



Six Sigma DMAIC Improvement Story

Project Objective:

Reduce The Amount of Time and Rework Required To Review and Approve Water and Sewer Projects

Last Updated: 06-22-15

Team Members:

Tom Marko, WASD, John Mendez, WASD, Zaba Castro, WASD, Sandra Alvarez, WASD, Maria Capote, WASD, Douglas Pile, WASD, Nora Palou, WASD, Sergio Garcia, WASD, JRD & Associates, Bill Busutil, OMB (Team Leader)

Lester Sola (Sponsor)

Jennifer Moon (Sponsor)

Identify Project Charter

The team developed a Project Charter.

Project Charter	
Project Name:	WASD Project Approval - Reduction of Cycle Time and Rework
Problem/Impact:	Delays in approving Water and Sewer (WASD) projects extend the overall development review process, which causes unnecessary increases in carrying costs for individual property owners as well as developers. This can discourage development, which could negatively impact the local economy.
Expected Benefits:	Faster turnaround time for approval of WASD projects; improved water and sewer infrastructure; reduced carrying costs; improved service environment for development.
Outcome Indicator(s)	Q1 - Overall turnaround time for pre-construction approval of WASD projects
Preliminary Target(s)	Target(s): Q1 - To be determined
Time Frame:	December 2014 through May 2015
Strategic Alignment:	Supports economic development in Miami-Dade County
In Scope:	The project approval process - From initial application submittal through other departments' review
Out-of-Scope:	All construction and conveyance related project approval steps
Authorized by:	Bill Johnson, Lester Sola
Sponsor:	Lester Sola and Jennifer Moon
Team Leader:	Bill Busutil
Team Members:	Tom Marko (WASD), John Mendez (WASD), Zaba Castro (WASD), Sergio Garcia (WASD), Sandra Alvarez (WASD), Maria Capote (WASD), Douglas Pile (WASD), Nora Paulo, WASD, JRD & Associates, Bill Busutil, OMB (Team Leader)
Process Owner(s):	Tom Marko, Sandra Alvarez, Sergio Garcia
Mgmt Review Team:	Lester Sola, John Mendez, Tom Marko
Completion Date:	May 16th, 2015
Review Dates:	TBD
Key Milestone Dates:	See Action Plan

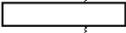
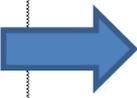


Develop Project Timeline Plan

The team developed a work plan to complete the project.

Legend:	
	= Actual
	= Proposed

Complete Project by May 16th, 2015

DMAIC Process Step	WHEN					
	2014 - 2015					
	Dec	Jan	Feb	March	April	May
1. Define	 			Completed 1/9/15		
2. Measure		 		Completed 1/16/15		
3. Analyze			 		Completed 2/13/15	
4. Improve			Completed 4/28/15	 		
5. Control						



Costs of Delaying Review and Approval of WASD Projects

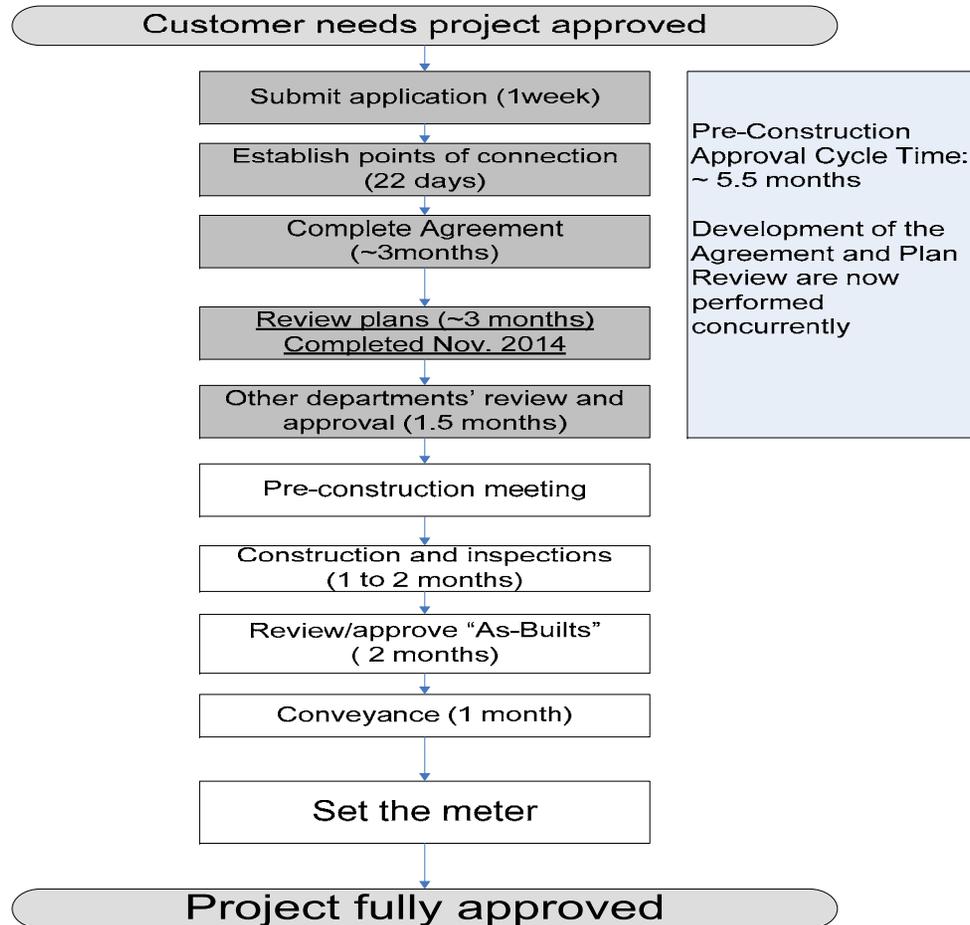
- Industry dissatisfaction with the process produces complaints to the Mayor's office
- Ultimately, delays in the process reduce revenue yield per *set* meter **(This dollar value is yet to be determined)**
- Project approval delays increase carrying costs for developers **(This dollar value is yet to be determined)**



Review Service Delivery System

The team reviewed WASD's project review and approval process

WASD Project Review and Approval Process (Cycle Time: 9 to 12 months)

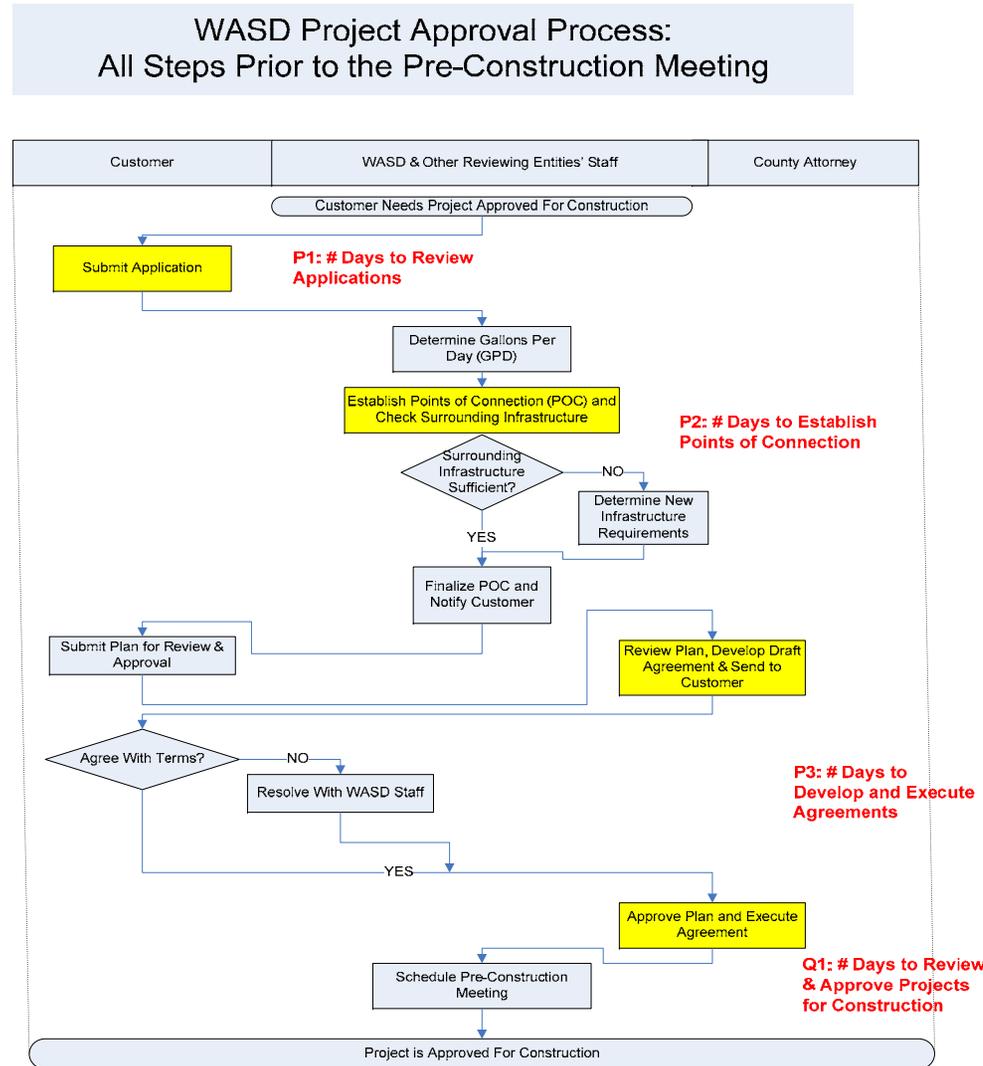


The team will focus on the selected (grey boxes) portion of WASD's project review and approval process

Review Process Flow Chart

The team constructed a flowchart for the Pre-Construction Project Approval Process.

