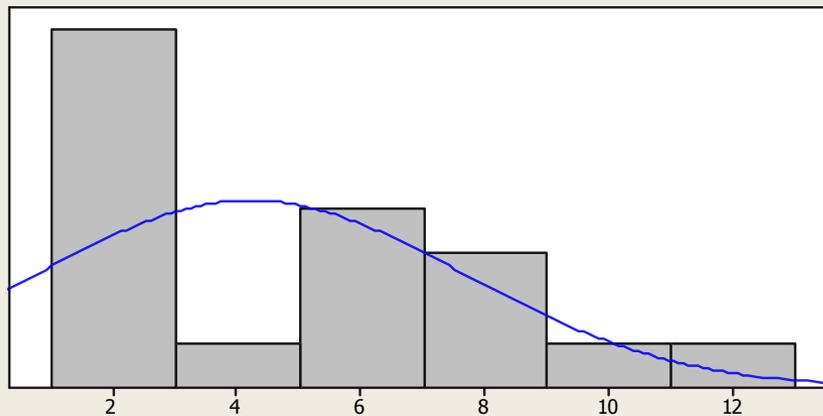
Cause & Effect Matrix											
Rating of Importance to Customer		3	7	3	3	3	10	10	10		
#	KPIV	Electronic form	Final Draft with all fiscal info	Program Concurrence	Fiscal Concurrence	Legal Concurrence	Distribution to Sub Grantee	Sub grantee Signed Final Agreement	Signed agreement from Director	Total	% Rank
1	Draft template	10	7	7	7	7	5	5	3	272	12%
2	Review electronic form/add tables	7	10	7	7	7	7	5	3	304	14%
3	Formatted form	1	5	7	7	7	3	3	3	191	9%
4	Legal Review & approval	1	1	3	3	10	3	7	7	228	10%
5	PDF Final Form	5	7	7	7	7	10	10	10	427	19%
6	Sub Grantee Signs	1	3	1	1	1	1	10	10	243	11%
7	Grant Agreement from Sub Grantee	1	1	1	1	1	3	10	7	219	10%
8	All documents combined and submitted to Director for signature (agreement + NGAs)	5	7	7	7	7	3	10	10	357	16%
Total		31	41	40	40	47	35	60	53		

Analyze

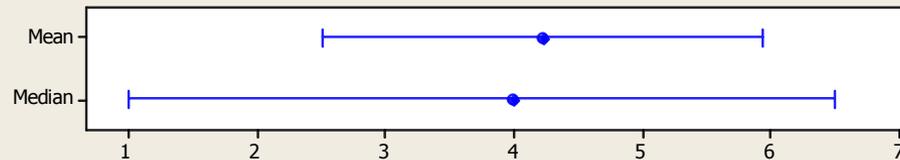
Critical X's Affecting Process
Time

Program Process Summary

Summary for Program Sign-off Date



95% Confidence Intervals



Anderson-Darling Normality Test

A-Squared	1.12
P-Value <	0.005

Mean	4.2222
StDev	3.4395
Variance	11.8301
Skewness	0.559034
Kurtosis	-0.957449
N	18

Minimum	1.0000
1st Quartile	1.0000
Median	4.0000
3rd Quartile	7.0000
Maximum	11.0000

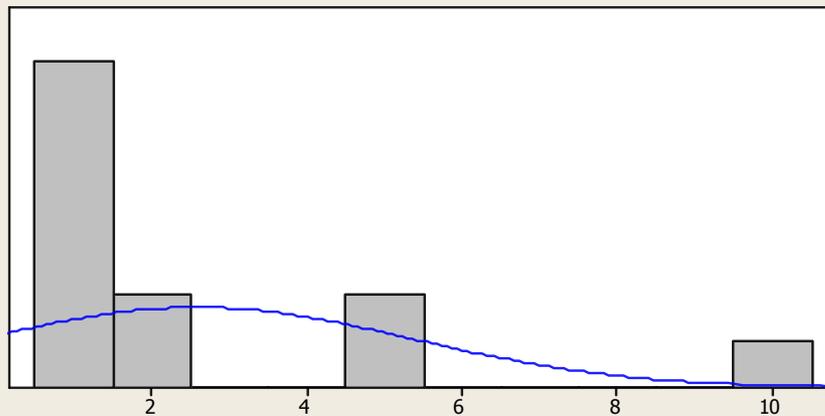
95% Confidence Interval for Mean	
2.5118	5.9326

