



Lean 6-Sigma Program

California Department of Transportation



Gina Cardoza
(Project Greenbelt)

Cristiana Rojas
**(Project Champion and
Executive Sponsor)**



Discrimination Complaint Investigation Unit

- ❖ **Problem Statement:** The Discrimination Complaint Investigation Unit (DCIU) in the Department's Equal Employment Opportunity Office has a backlog of cases to investigate and the investigations are taking too long to complete. Since the function of this office is to ensure compliance with the Department's EEO Policy (a workplace free of discrimination and harassment), it is vital for the Department to address the backlog systemically to ensure the time for investigating complaints is reduced.

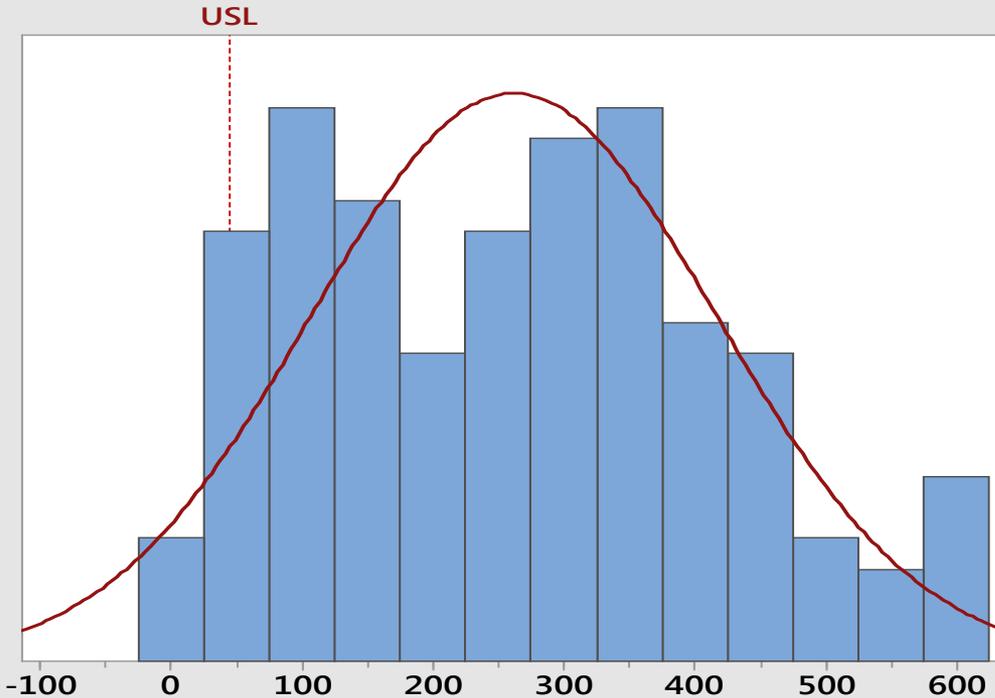
- ❖ **Objective:** To have 95% of internal EEO investigations completed within 45 business days from receipt of complaint.

- ❖ **Project Team:**
 - ❖ *Gina Cardoza- Greenbelt*
 - ❖ *Cris Rojas- Champion and Executive Sponsor*
 - ❖ *Tom Hicks-Team Member (DCIU)*
 - ❖ *Julie Jordan– Team Member (Legal Division)*
 - ❖ *Duncan Macintosh-Team Member (District 7)*
 - ❖ *Eric Mather- Team Member (DCIU)*
 - ❖ *Aaron Ochoco-Team Member (Office of Discipline Services)*
 - ❖ *Michelle Tucker – Team Member (Office of Enterprise Risk Management)*
 - ❖ *Judy Yamada- Team Member (Audits and Investigations)*

Baseline Capability

Process Capability Report- Total Days to Complete Investigation

Process Data	
LSL	*
Target	*
USL	45
Sample Mean	261.778
Sample N	144
StDev(Overall)	155.387

