



Lean 6-Sigma Green Belt Project



California Department of Food and Agriculture

Kimberly McCarthy

(Project Greenbelt)

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(Project Champion)



Antibiotic Residue Reporting Process

Problem Statement:

- ❖ The Milk and Dairy Food Safety Branch (MDFS) licenses screening and confirming laboratories that are responsible for testing milk for antibiotic residues prior to being processed. If a milk sample is determined to be positive, it must be reported to MDFS to ensure further testing and investigation is completed as well as the appropriate penalty is levied. The current process results in a long lag time between the positive test result and the application of the penalty and the refund to county Approved Milk Inspection Services (AMIS) programs.

Objective:

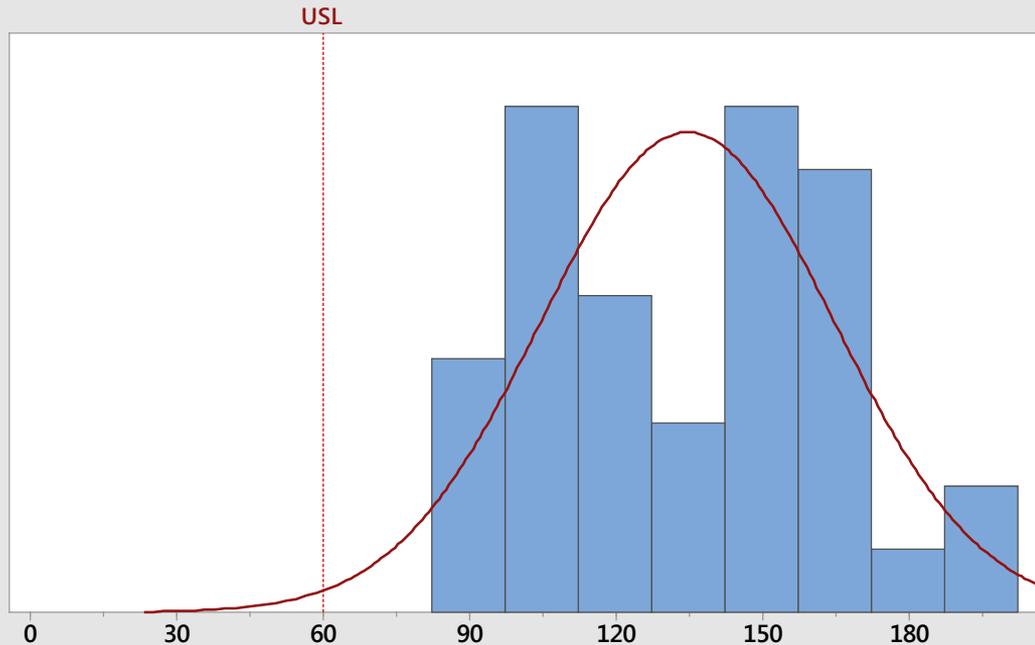
- ❖ Reduce the time between the positive test result and refunding the county to 60 days or less.

Project Team:

- ❖ Dr. Stephen Beam – Process Owner
- ❖ Melanie Graham – Financial Resource
- ❖ Robb Lalum – HQ Contact



