

Doing Right of Way a New Way

Using Lean Management in Utility Right of Way Acquisition

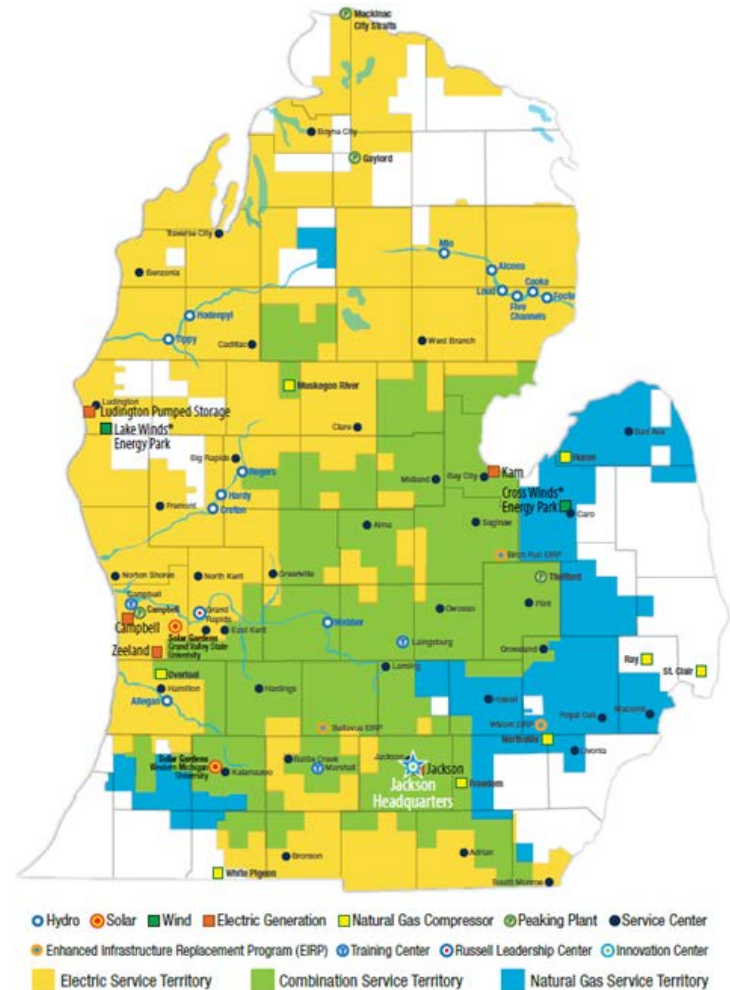
The CMS ENERGY logo is located in the bottom right corner of the slide. It features the text "CMS ENERGY" in a blue, sans-serif font, with a green swoosh underline that starts under "CMS" and ends under "ENERGY".

CMS ENERGY

Who are we?

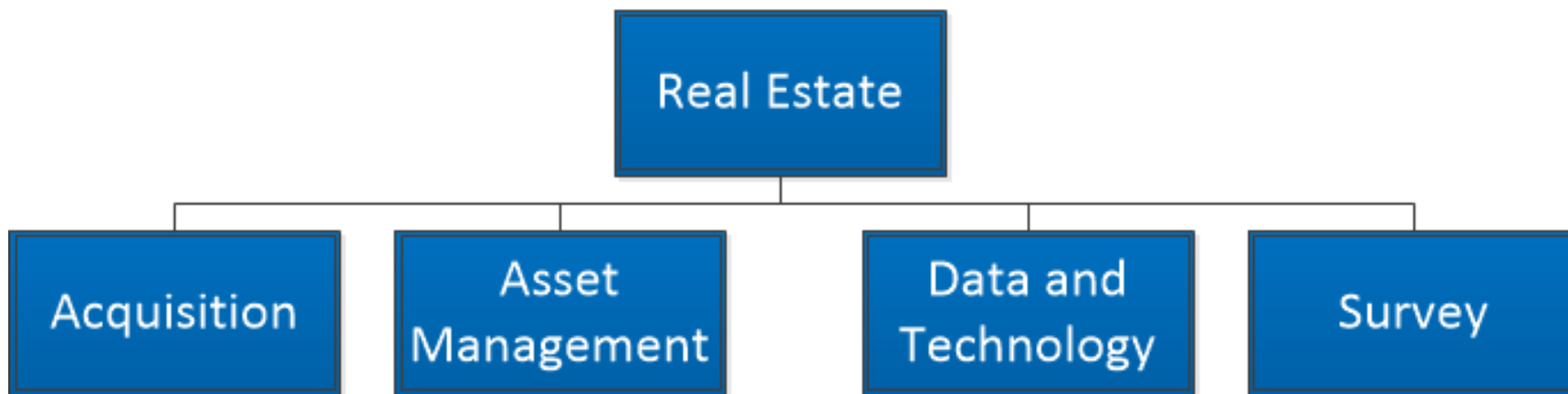
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- **6.7 million Michiganders count on us to serve**
 - We have more than 8,000 employees and thousands more contractors
- **Natural Gas**
 - More than 1,600 miles of transmission lines
 - 28,400 miles of distribution mains
 - 15 storage fields
- **Electric**
 - 71,622 miles of distribution lines



