

The Promise & Peril of IoT for Public Sector Facility Administrators: A Primer for Successful Programs

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Introduction

▶ Four Major Topics

- ▶ Demystify IoT
- ▶ Strategic Planning
- ▶ Operations
- ▶ Use Cases

▶ Sanity Checks

▶ Follow-Up Logistics

Demystify IoT

▶ Interconnection

- ▶ Internet of computing devices embedded in everyday objects

▶ Devices

- ▶ Enabled to send and receive data

▶ Data

- ▶ A lot of data. Every bit of data you need. Some you do not

▶ Purpose

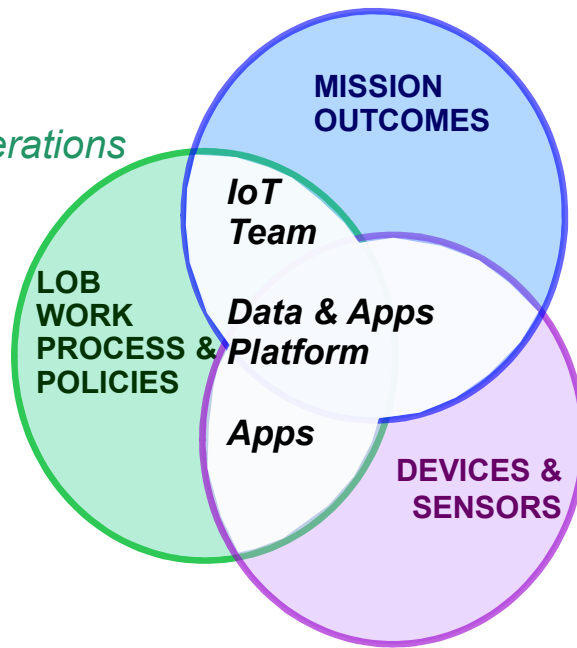
- ▶ Applications to achieve a desired service, benefit, insight, or knowledge

IoT Program Elements & Interaction

Internet

Connected Operations

- Network
- Mobility
- Security



Action

Administrative Controls

- Management
- Compliance
- Finance

Things:

Device Data:

- Condition
- Location
- Availability

Sanity Check - Demystify

► **Questions?**

Strategic Planning - Benefits

- ▶ **Benefit-based Program. What's the Goal?**
 - ▶ Improve...
 - ▶ Validate...
 - ▶ Discover...
 - ▶ Satisfy...
- ▶ **Facilities as Enterprise Platform, Products, & Machines**

Strategic Planning - Pitfalls

- ▶ **Ad-Hoc Approach. *IoT requires formal administration.***
 - ▶ Formal, Long term Plan
 - ▶ Leaders and Accountability...
 - ▶ Authority and Backing...
 - ▶ Inclusive of Contributors - *as necessary ...*
- ▶ **Overly Ambitious. *IoT is best rolled out in planned stages.***
- ▶ **Scope Creep. *IoT requires focus on immediate activities.***

Sanity Check - Strategic Planning

► Questions?

Operations - Teams

▶ IoT Program Team

- ▶ IoT Program Manager
- ▶ Administrators
- ▶ Line-of-Business / Agency Managers
- ▶ Facility Management & Operations
- ▶ Information Technology

▶ Set and Manage Stakeholder Expectations

- ▶ Share and follow the Strategic Plan

Operations - Technical

- ▶ **Start with the Existing Data and Grow to Right Scale**
- ▶ **Expand sources of information**
 - ▶ Building Automation Systems and Utility Meters
 - ▶ Occupancy Sensors
 - ▶ Mobile Devices
 - ▶ Selective Sensors
- ▶ **Integrate selectively and as necessary**
- ▶ **Develop & enforce formal cyber-security protocols**
 - ▶ #1 Source of failure are Gaps between independent systems

Sanity Check - Operations

► Questions?

Use Cases

▶ Efficiency of Facilities & Operations

- ▶ Fault detection beyond BAS, combined with Condition-based Operations
- ▶ Utility savings of 10-15%
- ▶ Operational savings of 15-50%
- ▶ Incremental rollout in phases matched to data sources

Use Cases

▶ Critical Systems / Loss Prevention - Refrigeration

- ▶ Losses due to refrigeration equipment problems and user error
- ▶ Monitored closure, temperature change, component condition
- ▶ Linked to mobile notification
- ▶ Integrated with work-order and procurement/contractor systems

Use Cases

▶ Operations Contract Compliance

- ▶ Automatic audit of maintenance actions & charges
- ▶ Equipment fitted with proximity sensors activated by vendor badge
- ▶ Tracked actual period of maintenance
- ▶ Compared actual time with billed time
- ▶ Monitors frequency and type of maintenance

Use Cases

▶ Critical Equipment Location

- ▶ Care staff spends at least 1 hour a day locating equipment & supplies
- ▶ Critical equipment tagged with RFID
- ▶ Improves care reliability and readiness
- ▶ Reduces shrinkage

Use Cases

▶ Increased Procedural Throughput

- ▶ Coordinates supply inventory, cleaning protocols, and room conditions
- ▶ Improvements in speed and quality of room turn over
- ▶ Reduces check-in calls
- ▶ Supports compliance reporting

Use Cases

▶ Procedural Compliance

- ▶ Enforces required sequence-of-operations
- ▶ Sensors linked to work stations / locations
- ▶ Personnel identified by badge are linked to actions and locations
- ▶ Improved compliance and outcomes
- ▶ Source for training and continuous improvement

Use Cases

▶ Integration of Businesses for Improved Outcomes

- ▶ Energy Services Contract returns improved by Fault Detection
- ▶ Improved returns supported larger roll out of facility improvements
- ▶ Improvements / faults transparent to lenders
- ▶ Improvements in transparency and contract enforcement

Use Cases

▶ Wayfinding

- ▶ “GPS for Occupants”
- ▶ Uses
 - ▶ Parking
 - ▶ Room scheduling
 - ▶ Utilization tracking
 - ▶ Team location
 - ▶ Pure wayfinding
- ▶ Extended to security and first responders

Sanity Check - Use Cases

► Questions?

Follow-Up Logistics

- ▶ Responses to Questions will be posted and/or sent
- ▶ Link to Recording will be sent to registrants
- ▶ Presenter Contact

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