The team developed *preliminary Outcome Indicators*



The team decided to analyze performance trends within each of the major sub-processes (Yellow Boxes)



Identify Data Collection Needs

The team developed a data collection spreadsheet to collect indicator and demographic data...

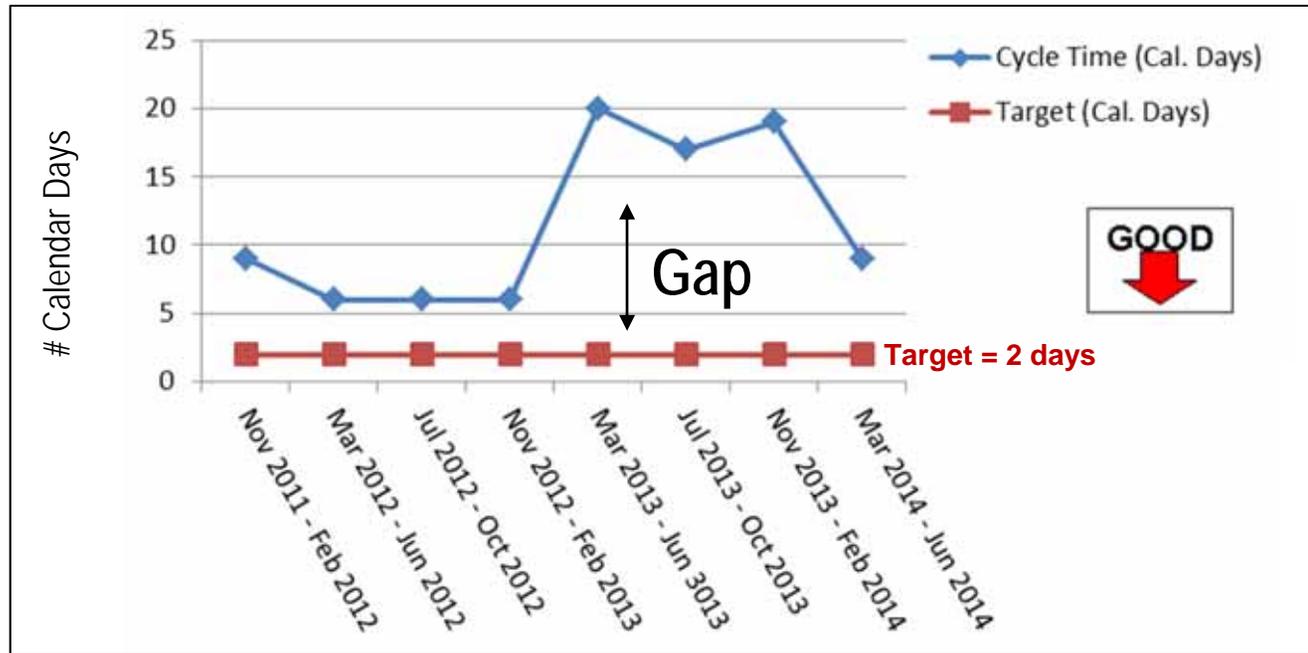
WASD Project Approval Process – Basic Demographics

DEMOGRAPHICS						Each Row Is A Project													
AGMT ID	WATER ER	PROJECTNAME	ZONING	Devlpmt Type (Res. Coml. Govt/Schlt. Indus)	WATER Gallons Per Day	Application Submittal Start	Application Submittal Finish	Cycle Time Application Submittal	POC Star	POC Finis	Cycle Time POC	Agreement Start Date	Agreement Date Offer	Agreement Date Executed	Cycle Time Agreeemer	Plan Review Start Date	Plan Review Final Approval Date	Other Department Review Start date	Other Department Review Finish Dat
21179	n/a	2425 CORAL WAY	O		-785	5/2/2012	5/7/2012	5	5/7/2012	5/8/2012	1	5/8/2012	5/11/2012	5/14/2012	6	#N/A		1/0/1900	10/10/2012
21070	n/a	DECORATORS PLUMBING INC	MIXED		0	11/15/2011	12/15/2011	30	12/15/2011	1/3/2012	19	1/3/2012	1/11/2012	1/17/2012	11	#N/A		1/0/1900	8/9/2012
21125	2012-072	FLORIDA INTERNATIONAL UNIVERSITY PAR	GU		61800	2/17/2012	2/23/2012	6	2/23/2012	3/8/2012	14	3/8/2012	4/2/2012	3/28/2012	20	#N/A		1/0/1900	11/20/2012
21589	2013-118	DIAZ RESIDENCE	EU-M		320	7/31/2013	8/6/2013	6	8/6/2013	8/12/2013	6	8/12/2013	8/16/2013	9/6/2013	25	10/11/2013		1/0/1900	4/11/2014
21113	n/a	CUTLER BAY CENTRE	BU-2		14909	12/6/2013	12/6/2013	0	12/6/2013	12/9/2013	3	12/9/2013	12/13/2013	1/3/2014	25	1/9/2014		1/0/1900	3/11/2014
21194	2012-057	10851 INVESTMENT INC	IU-1		155	5/1/2012	5/14/2012	13	5/14/2012	6/5/2012	22	6/5/2012	6/13/2012	7/2/2012	27	#N/A		1/0/1900	9/27/2012
21391	n/a	DADELAND COLONY PARKING GARAGE FIR	RU-4M		0	12/5/2012	12/14/2012	9	12/14/2012	1/14/2013	31	1/14/2013	1/31/2013	2/11/2013	28	#N/A		1/0/1900	6/5/2013
21351	2013-024	NEW RESIDENCE AT 324 SW 30 RD	TR-3		220	10/19/2012	10/29/2012	10	10/29/2012	11/19/2012	21	11/19/2012	11/28/2012	12/18/2012	29	#N/A		1/0/1900	6/12/2013
21514	2013-088	DORAL SIGNATURE SHOPS	PUD		3715	6/2/2014	6/11/2014	9	6/11/2014	6/12/2014	1	6/12/2014	6/27/2014	7/11/2014	29	8/23/2013		1/0/1900	2/18/2014
21483	2014-014	GOLD RESIDENCE	EU-1		550	3/20/2013	3/26/2013	6	3/26/2013	4/1/2013	6	4/1/2013	4/10/2013	4/30/2013	29	12/13/2013		1/0/1900	4/23/2014
21051	n/a	PARKVIEW	RESIDENTIAL		0	10/21/2011	10/25/2011	4	10/25/2011	11/17/2011	23	11/17/2011	12/13/2011	12/16/2011	29	#N/A		1/0/1900	2/7/2013
21401	2014-037	CVS PHARMACY #CS 65223	NULL		-1311	2/3/2014	2/7/2014	4	2/7/2014	3/13/2014	34	3/13/2014	3/26/2014	4/14/2014	32	3/14/2014		1/0/1900	6/13/2014
21349	2012-085	PALMETTO STATION TRACTION POWER SU	NULL		0	10/25/2012	10/25/2012	0	10/25/2012	10/30/2012	5	10/30/2012	11/13/2012	12/3/2012	34	#N/A		1/0/1900	2/25/2013
21464	2013-053	SOUTH MIAMI BUILDERS LLC	EU-M		640	3/1/2013	3/13/2013	12	3/13/2013	4/5/2013	23	4/5/2013	4/22/2013	5/10/2013	35	8/22/2013		1/0/1900	10/16/2013
21041	2012-044	MIAMI RESCUE MISSION	INDUSTRIAL		7566	2/23/2012	2/27/2012	4	2/27/2012	2/29/2012	2	2/29/2012	11/22/2011	4/4/2012	35	#N/A		1/0/1900	2/12/2013
21116	2013-039	BT-814 STOCKER ASTROSCIENCE CENTER	NULL		793	3/11/2013	3/11/2013	0	3/11/2013	3/22/2013	11	3/22/2013	4/26/2013	4/26/2013	35	8/19/2013		1/0/1900	9/18/2013
21065	2012-051	JOSE MORALES RESIDENCE	RESIDENTIAL		320	11/9/2011	11/9/2011	0	11/9/2011	12/6/2011	27	12/6/2011	12/15/2011	1/10/2012	35	#N/A		1/0/1900	3/5/2013
21063	n/a	MIAMI LAKES GOVERNMENT CENTER	COMMERCIAL		1290	11/7/2011	11/7/2011	0	11/7/2011	12/8/2011	31	12/8/2011	12/19/2011	1/12/2012	35	#N/A		1/0/1900	6/19/2012
21174	n/a	BRICKTOP'S RESTAURANT	CB		7162	4/10/2012	4/16/2012	6	4/16/2012	5/16/2012	30	5/16/2012	6/5/2012	6/21/2012	36	#N/A		1/0/1900	2/7/2013
21561	n/a	AVENTURA GOVERNMENT CENTER PARKIN	CF (COMMUNT		45	6/20/2013	7/8/2013	18	7/8/2013	7/15/2013	7	7/15/2013	7/31/2013	8/22/2013	38	8/6/2013		1/0/1900	9/18/2013
21204	n/a	PINECREST	NULL		550	5/8/2012	5/17/2012	9	5/17/2012	5/29/2012	12	5/29/2012	7/10/2012	7/12/2012	44	#N/A		1/0/1900	1/16/2013
21443	n/a	OC AQUATICS SWIM SCHOOL	IU-1		385	2/7/2013	2/19/2013	12	2/19/2013	2/21/2013	2	2/21/2013	3/14/2013	4/8/2013	46	#N/A		1/0/1900	4/24/2013
21266	n/a	KENDALL AIRPORT HOTEL AND SUITES	IU-C		9700	6/27/2012	7/3/2012	6	7/3/2012	8/23/2012	51	8/23/2012	9/19/2012	10/9/2012	47	#N/A		1/0/1900	3/5/2013
21302	2012-099	NEW 1 STORY DUPLEX	T3-O		140	8/20/2012	8/24/2012	4	8/24/2012	9/12/2012	19	9/12/2012	9/21/2012	10/29/2012	47	#N/A		1/0/1900	4/3/2013
21465	n/a	UNIVISION NEWS PORT	IC		0	3/12/2013	3/15/2013	3	3/15/2013	3/21/2013	6	3/21/2013	4/26/2013	5/8/2013	48	#N/A		1/0/1900	7/3/2013
21621	n/a	GR CLUB & RESTAURANT	T6-60A-O (URBA		5644	8/7/2013	9/17/2013	41	9/17/2013	9/24/2013	7	9/24/2013	11/5/2013	11/12/2013	49	9/27/2013		1/0/1900	12/6/2013