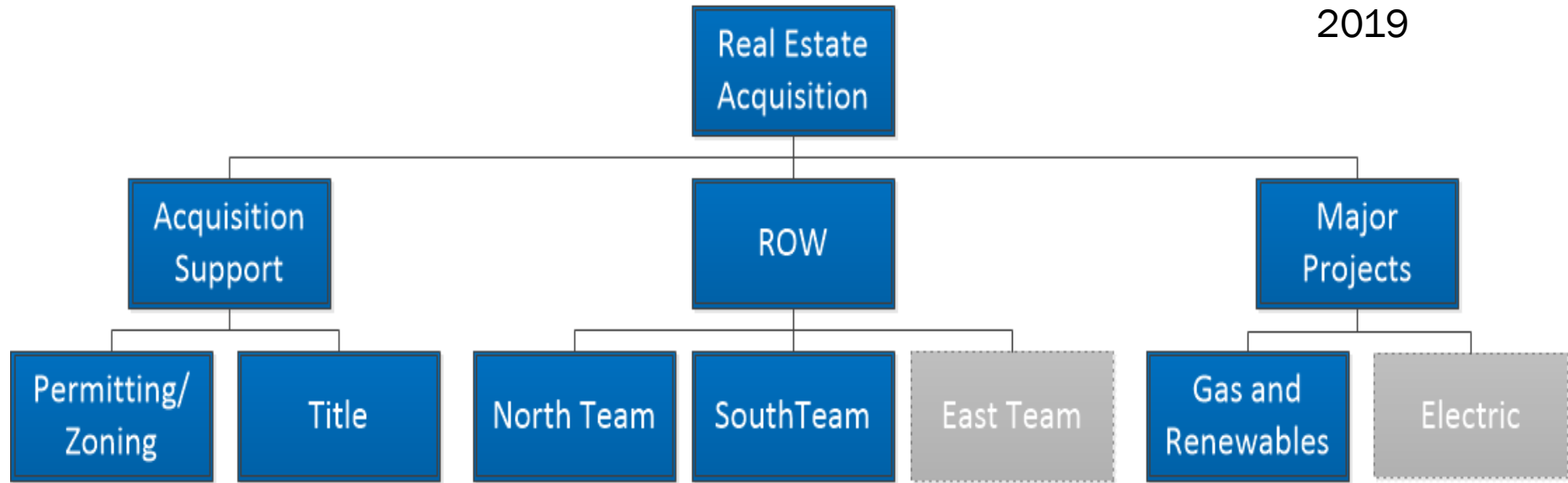
Real Estate

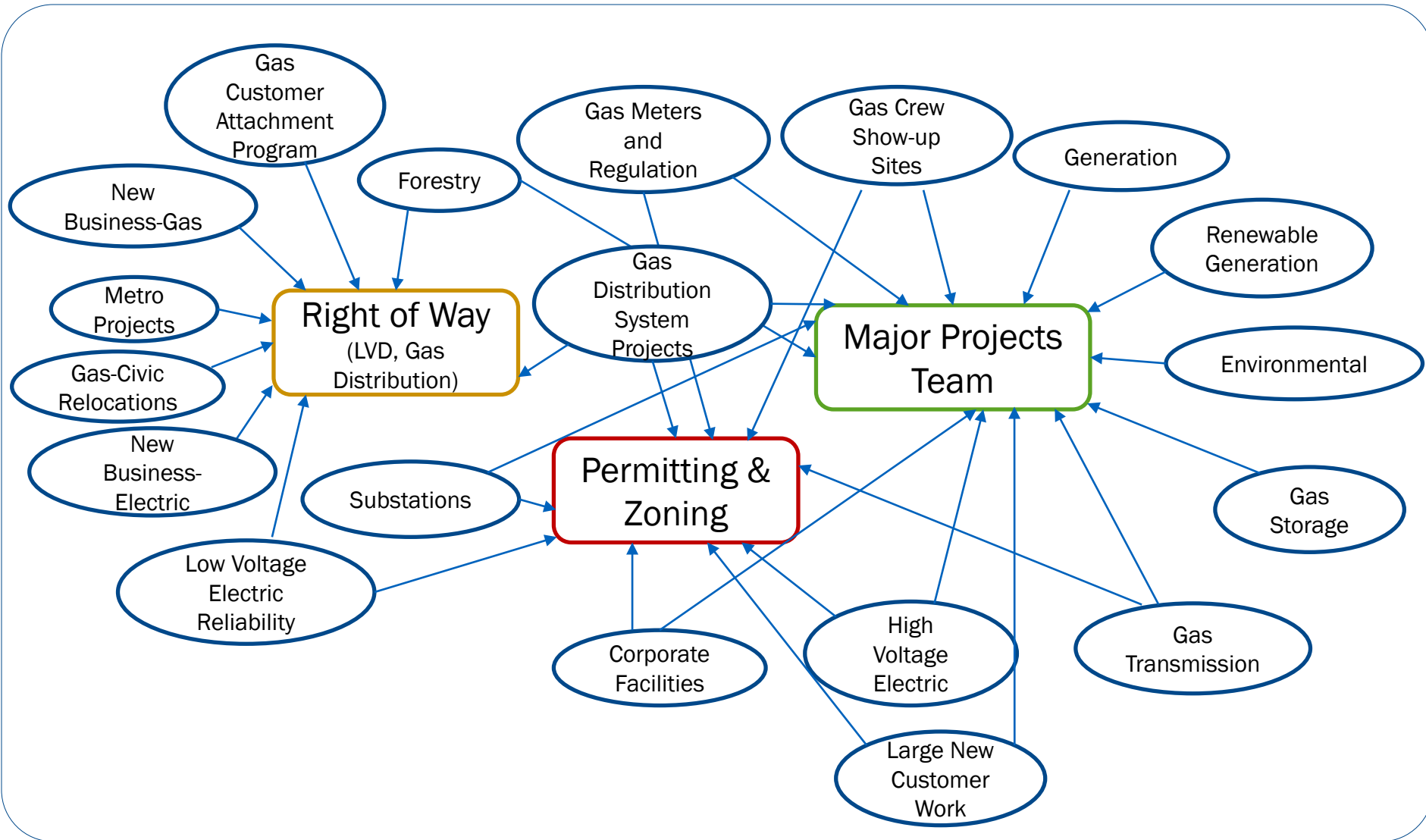
69 Employees



Real Estate Acquisition Org Structure

34 Employees
Adding 5 New