95% Confidence Interval for Median	
1.0000	6.4820

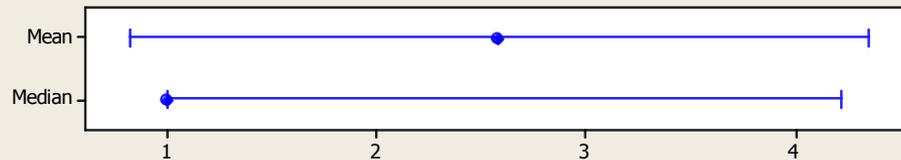
95% Confidence Interval for StDev	
2.5809	5.1563

Fiscal Process Summary

Summary for Fiscal Signoff



95% Confidence Intervals



Anderson-Darling Normality Test

A-Squared 1.79
P-Value < 0.005

Mean 2.5833
StDev 2.7784
Variance 7.7197
Skewness 2.07522
Kurtosis 4.26461
N 12

Minimum 1.0000
1st Quartile 1.0000
Median 1.0000
3rd Quartile 4.2500
Maximum 10.0000

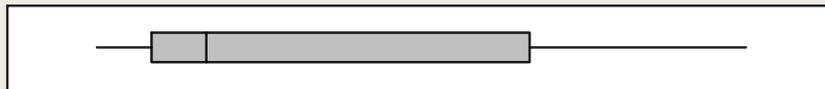
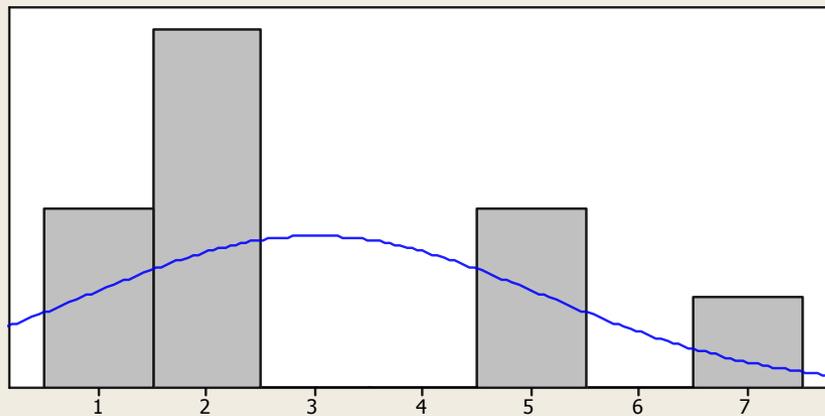
95% Confidence Interval for Mean
0.8180 4.3487

95% Confidence Interval for Median
1.0000 4.2106

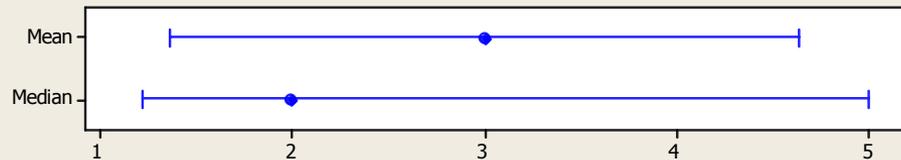
95% Confidence Interval for StDev
1.9682 4.7174

Legal Process Summary

Summary for Legal Sign-off



95% Confidence Intervals



Anderson-Darling Normality Test

A-Squared	0.82
P-Value	0.020

Mean	3.0000
StDev	2.1213
Variance	4.5000
Skewness	1.01015
Kurtosis	-0.28571
N	9

Minimum	1.0000
1st Quartile	1.5000
Median	2.0000
3rd Quartile	5.0000
Maximum	7.0000