The team collected trend data and found...

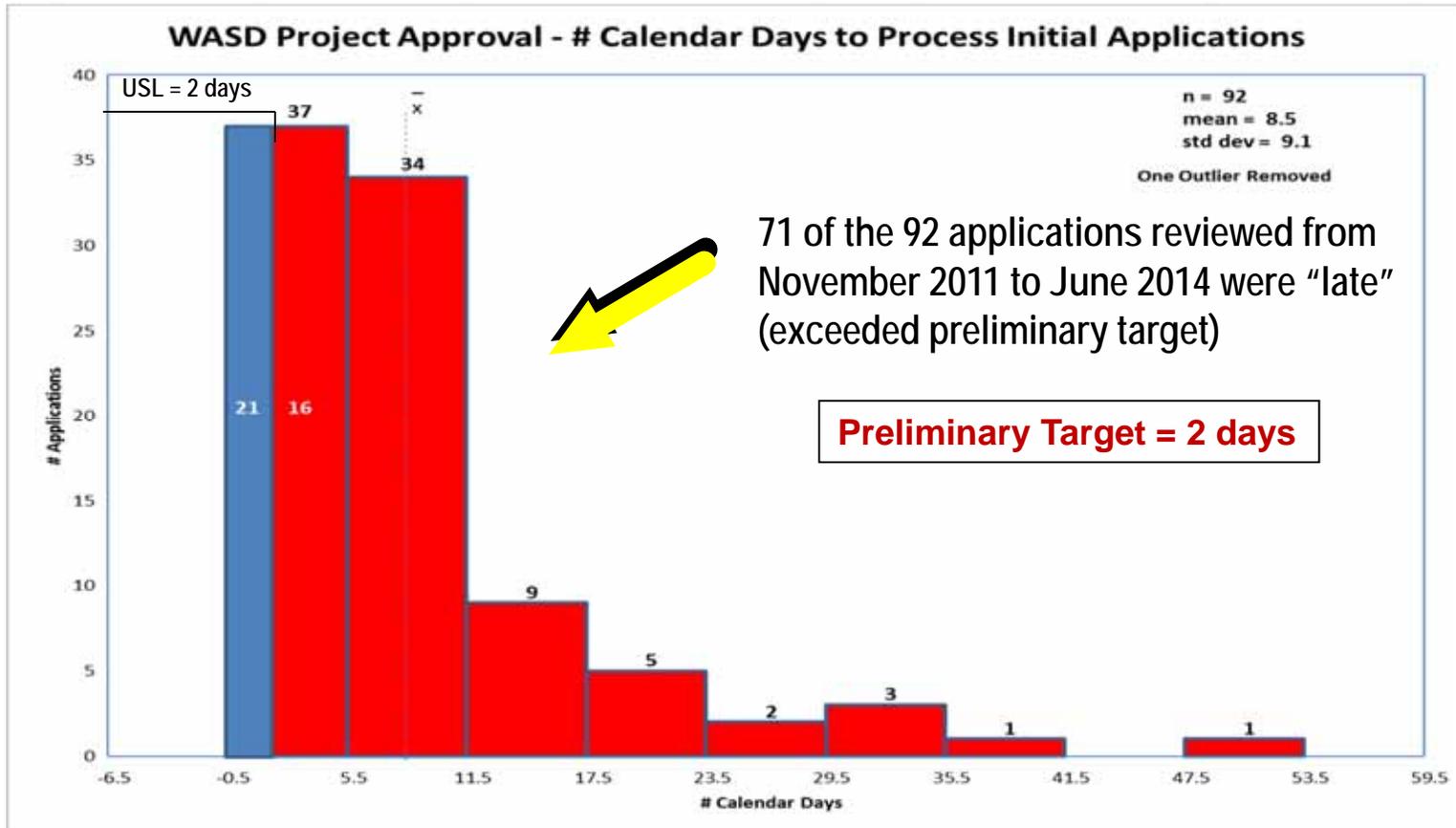
Average # Calendar Days To Review Applications



Note: Chart is based on applications submitted between November 2011 and June 2014.

Stratify the Problem

The team stratified applications submitted and reviewed from November 2011 to June 2014 and found...

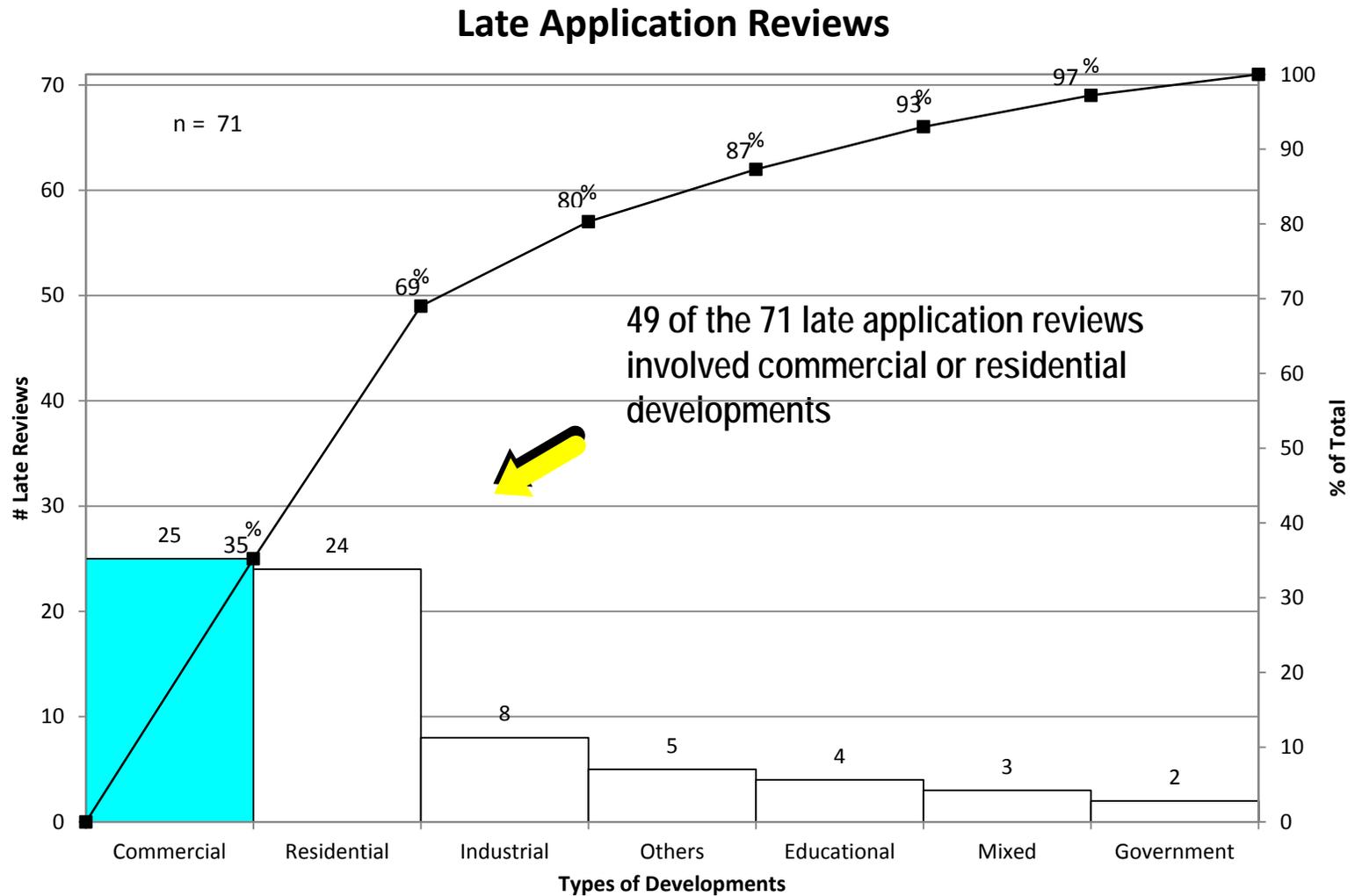


The team looked closer at the 71 late application reviews.