Baseline Capability



Average: 135 days

Refunding the county within 60 days, 0% of the time

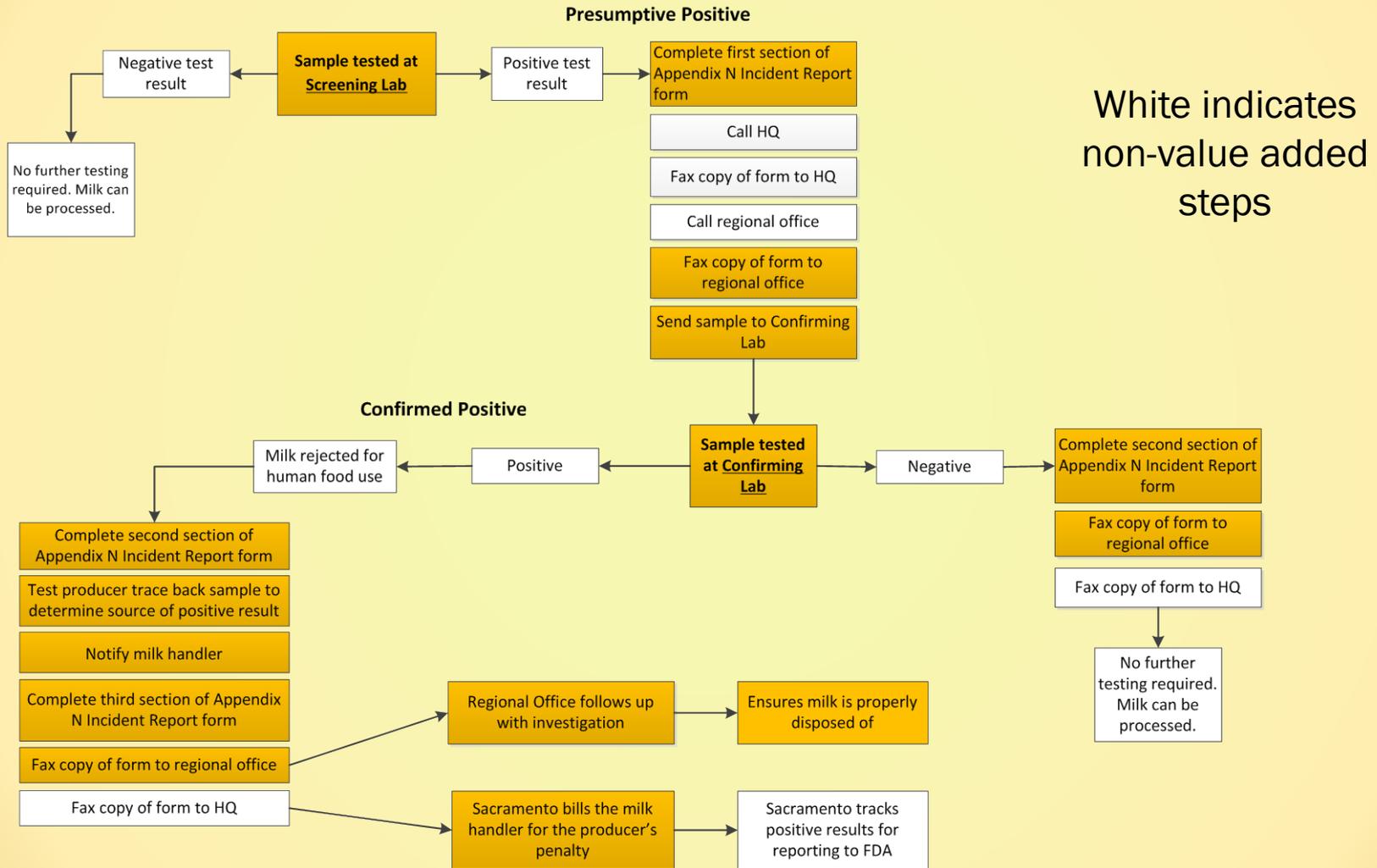
Expected defect rate of 99.37%

Process Data	
USL	60
Sample Mean	134.763
Sample N	38
StDev(Overall)	29.9508

Overall Capability	
PPU	-0.83
Ppk	-0.83
Cpm	*

