



Lean Six Sigma DMAIC Improvement Story

Green Belt Project Objective:
**To Reduce the Number of Days to Procure Zoo
Materials**

Last Updated: 3-28-18

Team: ***Bearded Dragons***

Eric Kaminsky (Co-Team Leader) **Armando Gonzalez** (Co-Team Leader)

Alessandra Williams **Daniel Crespo**

Carol Kruse and Maria Nardi (Sponsors)

Christina Salinas Cotter (Process Owner)



Identify Project Charter

3. ✓

The team developed a team Project Charter and secured signed off from sponsor.

Project Charter		
Business Case	Project Name:	Reduce Zoo Miami Procurement Cycle Time
	Problem/Impact:	Time Sensitive materials are required to maintain animal exhibits and facilities throughout Zoo Miami to ensure they remain open to the public. Purchasing delays can adversely impact the Zoo's earned revenue and attendance as exhibits, programs, and amenities could be unavailable to the visitors. Delays can also lead to animal welfare issues which can jeopardize the Zoo's long standing accreditation.
	Expected Benefits:	Improve timeliness of purchases
Objectives	Outcome Indicator(s)	Q1-Number of Days to Complete Purchase
	Proposed Target(s)	10 Calendar Days
	Time Frame:	Nov 2017 thru March 2018
	Strategic Alignment:	Supports strategic objectives
Scope	In Scope:	Pooled Contracts
	Out-of-Scope:	Award Contracts
	Authorized by:	Maria Nardi, PROS Dept Director
Team	Sponsor:	Carol Kruse, Zoo Director; Maria Nardi, PROS Dept Director
	Team Leader:	Eric Kaminsky (Co-Team Leader) Armando Gonzalez (Co-Team Leader)
	Team Members:	Daniel Crespo, Alessandra Williams
	Process Owner(s):	Christina Salinas-Cotter
	Mgmt Review Team:	Carlos Maxwell, Mayra Morales, Carol Kruse, Maria Nardi, Christina Salinas Cotter
Schedule	Completion Date:	3/30/18
	Review Dates:	Monthly and Final Review in March 2018
	Key Milestone Dates:	See Action Plan

Define

Measure

Analyze

Improve

Control

2












Develop Project Timeline Plan

The team developed a Timeline Plan to complete their Project.


Legend:	
	= Actual
	= Proposed

WHAT: Reduce Zoo Miami Procurement Cycle Time


HOW	WHEN						
	Month 2017-2018						
	Nov	Dec	Jan	Feb	Mar	Apr	May
1. DEFINE		  Completed 12/15/17					
2. MEASURE		  Completed 1/5/18					
3. ANALYZE			  Completed 1/19/18				
4. IMPROVE				  3/30/18			
5. CONTROL							
							5/31/18



Project Alignment to Strategy



ZOO MIAMI STRATEGIC PLAN OVERVIEW 2017 - 2019




ANIMAL WELL-BEING

Goal: To be a leading zoological organization in delivering the highest standards of animal care, wellness and population sustainability practices, leveraging the natural environment of South Florida

Strategic Objectives:

- Develop and maintain a purpose-driven, resource efficient Institutional Collection Plan that informs and integrates with conservation and guest experience plans
- Implement animal wellness, training and enrichment programs to be a leader in the physical and psychological care and management
- Improve professional development and training opportunities for all staff that influence animal care
- Expand the preventive health and nutrition programs to advance overall animal healthcare




FINANCIAL STRENGTH

Goal: To utilize sound business practices to fulfill Zoo's mission leveraging the County's and Zoo Miami Foundation's support

Strategic Objectives:

- Evaluate and recommend management model for the Zoo's long-term financial sustainability
- Using a three-year revenue plan cycle, optimize revenue growth opportunities
- Improve business processes to reduce expenses and improve efficiencies
- Secure financial support for key components of the Master Plan Refresh
- Strengthen Zoo Miami Foundation's capacity to build the community's support base




CONSERVATION & STEWARDSHIP

Goal: To become a leader in subtropical wildlife conservation, education and environmental stewardship both globally and locally

Strategic Objectives:

- Implement the Zoo Conservation Plan that balances international support with local efforts fostering community and staff engagement
- Increase the Zoo's capacity as a regional hub for science education and engagement
- Develop and implement a comprehensive approach to environmental sustainability within all Zoo operations





PERFORMANCE EXCELLENCE

Goal: To establish an organizational culture of caring, collaboration and engagement

Strategic Objectives:

- Define and strengthen the Zoo's culture building upon PROS Dept. core values and uniquenesses of the Zoo
- Increase the value placed on and procedures for internal communication to support staff in fulfilling the Zoo's mission
- Evaluate and update standard operating procedures to foster collaboration, consistency of delivery, and efficiency of operations
- Strengthen performance management efforts and procedures
- Integrate and expand the volunteer program to enhance the guest experience and increase community engagement





GUEST EXPERIENCE

Goal: To deliver memorable guest experiences that engage diverse audiences in fun and learning

Strategic Objectives:

- Deliver consistently the desired guest experience
- Establish a formalized training program
- Utilize technology to support and enhance the desired guest experience
- Integrate brand and marketing messages to engage all of the Zoo's diverse audiences
- Implement a guest experience plan to engage guests with the Zoo's botanical gardens


ELEVATOR SPEECH

"At Zoo Miami we provide fun experiences that encourage visitors to:

Connect with animals and nature

Care for, and about, animals

Conserve our world"

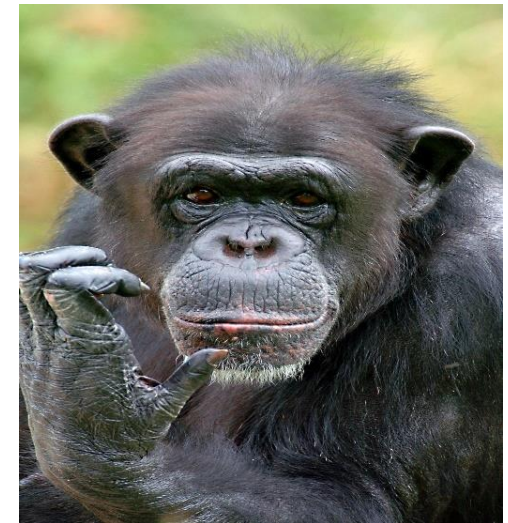




- Zoo Miami is an award-winning Miami-Dade County attraction that is accredited through the Association of Zoos and Aquariums (AZA). The Zoo is also the largest and oldest zoological garden in Florida, and the only tropical zoo in the continental United States.
- Today, Zoo Miami occupies almost **750 acres** (340 developed), and is home to more than **3,000 animals** representing over **500 different species** in exhibits that are entirely cageless.
- Zoo Miami is one of approximately 200 institutions that are accredited through AZA. Every five (5) years the Zoo must go through a rigorous application and inspection process to prove that the highest standards in animal care is provided while providing a fun and educational family experience that connect to various conservation efforts.



- Zoo Miami is projected to earn **\$15.4M in Revenue** and attract **over 1 million visitors** in current FY 17-18.
- The Zoo issues approximately **1,500 Purchase Orders per year** that requires a competitive bid process. Purchases range from construction materials required to maintain exhibits and facilities to animal enrichment items to support the physical and psychological needs of the animals.
- **Timely purchases are critical** in order for the Zoo to continue to grow revenue/attendance, maintain AZA accreditation, prevent visitor/employee/animal safety issues, and to support the Zoo's overall mission of sharing the wonder of wildlife and helping to conserve it for generations to come.