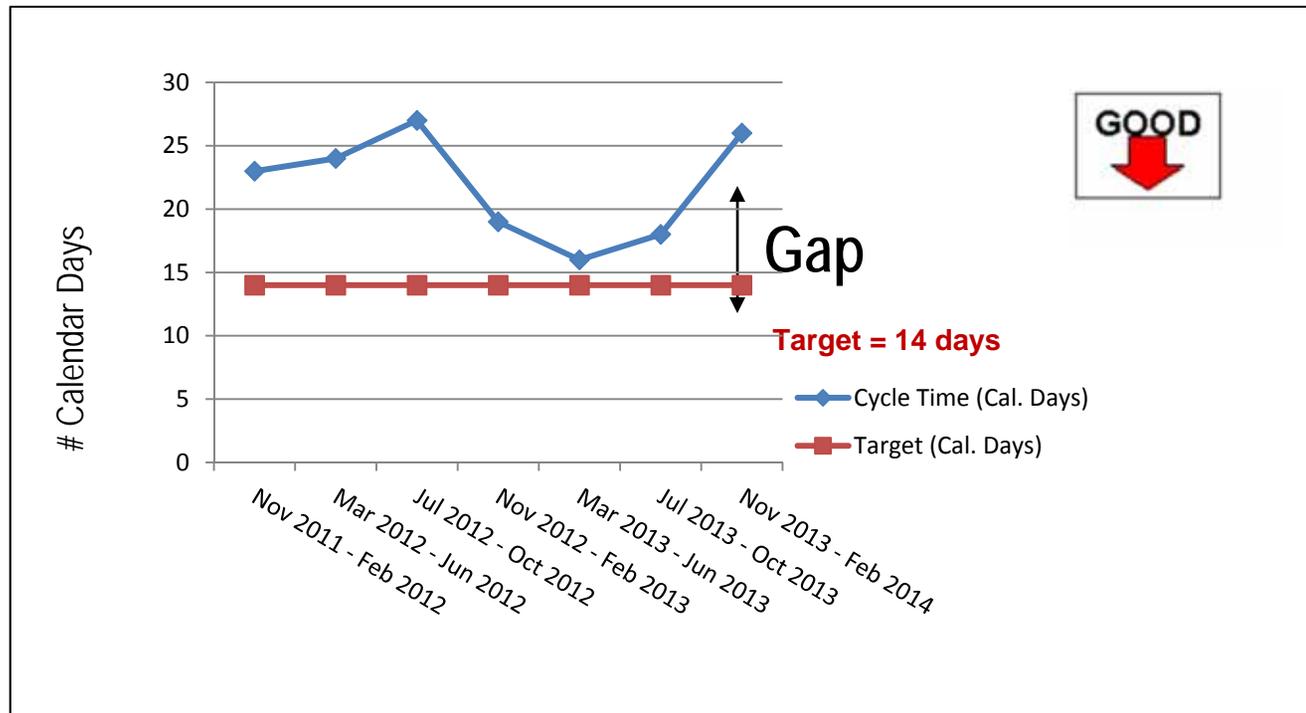
Stratify the Problem

The team further stratified late application reviews from November 2011 to June 2014 and found...



The team collected trend data and found...

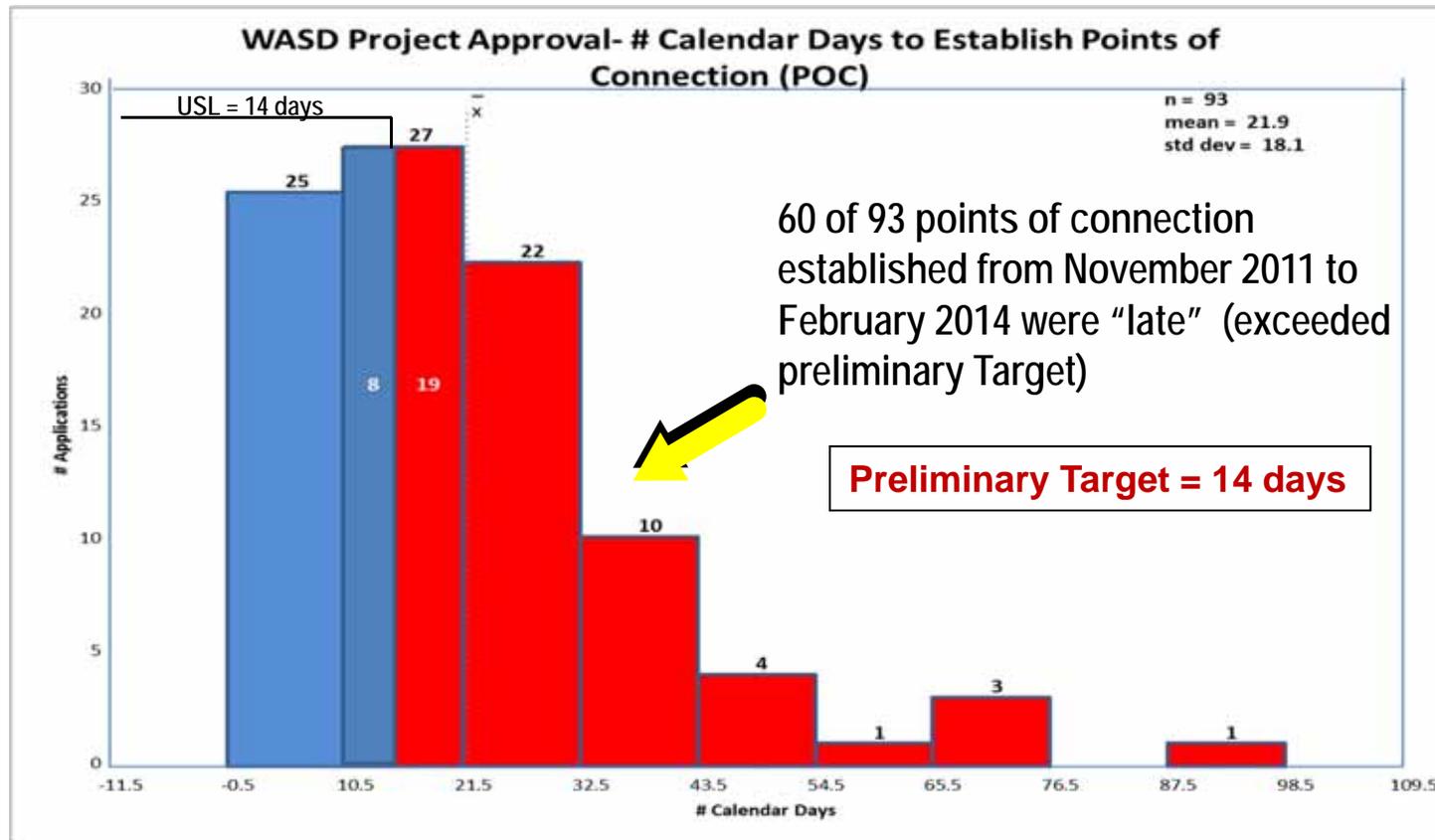
Average # Calendar Days to Establish Points of Connection (POC)



Note: Chart is based on POC's established between November 2011 and June 2014.

Stratify the Problem

The team stratified points of connection established from November 2011 to February 2014 and found...