95% Confidence Interval for Mean

Lower Bound	1.3694
Upper Bound	4.6306

95% Confidence Interval for Median

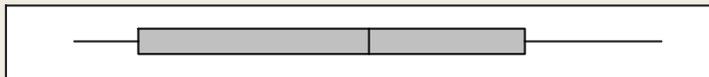
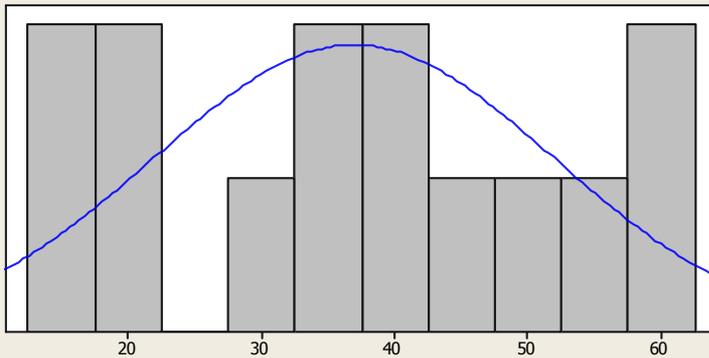
Lower Bound	1.2279
Upper Bound	5.0000

95% Confidence Interval for StDev

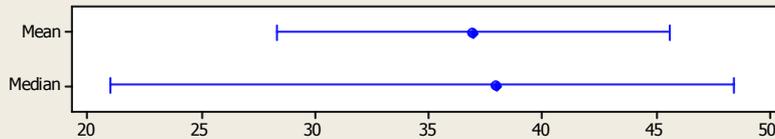
Lower Bound	1.4329
Upper Bound	4.0640

Total Process

Summary for total



95% Confidence Intervals



Anderson-Darling Normality Test

A-Squared	0.27
P-Value	0.626

Mean	36.929
StDev	14.990
Variance	224.687
Skewness	0.07485
Kurtosis	-1.16883
N	14

Minimum	16.000
1st Quartile	20.750
Median	38.000
3rd Quartile	49.750
Maximum	60.000

95% Confidence Interval for Mean

28.274	45.583
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95% Confidence Interval for Median

20.949	48.360
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95% Confidence Interval for StDev

10.867	24.149
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1-Sample t: $m > 35$ days