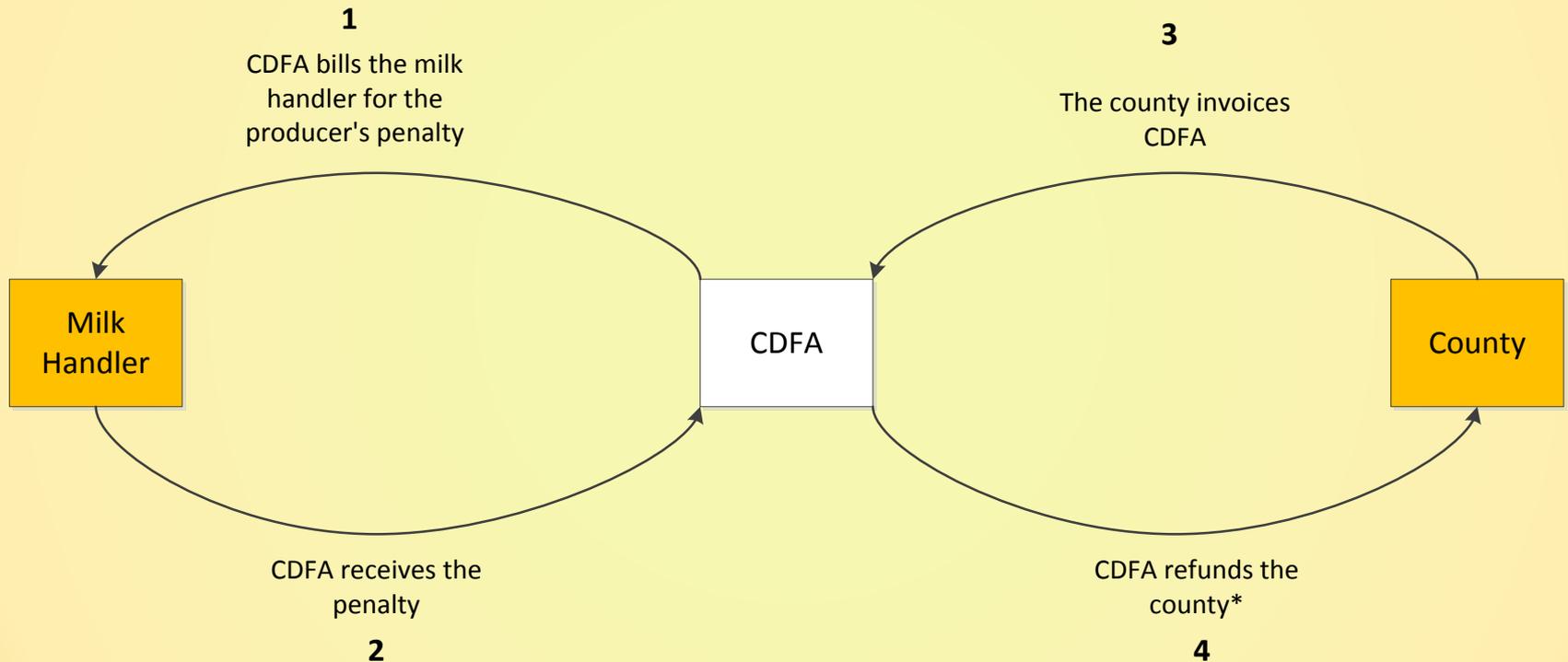
	Performance	
	Observed	Expected Overall
% < LSL	*	*
% > USL	100.00	99.37
% Total	100.00	99.37

Process Map



Process Map (continued)

If dairy is county inspected...



*CDFA must receive the money from the milk handler prior to refunding the county.