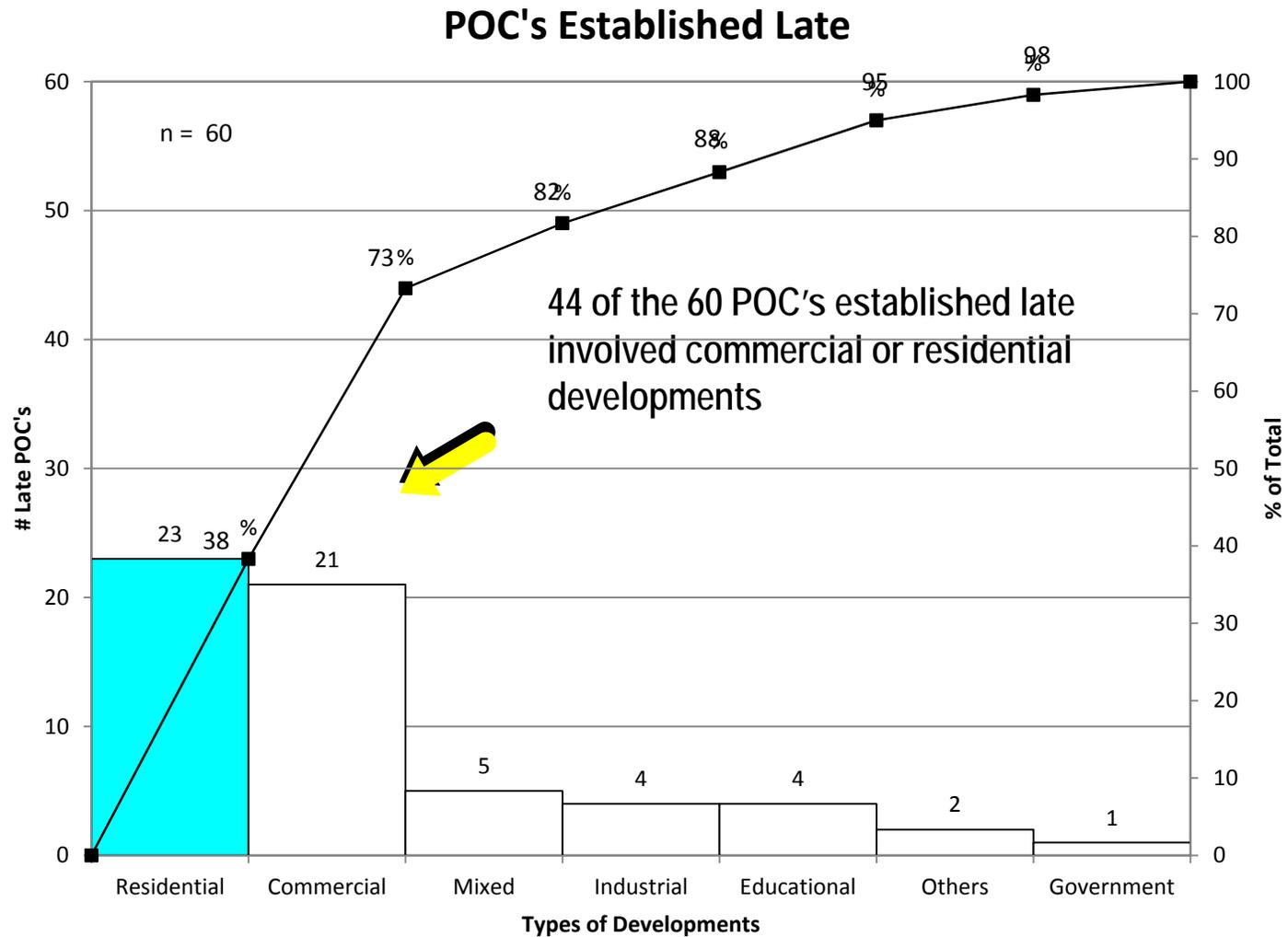


The team looked closer at the 60 POC's established late.



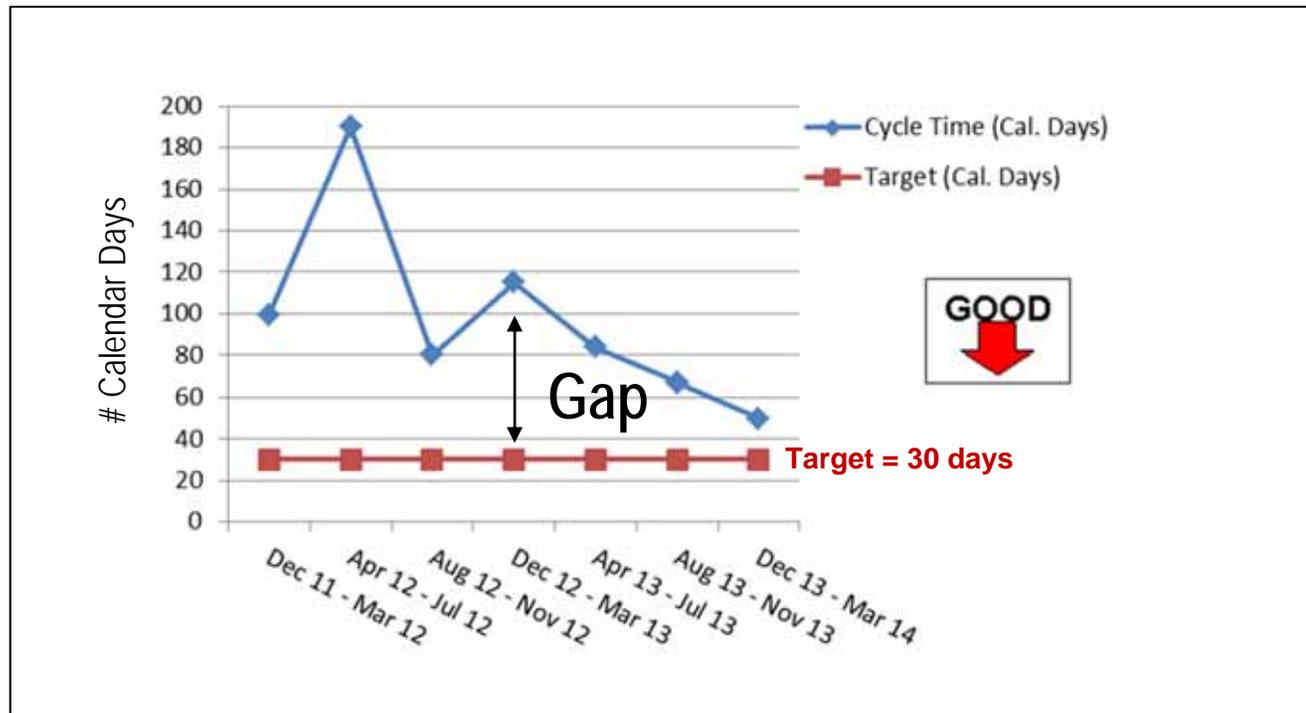
Stratify the Problem

The team further stratified POC's established late from November 2011 to February 2014 and found...



The team collected trend data and found...

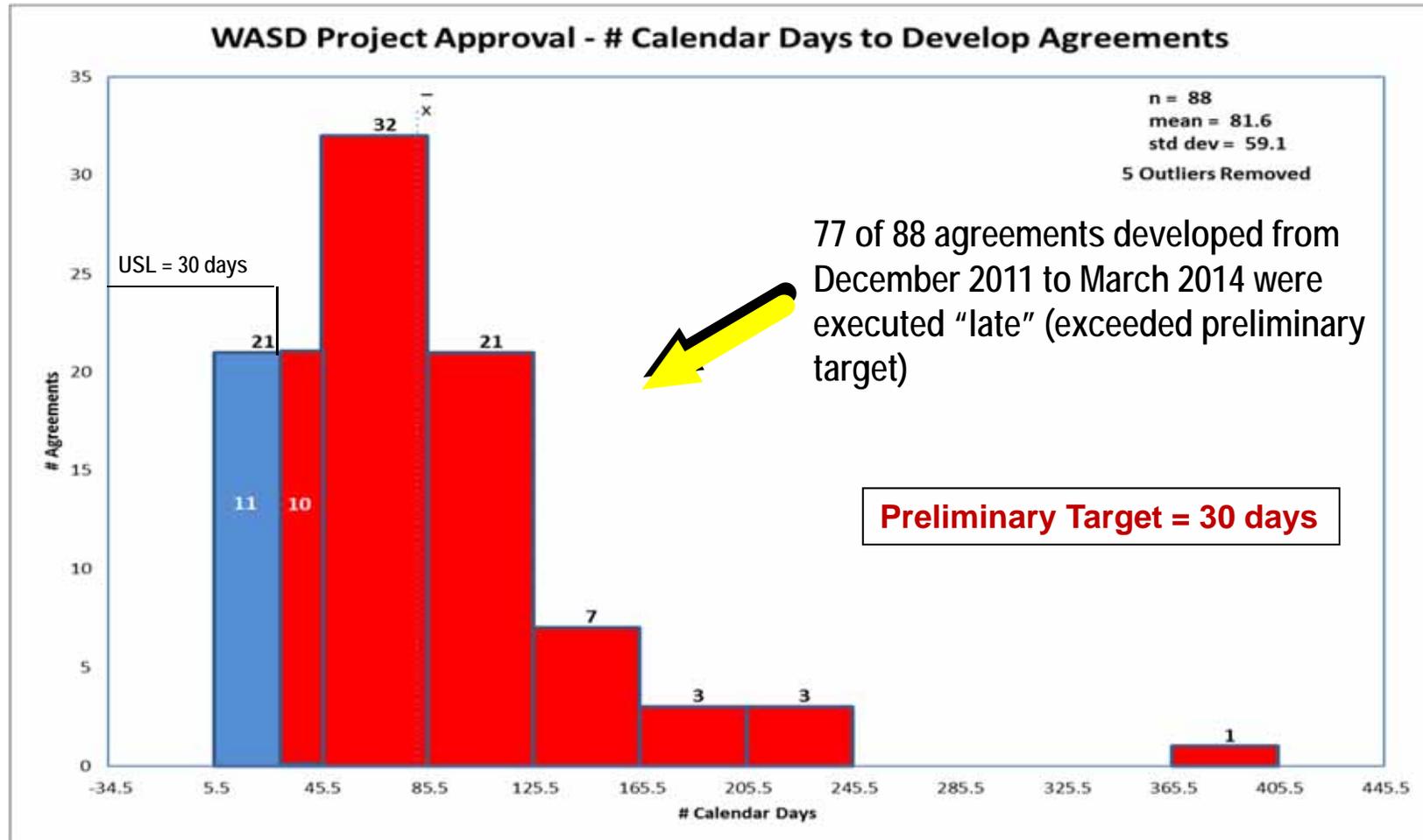
Average # Calendar Days to Develop and Execute Agreements



Note: Chart is based on agreements executed between December 2011 and March 2014.

Stratify the Problem

The team stratified agreements executed from December 2011 to March 2014 and found...