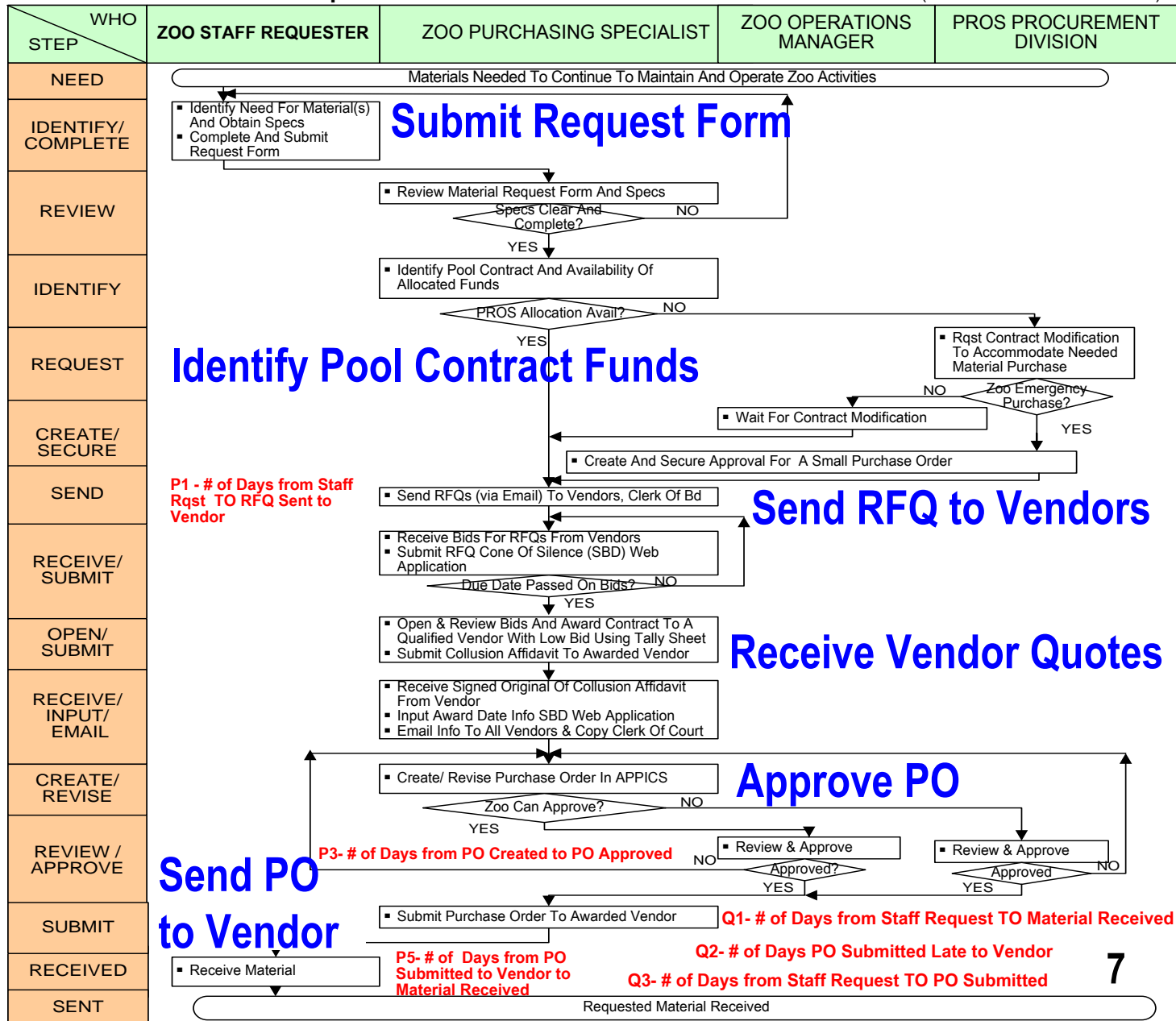
Construct Process Flow Chart

The team constructed a Process flow chart describing the Process.

The team next looked Stakeholder process needs.

Fulfill Material Purchase Requests For ZOO Miami

(Process Owner: Zoo Director)



Stakeholder Needs

5. 

The team identified stakeholder needs for the process outputs.

Stakeholders Needs	
Stakeholders	Process Output Needs
Requestor	PO received timely
	PO has accurate amount and info
	PO has correct specs
Animals	Minimize delays in habitat and welfare needs
Zoo Guests	Working facilities
	Exhibits clean and available
	Safe environment
Employees/ Zoo Mgmt	Materials/equipment available to complete assignments
	Safe environment



Cost of Poor Quality

6.

The team identified the hidden costs of delayed POs.

Stakeholder	Pain Experienced	Annualized "Costs"
Requestor	<ul style="list-style-type: none"> Loss of Production OT to schedule Delay in completion 	<u>Labor costs</u> Rescheduling staff: $0.25 \text{ hours} * \$25.00 * 50\% * 1,500 \text{ of POs per year} = \$4,700$
Animals	<ul style="list-style-type: none"> Unsafe exhibits Containment issues Lack of enrichment/training items 	<u>Labor costs</u> Transferring animals to other exhibits/holding containments: $3 * \$20.00 * 52 \text{ weeks} = \$3,100$
Zoo Guests	<ul style="list-style-type: none"> Service interruptions Closed Exhibits Dirty and hazardous facilities/restrooms 	<u>Revenue Loss</u> Guest refunds: $\$22.95 * 1,200 \text{ refunds per year} = \$27,500$
Employees/ Mgmt	<ul style="list-style-type: none"> Lack of tools/materials to complete assigned work 	<u>Labor Costs</u> Downtime for Trades staff: $25 \text{ employees} * 1 \text{ hr/week} * 52 \text{ weeks} * \$20.00 = \$26,000$

Total Estimated Cost of Poor Quality Savings = \$61,300 Annually

Define Measure Analyze Improve Control



Identify Data Collection Needs

8.

The team developed a spreadsheet to help analyze the process.

Material Procurement Status Summary *(Every Row is a material Request)*

BCB	D E M O G R A P H I C S								M I L E S T O N E D A T E S											
	WHAT					WHO	WHERE	WHO	P	Q	R	S	U	V	W	X	Y	Z	AA	AB
	B	C	D	E	F	H	N	O												
	Line #	PO #	Material Description	Contract Name	Quantity	Cost	Vendor name	Item able to be purchased locally (Miami-Dade)?	Requester	1- Requested		2- Request For Quote (RFQ)		3- Purchase Order Created		4- Purchase Order Approved		5- Purchase Order Submitted		6- Requested Completed
									Date	Day	Date	Day	Date	Day	Date	Day	Date	Day	Date	Day
				Avg	Total		%Y			% Mo		% Mo	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo	% Mo
				25.5	\$253,020		82%			17.6		25.5	26.7		36.4		21.3		21.2	
1	3417	3" x 4" x 71" Cedar PL	Playground	1	\$2,828	Rep Service	N	Walkways Maintenance	6/11/17	Su	6/15/17	Th	6/20/17	Tu						
2	3351	Bulldozer Crawler Do	Equipment	1	\$3,350	Kelly Tractor	Y	Maintenance Super	6/15/17	Th	6/15/17	Th	6/20/17	Tu	6/21/17	We				
3	3916	Center Complete Spi	Coarse Agg	1	\$840	SDI Quarry	Y	Mechanic	8/4/17	Fr	8/4/17	Fr	8/8/17	Tu	8/8/17	Tu	8/9/17	We	8/9/17	We

DURATION							OUTCOMES				BB	
Target Days							AM	AN= Today-AM Due	AO= Today-AL Due	AP= Y-P Target= 8		AR= Y' if AP<=0
1	5	1	1	6	14	8				AL= Y-P		
AC= R-P	AD= U-R	AE= W-U	AF= Y-W	AG= AA-Y	AH= AA-P	AL= Y-P	Next Milestone Due	# of Days Until Mile- stone Due	# of Days Until Rqst Cmpltn Due	# of Days PO Submttd LATE	PO Submttd Timely?	Comments
Staff Reqstd TO Rqst RFQ	Rqst RFQ TO PO Created	PO Created TO PO Approved	PO Approved TO PO Submitted	PO Submitt ed TO Rqst Compld	Staff Rqstd TO Rqst Compld	Rqst Cmpld TO PO Submitted						
Avg # of Days										# Past Due	# Past Due	
3.9	8.5	0.4	1.5	0.0	14.3	14.3		2	2	6.3	18%	
P1	P2	P3	P4	P5	Q1	Q3	P7		P8	Q2	Q4	
-5	6						4-Approve PO	-50	-44			
0	5	0					5-Submit PO	-49	-43			
0	4	0	1	0	5	5	**Completed**	NA	NA	-3	Y	

Define Measure Analyze Improve Control

10



Target Setting Methodology: P6-CE020f: % Cases in Compliance prior to NOV

The team set the target using **Florida Benchmarking Consortium's (FBC's) comparable data.**

The team noted that **the Zoo ranked 6th overall against** counties and cities for the most recent year.

The team selected comparable city and counties for analysis.


FBC Comparative Data <i>(copy & Paste into the white cell with blue text columns)</i>								
Organization	Good Direction Up or Down?	Comparable? Y/N	Fiscal Yr Performance for: PU021 - Avg # Business Days from requisition to issuance of purchase order for formal bids (RFP)				Rank	Rank
	Down		3rd Most Recent Yr Performance	2nd Most Recent Year Performance	Most Recent Year Performance	Average Performance	3 Year Avg	Most Recent Year
			Average for below columns					
		% Y						
		54%	67.5	130.0	87.3	76.9	6.9	6.9
1	Alachua County	Y		30	45	37.5	7	7
2	Broward County	N		376	344	360	13	13
3	Charlotte County	N	79	96	81	85.3	9	9
4	Marion County	Y			5	5	5	5
5	Miami-Dade County	N	186	146	218	183.3	12	11
6	City of Cape Coral	N			120	120	11	10
7	City of Clermont	N			1	1	1	1
8	City of Deerfield Beach	Y			75	75	8	8
9	City of North Miami	N	3		229	116	10	12
10	City of Oviedo	Y			4	4	4	4
11	City of Port St. Lucie	Y			1	1	1	1
12	City of Tallahassee	Y	2	2	1.6	1.9	3	3
13	Zoo Miami	Y			10.2	10.2	6	6

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Target Setting Methodology

The team reviewed options provided by FBC's worksheet.