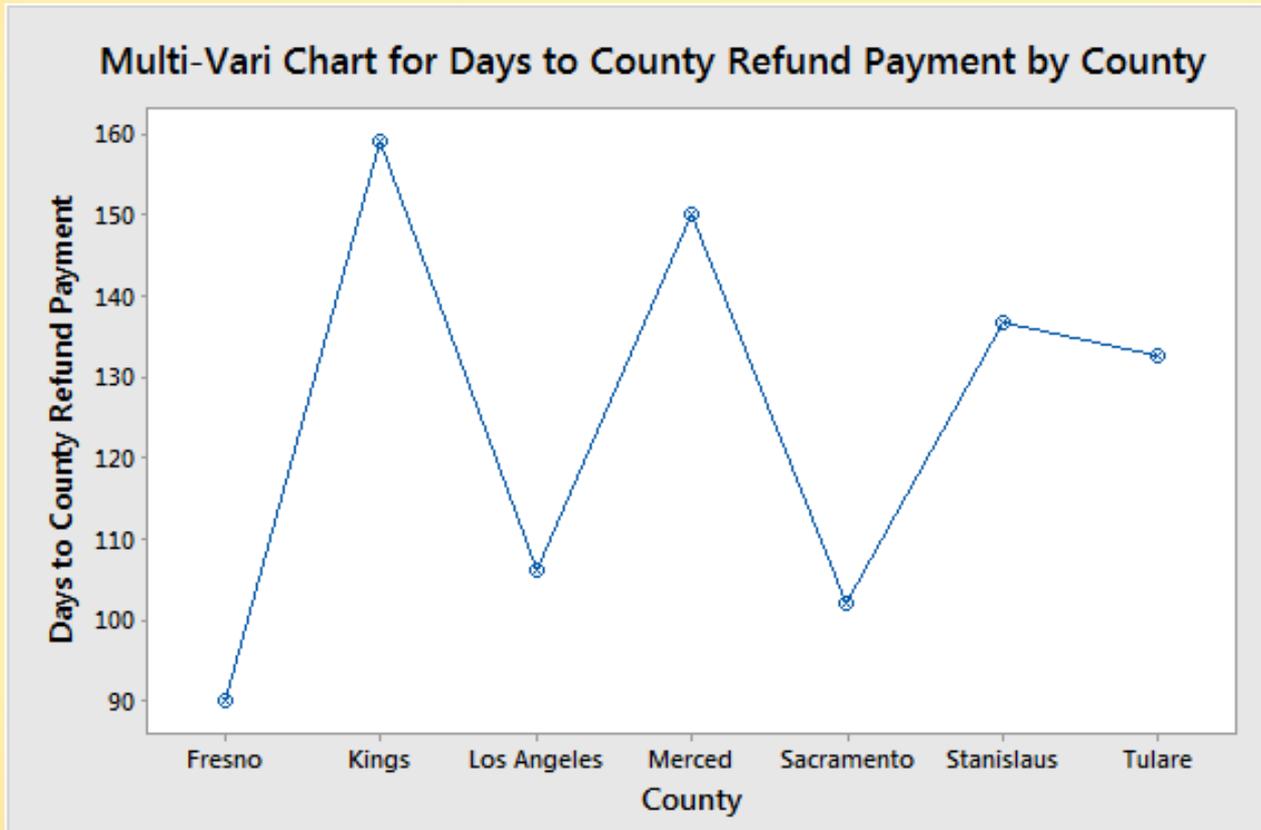


Analysis Tools

- ❖ Multi-Vari Analysis
- ❖ Time Series Plot
- ❖ Graphical Summary Breakdown
- ❖ Capability Analysis
- ❖ Mood's Median Test
- ❖ FMEA
- ❖ Fishbone Diagram



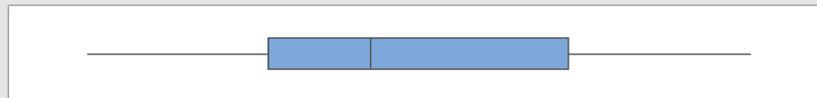
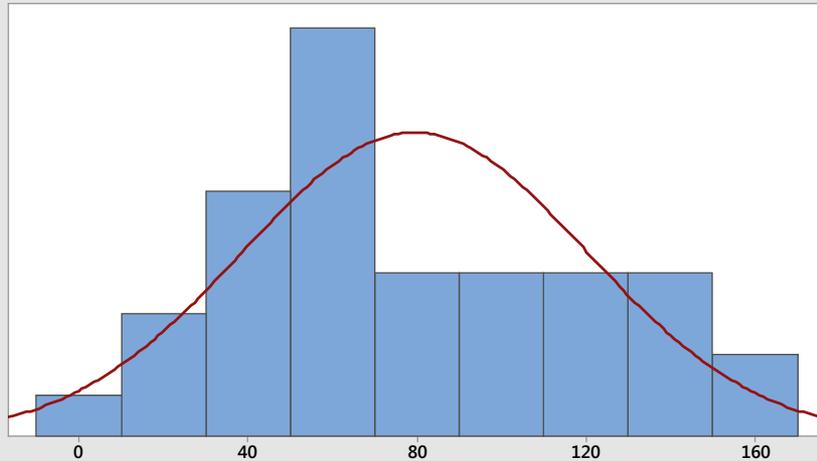
Analytical Finding: Multi-Vari Analysis



- ❖ No correlation between the counties
- ❖ Delays not county specific; global process issue

Analytical Finding: Graphical Summary Breakdown

Additional time the county has to wait after payment is received by CDFA



Anderson-Darling Normality Test

A-Squared	0.40
P-Value	0.350

Mean	79.474
StDev	40.743
Variance	1659.986
Skewness	0.179553
Kurtosis	-0.777239
N	38

Minimum	2.000
1st Quartile	44.750
Median	69.000
3rd Quartile	115.750
Maximum	159.000