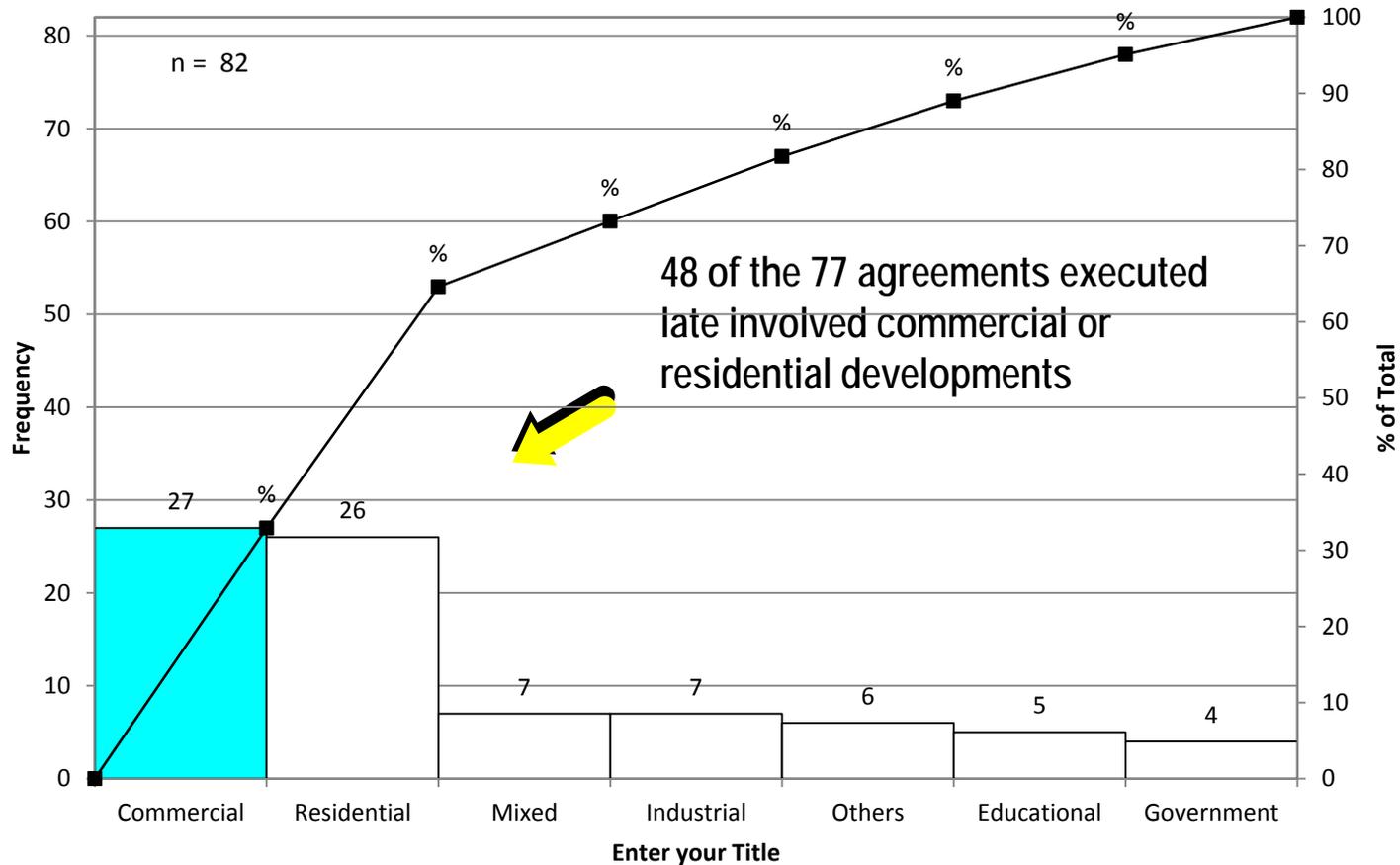
The team looked closer at the 77 agreements executed late.



Stratify the Problem

The team further stratified agreements executed late from December 2011 to March 2014 and found...

Pareto Chart



Stratify the Problem

Problem Statement: 42 of 93 projects reviewed from November 2011 to June 2014 that exceeded preliminary target cycle times for initial application review, establishment of POC's, and development/execution of agreements involved commercial or residential developments



Stratify the Problem

The team sampled 14 of the 42 "late" reviews, interviewed staff responsible for each review step and identified factors contributing to project approval delays

Problem Statement: 42 of 93 projects reviewed from November 2011 to June 2014 exceeded maximum cycle time standards for initial application review, establishment of POC's, and development/execution of agreements

Reasons or Factors <i>(That possibly contributed to delays in the Donation Construction Project Approval Process from Application Submittal to Development of the Agreement)</i>	22169 - JBL Building	21336 - Element Hotel	21330 - Joe Moretti Preserva	21354 - Center for Innovative	21338 - Point Royale Shopp	21501 - Med Eye Associates	21611 - New Residents Lipt	21743 - McDonald's	21401 - CVS Pharmacy	21195 - South Florida Educa	21285 - Tagliatella	21266 - Kendall Airport Hot	21485 - 1110 Brickell Office	21424 - Flagami Everglades	Total	Percentage
	Personnel Shortage/Backlog	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14
Calculation of GPD credits	X	X	X	X	X	X	X	X	X	X	X	X	X	X	9	64%
No back-up person to cover application review							X	X							2	14%
Increase in Affordable Housing LOA demand (Affordable Housing LOAs take priority)							X								1	7%
Personnel Shortage/Backlog	X	X	X	X	X	X	X	X	X	X	X	X	X	X	14	100%
Required Master Planning Analysis		X	X					X							3	21%
Required special sewer basin analysis		X													1	7%
Required CDSA Analysis for Pump Station Status		X													1	7%
Increase in Affordable Housing LOA demand (Affordable Housing LOAs take priority)							X								1	7%
Revised POC								X							1	7%
Determination of construction connection charges / oversize credits	X	X						X	X						4	29%
Ownership was not clarified on time	X				X			X							3	21%
Administrative review requirement WASH	X	X	X	X	X	X	X	X	X	X					8	57%
County Attorney Review Requirement	X	X													2	14%
One person responsible for document control in WASH	X	X	X	X	X	X	X	X	X	X	X				12	86%

Stratify the Problem

The team sampled 14 of the 42 "late" reviews, interviewed staff responsible for each review step and identified factors contributing to project approval delays

Problem Statement: 42 of 93 projects reviewed from November 2011 to June 2014 exceeded maximum cycle time standards for initial application review, establishment of POC's, and development/execution of agreements

		Reasons or Factors (That possibly contributed to delays in the Donation Construction Project Approval Process from Application Submittal to Development of the Agreement)														Total	Percentage	
		22169 - JBL Building	21336 - Element Hotel	21330 - Joe Moretti Preserva	21354 - Center for Innovative	21338 - Point Royale Shoppin	21501 - Med Eye Associates	21611 - New Residents Lipita	21743 - McDonald's	21401 - CVS Pharmacy	21195 - South Florida Educat	21265 - Tagliatella	21266 - Kendall Airport Hotel	21485 - 1110 Brickell Office B	21424 - Flagami Everglades			
Development of the Agreement	Developer review deadline(30 days)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	11	79%
	Preparation of multiple documents required and prepared by WASD	X				X			X	X				X			5	36%
	Preparation of unique agreements for each case	X	X	X	X	X	X	X	X	X	X	X	X				13	93%
	Review of Opinion of Title / Joinder	X				X								X			3	21%
	Developer did not pay recording fees			X													1	7%
	Water Supply Certification (WSC) Letter requirement					X											1	7%
	Increase in Affordable Housing LOA								X								1	7%
	Re-offer of agreement								X	X				X			3	21%
Process Design	Each project approval step is performed sequentially, resulting in a very time consuming process	X	X	X	X	X	X	X	X	X	X	X	X	X	X		14	100%

The team conducted Root Cause Analysis and found...

WASD Project Approval Process Root Cause Analysis						
Factors	Why?	Why?	Why?	Why?	Why?	Potential Root Cause(s)
Each project approval step is performed sequentially, resulting in a very time consuming process						1. The overall project approval process is linear, and designed for each step to occur sequentially
Preparation of a unique agreement for each case	20-40% of the paragraphs need to be modified for each specific project					2. The agreement development process is complex and requires re-work for each agreement in several areas
The Developer was holding the document	Developers need to review the document in detail and provide an opinion of title.	Documents are typically 20-30 pages long, with very specific provisions.				
One person responsible for document control in WASD for administrative and legal reviews	There are delays in agreements arriving at the administrator's desk.	Documents frequently need to return to the Administrative Secretary prior to moving to the next step	Current WASD process requires that the documents go to this person	Process is designed to make sure the documents are not lost or misplaced		3. The administrative review portion of the agreement development process favors document security over expediency
Personnel Shortage/Backlog	Not enough personnel to handle the incoming workload	Three Engineering positions in this Section (Utilities Review) were eliminated				4. WASD's personnel allocation policies place higher priority on other responsibilities in the Department
Personnel Shortage/Backlog	Not enough personnel to handle the incoming workload	Personnel intended for this function were reassigned ("detached") to other responsibilities				
Calculation of GPD credits	Staff spends too much time on this task					5. The process to calculate GPD is cumbersome and requires many steps

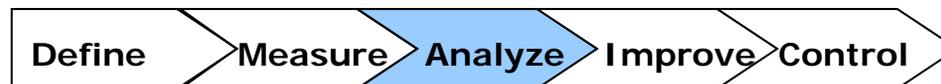
The team proceeded to verify each potential root cause

Verify Root Causes

The team verified the potential root causes...