		FBC Target Setting Worksheet							
Target Selection Matrix		Good Direction (Down or Up)	Our Organization		3rd Most Recent Performance	2nd Most Recent Year Performance	Most Recent Year Performance		
		Down	Zoo Miami				10.2		
For Performance Indicator==>		PU021 - Avg # Business Days from requisition to issuance of purchase order for							
<div><div><div></div><div></div><div></div></div><div>Stoplight Legend <0 or > 50% from Current Perf 25%-50% from Current Perf < 25% from Current Perf</div></div> <div>Target Methodology (Based on)</div>		ALL Organizations				Only Comparable Organizations			
		3 Year		Most Recent Year		3 Year		Most Recent Year	
		Potential Target	Gap from 3 Yr Avg Performance	Potential Target	Gap from Most Recent Performance	Potential Target	Gap from 3 Yr Avg Performance	Potential Target	Gap from Most Recent Performance
1	ALL Organizations	93.40	-816%	87.29	-756%	17.58	-72%	2.00	80%
2	Top 10 Organizations	33.69	-230%	34.38	-237%	19.23	-89%	20.26	-99%
3	Top 5 Organizations	2.58	75%	2.52	75%	4.42	57%	4.36	57%
4	Top Organization	1.00	90%	1.00	90%	1.00	90%	1.00	90%
5	Our Best Perf	10.20	0%	10.20	0%	10.20	0%	10.20	0%
6	Our Avg Perf	10.20	0%	10.20	0%	10.20	0%	10.20	0%
7	Average of All Methods	25.18	-147%	24.27	-138%	10.44	-2%	8.00	22%

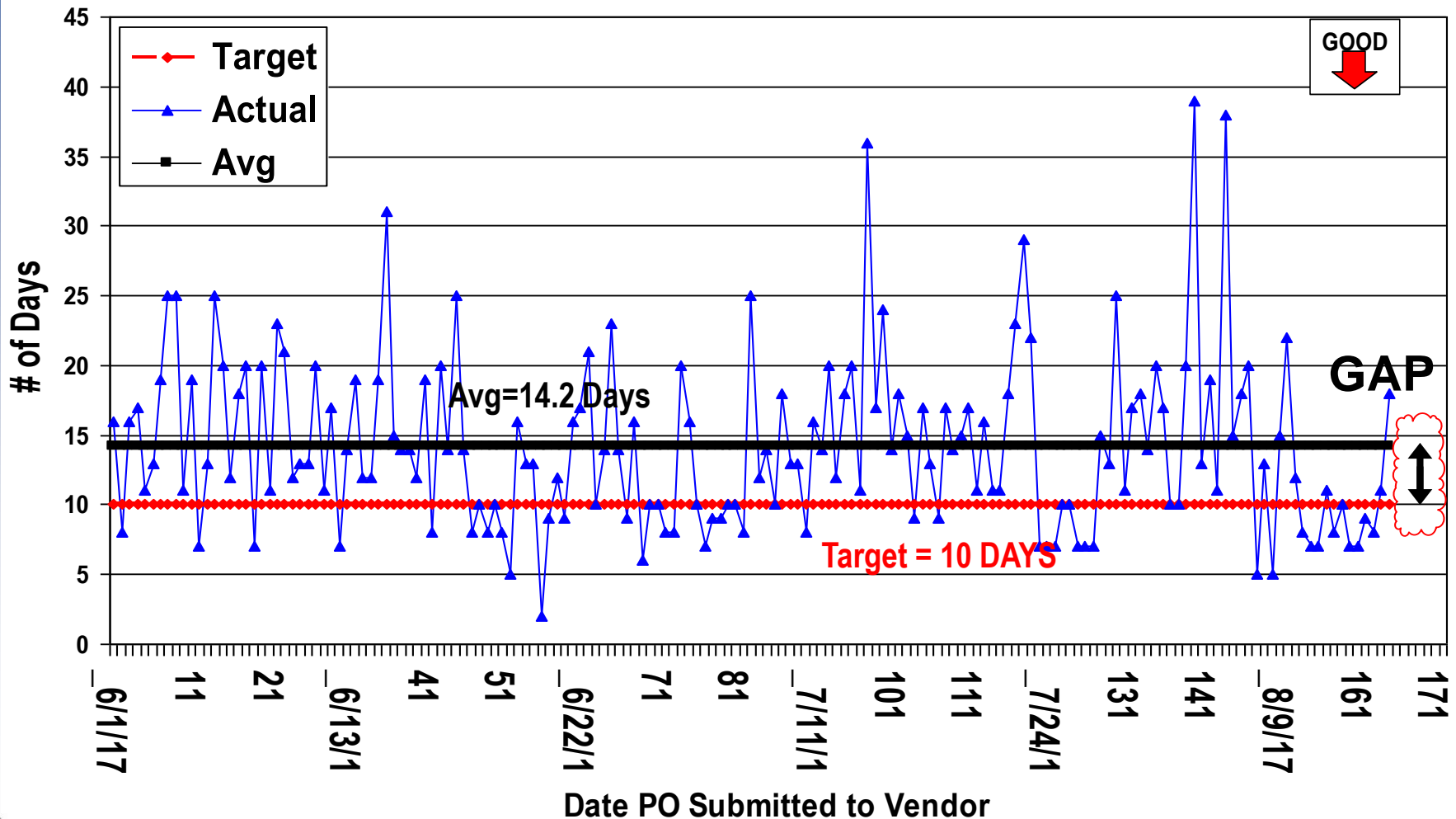
The team selected 8 Business Days as an initial target
or 10 Calendar Days as our target.



Display Indicator Performance “Gap”

The team collected Q3 indicator data and reviewed performance trends:

