



State Water Resources Control Board

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(Project Greenbelt)

Bill Orme

(Project Champion)

Phil Crader

(Executive Sponsor)

Lean 6-Sigma Program



Processing Time Reduction for 401 Applications

Problem Statement: *At 273 days, processing applications and issuing 401 Water Quality Certification certifications is a time consuming and resource intensive process*

Objective: *Reduce 401 Certification processing time to 90 days*

Project Team:

Jean Bandura – Greenbelt

Bill Orme – Champion

Phil Crader – Executive Sponsor

Team Members:

WQC Unit

Ryan Mallory-Jones, WB Legal Staff

Mark Harvey, Caltrans & Customer



Lean 6-Sigma Program



Baseline Capability

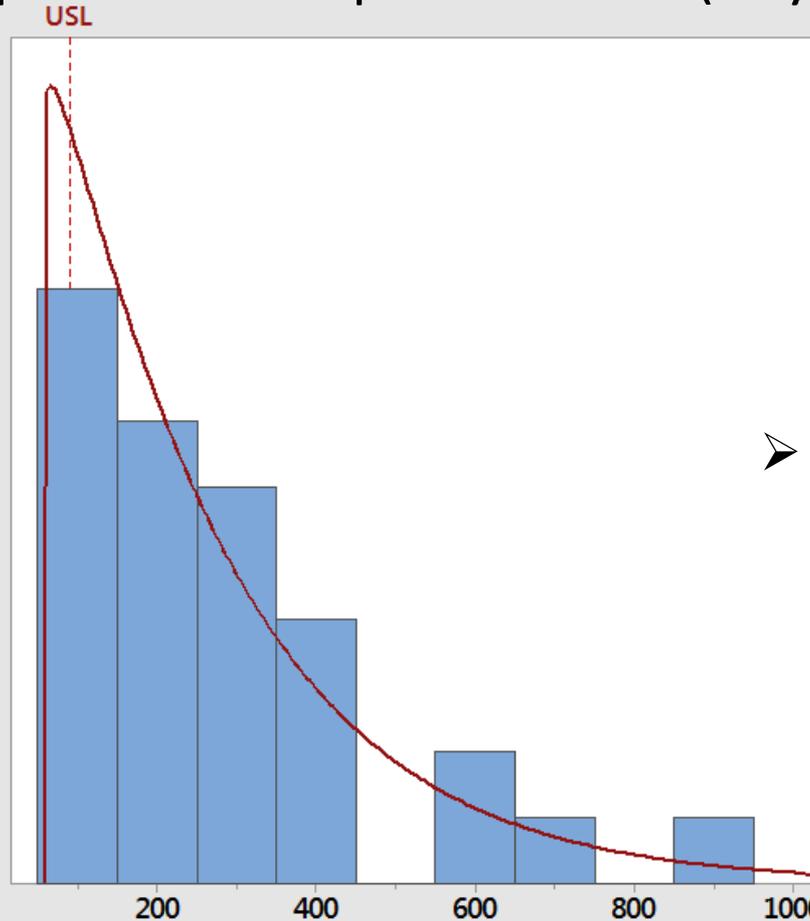
Application Completion Time (Days)

Process Data	
LSL	*
Target	*
USL	90
Sample Mean	273.633
Sample N	30
Shape	1.03845
Scale	220.131
Threshold	56.8032