Employees in
2019





Lean Management pioneered by Toyota Motor Company (TPS)

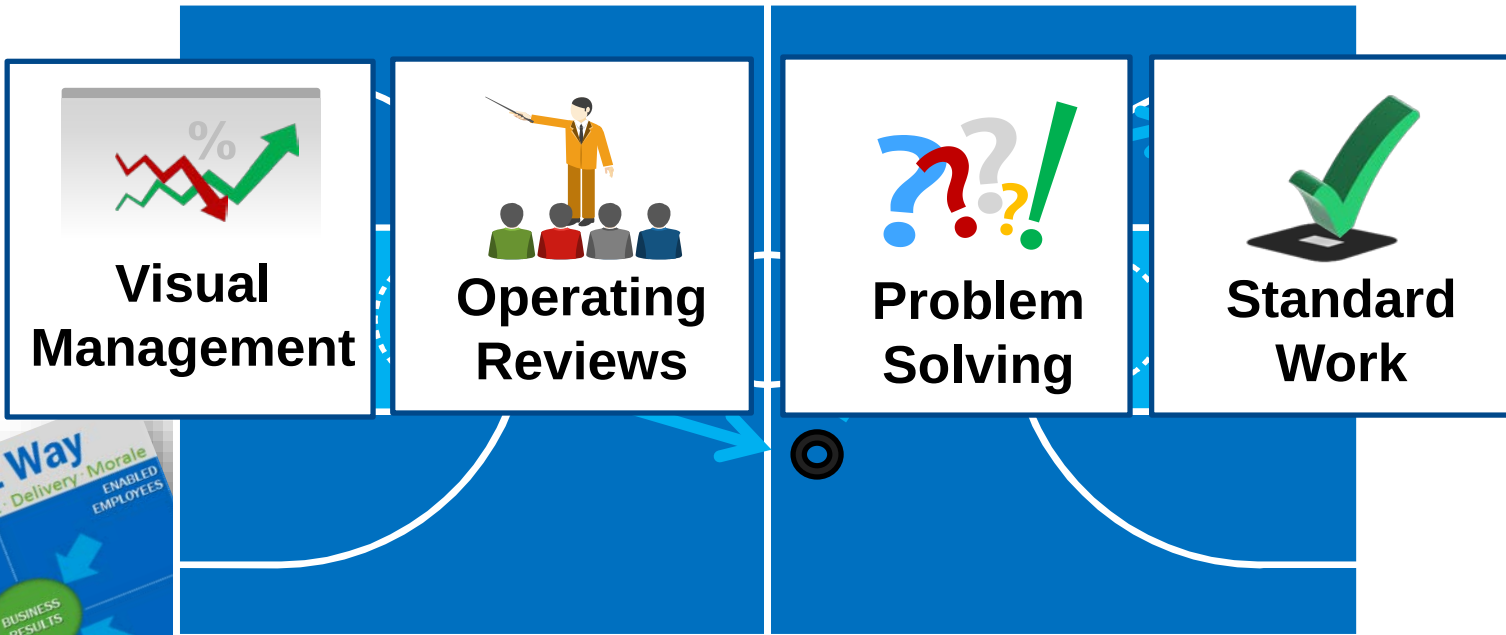
- Developed 1948 -1975
- Came to US in the 1980's

