

The LAWA Asset Management Journey

Using Data to Drive Cultural Change – Airport Maximo User Group

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Presenters



Rick Connolly
LAWA Deputy General Manager
rconnolly@lawa.org



Tyrone Jessamy
LAWA Airport Utilities and Control Division
tjessamy@lawa.org



Jennifer Mims
Jacobs Solutions, Asset Management
Jennifer.mims@jacobs.com



Phu Tong
LAWA Asset Management Division
ptong@lawa.org

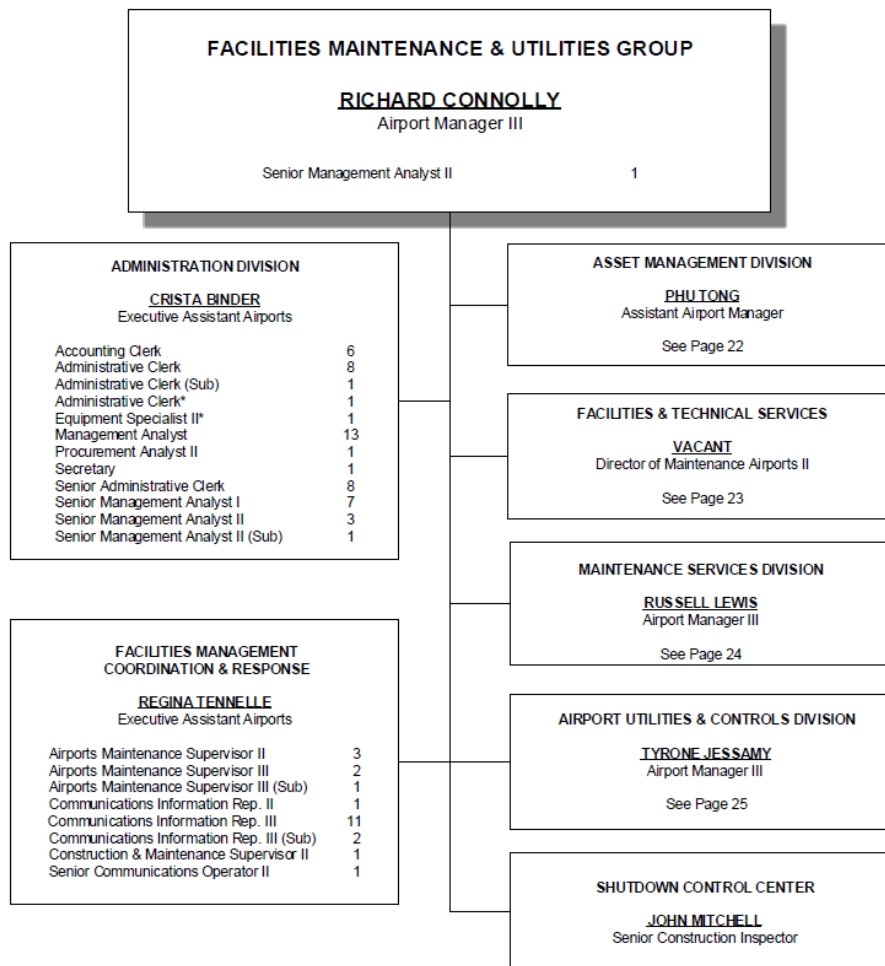
Presentation Overview

- LAWA Fast Facts and Capital Program
- The 10-Year Journey
- Using Data to Drive Change
- Lessons Learned
- Q&A



LAWA Background

Facilities Maintenance & Utilities Group



- Annual operating budget \$280 mil
- 1500 FTEs

LAWA Fast Facts

- City owned and operated airports
- Two airports (LAX & VNY)
- 7 member board
- Civil service employees (Union)
- 3,655 employees
- 88.1 MAP (2019)
- 4th Busiest Airport Globally
- 2nd Busiest in the US
- Preparing for 2028 Olympics
- \$14.3 Billion Capital Program
- 9 terminals
- 5.9 mil SF
- 141 gates (32 future)
- 3,673 acres
- 4 runways