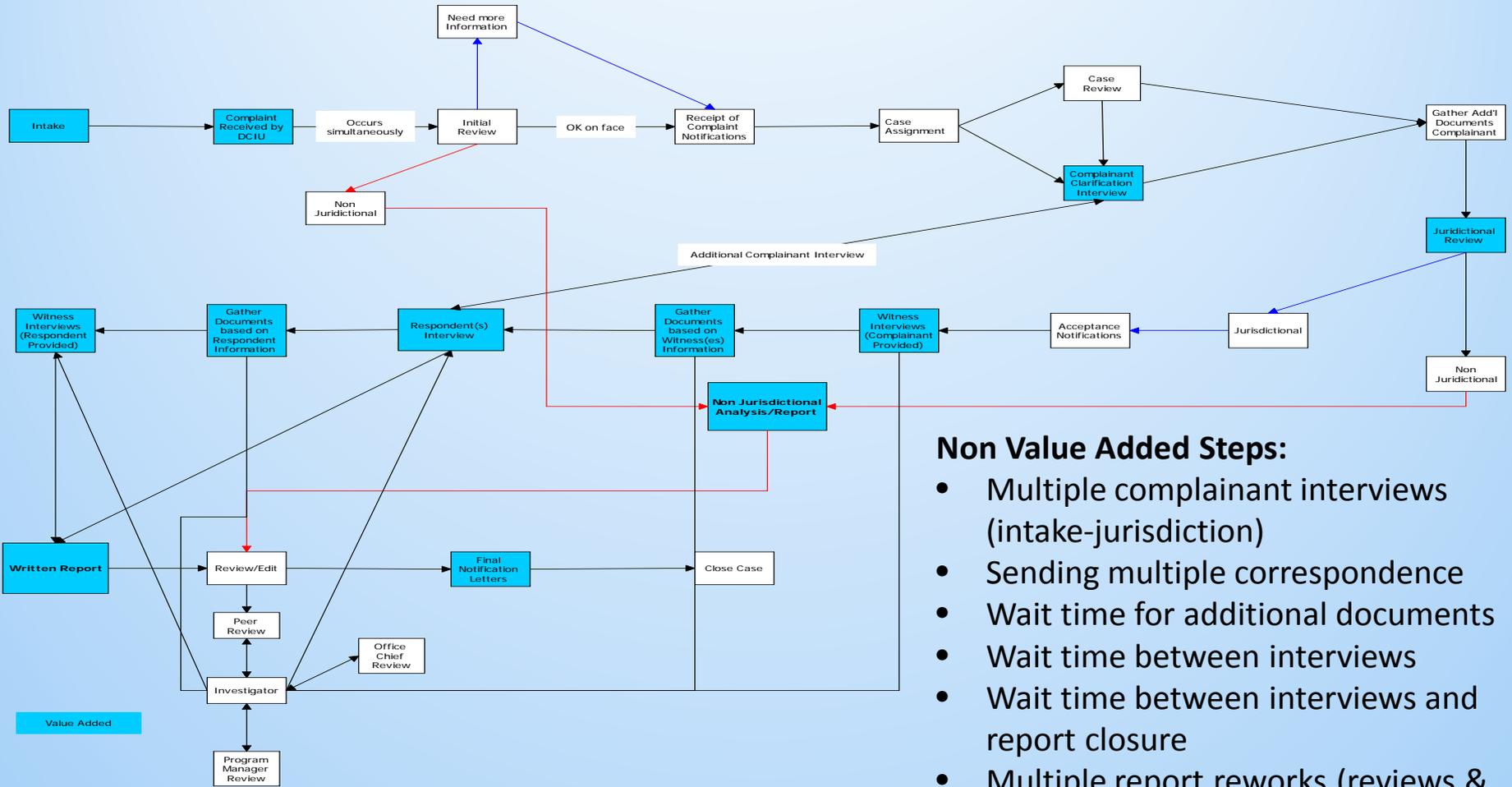


Overall Capability	
Pp	*
PPL	*
PPU	-0.47
Ppk	-0.47
Cpm	*

- Average= 262 days
- Max= 614 days
- 7-8% of investigations within 45 days spec

Performance		
	Observed	Expected Overall
% < LSL	*	*
% > USL	93.06	91.85
% Total	93.06	91.85