Key Concepts (According to Brad)

- Kazian-"Improvement" activities that continuously improve all functions
- Principle 4. Heijunka-leveling off production
- Principle 5. Stop and fix problems to get quality right
- Principle 6. Standardized tasks
- Principle 7. Visual Control
- Principle 12. Genchi Genutso-"Go and See" go to where the work is done
- Principle 14. Hansei-Relentless Reflection

CE WAY: 4 Basic Plays

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Keys: 1, 3, 10

- 1 Second - Understand the Status
- 3 Seconds - Understand the Trend
- 10 Seconds - Understand the reasons and what is being done

Requirements

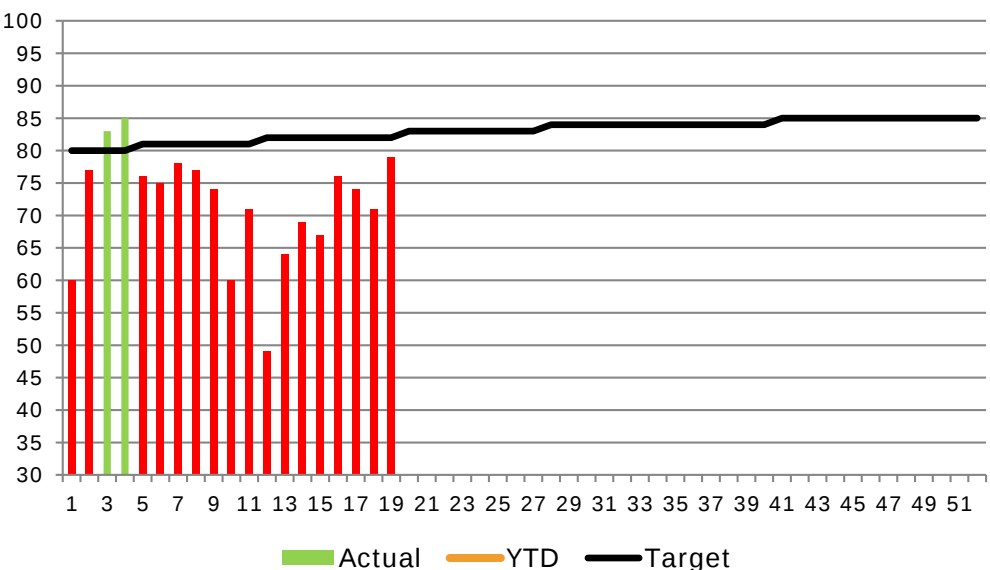
- Clear and easy to understand charts
- Target driven metrics
- Metrics are managed by the level of the organization that can control the outcomes