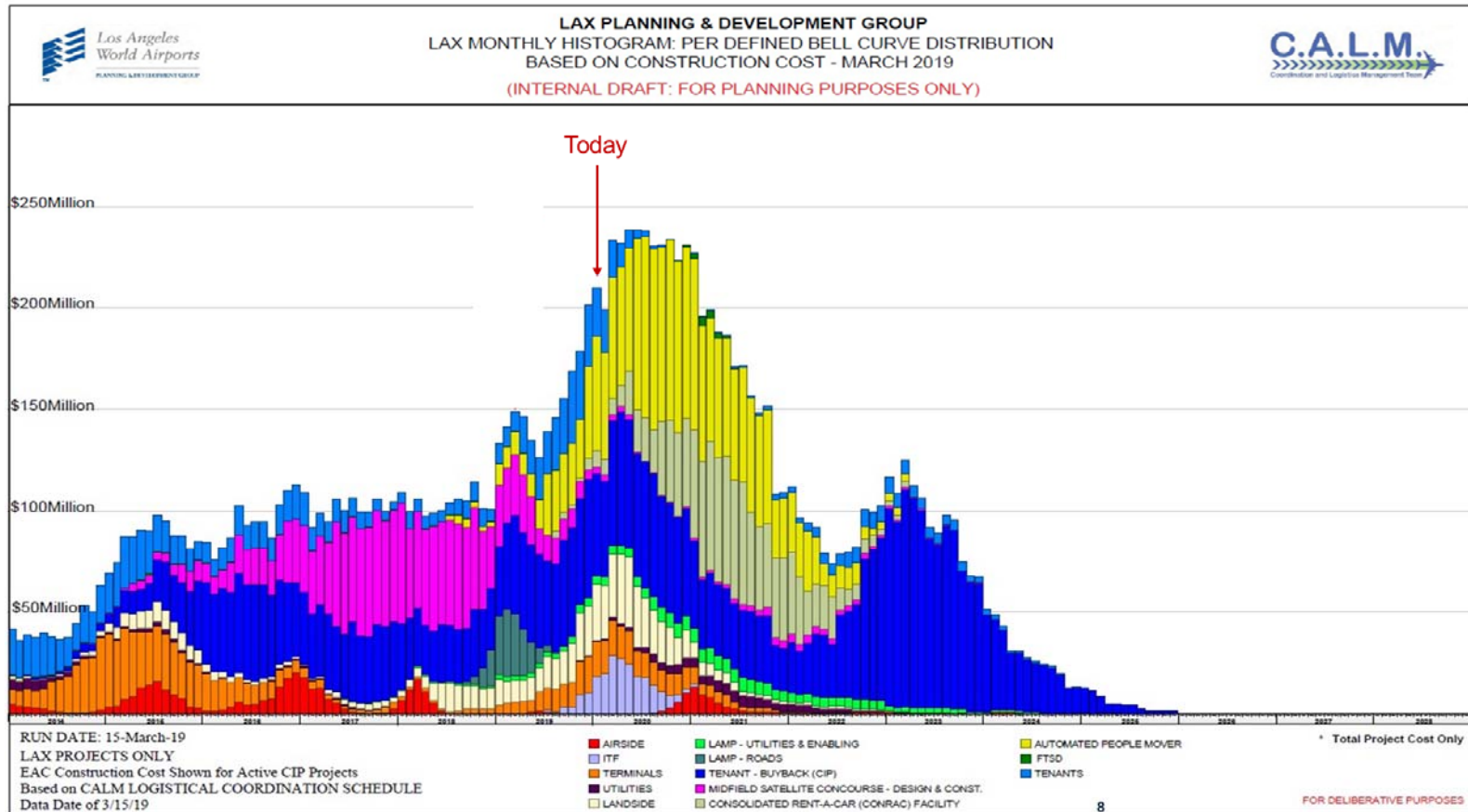
LAWA

Jacobs

LAWA's Capital Program



LAWA's Capital Program



Midfield Satellite Concourse

- 13 additional gates
- 750,000 SF
- \$1.6 billion



Automated People Mover

- 2.25 miles
- \$2 billion

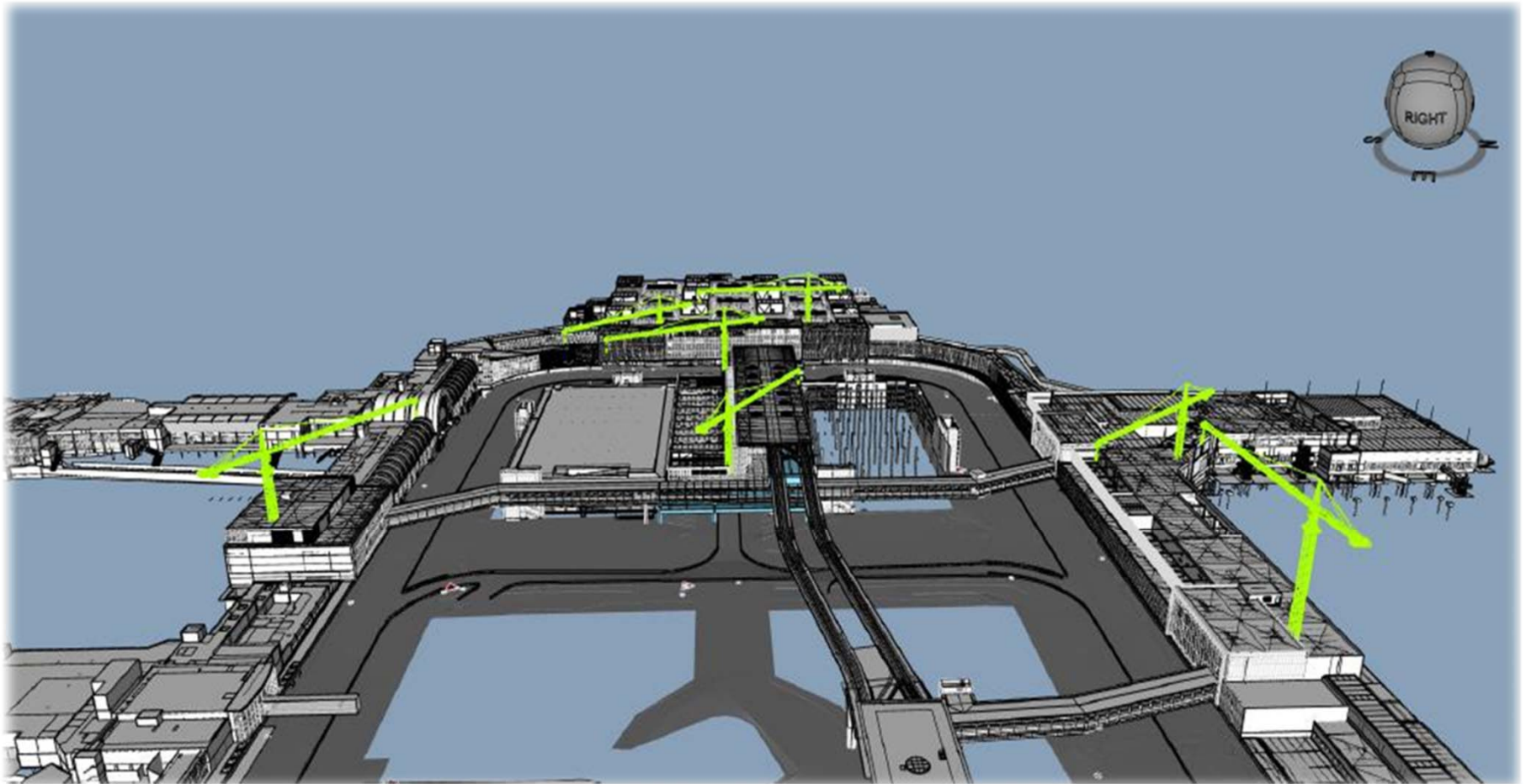


Consolidated Rent-A-Car Facility

- 6.4M SF
- 18,000 rental cars
- \$2 B



Future CTA Crane Example



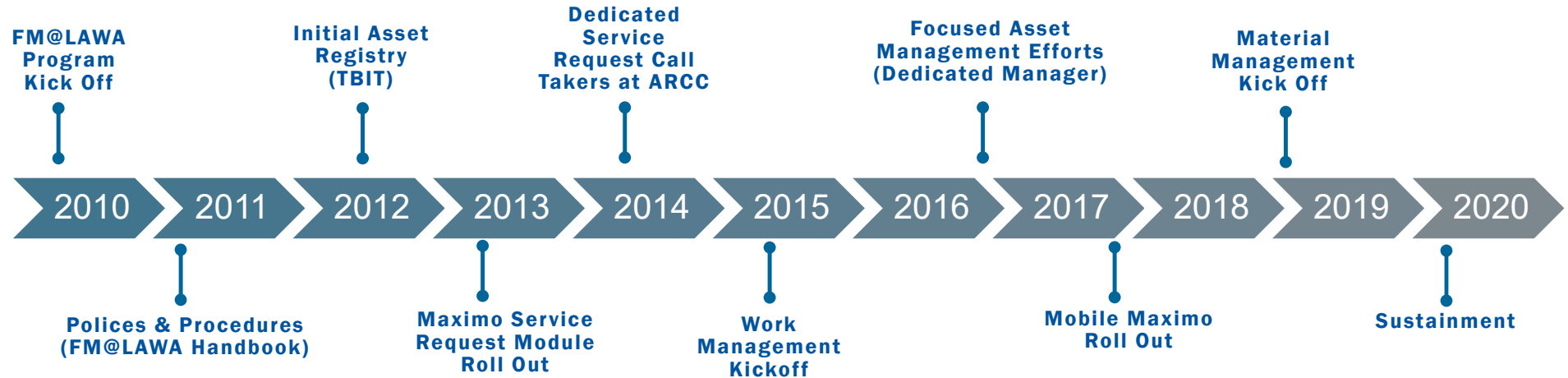


The FM@LAWA Journey

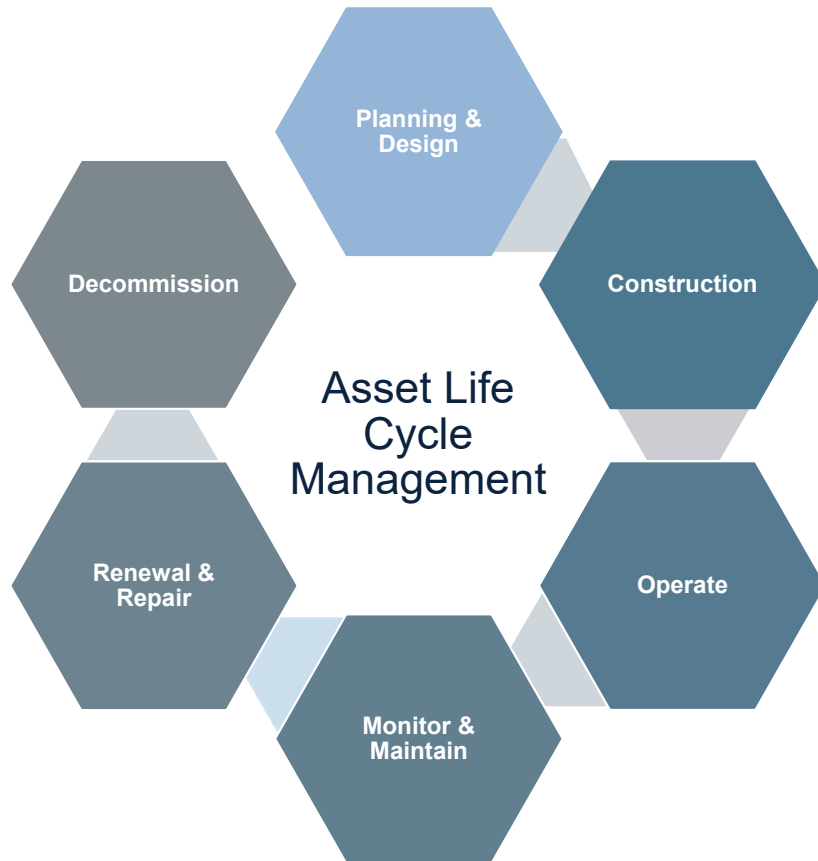
Case for Change (2009)

- Major capital programs
- Highly reactive environment
- Lack of uniform standards & naming conventions
- Reliant upon “tribal knowledge” in the maintenance shops
- Knowing what we own, who is responsible to maintain, condition, expected life, and location
- Strong customer service focus with capability to respond
- Increasing accountability and transparency
- Lack of metrics and systems to measure and manage performance
- Implementing a single system of records