Observed Performance	
% < LSL	*
% > USL	83.33
% Total	83.33

Overall Capability	
Pp	*
PPL	*
PPU	-0.10
Ppk	-0.10

Exp. Overall Performance	
% < LSL	*
% > USL	86.92
% Total	86.92

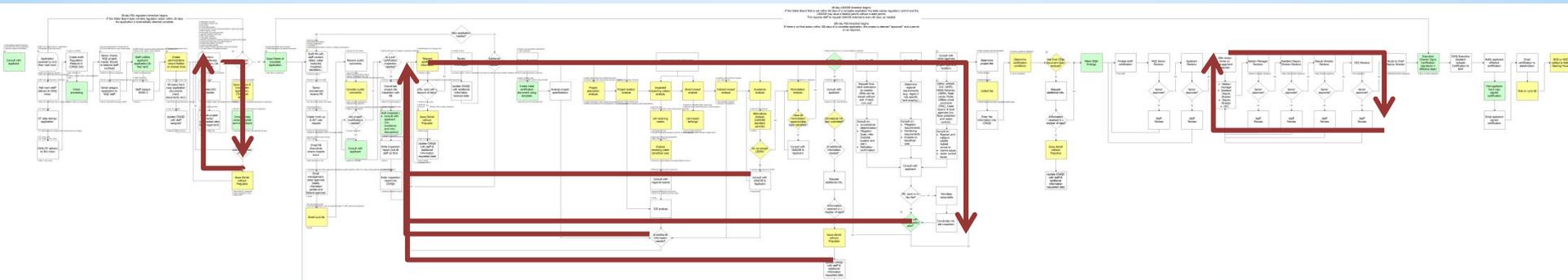


➤ 273 day process

➤ Completion time exceeds 90 days for 83% of applications

Initial Process Map

- 130 Step Process Map
- 13 value added steps



Re-work loops

- Multiple requests for information
- Review
- Excessive wait time

Key Analytical Finding 1 –FMEA

Process Step	Input	Defect	Effects	RPN
Has Final CEQA been received?	CEQA document	NOT final	Cannot issue certification	900
Concur with mitigation?	Draft mitigation plan	Incomplete Plan (13 criteria)	Significant Delay	810
Request for information	Lack of information	Unclear request	Delay	729

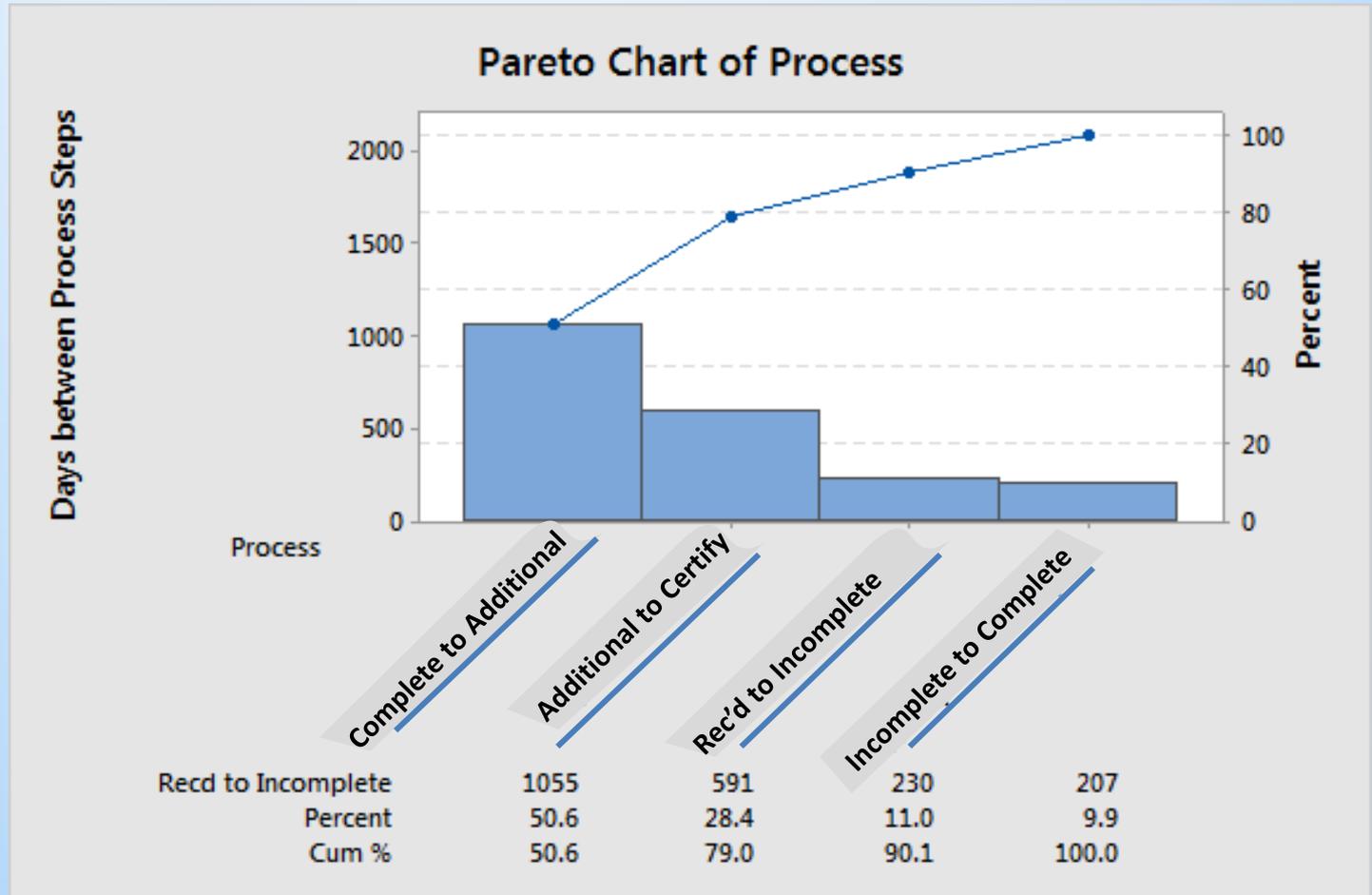
- Key process inputs determine completion time
- Unclear requests for information lead to unnecessary back and forth with the applicant