Q3- # of Days from Material Request TO Purchase Order Submitted to Vendor

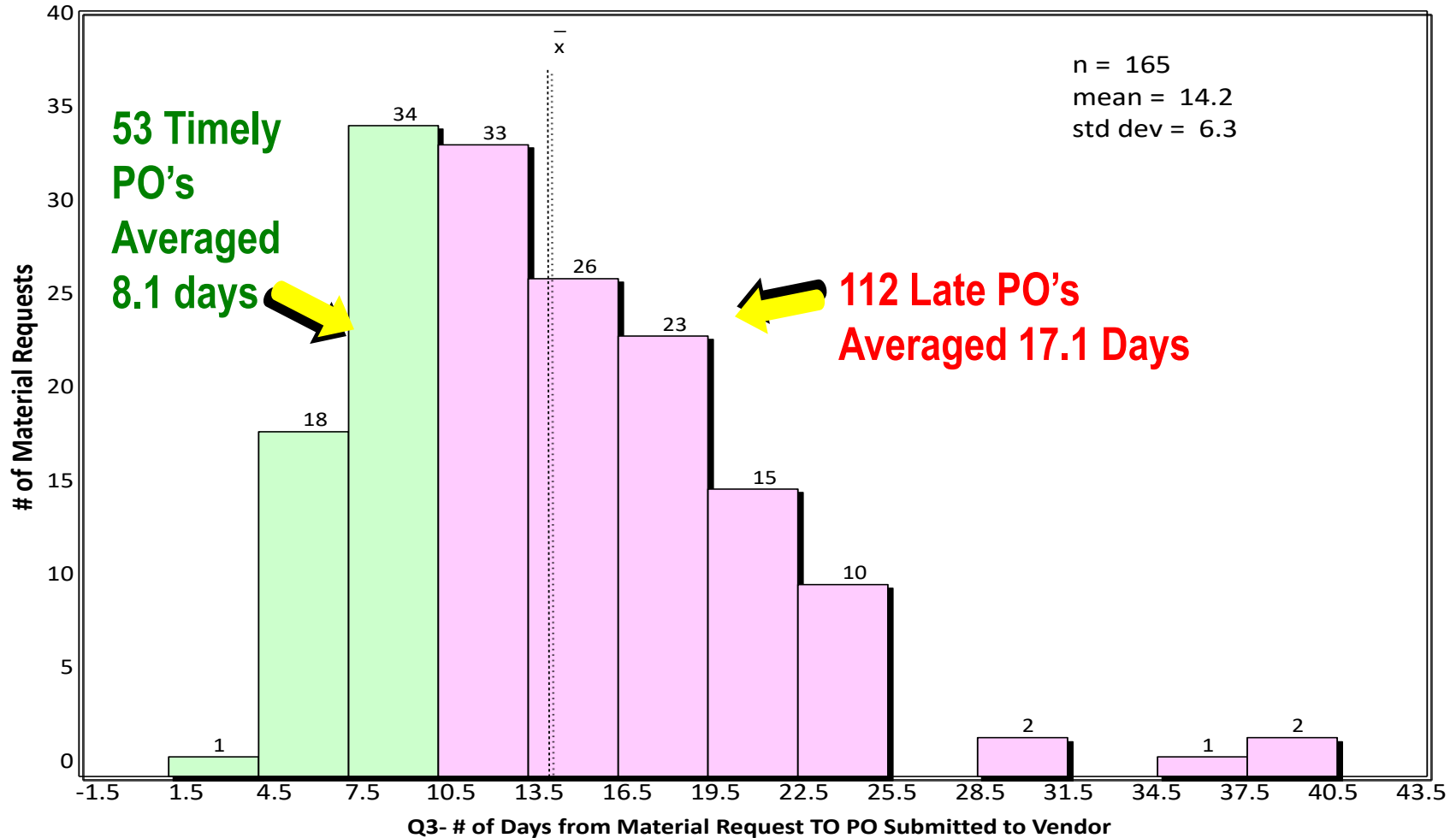


Stratify Problem

8. 

The team stratified the 165 Fulfilled Requests many ways and found...

Zoo Requests Fulfilled from June 1 though Aug 22, 2017



The team looked closer at the comparing the **LATE PO's** to the **TIMELY PO's**.

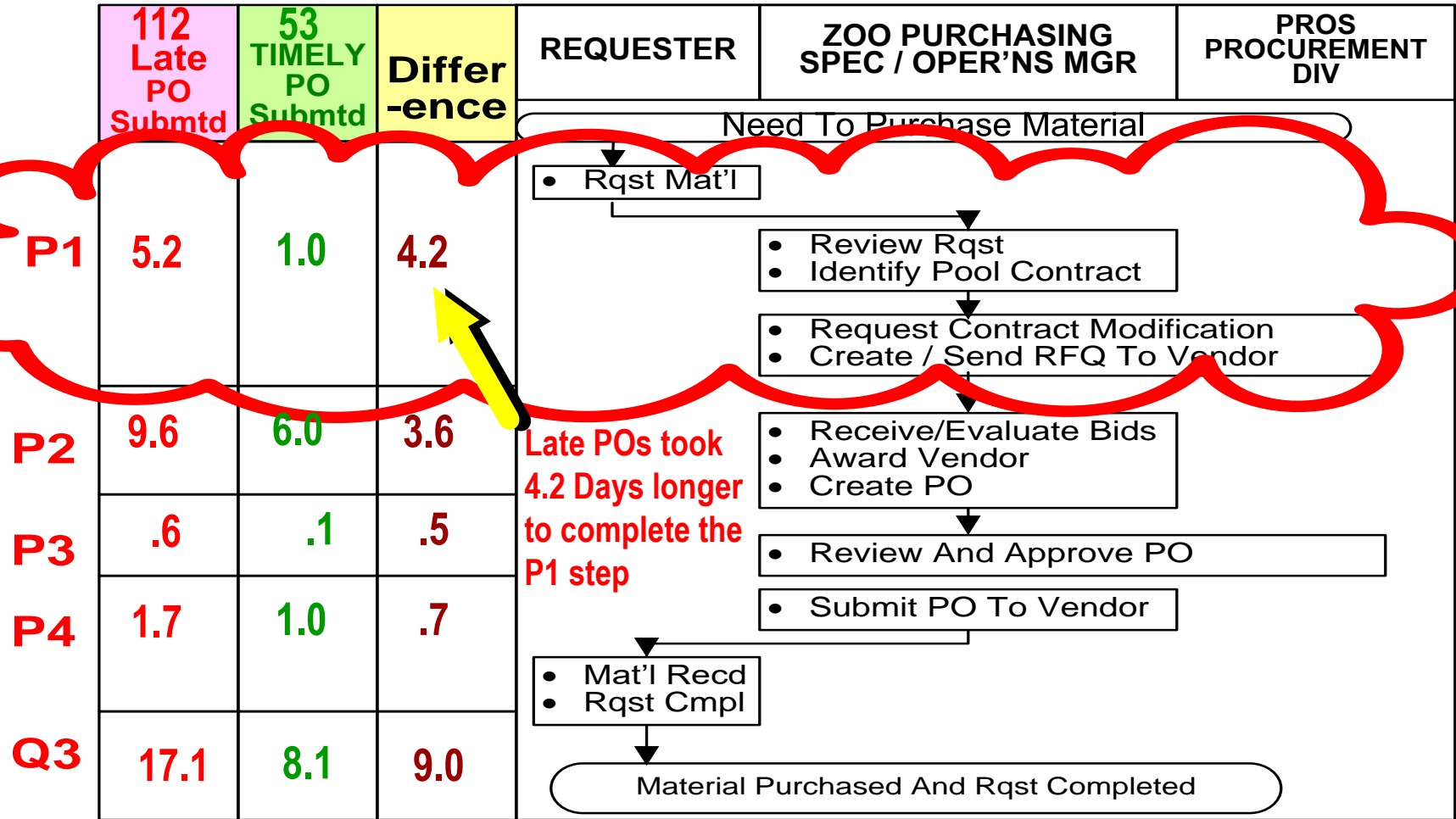
Define Measure Analyze Improve Control

14



Stratify the Problem

The team compared the **LATE Requests** to the **TIMELY Requests** and found...
Fulfill Material Purchase Requests for ZOO Miami



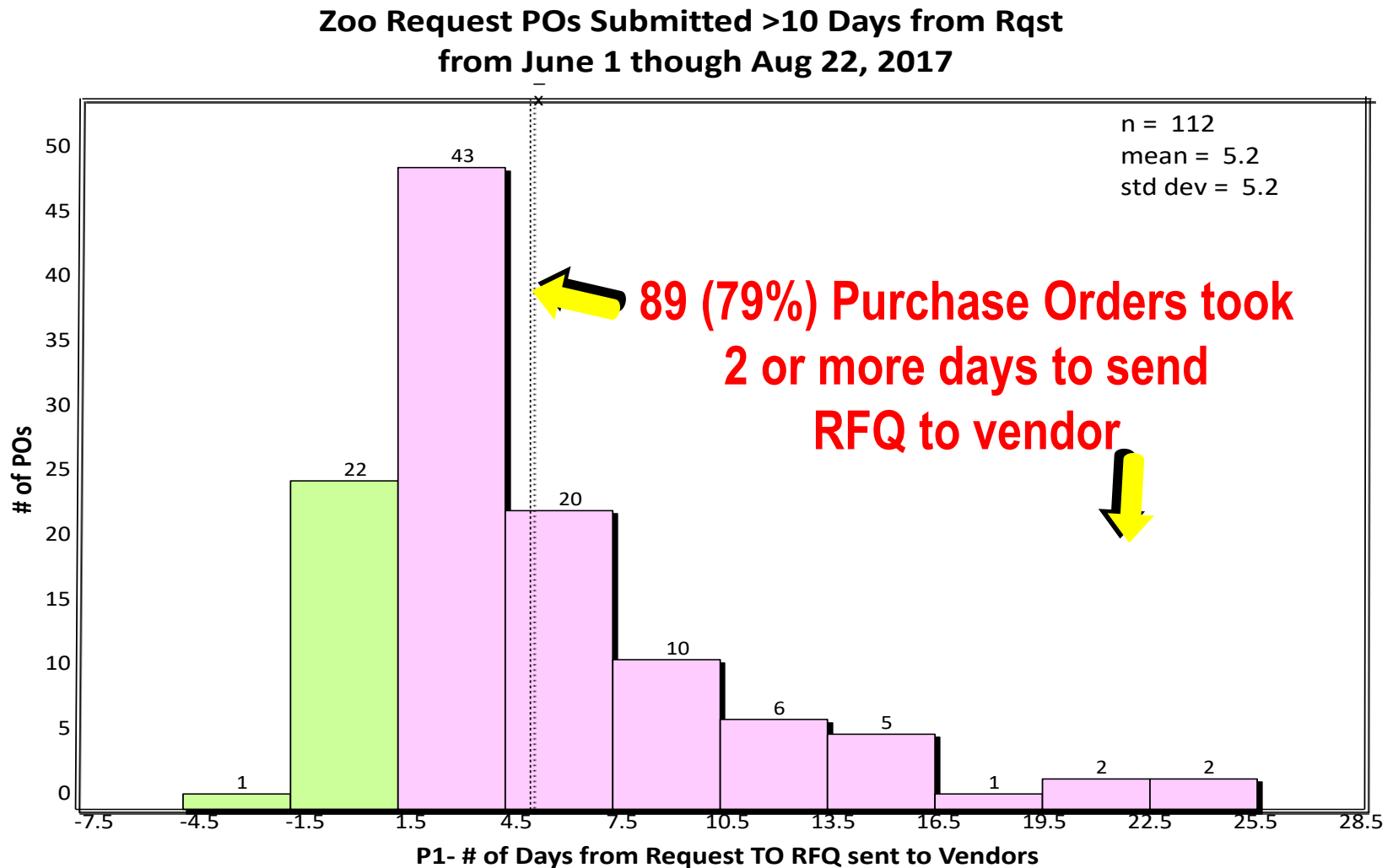
The team looked more closely at the **112 Late POs in Step P1.**



Stratify Problem

8. 