95% Confidence Interval for Mean	66.082	92.866
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95% Confidence Interval for Median	58.739	102.000
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95% Confidence Interval for StDev	33.216	52.711
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- ❖ Average 80 days
- ❖ Range: 2-160 days

Critical x's

- ❖ Multiple non-value added steps for industry that result in delayed paperwork processing
- ❖ Time delays between receiving the penalty and the county refund
 - Inconsistent county invoicing procedures
 - Delays within CDFA's financial services office

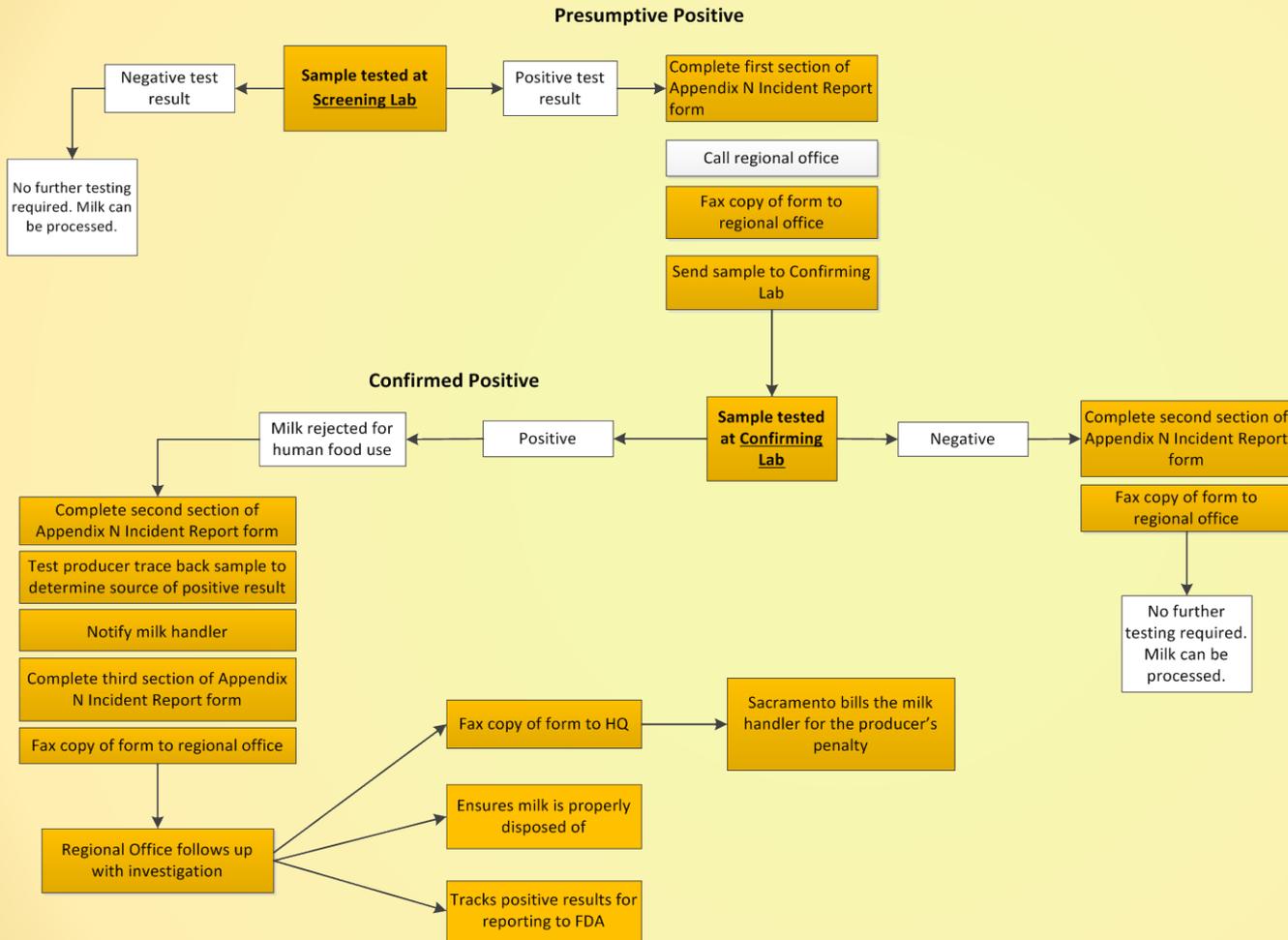


Improvement Techniques

- ❖ Eliminated redundant reporting procedures
 - Eliminated the need to contact both headquarters and regional offices throughout the process
- ❖ Removed non-value added CDFA collection and distribution steps
 - County directly invoices the milk handler