Root Cause Verification Matrix		
Potential Root Cause	How Verified?	Root Cause or Symptom
1 The overall project approval process is linear, and designed for each step to occur sequentially	The team verified this root cause through discussions with WASD managers, review of submitted plans and discussions with other jurisdictions	Root Cause
2 The agreement development process is complex and requires re-work for each agreement in several areas	The team verified this root cause through discussions with WASD managers and examination of several agreements	Root Cause
3 The administrative review portion of the agreement development process favors document security over expediency	The team verified this root cause through discussions with WASD managers and observation/review of the process	Root Cause
4 WASD's personnel allocation policies place higher priority on other responsibilities in the Department	The team verified this root cause through discussions with WASD managers and review of historical data	Root Cause
5 The process to calculate GPD is cumbersome and requires many steps	The team verified this root cause through discussions with WASD managers and observation/review of the process	Root Cause

All potential root causes were verified as root causes.



Identify and Select Countermeasures

The team brainstormed countermeasures to reduce project approval cycle time and rework

Highlights of Countermeasures (a comprehensive list of countermeasures is in the appendix)			Revised 1/23/14			
Problem Statement	Verified Root Causes	Countermeasures	Legend:			
			5=Extremely		3=Moderately	
			4=Very		2=Somewhat	
			Ratings			
			Effectiveness	Feasibility	Overall	Take Action ? Yes/No
42 of the 93 projects reviewed from November 2011 to June 2014 that exceeded maximum cycle time standards for initial application review, establishment of POC's and development/execution of agreements involved commercial or residential agreements	The overall project approval process is linear, and designed for each step to occur sequentially	Have customers propose points of connection as part of their initial plan submittal, thus enabling all WASD work units as well as other approving departments to review plans simultaneously, at the front end of the project approval process	5	4	20	Y
		Offer pre-application meetings that would include other approving agencies and the following WASD Sections: New Business, Plan Review, ROW, and Inspections	4	4	16	Y
		Create a database (perhaps a Sharepoint site until a new database becomes available) to track all projects and provide relevant information to customers	5	3	15	Y
		Notify the Developer or Homeowner of the date when a draft agreement is sent to the customer's representative, as well as the date when the representative returns the draft to WASD for final review and execution	5	3	15	Y
		Make high level staff available to discuss nuanced issues like basin boundaries, pump station capacity, etc. with customers	5	4	20	Y
		Proactively communicate with customers throughout the project approval process to avoid extra "rounds" of review	4	4	16	Y



Identify and Select Countermeasures

The team brainstormed countermeasures to reduce project approval cycle time and rework

Highlights of Countermeasures (a comprehensive list of countermeasures is in the appendix)				Revised 1/23/14			
Problem Statement	Verified Root Causes	Countermeasures	Ratings				
			Effectiveness	Feasibility	Overall	Take Action? Yes/No	
42 of the 93 projects reviewed from November 2011 to June 2014 that exceeded maximum cycle time standards for initial application review, establishment of POC's and development/execution of agreements involved commercial or residential agreements	The agreement development process is complex and requires re-work for each agreement in several areas	Design an agreement template so that pages 1 and 2 contain unique project information, and subsequent pages contain boiler plate language	3	5	15	Y	
		Eliminate unnecessary paragraphs and back up documents in agreements	4	4	16	Y	
	The administrative review portion of the agreement development process favors document security over expediency	Deliver draft agreements to the administrator on a daily basis	3	3	9	Y	
		WASD's personnel allocation policies place higher priority on other responsibilities in the Department	Finalize long term staffing requirements once the impacts of proposed process improvements are determined and documented	5	4	20	Y
<p>Note: No countermeasures were developed for the root cause associated with the calculation of GPD credits</p>							

The team then estimated potential impacts of these countermeasures



Potential Impacts of Countermeasures

Current pre-construction project approval cycle time: 165 calendar days (~ 5.5 months)...The team estimates an overall **reduction of approximately 102 calendar days (~ 3.5 months)** to obtain pre-construction project approval at WASD

Running Cycle time (Calendar Days) For Pre-Construction Project Approval	10	20	30	40	50	60	70	80	90	100
	Day 8									
Application Review & Approval										
Plan Review & Approval (Including P.O.C.'s)			Day 37							
Other Departments' Review & Approval				Day 50						
Agreement Development & Execution						Day 63				

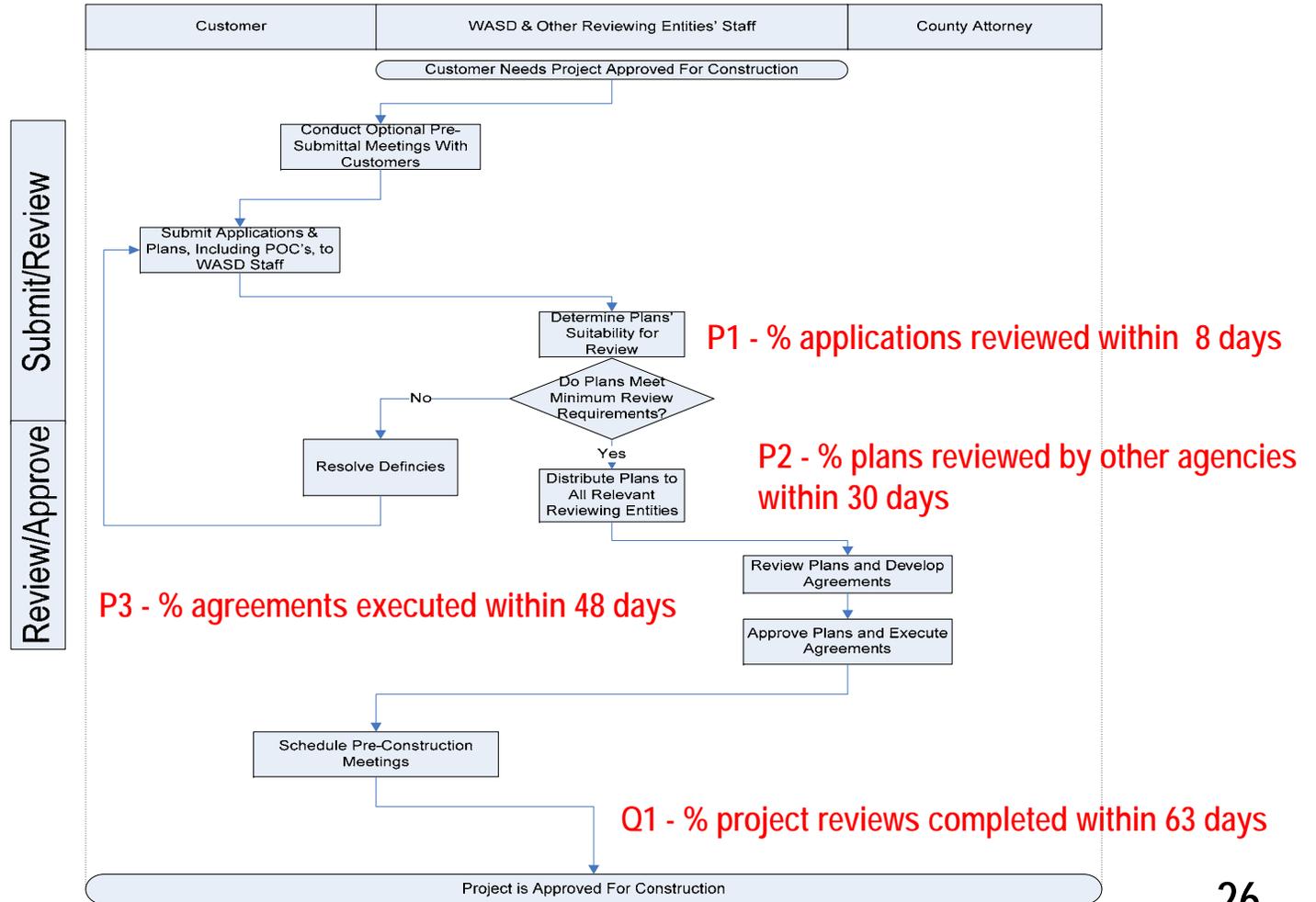
Total Estimated Cycle Time for Pre-Construction Project Approval: **63 Calendar Days**

Revised Process Flow Chart

The team developed a revised flow chart that incorporates the proposed countermeasures

WASD Project Approval Process: Proposed Overview

The Team Revised Outcome Indicators



Identify Barriers and Aids

The team performed Barriers and Aids analysis on the selected countermeasures

Countermeasures: Implement 27 countermeasures to reduce project approval cycle time and rework

Barriers		Aids
Impact	Forces against Implementation	Forces For Implementation
H	1) Resistance from other agencies re: conducting their plan reviews at the front end of the process (Supported by Aid: A, D)	A) Enthusiastic support from WASD Management, the Mayor, the Commission and the Development Community
H	2) Complex logistics and lack of time for outside agencies to attend pre-application meetings at WASD (Supported by Aid: A, B, D)	B) Use of "Go To Meeting" or other technology to enable outside agencies to participate remotely in pre-application meetings
M	3) Resistance from WASD staff re: process changes (Supported by Aid: D)	C) Developers' and property owners' strong support for more accountability and transparency in the process
	4) Resistance from some Engineers of Record re: more accountability and transparency in the process (Supported by Aid: C)	D) The WASD Director's commitment to implement changes that will improve services

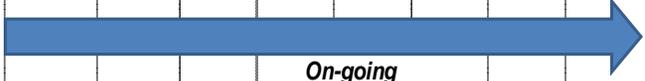
The team next sought to incorporate this analysis into the team's Action Plan.