The team stratified the 112 Late POs for step 1 using a histogram and found...



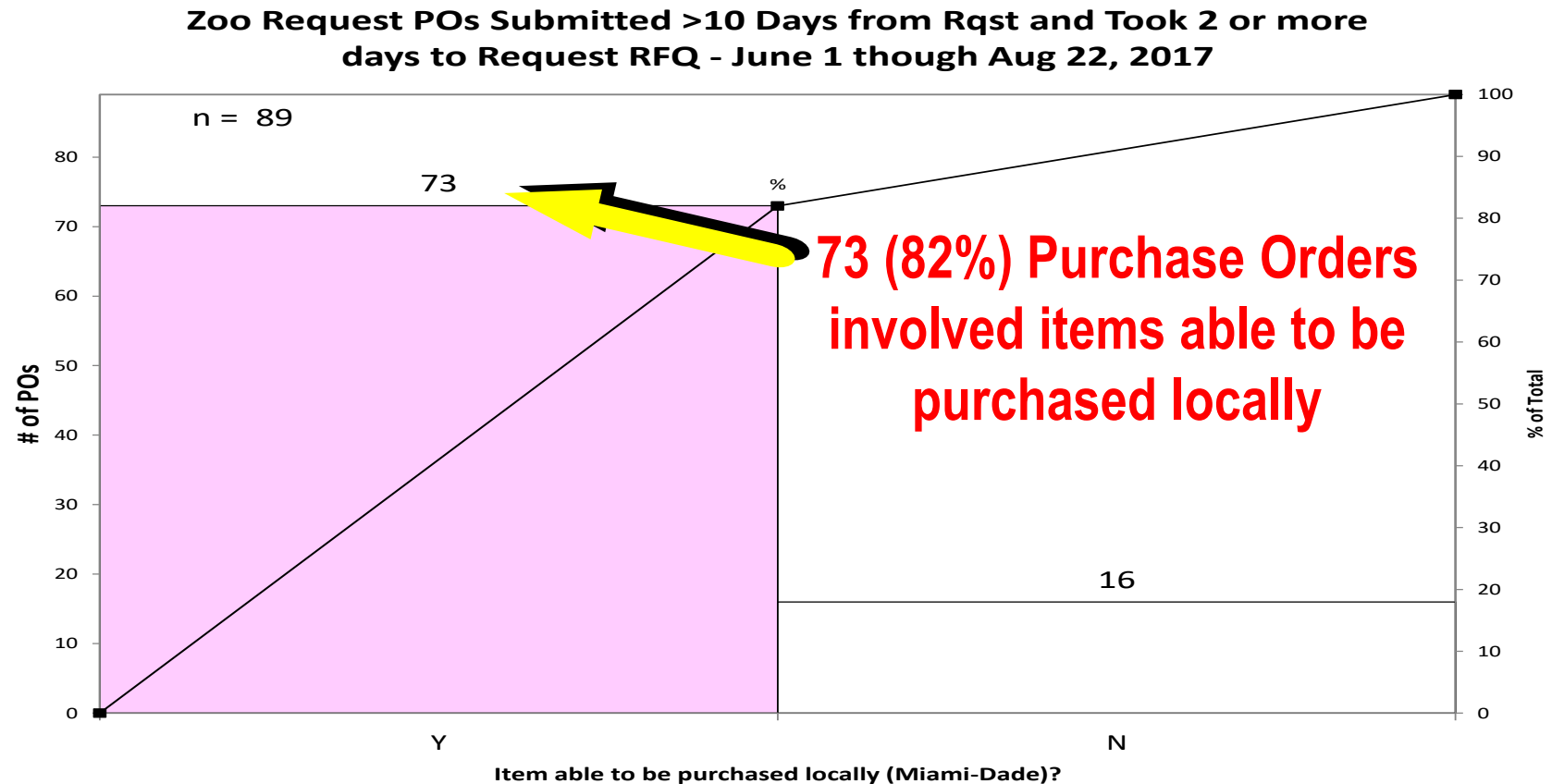
The team looked closer at the 89 Purchase Orders.



Stratify Problem

8., 9., 10. 

The team stratified 89 POs many ways and found...



Problem Statement: “73 Zoo POs submitted to vendors between June 1 through Aug 22, 2017 were submitted >10 Days after the Rqst and took 2+ days to Request RFQ and involved materials available locally”



Identify Potential Root Causes

11., 12. 

The team completed Single Case Bore Analysis...

Single Case Bore Analysis

Problem Statement: "73 Zoo Request POs submitted to vendors between June 1 through Aug 22, 2017 were submitted >10 Days after the Rqst and Took 2+ days to Request RFQ and involved materials available locally"

Reasons or Factors (that contributed to the late purchase order) A	Random Sample of 15 of the 73 POs															Total	Percentage
	1;PO#3322:Prominent Controller	2;PO#3736:6 - 40 watt UV Bubs	3;PO#3872:HYMAX Coupling;Plu	4;PO#3809:6001 2RS Bearings;1	5;PO#3811:Speedair Aluminum	6;PO#3243:Relay fuel cut part#2	7;PO#3251:Tensioner Pulley Idle	8;PO#3248:20 gal. Round Open	9;PO#3250:22" Push Button V-Ja	10;PO#3246:Rustoleum 7000 Sy	11;PO#3374:Ice Thickness Prob	12;PO#3727:48" x 96" x 125" Sh	13;PO#3949:4' x 8' 3/4" Regular	14;PO#3645:Sewell SW-20232 M	15;PO#3256:9 Forest Green Um		
1) Specs Submitted were missing info/not clear		X			X	X			X	X			X			6	40%
2) Purchasing Specialist busy/working on other assignments	B		X	X			X	X			X	X				6	40%
3) Purchasing Specialist out of office	C	X					X				X			X		4	27%
4) Warranty Research	X															1	7%

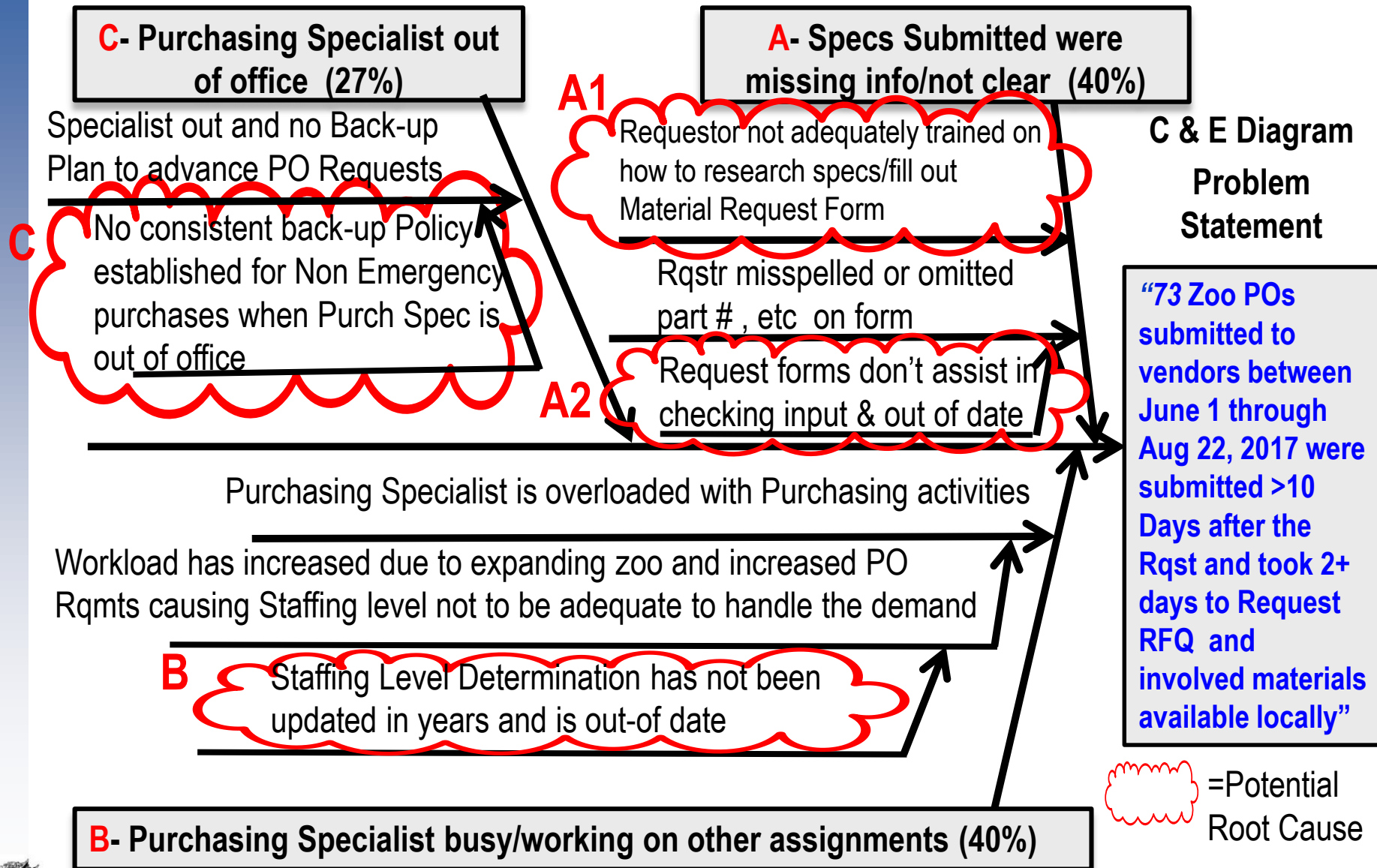
The team incorporated these factors into Cause and Effect Analysis.