Key Analytical Finding 2

–Pareto Chart of Processing Steps

- Each step represents additional **information requests**
- The most time passes between deeming an **application complete and certification**



Critical X's (root causes of problems)

- Final CEQA document
- Mitigation plan
- Information requests



Improvement Techniques

Revised Process *initiates early coordination*

- Pre-application consultation
- Pre-certification inspection

Standard work *provides consistent public service*

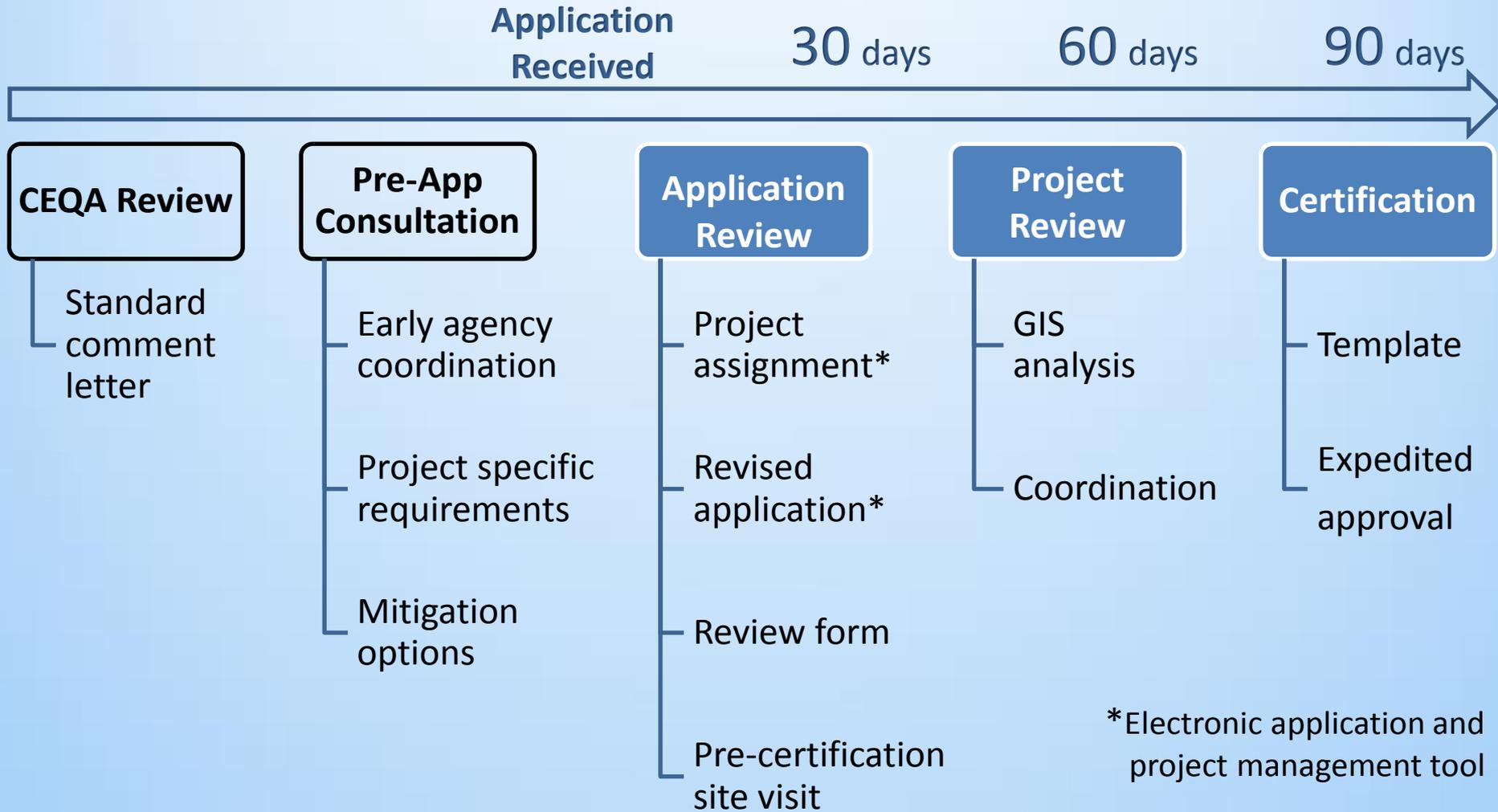
- Certification template
- New application form