Program Timeline - Key Milestones



Using Maximo – Asset Life Cycle



Planning & Design	Align BIM data structures with Maximo asset classifications
Construction	Work with contractor to tag all assets with Maximo Asset ID
Operate	Capture asset down time and failure codes (problem/cause/remedy) in Maximo
Monitor & Maintain	Maximo PMs and job plans
Repair & Renew	Record hours, parts & work in Maximo
Decommission	Change status in Maximo to obsolete

FM@LAWA Handbook

Policies

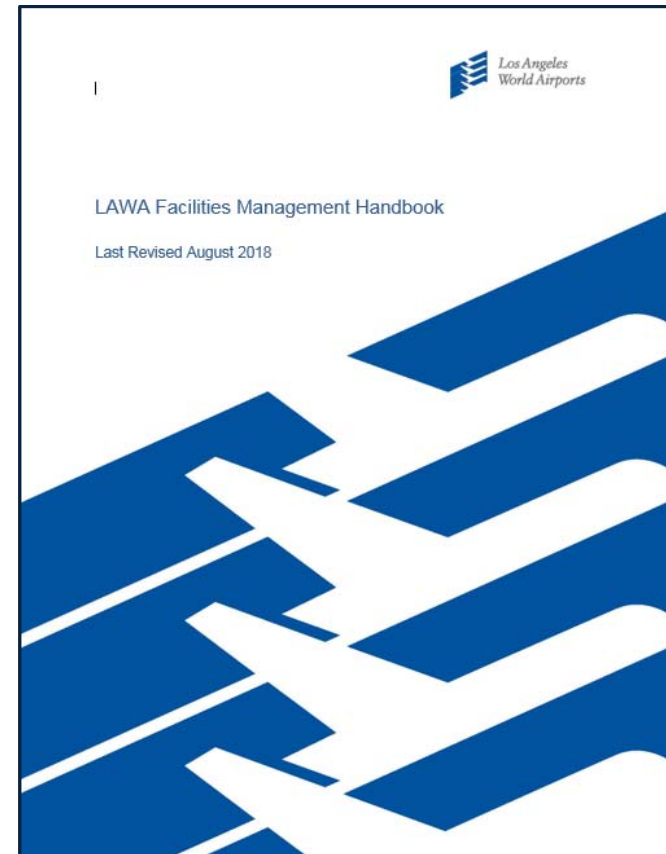
- Processes and procedures for all personnel

Conventions

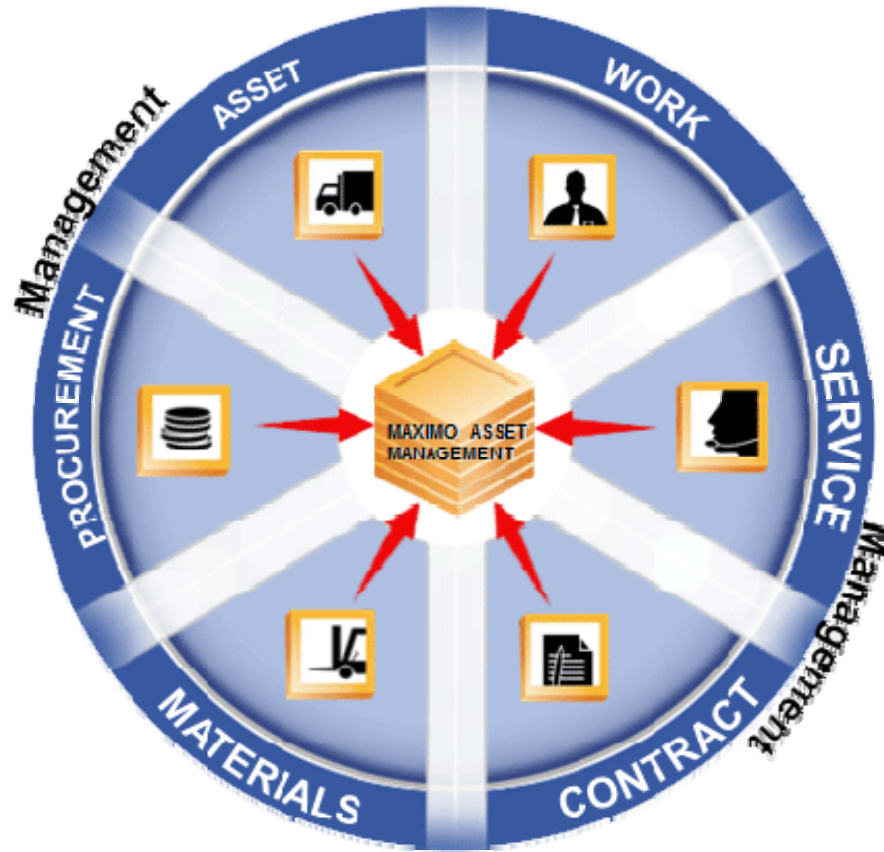
- Best practices for facilities and asset naming

Guidelines

- Processes and procedures that are not official policy



Implemented Maximo



Maximo Service Request

Metric Minute

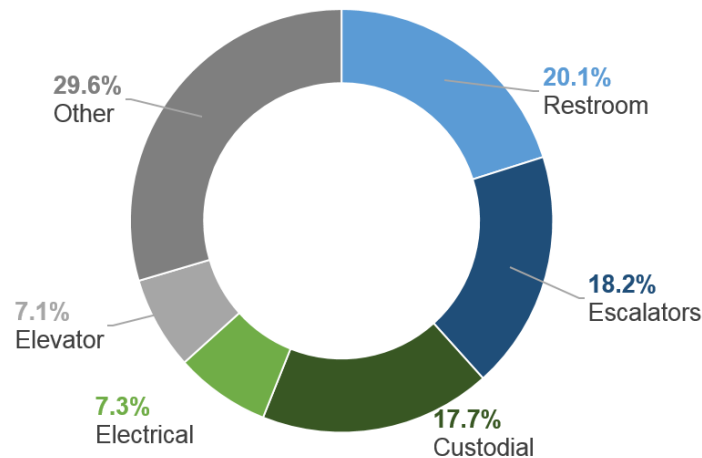
In 2019, we continued to manage maintenance work through service requests and work orders.