Initial Process Map



Non Value Added Steps:

- Multiple complainant interviews (intake-jurisdiction)
- Sending multiple correspondence
- Wait time for additional documents
- Wait time between interviews
- Wait time between interviews and report closure
- Multiple report reworks (reviews & edits)



Analysis Tools

- ❖ Fishbone Diagram
- ❖ Capability Analysis
- ❖ Scatterplots
 - # of Parties vs. Time to complete investigation
 - Location vs. Time to complete investigation
- ❖ Boxplot (Investigation timeframes)
- ❖ FMEA
- ❖ Worker Activity Analysis
- ❖ TAKT Time/Cycle Time Analysis
- ❖ Hypothesis Testing (One-way ANOVA)
 - Location of Case (District/Region)
 - Investigator
 - Case Outcome
- ❖ Pareto Charts
 - Report defects (by group and individual)
 - Worker Activity
 - Value Added vs. Non Value Added Activities

DCIU TAKT/CYCLE TIME 2014

TAKT TIME-2014
(Rate Received)

1,950 hours/yr. (work time)

169 (# Investigations rec'd/yr.)

CYCLE TIME-2014
(Rate Completed)

1,950 hours/yr. (work time)

151 (# Investigations completed/yr.)

❖ DCIU received 1 new investigation approximately every **11.54** hours.
(3.25/week or 14 per month)

❖ DCIU completed 1 investigation approximately every **12.91** hours.
(2.90/week or 12 per month)

Rate investigations received exceeded the rate completed in 2014. This added to our backlog.



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DCIU TAKT/CYCLE TIME 2015

**TAKT TIME-Jan-June 2015
(Rate Received)**

**CYCLE TIME-Jan-June 2015
(Rate Completed)**

900 hours/yr. (work time)

900 hours/yr. (work time)

81 (# Investigations rec'd/yr.)

108 (# Investigations completed/yr.)

❖ DCIU received 1 new investigation approximately every **11.11** hours.
(3.38/week or 15 per month)

❖ DCIU completed 1 investigation approximately every **8.33** hours.
(4.50/week or 20 per month)

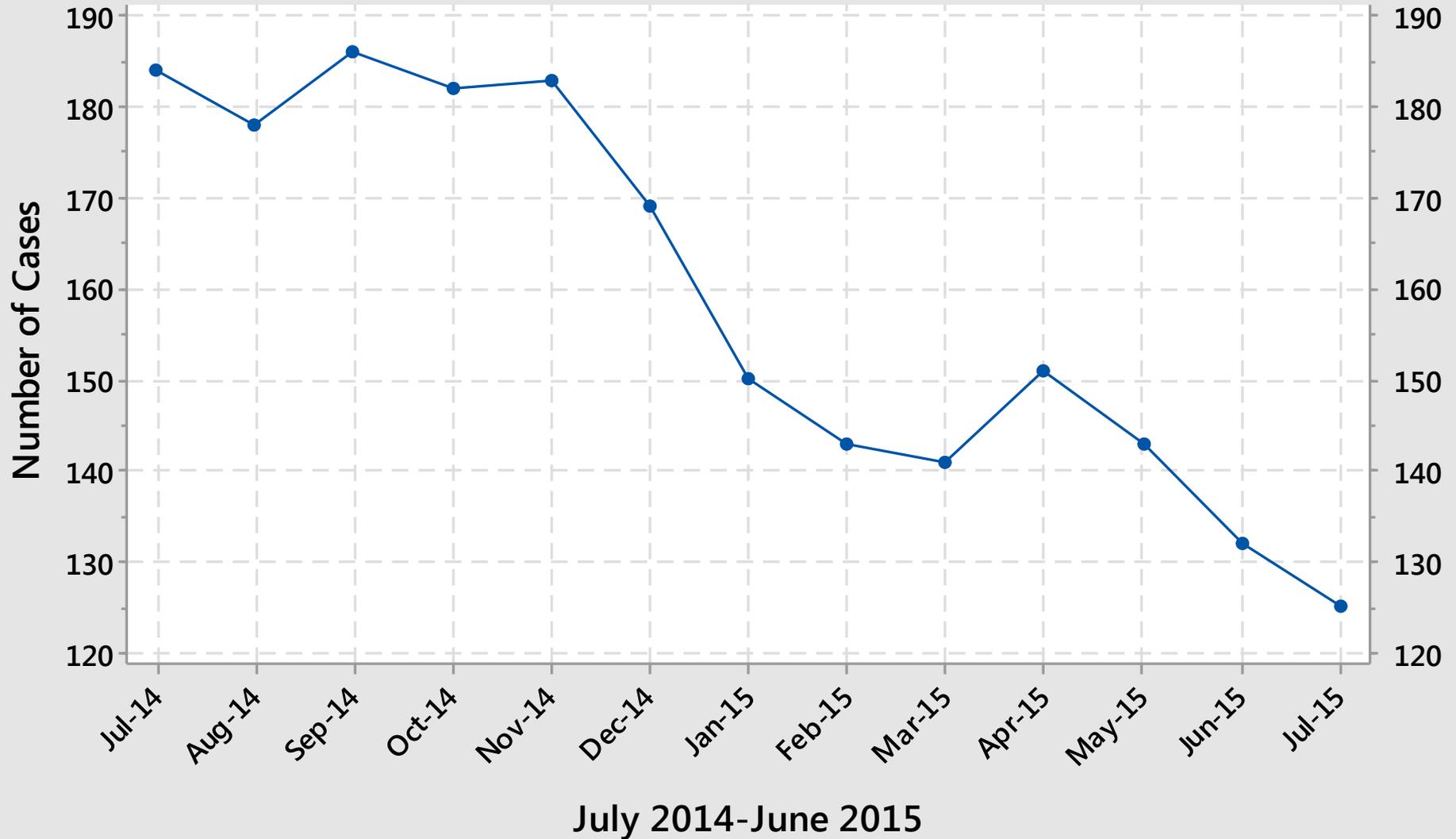
DCIU has kept up with the rate new cases are received as well as decreased the backlog in 2015