New Process Map

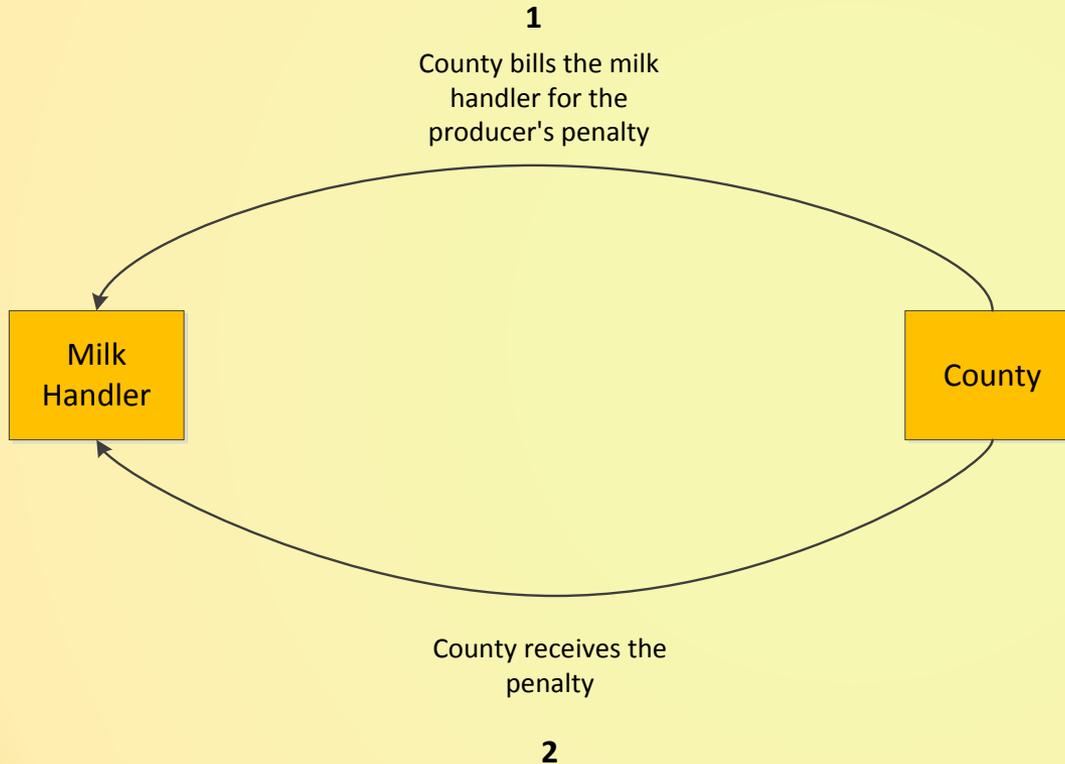


Regional offices are now responsible for contacting Headquarters



New Process Map (continued)

If dairy is county inspected...