PROPERTY RIGHTS AVAILABILITY %

WEEKLY TREND THRU MAY 11, 2018

	ACTUAL	TARGET	GAP
CURRENT WK	79 %	82 %	3 %
YTD	70 %	82 %	12 %

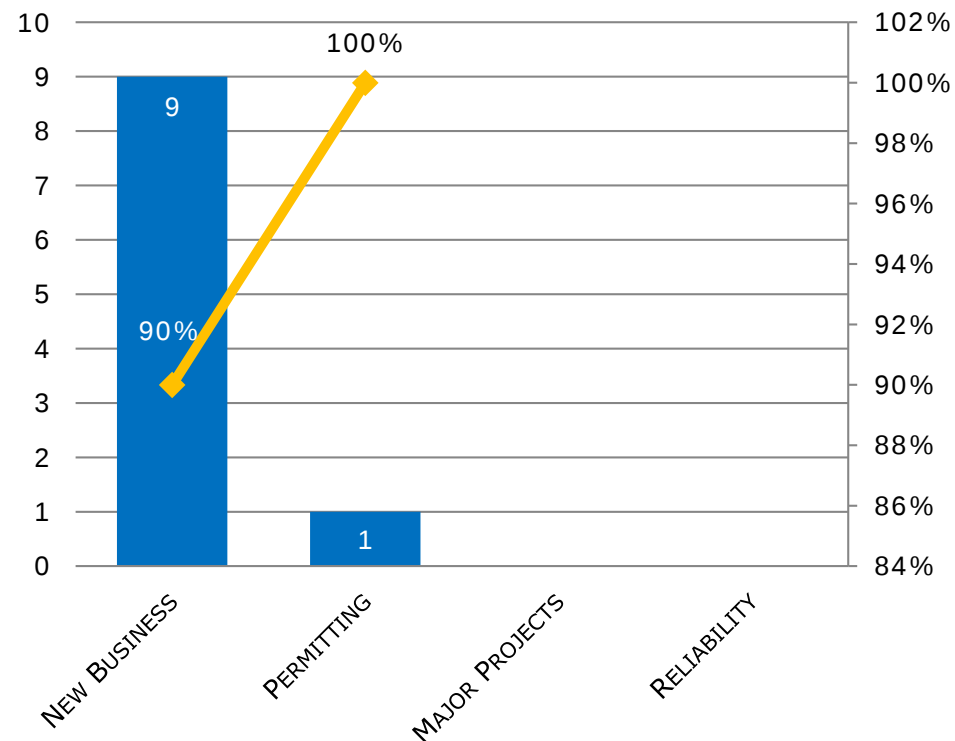


	Total Projects	Misses	Percent On Time
Week	47	10	79%
YTD	1077	325	70%

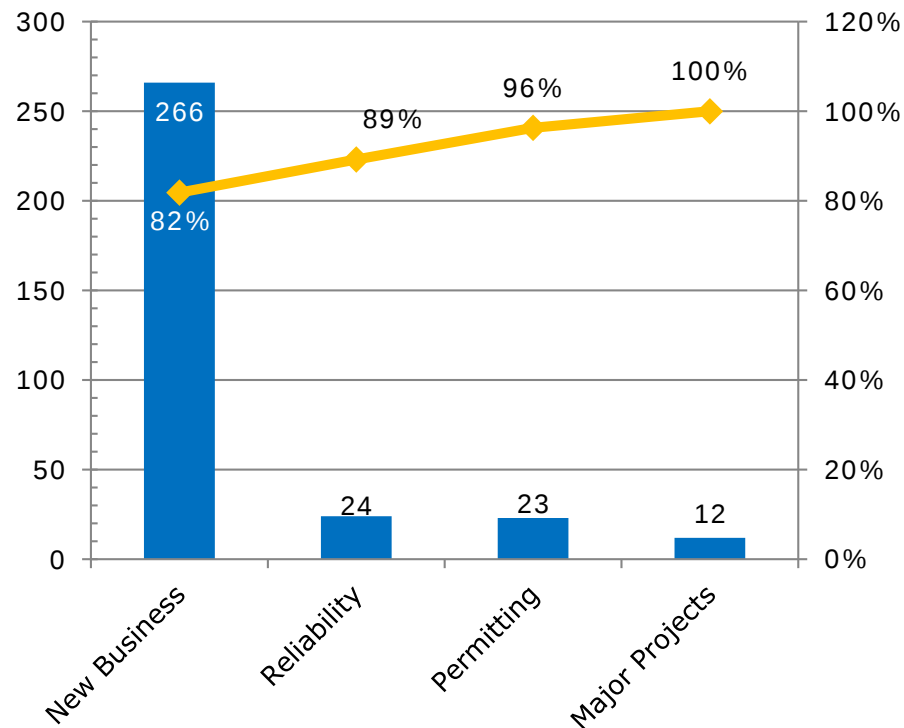
YTD	Total Projects	Misses	Percent On Time
Major Projects	82	12	85%
Distribution	849	290	66%
Permits	146	23	84%