Visual management tools *improve communication*

- Updated application tracking

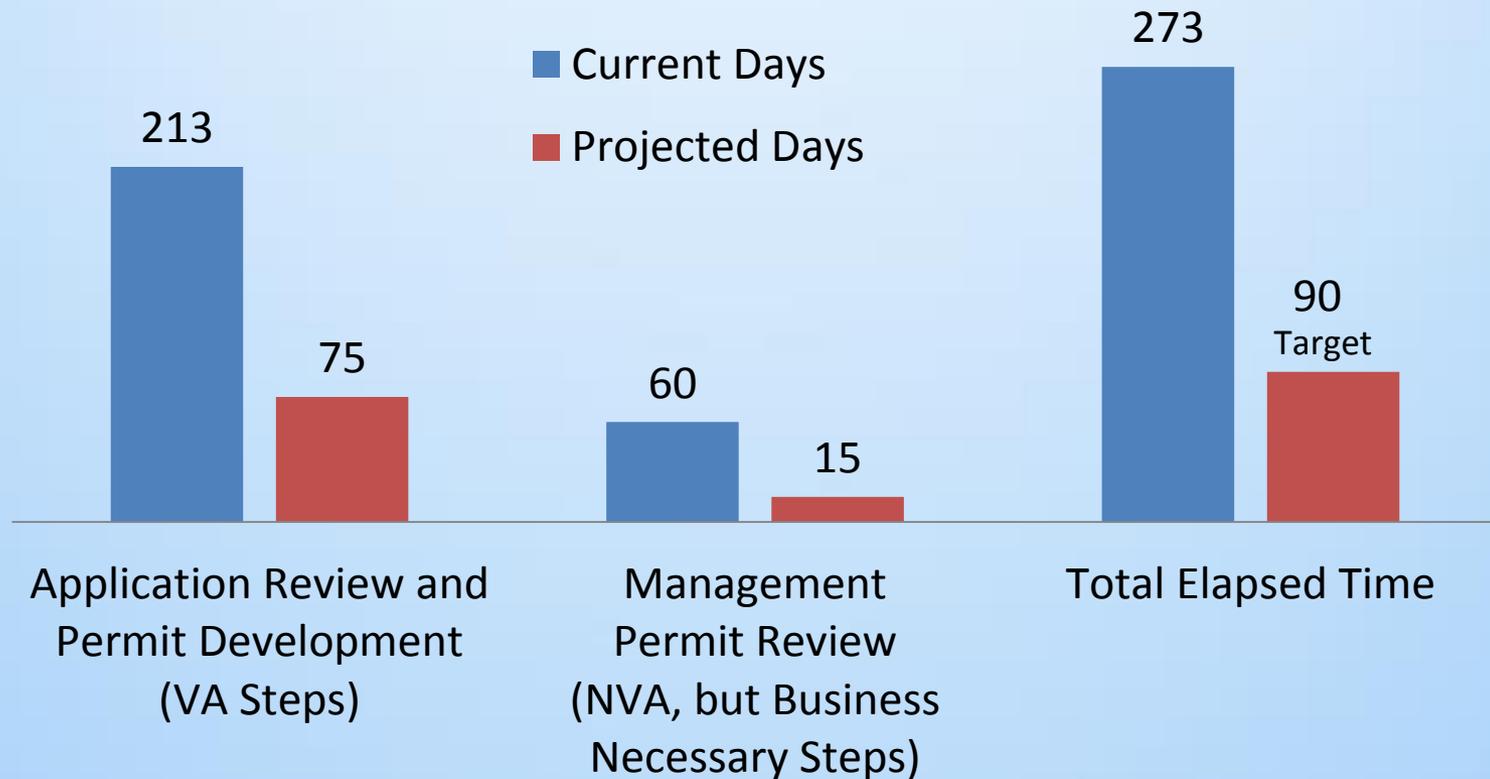


New Process Map



Projected Capability Analysis

Comparison of Process Map Timeframes



Control Plan

Implemented measurement system to track critical X's

Standing unit meeting agenda item for project progress review

Procedures

- New application form
- Certification template
- Administrative manual
- Review checklist



Additional Benefits



Improved

- Transparency
- Regulatory consistency
- Public service
- Environmental protection

Green Belt Contact Information

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