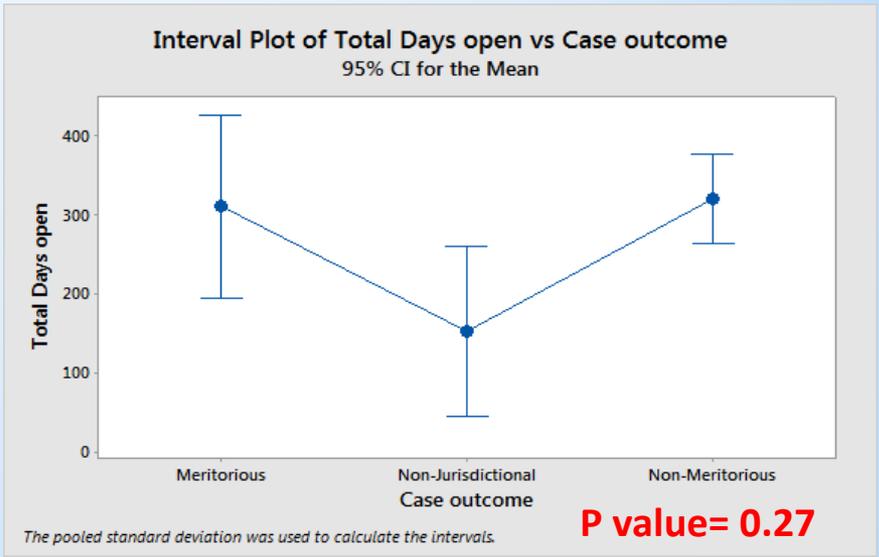
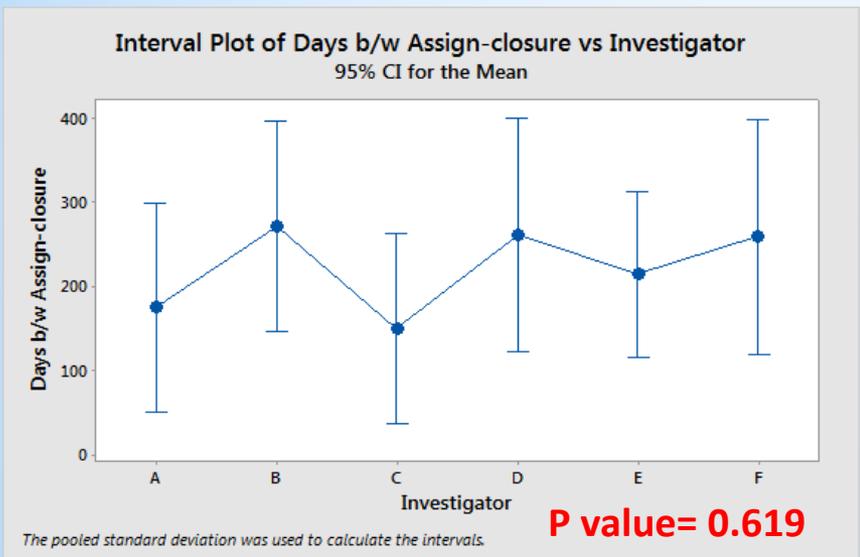
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Time Series Plot of Cases-Backlog (prior 12 months)