43,162 ▼ 0.2%
2019 total service
requests since
'18

52,984 ▼ 0.2%
2019 total work
orders since
'18

- 4,303 WOs generated from service requests
- 4,256 WOs generated from online work requests
- 32,057 PM WOs generated
- 12,368 WOs generated by shop personnel

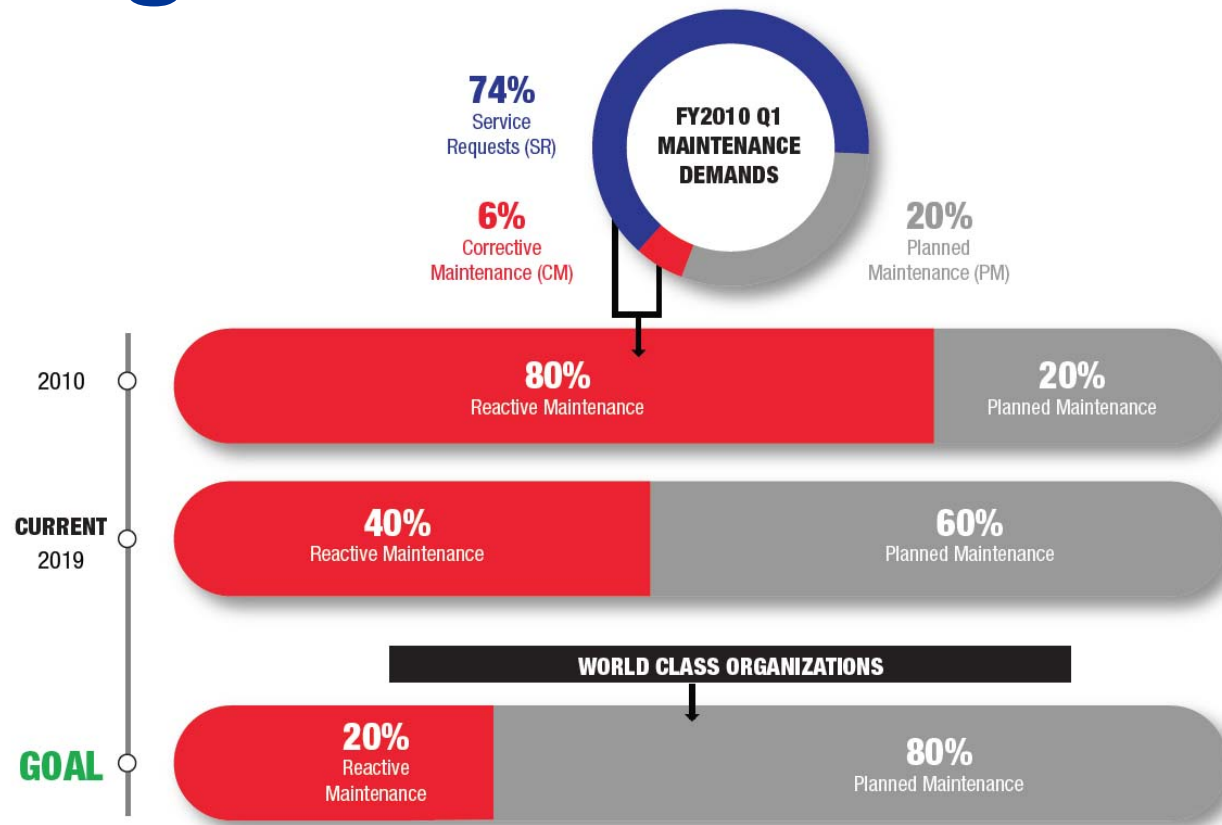
Most Common Service Request Categories
January 1, 2019 - December 31, 2019