PARETO: MISSES BY AREA

Weekly Real Estate Misses by Area
Data thru May 11, 2018

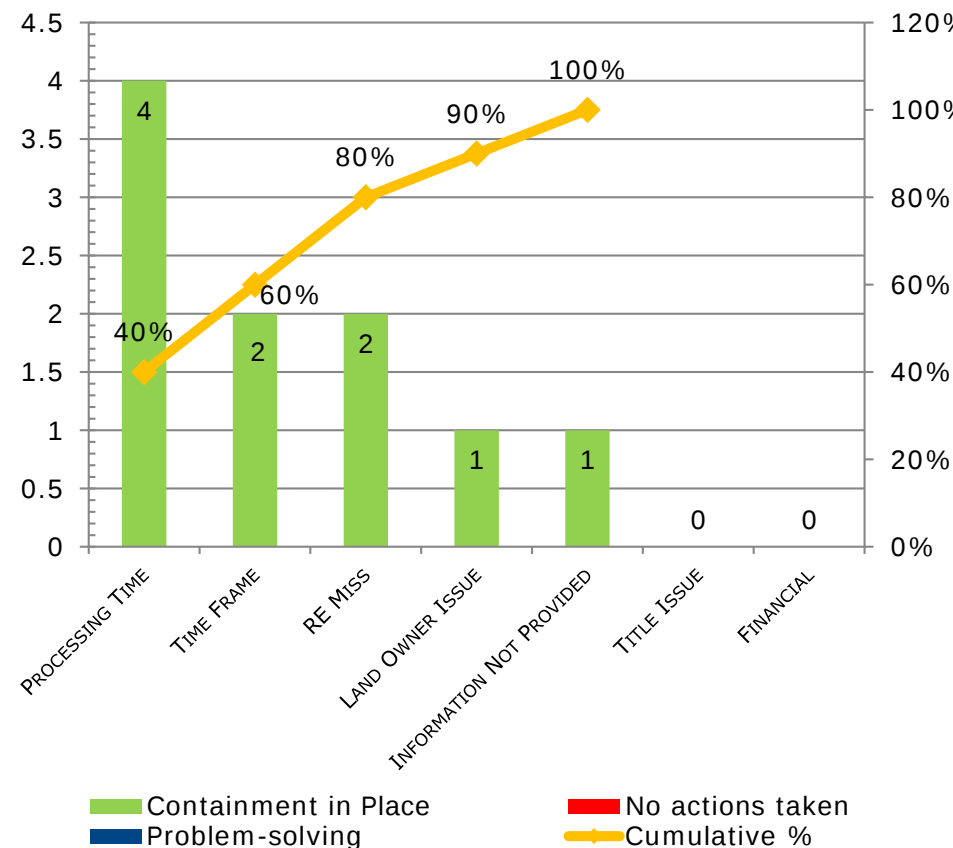


YTD Real Estate Misses by Area
Data thru May 11, 2018

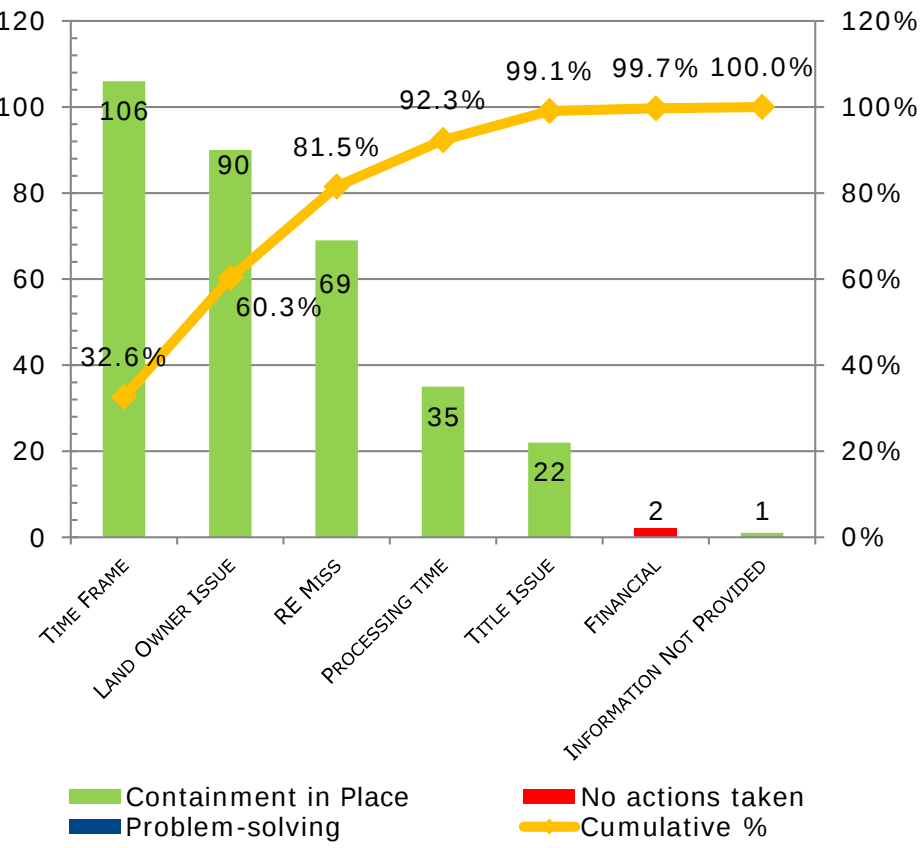


PARETO: PROPERTY RIGHTS AVAILABILITY %

Real Estate Acquisition Deadline Misses Weekly
Week of May 5th - May 11th, 2018



Real Estate Acquisition Deadline Misses YTD
Data thru May 11, 2018



ACTIONS IMPACT: PROPERTY RIGHTS AVAILABILITY %

Action #	IMPACT (SQCDM, X-Department, other)	OWNER	SHORT TERM COUNTERMEASURE OR MAJOR ACTION	TAR GET DATE	STATUS
1	Quality	Krabel	Develop Current State Process Map for new business work (Distribution). Completed SIPOC.	5/8	
2	Delivery	Krabel	Implement short term counter measure (if applicable) for new business work (Distribution).	5/11 7/16	
3	Delivery	Krabel	Problem solve sessions for identified defect for new business (Distribution).	5/16 5/21	
4	Delivery	Krabel	Align with MDOT to adopt a common process for construction in road right of way.	6/1	
5	Quality / Delivery	Stassines / Reed	Define need and parameters for easement exhibit templates.	5/18	
6	Quality / Delivery	Stassines / Krabel	Define need and establish parameters to reduce data entry points.	5/25	
7					
8					

See Attached

- **Daily Operating Reviews**
 - 15 minute minutes cascading meetings starting at individual contributor to officers. Identify exceptions to plan performance in the preceding day and plan for the current day.
- **Weekly Operating Reviews**
 - Typically 30 min-1hr. Identify exceptions to plan, action items/counter measures that are being pursued to get back on plan.