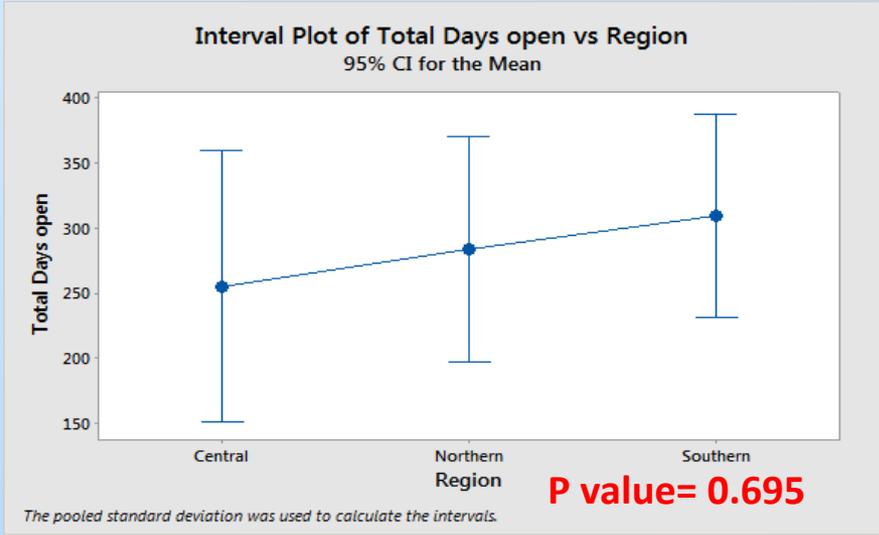
Hypothesis Testing: One-Way ANOVA



In each of the 3 hypothesis tests, we failed to reject the null hypothesis.

There is no significant statistical difference between:

- Investigators and case completion time
- Case outcome and case completion time
- Region and case completion time



Critical X's (root causes of problems)

❖ Intake process

- Receiving incomplete or missing information at onset of case

❖ Backlog

- Cases sit for at least 100 days before being investigated

❖ Interviews (Complainant, Respondents, and Witnesses)

- Allowing parties to dictate investigation timeframe and process

❖ Written Report Process

- Waiting until the end of investigation to write up entire report

❖ Review/Edit Process

- Incomplete staff work, multiple reviews and reworks
- Management taking too long to review reports and send back