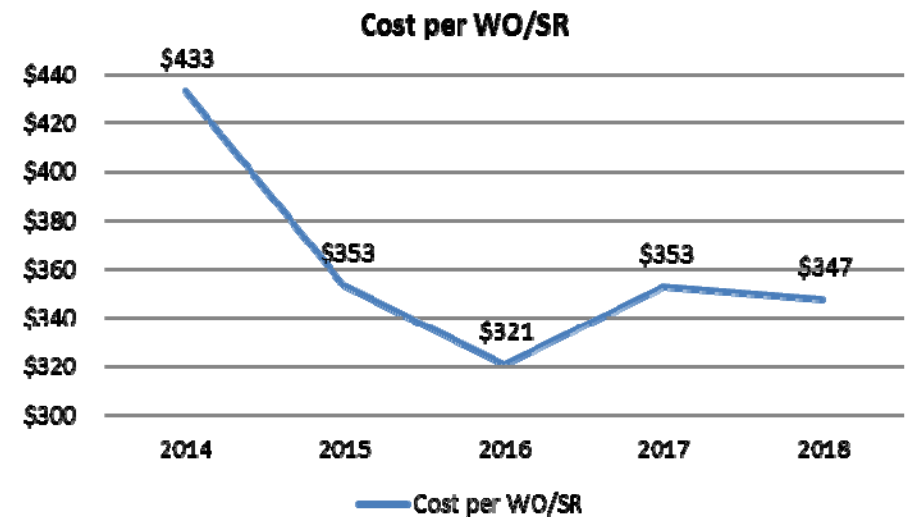
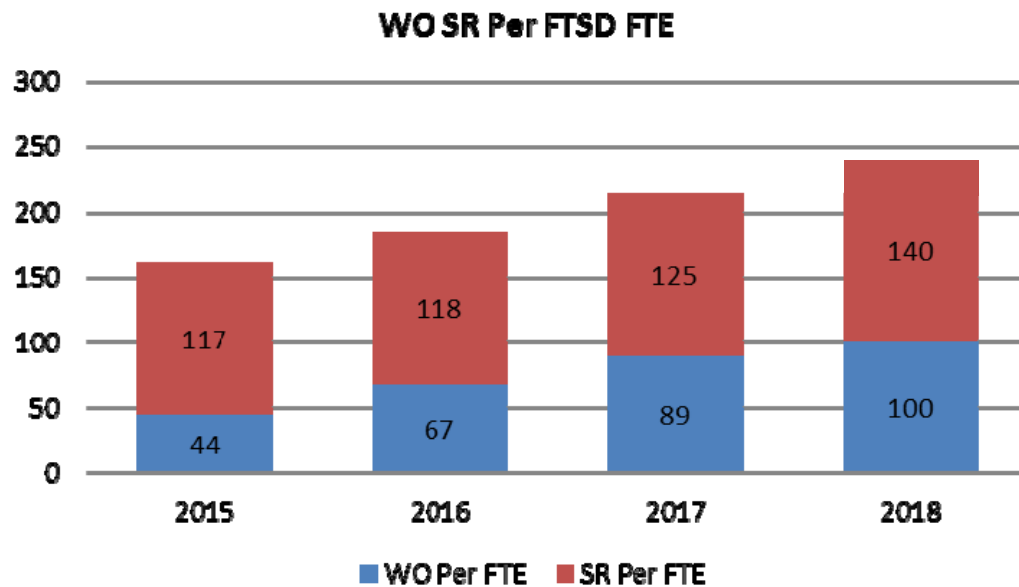
Work Management

Increasing Proactive Work



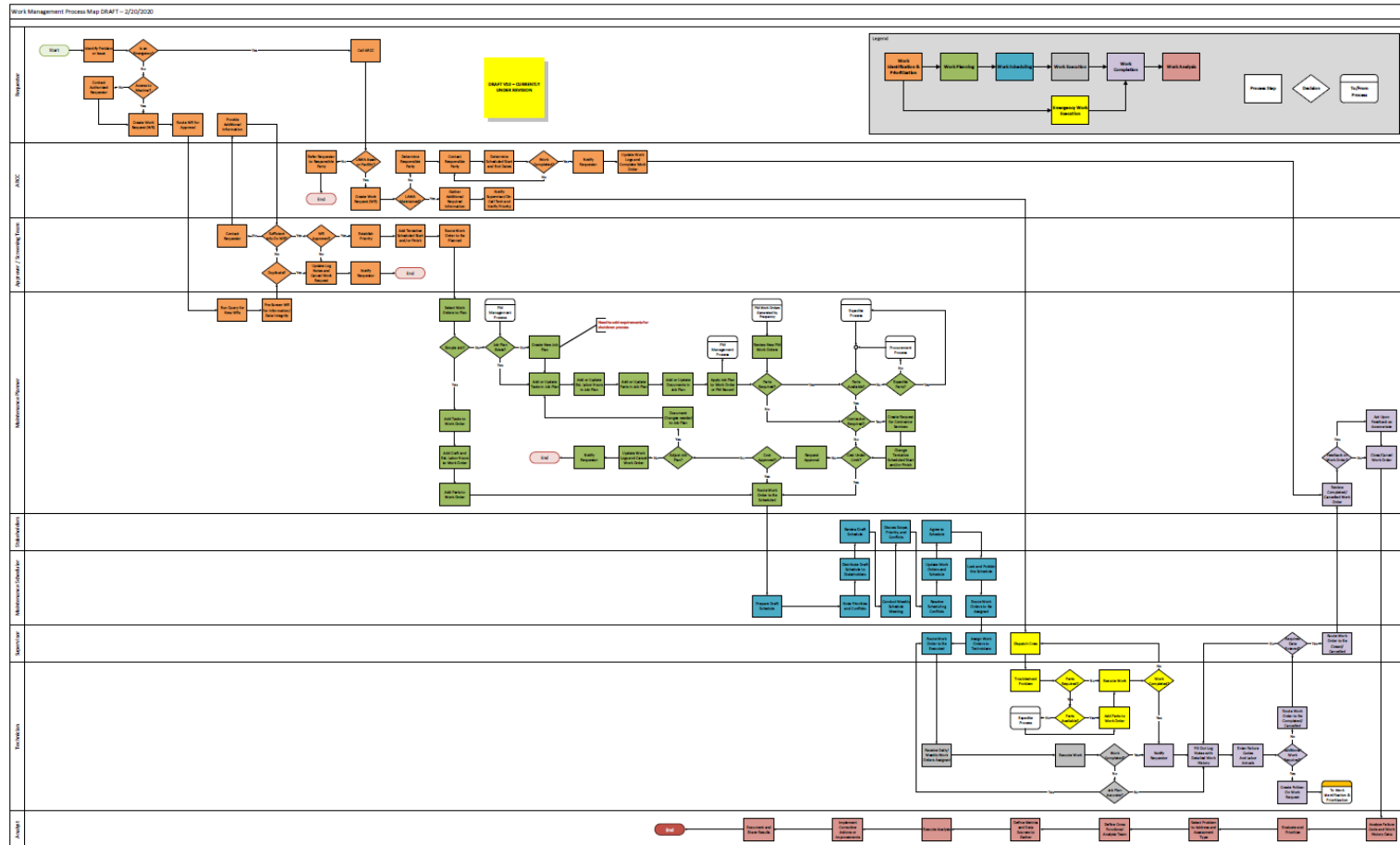
Reactive work is 3x more costly than proactive work