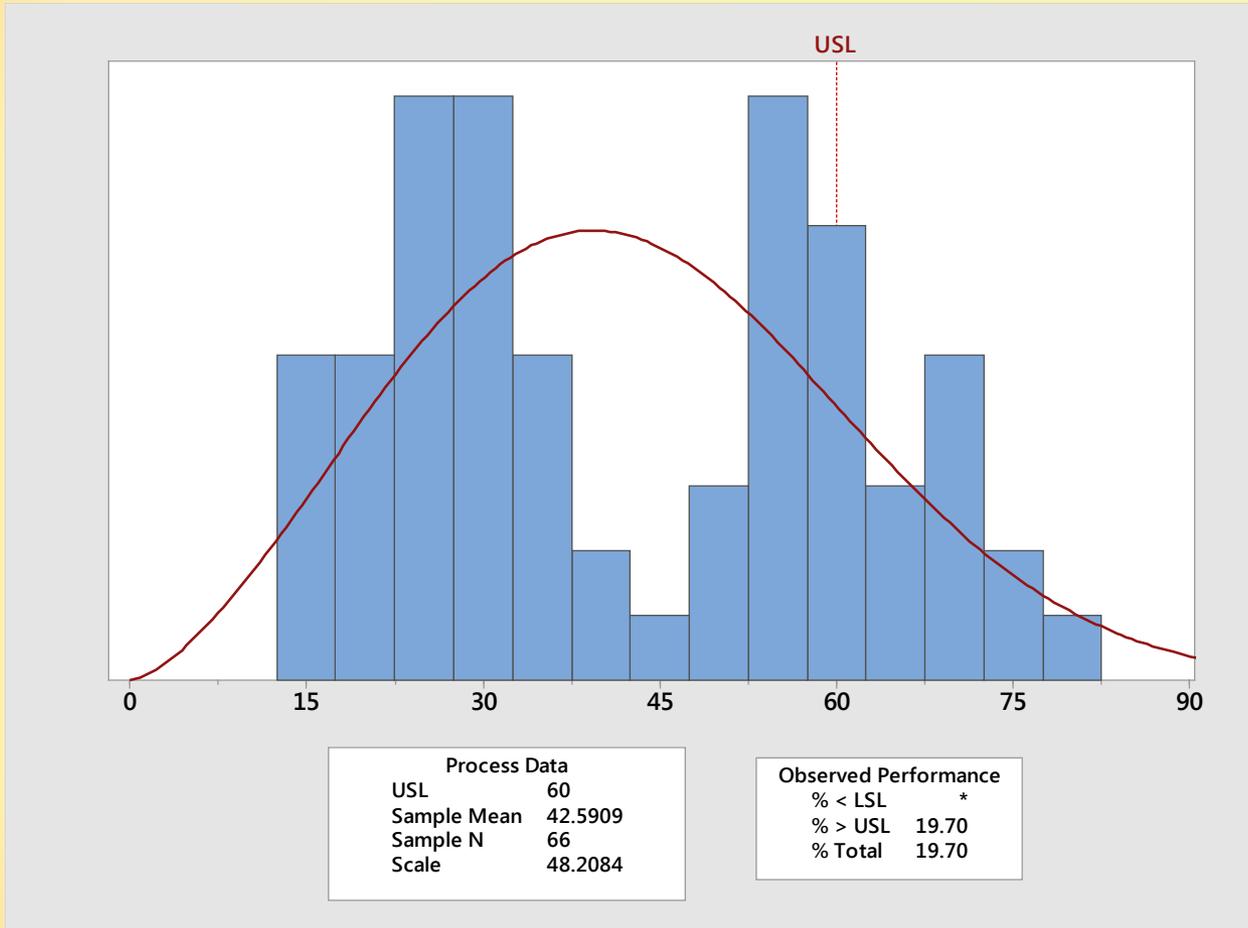


CDFA no longer billing the milk handler and reimbursing the county

*CDFA must receive the money from the milk handler prior to refunding the county.



New Capability Analysis (projected)