- **Monthly Operating Reviews**
 - Typically 1hr High-level strategic look to confirm actions are closing gaps, or if additional action is needed. Status of teams progress against the plan.

KEY: Meetings start and end on time!

Benefits: Escalation of issues

- **Tools:**
 - 4 Diamond
 - SIPOC
 - 5 Whys
 - Fishbone
- **Keys:**
 - Accurate Problem Definition
 - Make sure all involved in the process participate

Example Attached

Easement Problem Definition

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Problem Description: In 2018, 326 of 798 easement requests are being received at < 30 days.

Define:

- Energy
- Work type specific
- Geography of Des
- Departmental
- Geography of Req
- How late received
- Seasonal pattern

Electric (1066)

Gas (37)

Both

Defining Priority Type of 326

Defining where designed, HQ & WMC

Defining requesting department (LVD/CEM/DPE)

Defining where zone where easement requested

Neg
4

0-5 days
20

6-10 d
29

11-15 d
47

16-20 d
89

21-25 d
45

26-29 d
92

J

F

M

A

M

J

J

A

S

O

N

D

Easement Problem Definition

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Problem Description: Of the 472 we received > 30 days, XX% were not successes

What

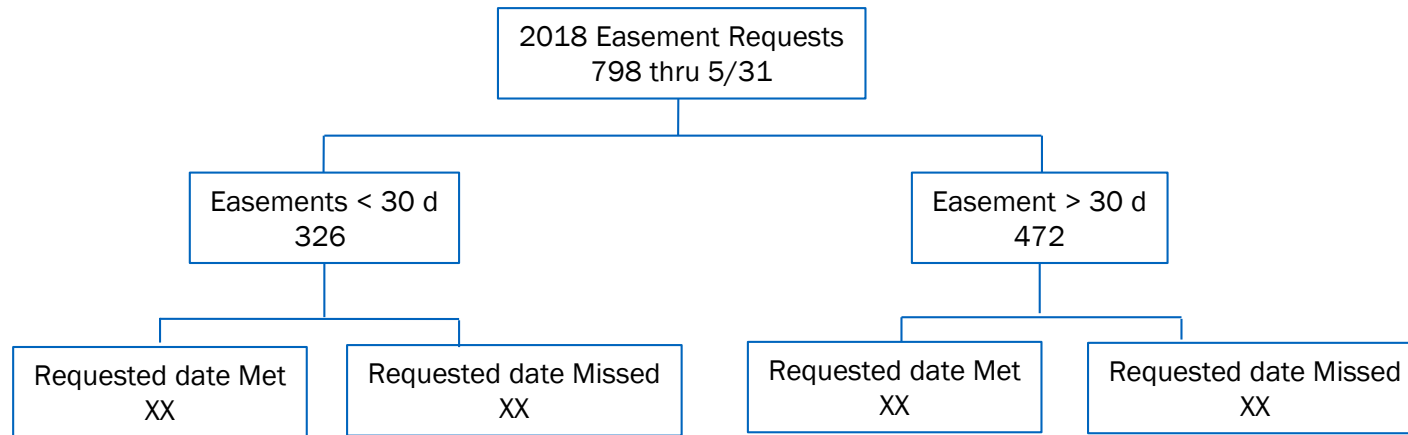
1 st party req	3 rd party req										
Define complexity of request by # of easements											
Defining where designed, HQ & WMC											
Defining requesting department (LVD/CEM/DPE)											
Defining where zone where easement requested											
30-35 d X	36-40 d x	41-45d X	46-50 d X	> 50 d X							
J	F	M	A	M	J	J	A	S	O	N	D
FTQ of Packet		Route Changes		Other Reasons							