Doing More with Less



More work completed per FTE and at reduced costs

Maintenance Planning



Central Utility Plant

- \$424 Mil
- 8.4 MW of electricity and 19,600 tons of cooling
- 2 Combustion Gas Turbines
- 5 Centrifugal Chillers
- 2 Steam Driven Centrifugal Chillers
- Thermal Storage Tank

Assets/equipment

- 13 –Boilers
- 15 - Cooling tower
- 226 - pumps
- 123- Heat Exchangers





Asset Data Management

Asset Data Dictionary

- Asset classifications
- Specifications
- Hierarchies

** aligns with BIM data structures for future capital projects



Asset Tagging

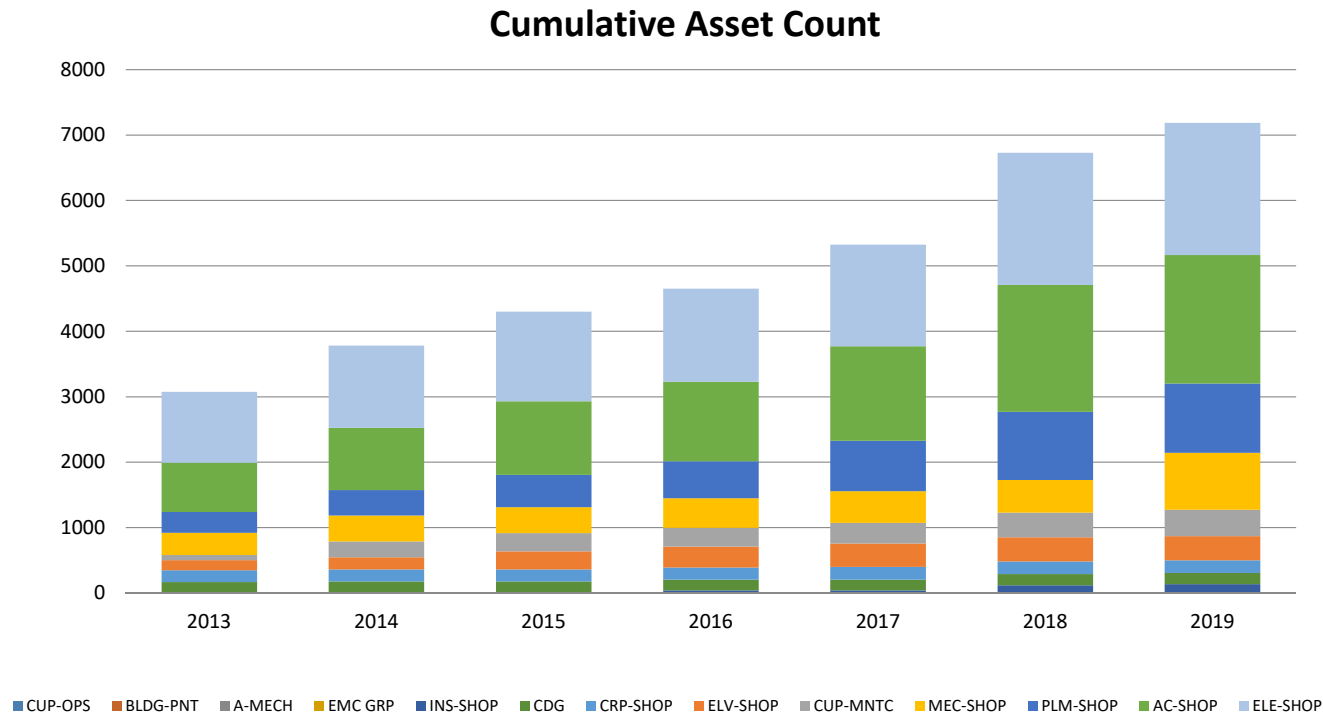


Mobile Maximo

- 200+ mobile devices deployed to technicians