Develop and Implement Action Plan

Legend:
 = Actual
 = Proposed

The team developed an implementation action plan for the countermeasures.

WHAT: Implement 27 countermeasures to reduce pre-construction approval cycle time													
HOW	WHO	WHEN											
		2015											2016
		April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan		
1. Develop Countermeasures:													
Parallel Processing	Team	█	Completed 4/16/15										
Communication With Customers	Team	█	Completed 4/16/15										
Execution of Agreements	Team	█	Completed 4/28/15										
2. Secure management approval of countermeasures (share benefits and cost savings)	Team	█	5/29/15										
3. Communicate/Train WASH staff in countermeasures and related policies/procedures (share benefits and cost savings)	Tom/Sergio/Sandy							8/28/15					
4. Implement countermeasures and secure cooperation of approving outside agencies (share benefits and cost savings)	Tom/Sergio/Sandy										11/27/15		
5. Review results, adjust countermeasures as necessary and present results to management	Tom/Sergio/Sandy											12/18/15	
6. Establish on-going responsibilities and standardize countermeasures into operations	Tom/Sergio/Sandy												
													



Review Results

The team will collect indicator data and review results of its countermeasures

Countermeasures to be implemented by Dec. 31, 2015



Q1 - % project reviews completed within 63 days

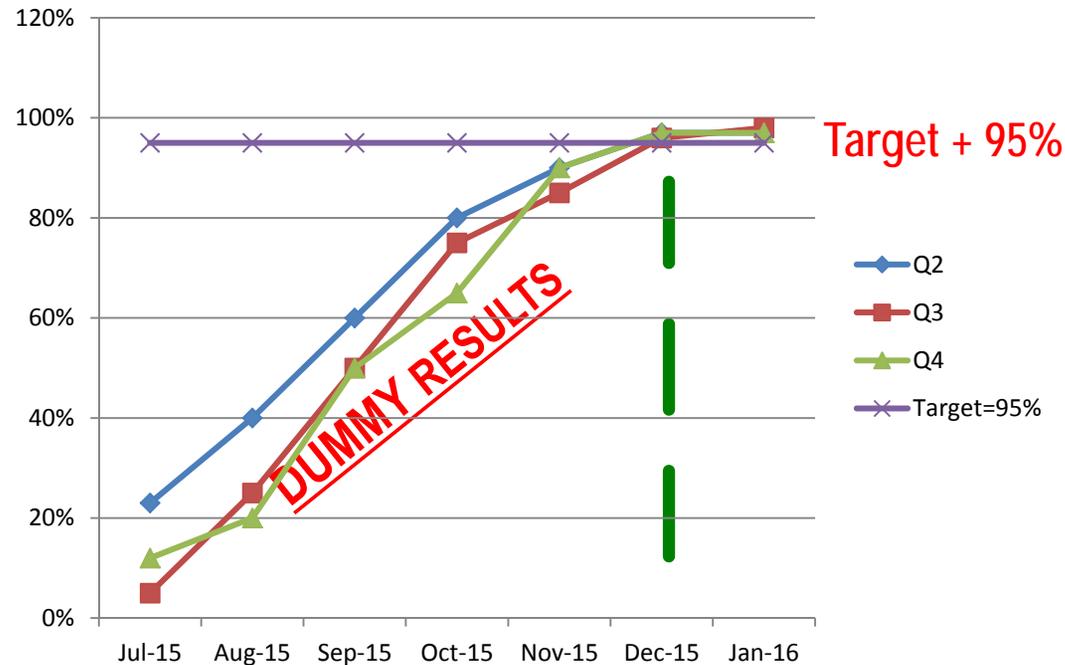
The team was encouraged by the results and will continue to monitor the countermeasures.



Review Results

The team will collect indicator data and review results of its countermeasures

Countermeasures to be implemented by Dec. 31, 2015



P1 - % applications reviewed within 8 days

P2 - % plans reviewed by other agencies within 30 days

P3 - % agreements executed within 48 days

The team was encouraged by the results and will continue to monitor the countermeasures.



Standardize Countermeasures

The team developed a Process Control System (PCS) to monitor this process on an on-going basis.

Process Control System						
Process Name: Review and Approve Water and Sewer Projects			Process Owner: Tom Marko			
Process Customer(s): Property Owners and Developers			Critical Customer Requirements: Review and approve Water and Sewer Projects quickly and thoroughly			
Process Purpose: Review Water and Sewer Projects and approve them for construction			Current Sigma Level: TBD		Outcome Indicators: Q1 – Q4	
Process and Quality Indicators			Checking / Indicator Monitoring			Contingency Plans / Misc. • Actions Required for Exceptions • Procedure References
Process Indicators	Control Limits	Data to Collect	Timeframe (Frequency)	Responsibility		
And						
Quality Indicators	Specs/ Targets	What is Checking Item or Indicator Calculation	When to Collect Data?	Who will Check?		
Q1	% project reviews completed within 63 calendar days	95%	100 * (# projects approved/denied within 58 calendar days / # projects submitted for review)	Monthly	Tom Marko , Dev. Coordinator	• Project Approval Flow Chart
P1	% applications reviewed within 8 calendar days	95%	100 * (# applications approved/denied within 8 calendar days / # applications submitted)	Monthly	Sandra Alvarez , New Business Mgr.	• Initial Application Submittal Flow Chart
P2	% plans reviewed by other agencies within 30 calendar days	95%	100 * (# plans reviewed by other agencies within 30 calendar days / # plans submitted for review)	Monthly	Sergio Garcia , Plan Review Mgr.	• Plans Review Flow Chart
P3	% agreements executed within 48 calendar days	95%	100 * (# agreements executed within 48 calendar days / # agreements submitted for review)	Monthly	Douglas Pile , N.B Contracting Officer	• Develop Agreements Flow Chart

Approved: _____ Date: _____ Rev #: _____ Rev Date: _____

The team looked ahead to the future.



Identify Lessons Learned

Lessons Learned

- 1) Partnering with the development community during design of countermeasures produced powerful solutions with excellent potential results
- 2) Analysis of the project approval process revealed the need for outstanding performance from WASD staff, Engineers of Record as well as Developers/Home Owners in order to minimize cycle time while improving the overall quality of this process

Next Steps

- 1) Present project results to WASD management, project sponsors and the development community
- 2) Continue to monitor the countermeasures and performance results
- 3) Explore additional opportunities for process improvements in other areas of WASD's operation



Appendix

WASD Project Approval Process – Comprehensive List of Countermeasures

Countermeasures	Effectiveness (1-5)	Feasibility (1-5)	Overall Rating (B*C)	Take Action (Y or N)?
Offer pre-application meetings that would include other approving agencies and the following WASD Sections: New Business, Plan Review, ROW, and Inspections	4	4	16	Y
Use "Go To Meeting" software or other technologies to communicate with other approving agencies during pre-application meetings	3	5	15	Y
Provide Agreement Templates at pre-application meeting	3	4	12	Y
If needed, have the Engineer of Record create a points of connection exhibit for the pre-application meeting	3	3	9	Y
Minimize wait time when scheduling optional pre-app. meetings	3	3	9	Y
Create a database (perhaps a Sharepoint file) to track all projects and provide relevant information to customers	5	3	15	Y
Determine points of connection during initial application submittal when appropriate	5	3	15	Y
Encourage electronic application submittal and develop electronic fee payment capability for faster processing	5	3	15	Y

WASD Project Approval Process – Comprehensive List of Countermeasures

Have customers propose points of connection as part of their initial plan submittal, thus enabling all WASD work units as well as other appropriate departments to review plans simultaneously, at the front end of the project approval process	5	4	20	Y
Provide clear roadmap re: project approval steps both on-line and at the pre-app meeting	4	4	16	Y
Include compliance with established deadlines in Reviewers' performance evaluations	4	4	16	Y
Make high level staff available to discuss nuanced issues like basin boundaries, pump station capacity, etc. with customers	5	4	20	Y
Make GPD credit information readily available to all, including applicants	4	3	12	Y
Make appropriate WASD information available to design professionals and the public	5	3	15	Y
Notify customers re: pending expirations & give them the option to extend POC's, LOA's or Agreements	5	3	15	Y
Notify the Developer or Homeowner of the date when a draft agreement is sent to the customer's representative, as well as the date when the representative returns the draft to WASD for final review and execution	5	3	15	Y
Establish a "tickler" function in the system to flag POC's, LOA's or agreements about to expire	5	5	25	Y

WASD Project Approval Process – Comprehensive List of Countermeasures

Proactively communicate with customers during the processing of agreements, covenants, etc. to avoid extra "rounds" of review	4	4	16	Y
Require that only a notary signs agreements, not a notary plus two witnesses	3	3	9	Y
Deliver draft agreements to the administrator on a daily basis	3	3	9	Y
Improve Opinion of Title affidavit (Consider Seminole County's Corporate I.D. Affidavit)	3	3	9	Y
Eliminate unnecessary paragraphs and back up documents in agreements	4	4	16	Y
Standardize agreement paragraph numbers and titles, and generalize the language to avoid modifications	4	4	16	Y
Design an agreement template so that pages 1 and 2 contain unique project information, and subsequent pages contain boiler plate language	3	5	15	Y
Create a blank page on agreements to drop in a digitized image of the site plan	3	3	9	Y
Develop a Macro for developer agreements and other documents	3	4	12	Y
Finalize long term staffing requirements once the impacts of proposed process improvements are determined and documented	5	4	20	Y