Define:

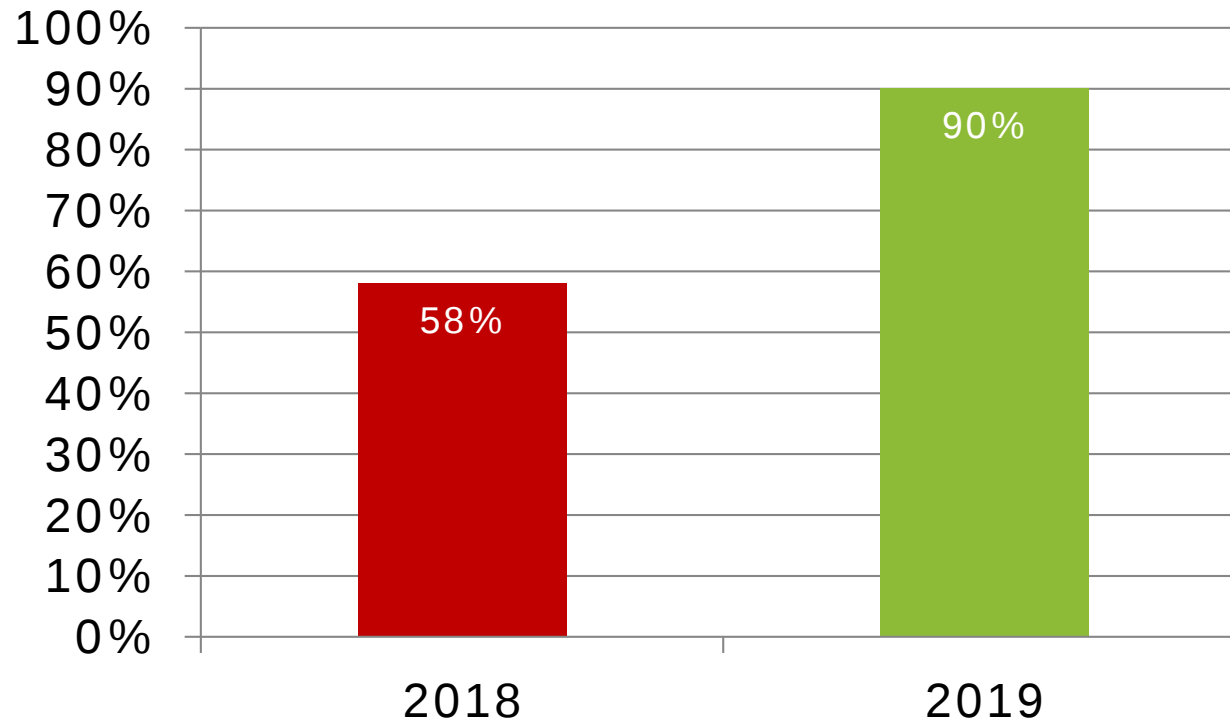
- Type of request
- # of easements
- Geography of Des
- Departmental
- Geography of Req
- Time given to complete
- Seasonal pattern
- Why missed?

Real Estate Problem Definition Tree

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January



Additional Information

Additional Benefits from CE Way

- Have received more visibility to address issues.
- Employee Engagement Scores have increased in every category.

Interesting Facts.....

- Since 2014 Real Estate Acquisition has grown from 10 employees to 39
- Real Estate Acquisition has 44-48 contractors supporting staff from 14 in 2014

QUESTIONS ?