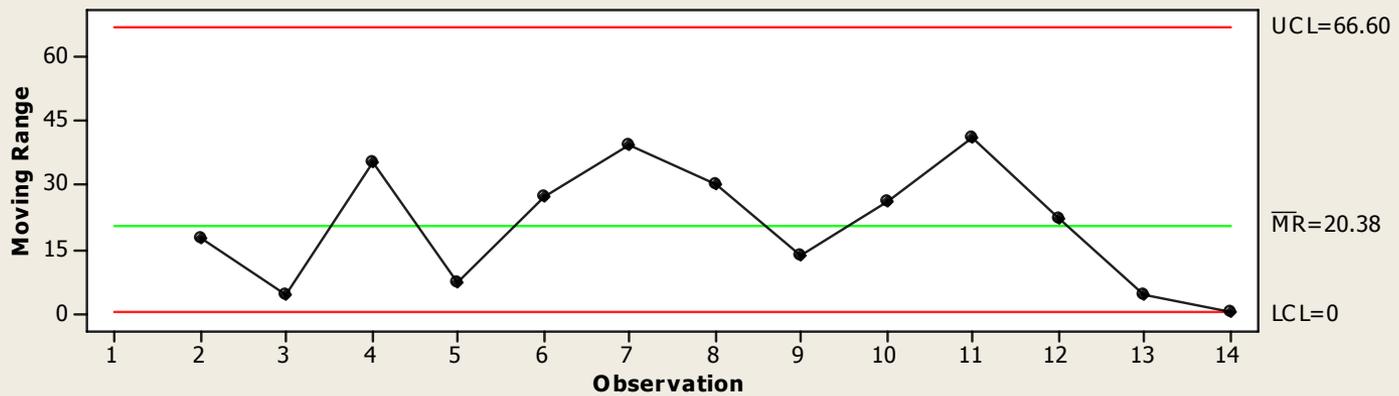
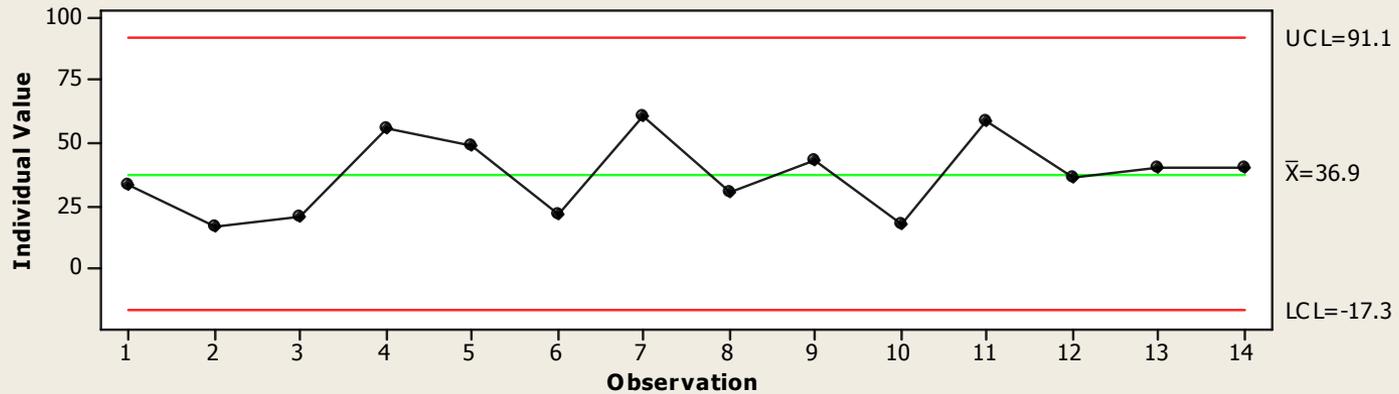
$T = .48$

p value = .638

95% CI: (28.27, 45.58)

Process Control Chart

I-MR Chart of total



FMEA

Key Process Step or Input	Potential Failure Mode	Potential Failure Effects	S E V	Potential Causes	O C C	Current Controls	D E T	R P N	Actions Recommended	Actions Taken
Draft Template	Wrong Template Used	Slows Process	4	Not paying attention to detail	2	Delete old version	10	80	Better review procedures	Create checklist
Add Tables	Wrong Tables/Dates	Slows Process	5	Wrong Schedule	3	Award Fed Requirements	1	15	Better review procedures	
Format Form	Neglect	Slows Process	4	Changes between steps	1	Communication w/sub grantee start of process	10	40	Better review procedures	
Legal Review & Approval	Backlog/Unaware document awaiting approval	Slows Process	4	Routing issues discovered	3	None	5	60	Online tracking application	Electronic NGA Application
PDF Final Form	Edits not captured/wrong agreement to subgrantee/new Exec Order/Admin Changes	Delay	5	Mail merge	2	Another review (possibly)	2	20	Remove tailored components	
Sub Grantee Signs	Gets lost	Delay	8	Forgot/Lost	9	Follow-up	1	72	Electronic signing of documents	Electronic NGA Application
Combine all Documents and Submt to Director	Missed in attachment	Delay	10	Grantee did not send back/misplaced	2	Checklist	1	20	Use checklist	

