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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’s Capital Program

Presenting the future of LAX
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

- **2010**: FM@LAWA Program Kick Off
- **2011**: Initial Asset Registry (TBIT)
- **2012**: Dedicated Service Request Call Takers at ARCC
- **2013**: Polices & Procedures (FM@LAWA Handbook)
- **2014**: Maximo Service Request Module Roll Out
- **2015**: Work Management Kickoff
- **2016**: Focused Asset Management Efforts (Dedicated Manager)
- **2017**: Mobile Maximo Roll Out
- **2018**: Material Management Kick Off
- **2019**: Sustainment
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
- Capture asset down time and failure codes (problem/cause/remedy) in Maximo

**Operate**
- Maximo PMs and job plans
- Record hours, parts & work in Maximo

**Monitor & Maintain**
- Change status in Maximo to obsolete

**Renewal & Repair**

**Decommission**

Asset Life Cycle Management
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

- 2019 total service requests: 43,162 (0.2% decrease since '18)
- 2019 total work orders: 52,984 (0.2% decrease 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

- 29.6% Other
- 20.1% Restroom
- 18.2% Escalators
- 17.7% Custodial
- 7.3% Electrical
- 7.1% Elevator
- 2.6% Other
Work Management
Reactive work is 3x more costly than proactive work
More work completed per FTE and at reduced costs
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
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

1. Reactive
   - Data not aligned across systems
   - No organizational hierarchies
   - No naming standards

2. Defined
   - Data and systems aligned
   - Some adherence to new process

3. Managed
   - Established Processes
   - Adequate Resources
   - Staff Informed of SOPs

4. Competent
   - Implemented Processes
   - Staff Confidence
   - SOPs Culturally Accepted

5. Optimized
   - Processes and Culture Built on Continuous Improvement Mindset
   - Check
FM@LAWA Journey

2010
Kicked of Asset Mgt Program

Today

2020
Asset Management Program Established and Maturing

2030
World Class Asset Mgt Program
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 😊
Questions