Identify Potential Root Causes

12., 13. 

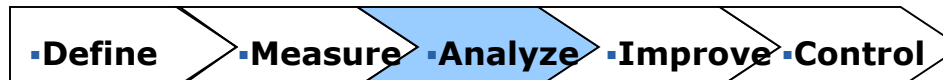
The team completed the Fishbone Analysis...



The team collected data to verify the root causes and found....

Root Cause Verification Matrix		
Potential Root Cause	How Verified?	Root Cause or Symptom
A1 Requestor not adequately trained on how to research specs/fill out Material Request Form	Interviewed Supv and verified no recent training provided for requestors	Root Cause
A2 Request forms don't assist in checking input & out of date	Observed form and noted a number of current technology improvements are not incorporated into form	Root Cause
B Staffing Level Determination has not been updated in years and is out-of date	Reviewed Zoo workload for last 10 years which increased significantly while Purchasing Specialist position is still at 1 position	Root Cause
C No consistent back-up Policy established for Non Emergency purchases when Purchasing Spec is out of office	Reviewed Written Procedures and interviewed Supv and no back-up designated for non emergency requests	Root cause








All four (4) were validated as root causes.



Identify and Select Countermeasures

14., 15. 

The team brainstormed many countermeasures and narrowed them down to these for evaluation:

Countermeasures Matrix						
Problem Statement	Verified Root Causes	Countermeasure	Legend:			
			5=Extremely 4=Very		3=Moderately 2=Somewhat 1=Little or None	
			Ratings			
			Effective-ness	Feasi-bility	Overall	Take Action? Yes/No
"73 Zoo Request POs submitted to vendors between June 1 through Aug 22, 2017 were submitted >10 Days after the Rqst and took 2+ days to Request RFQ and involved materials available locally"	A1 -Requestor not adequately trained on how to research specs/ fill out Material Request Form	A1 - Develop training on how to research specs and fill out form	5	5	25	
		A2- Require requestor to Submit request Electronically	4	4	16	
	A2 - Request forms don't assist in checking input & out of date	A3- Revise the current form to include more assistance to self check errors and omissions	4	4	16	
	B- Staffing Level Determination has not been updated in years and is out-of date	B1- Escalate the filling of the part time position for Purchasing Specialist	5	4	20	
		B2- Lock-in vendor Quotes for recurring items for 6 months (and change process)	3	5	15	
		B3- Implement an electronic Bid System for Vendors to be used by the Department	5	3	15	
	C- No consistent back-up Policy established for Non-Emergency purchases when Purch Spec is out of office	C1- Develop back-up Policy for when Purchasing Specialist is out of office	4	5	20	

The team selected 7 Countermeasures for implementation.

Define Measure Analyze Improve Control



Identify Barriers and Aids

16.



The team performed Barriers and Aids analysis on the selected Countermeasures.

Countermeasure(s): **Implement 7 countermeasures to Reduce Time to Procure Zoo Materials**

Barriers		Aids
Impact (H, M, L)	Forces against Implementation	Forces For Implementation
L	1) Push Back from Requestors <i>(Supported by Aids: A, B)</i>	A) Management very supportive of efforts
H	2) Limited Resource Dollars to spend <i>(Supported by Aids:A, B)</i>	B) Benefits- \$ savings, Zoo Receive Materials in timely manner; Animal Well-being; Internal/ External Satisfaction; Increased Revenue
M	3) Push Back from Vendors <i>(Supported by Aids:C)</i>	C) Vendors receive longer commitment

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













Develop and Implement Action Plan

Legend:
 = Actual
 = Proposed

The team implemented an Action Plan for the team's Countermeasures.

17. 

WHAT: Implement 7 countermeasures to Reduce Time to Procure Zoo Materials

HOW	WHO	WHEN						
		2018						
		Jan	Feb	Mar	Apr	May	Jun	Jul
1. Develop Countermeasures/ Practical Methods:								
A1- Develop training on how to research specs and fill out form	Team		2/19/18					
A2- Require requestor to Submit request Electronically	Eric		2/19/18					
A3- Revise the current form to include more assistance to self check errors and omissions	Eric		2/19/18					
B1- Escalate the filling of the part time position for Purchasing Specialist	Eric		2/19/18					
B2- Lock-in vendor Quotes for recurring items for 6 months (and change process)	Eric		2/19/18					
B3- Implement an electronic Bid System used by the Dept	Eric/ ISD		2/19/18					
C1- Develop back-up Policy for when Purchasing Spec is out of office	Eric		2/19/18					
2. Secure Management Approval of Countermeasures (share benefits and savings)	Team			3/30/1				
3. Communicate/Train Staff in Countermeasures and related policies/procedures (share benefits and Mgmt Support)	Team				4/30/1			
4. Implement Countermeasures	Team						5/31/1	
5. Establish On-going responsibilities and standardize countermeasures into operations	Team							On-Going

Define Measure Analyze Improve Control


23



A3- Revise form to assist requester to correct errors

The team created an MS Excel Material Request Form...
with **drop down boxes**.... and **validation**

14. ✓

 MATERIAL REQUEST FORM							
Please complete, validate info and submit via email attachment to => Ernesto.Martinez@miamidade.gov							
Requester: John Watt							
Requester Classification: Electrician						Date: 2/2/18	
QUANTITY	UNIT	PART DESCRIPTION	Part Number		Validation	Job Detail	Work Order #
2	Each	50 Amp Spider Box	Enter=>	3221415SBX	Error! Check Part #s	Picnic Field Electrical	4216
			Re-Enter=>	3221451SBX			
25	Feet	50 Amp copper wire	Enter=>	321314SBX	Validated	Picnic Field Electrical	4216
			Re-Enter=>	321314SBX			
4	Cu Yds	Concrete mix	Enter=>	D328761	Retype Part #	Picnic Field Electrical	4216
			Re-Enter=>				
APPROVED BY: Carson Foles						Date 2/4/18	

Define Measure Analyze Improve Control

B2- Lock in Vendor Quotes for 6 months

14. 

The team is proposing a 6 month “Price Lock” from vendors.

Page 1 of 4



REQUEST FOR QUOTATION

MIAMI-DADE COUNTY
Zoo Miami
12400 SW 152nd Street
Miami, Florida 33177

**THIS IS NOT
AN ORDER**

QUOTE #: FY18-A1222B
CONTRACT #: 7963-1/22-1 (BM)
Concrete Mix / Stockroom / 04
CONTACT PERSON: Ernesto Martinez

DATE ISSUED: 01/19/2018

QUOTE DUE DATE: 01/26/2018
QUOTE DUE TIME: 2:00 PM

PHONE: 305-251-0400 ext. 5084995 FAX: 305-596-8018

Email:

zoobids@miamidade.gov

SEALED QUOTE REQUIRED: ☐ YES ☒ NO

SCOPE OF WORK \ TECHNICAL SPECIFICATIONS \ ADDITIONAL ITEMS: Attached ☐

~All prices shall be F.O.B. Destination delivery point including all costs and freight unless otherwise specified.