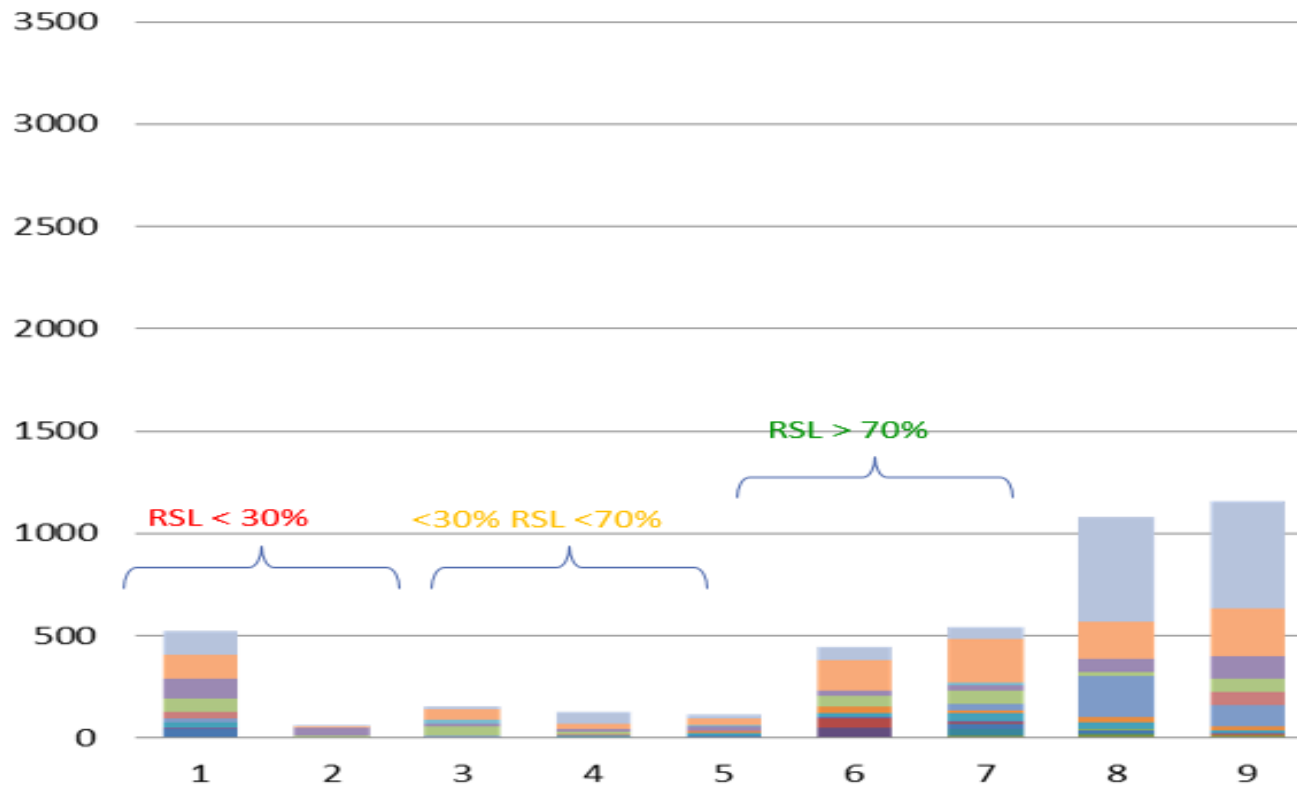


Asset Awareness



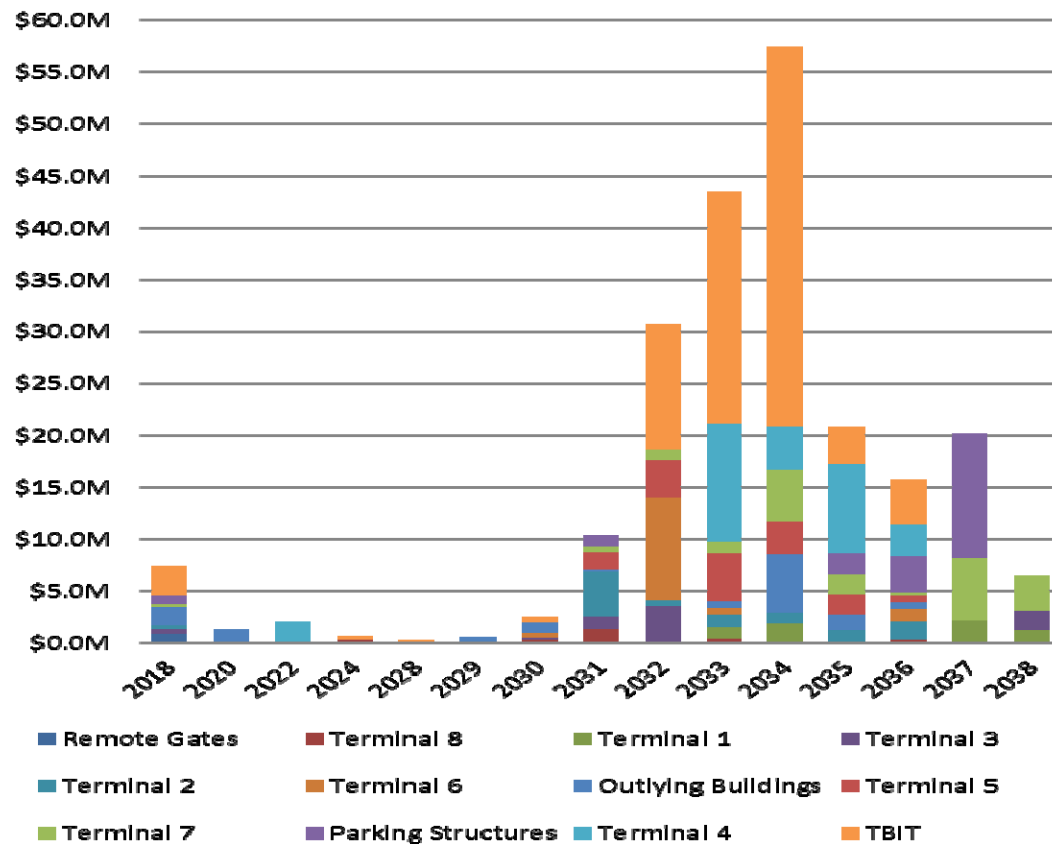
Increased number of assets in Maximo - Knowing what LAWA owns/maintains

Remaining Service Life



More effective budgeting and planning

Renewal Schedule



Understanding current and future investment needs

Material/Spare Parts Management



Before



After

Organizational Culture Change



FM@LAWA Journey



Lessons Learned

- It is a journey – celebrate small successes along the way
- Leadership in key staff position critical to success
- Collaborative approach always best
- Communicate – communicate – communicate
- Choose Consultant wisely 😊