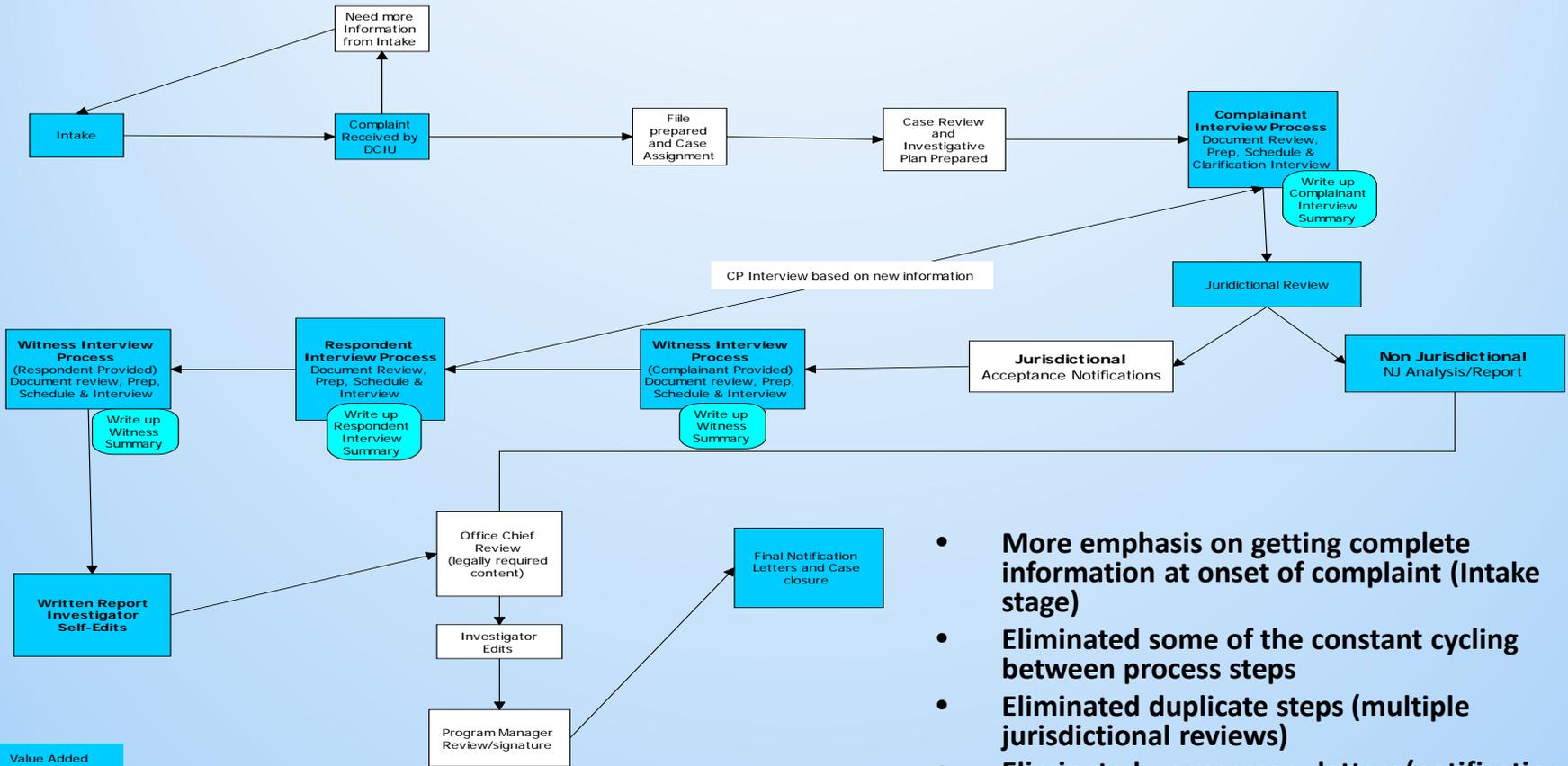


Improvement Techniques

- ❖ Decreased caseloads
- ❖ New detailed EEO-4 form
- ❖ Developed written investigative plan for each case
- ❖ Standardized how cases are investigated- set milestone dates for each phase of an investigation
- ❖ Standardized how cases are scheduled & confirmed
- ❖ Developed interview scheduling form & script for schedulers
- ❖ Standardized how reports are written and reviewed
- ❖ Revising language in letters, notifications, and rights to set specific expectations of parties and timeframes
- ❖ Partnering with District EEO Officers
- ❖ Revising Investigative Manual to reflect changes in process