Failure to complete and sign this form renders your bid/quotation non-responsive and ineligible for award. Requests for additional information or clarifications shall be made via email to the contact person identified on this form. A copy for all correspondence must be filed with the Clerk of the Board at clerkhcc@miamidade.gov

All applicable terms and conditions pertaining to this ITQ may be viewed online by clicking on the link listed below:
<http://www.miamidade.gov/procurement/library/boilerplate/general-terms-and-conditions-r15-2.pdf>

SUBSTITUTES ALLOWED: Yes ☒ No ☐

ITEM	DESCRIPTION	QTY	UNIT PRICE	TOTAL PRICE
1	Pallets of 60 Lbs. bag of Concrete Mix	4 Pallets	\$	\$
Quote Valid for 6 Months			TOTAL	\$

DELIVER TO: Zoo Miami Warehouse 12400 SW 152nd ST. Miami, FL 33177 Attn: Ernesto Martinez

Delivery is required in 07 calendar days after receipt of an order.

Otherwise specify number of calendar days for delivery after receipt of order: _____

Method of Award: In the Aggregate to the Lowest Responsive Responsible Bidder

Small Business Enterprise? Yes _____ No _____

Micro Business Enterprise? Yes _____ No _____

If yes, please provide your Certification Number: _____

Authorized Signature: _____ Title: _____

Print/Type Name: _____ Phone: _____

E-mail: _____ Fax: _____

Firm Name: _____ F.E.I.N. No.: ____/____/____/____/____/____

Address: _____ City: _____ State: _____

It is hereby certified and affirmed that the bidder shall accept any awards made as a result of this quotation. Bidder further agrees that prices quoted will remain fixed for a period of **6 Months** from date quotation is due. If awarded a purchases order or contract as a result of this solicitation, bidder further agrees that prices quoted shall remain fixed and firm for the term of the contract.

THE EXECUTION OF THIS FORM CONSTITUTES THE UNEQUIVOCAL OFFER OF PROPOSER TO BE BOUND BY THE TERMS OF ITS PROPOSAL. FAILURE TO SIGN THIS SOLICITATION WHERE INDICATED ABOVE BY AN AUTHORIZED REPRESENTATIVE SHALL RENDER THE PROPOSAL NON-RESPONSIVE. THE COUNTY MAY, HOWEVER, IN ITS SOLE DISCRETION, ACCEPT ANY PROPOSAL THAT INCLUDES AN EXECUTED DOCUMENT WHICH UNEQUIVOCALLY BINDS THE PROPOSER TO THE TERMS OF ITS OFFER.

Quote Valid for 6 Months

Define Measure Analyze Improve Control



Estimated Return on Investment (ROI)

The team estimated the net benefits and ROI.

21. 

ROI WORKSHEET for: Reducing Time to Procure Zoo Materials

ITEMIZED COSTS (DESCRIPTION)	\$ VALUE (ANNUALIZED)	ITEMIZED BENEFITS (DESCRIPTION)	\$ VALUE (ANNUALIZED)
A1- Develop training on how to research specs and fill out form	\$500	Rescheduling staff: 0.25 hours* \$25.00* 50%*1,500 of POs per year= \$4,700 X80%	\$3,760
A2- Require requestor to Submit request Electronically	No Cost		
A3- Revise the current form to include more assistant to self check errors and omissions	No Cost	Transferring animals to other exhibits/ holding containments: 3* \$20.00* 52 weeks= \$3,100 X80%	\$2,480
B1- Escalate the filling of the part time position for Purchasing Specialist	No Cost		
B2- Lock-in vendor Quotes for recurring items for 6 months (and change process)	No Cost	Guest refunds: \$22.95*1,200 refunds per year= \$27,500X 80%	\$22,000
B3- Partner with OMB/stakeholders to conduct decision analysis for determining viability of electronic Dept-wide Bid System for Vendors	\$2,000	Downtime for Trades staff: 25 employees*1 hr/week* 52 weeks* \$20.00= \$26,000 X80%	\$20,800
C1- Develop back-up Policy for when Purchasing Spec is out of office	No Cost		
Total Annualized Costs	\$2,500	Total Expected Annualized Benefits	\$49,040
Net Benefits==>		\$46,540	
ROI==>		19 : to 1 ratio	



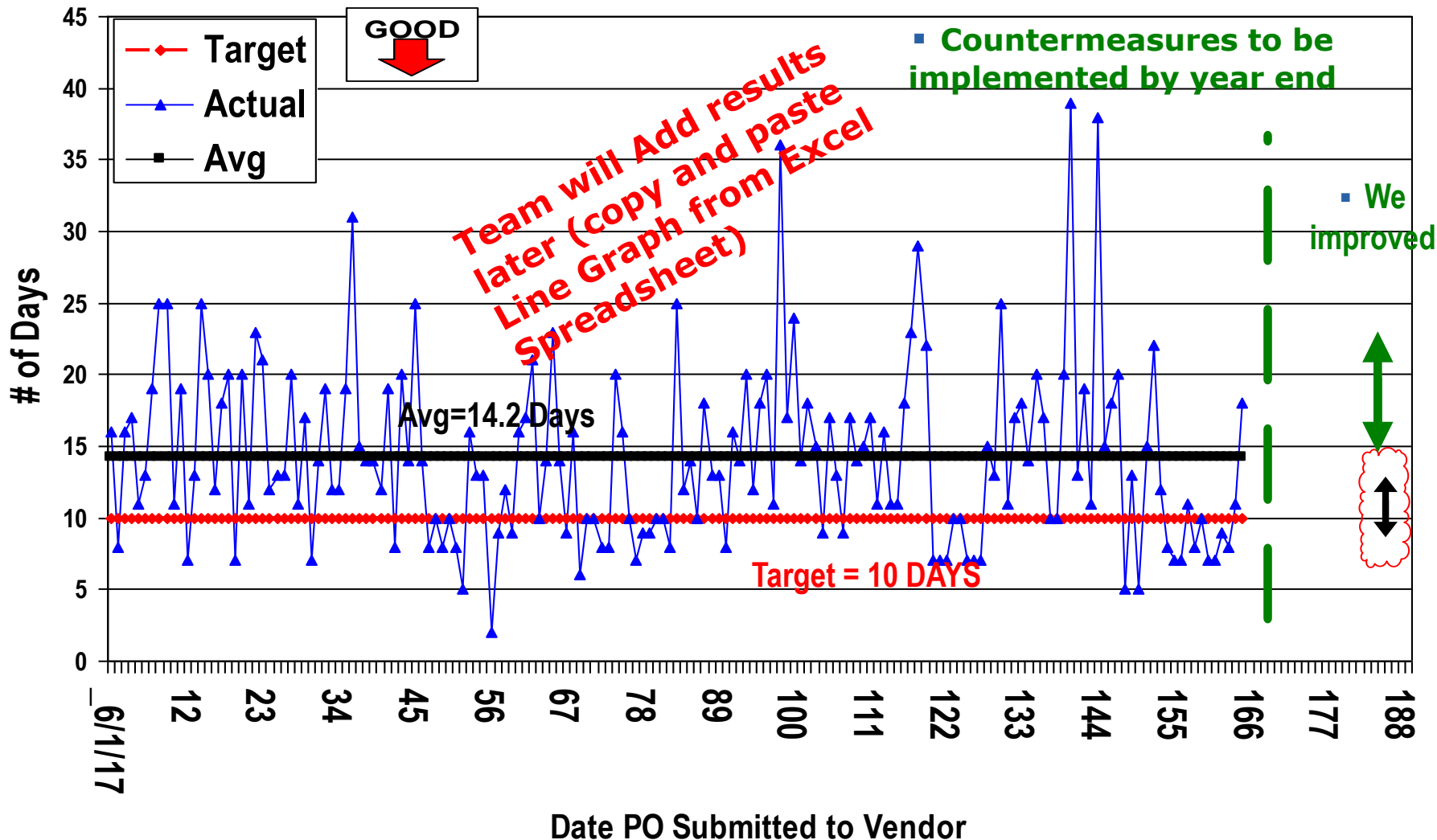
Review Results

19., 21.



The team collected indicator data and reviewed performance trends:

Q3- # of Days from Material Request TO Purchase Order Submitted to Vendor



The team will continue to monitor the countermeasures.