Average: 43 days

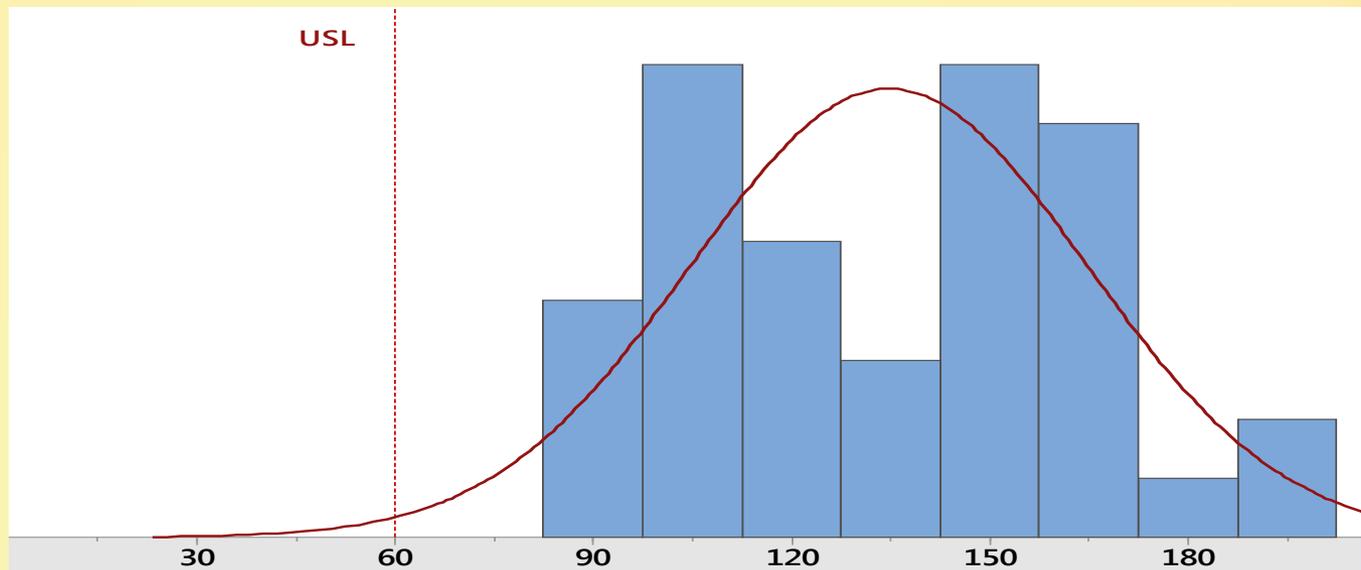
Projected to receive payment within 60 days, 80% of the time

Expected defect rate of 19.7%

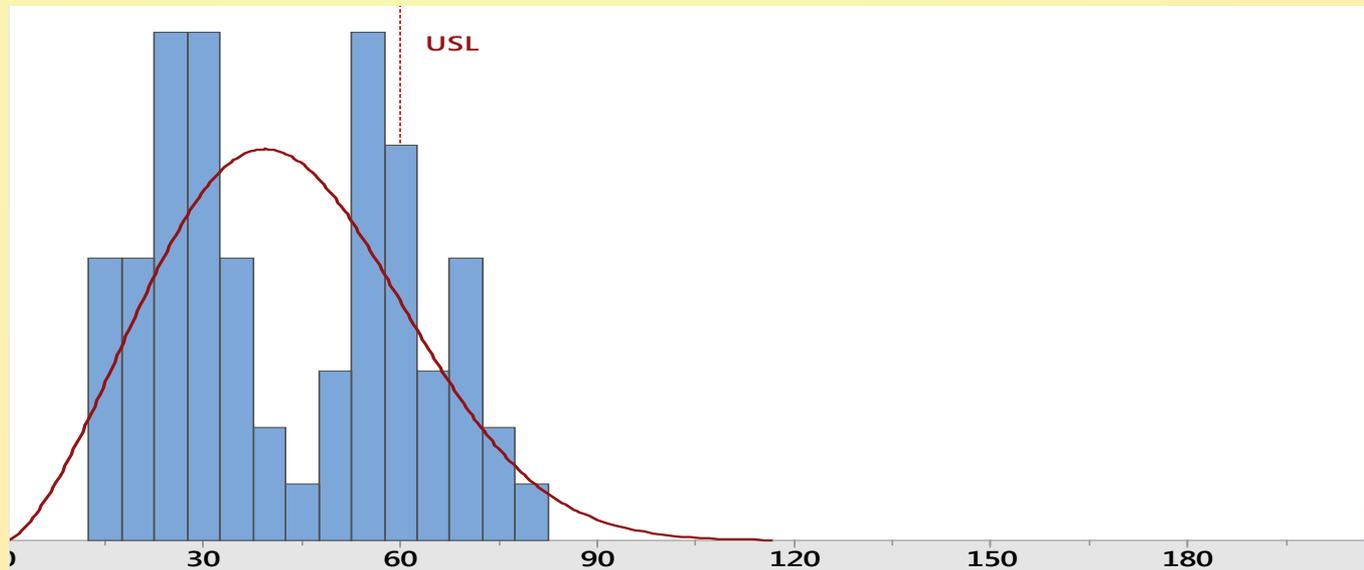


Capability Analysis Before and After

Before



After
(Projected)



Control Plan

❖ New Procedures

- New reporting process procedures for industry
- County responsible for directly invoicing the county instead of payment passing through CDFA

❖ Track processing time for incoming positive results



Contact Information

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