New Process Map

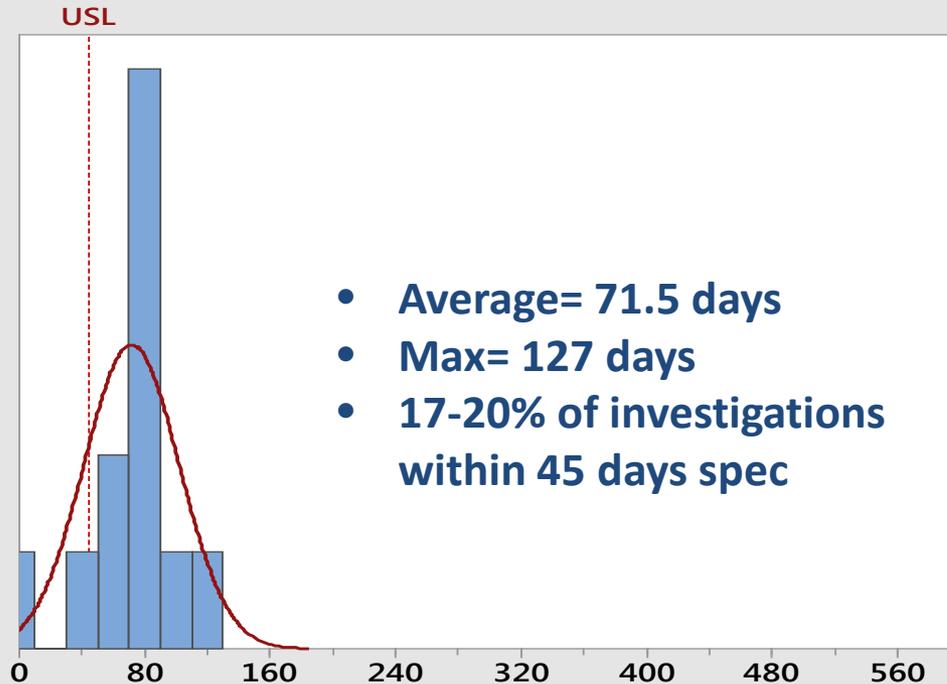


- More emphasis on getting complete information at onset of complaint (Intake stage)
- Eliminated some of the constant cycling between process steps
- Eliminated duplicate steps (multiple jurisdictional reviews)
- Eliminated unnecessary letters/notifications
- Eliminated multiple review/edit steps
- Added a self editing step

New Capability Analysis

Process Capability Report- Pilot New Process

Process Data	
LSL	*
Target	*
USL	45
Sample Mean	71.5833
Sample N	12
StDev(Overall)	30.4047



Overall Capability	
Pp	*
PPL	*
PPU	-0.29
Ppk	-0.29
Cpm	*

Performance		
	Observed	Expected Overall
% < LSL	*	*
% > USL	83.33	80.90
% Total	83.33	80.90

Control Plan

- ❖ Evaluate # of new cases received per month (C Chart/TAKT Time analysis)
- ❖ Evaluate # of cases closed per month (C Chart/Cycle Time analysis)
- ❖ Evaluate # of cases closed per investigator (cumulative-C Chart)
- ❖ Track backlog monthly- (Time Series Plot/C Chart)
- ❖ Set milestones for each case which will be given to investigator at onset of case. One-on-one meetings with investigators to discuss status of cases
- ❖ Spot check case files to ensure investigator meeting those milestones
- ❖ Track report defects by group and individually (Pareto Chart)
- ❖ Standard operating procedures for each step of the investigation process
- ❖ Ongoing training for District/Division EEO intake staff and investigators



Additional Benefits of New Process

- ❖ Decrease investigator burnout
- ❖ Standardized process across all investigations- decreased variation
- ❖ Increased responsiveness will show employees that the Department takes discrimination/harassment complaints seriously
- ❖ Gives the Department the ability to address issues more timely and prevent additional issues from arising
- ❖ Increased confidence and trust in the Department and EEO Program as a whole
- ❖ Better communication between District/Divisions & Headquarters EEO staff



Green Belt Contact Information

- ❖ **Name:** **Gina Cardoza**
- ❖ **Phone:** **916-227-7413**
- ❖ **Email:** **Gina.Cardoza@dot.ca.gov**