Standardize Countermeasures

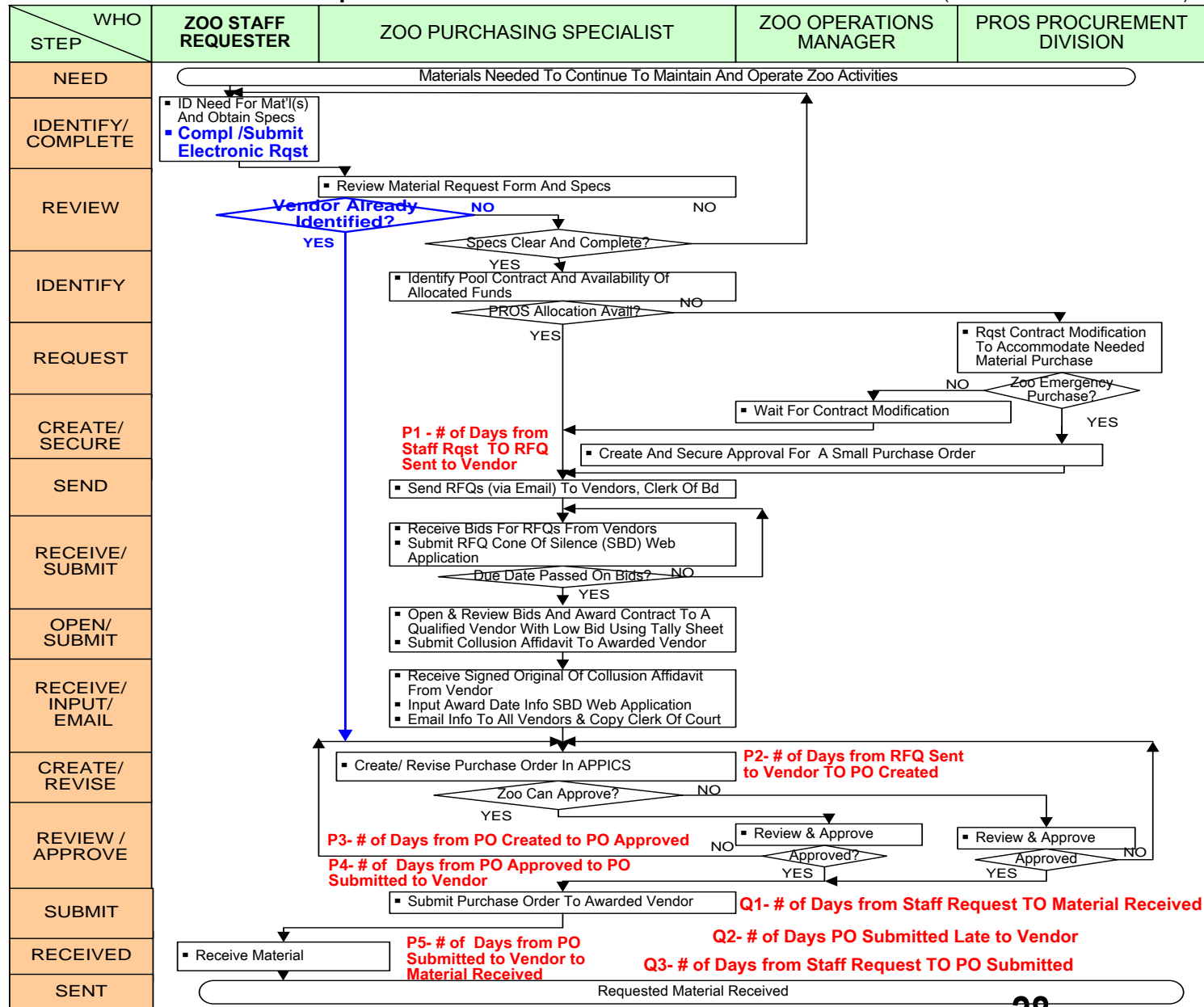
22.



The team incorporated their countermeasures into their Process Flowchart.

Fulfill Material Purchase Requests For ZOO Miami

(Process Owner: Zoo Director)



Standardize Countermeasures

23.



The team completed the Process Control System form for the Process.

Process Control System						
Process Name: Fulfill Material Purchase requests for Zoo Miami			Process Owner: PROS Asst Director			
Process Customer: Patrons, Zoo Staff, Zoo Animals			Critical Customer Requirements: Secure Requested Materials timely			
Process Purpose: Procure Materials needed for Zoo Miami Operations			Current Sigma Level: TBD			
			Outcome Indicators: Q1, Q2, Q3			
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?	
P1	# of Days from Staff Rqst to RFQ Sent to Vendor	2 Days	(Date RFQ Sent)- (Date Staff Rqst)	Monthly	Zoo Operations Mgr	Zoo Procurement Spreadsheet; escalate to Mgmt
P2	# of Days from RFQ Sent to Vendor to PO Created	6 Days	(Date PO Created)- (Date RFQ Sent)	Monthly	Zoo Operations Mgr	Zoo Procurement Spreadsheet; escalate to Mgmt
P3	# of Days from PO Created to PO Approved	1 Day	(Date PO Approved)- (Date PO Created)	Monthly	Zoo Operations Mgr	Zoo Procurement Spreadsheet; escalate to Mgmt
P4	# of Days from PO Approved to PO Submitted to Vendor	1 Day	(Date PO submitted to Vendor)- (Date PO Approved)	Monthly	Zoo Operations Mgr	Zoo Procurement Spreadsheet; escalate to Mgmt
P5	# of Days from PO Submitted to Vendor to Material Received	5 Days	(Date Material Recd)- (Date PO Submitted to Vendor)	Monthly	Zoo Operations Mgr	Zoo Procurement Spreadsheet; escalate to Mgmt
Q1	# of Days from Staff Request to Material Received	15 Days	(Date Material Recd)- (Date Staff Rqst)	Monthly	Zoo Operations Mgr	Zoo Procurement Spreadsheet; escalate to Mgmt
Q2	# of Days PO Submitted Late to Vendor	0 Days	(Date PO Submitted)- (Date Staff Rqst +10 days)	Monthly	Zoo Operations Mgr	Zoo Procurement Spreadsheet; escalate to Mgmt
Q3	# of Days from Staff Request to PO Submitted	10 Days	(Date PO Submitted to Vendor)- (Date Staff Rqst)	Monthly	Zoo Operations Mgr	Zoo Procurement Spreadsheet; escalate to Mgmt

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

The team is proposing to use a specially designed Mgmt Report to monitor ongoing and track through Active Strategy.

Define Measure Analyze Improve Control

29



Standardize Countermeasures

23.



The team will use a specially created spreadsheet that will help the Purchasing Specialist manage the Requests during the process. The spreadsheet displays the Next Process Milestone Step Due and the number of days until that step is due.

Material Procurement Status Summary (Every Row is a material Request)

Line #	BCB M O G R A P H I C S					MILESTONE DATES															
	WHAT			WHO	WHO	P	Q	R	S	U	V	W	X	Y	Z	AA	AB	AM	AN= Today-AM Due	AO= Today-AL Due	
	B	C	D	H	O																
	PO #	Material Description	Contract Name	Vendor name	Requester	1- Requested Date	Day	2- Request For Quote (RFQ) Date	Day	3- Purchase Order Created Date	Day	4- Purchase Order Approved Date	Day	5- Purchase Order Submitted Date	Day	6- Material Received Date	Day	Next Milestone Due	# of Days Until Mile- stone Due	# of Days Until Rqst Cmpltn Due	
							% Mo		% Mo		% Mo		% Mo		% Mo			# Past Due	# Past Due		
						20.0		24.8		26.7		36.4		20.0		20.0			6	6	
																				P7	P8
1	3417	3" x 4" x 71"	Playground	Rep Servi	Walkways	1/1/18	Mo	1/3/18	We	1/8/18	Mo	1/15/18	Mo	1/19/18	Fr			6-Complete Rqst	4	-5	
2	3351	Bulldozer Cr	Equipment	Kelly Trac	Maint Supe	1/1/18	Mo	1/5/18	Fr	1/10/18	We	1/11/18	Th					5-Submit PO	-8	-5	
3	3923	35 Cases Har	Electrical	American	Custodial S	1/1/18	Mo	1/10/18	We	1/12/18	Fr							4-Approve PO	-7	-5	
4	3916	Center Comp	Coarse Agg	SDI Quar	Mechanic	1/18/18	Th											2-Rqst RFQ	-1	12	
5	3491	Drum of R -	Refrigeran	Grainger	A/C Tech	1/16/18	Tu	1/17/18	We									3-Create PO	3	10	



Lessons Learned

- 1) Learned how to solve a “Cycle Time” problem using a flowchart...duration data helped identify the step that was getting delayed in the late requests.
- 2) Single Case Bore Analysis was helpful in narrowing the team’s focus to identify root causes.
- 3) Pareto analysis using QCTools was quick and easy.

Next Steps

Continue to implement countermeasures and monitor performance results using the specially designed management report and track through Active Strategy.