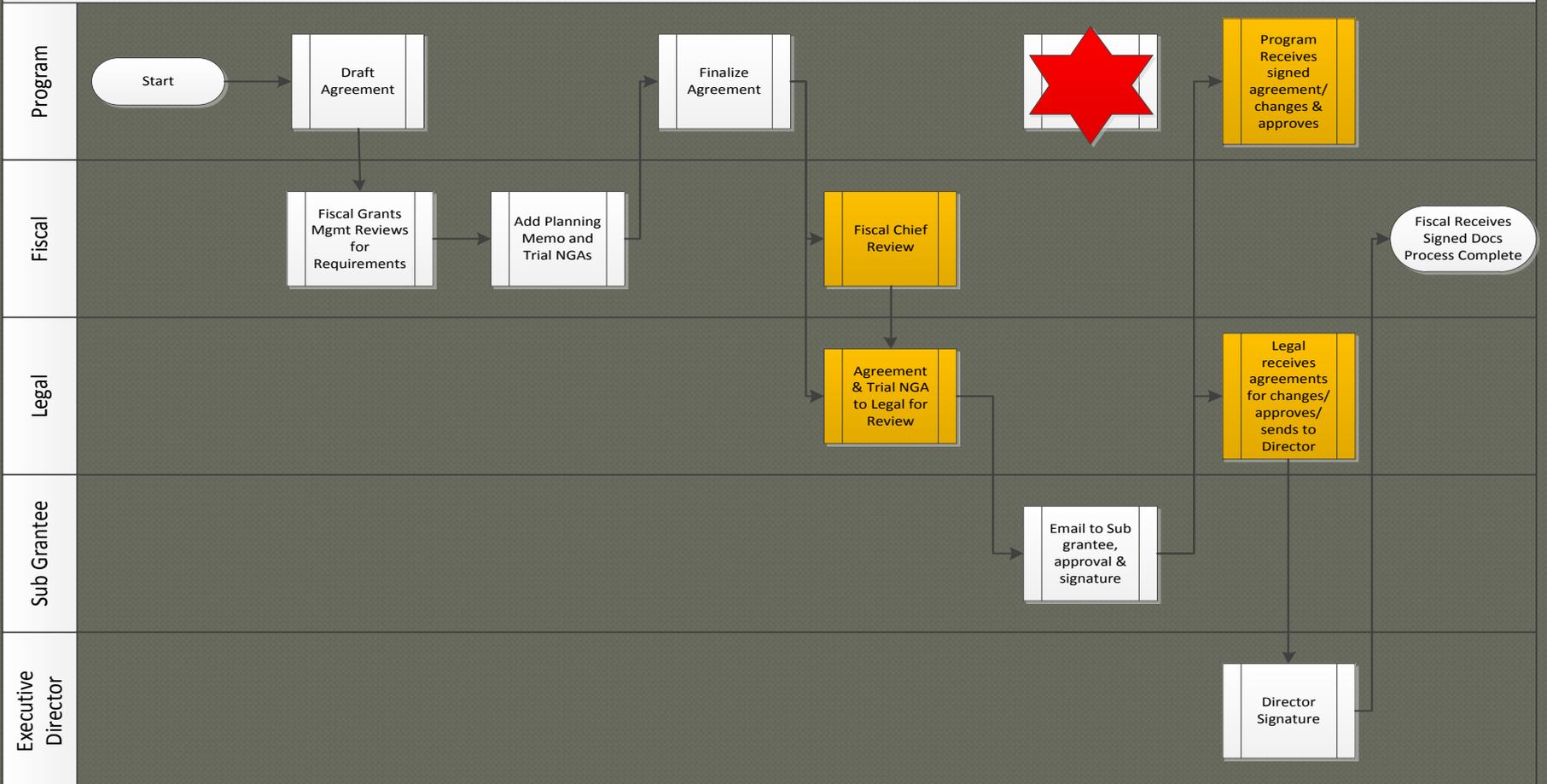
Improve

- **Recommended Solution**

- **Electronic NGA application**
 - Standardize the Process
 - Adjust settings of key process input variables (templates, appendices) to error proof final documentation
 - Will add process to collect data
 - Annual Calendar for Standard Grants
 - Electronic signing of documents

Lean

Grant Agreement Process



New Targets

- ◉ Cut process time by 5 days by eliminating hard copy transfer of documentation
 - Lead time can be reduced by electronic transfer of paperwork between divisions
 - Allow electronic signatures to eliminate snail mail process
- ◉ Cut process time by additional 5 days by streamlining review process
 - Electronic document review allows entire cross function team to review, suggest changes and approve final draft in shortened timeframe

Control

- Management Control System
- Training/SOP
- End of Process Quality Audit

Questions?

Thank you for your time!