

# Distribution Grid Modernization



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CUSTOMERS FIRST

Strategic Long Term Resource Plan

# DIGITAL TRANSFORMATION

- Allows us to **rethink** how we use **technology** and **data** to fundamentally change business practices and performance.
- Our business processes (majority of them) were created ages ago before a lot of technology was available. They were also developed with safety in mind.
- It encompasses technology, culture, and processes working together in synergy



# Distribution Automation Program

... LADWP envisions **to have all the foundational elements in place** to build a smarter, more reliable distribution system that effectively utilizes new technology and innovation to improve system reliability and customer experience.

... this program's vision... is for a resilient distribution system that has the intelligence required to automatically self-heal, greatly reduce outage duration and frequency, and shift our employees' focus toward proactive decision-making rather than reacting to issues after they occur.

*LADWP Distribution Automation Program Charter, October 2018*

# Distribution Automation Benefits

- Build a smarter, more reliable **distribution system** effectively
- Utilize **innovative technologies** to improve system reliability
- Develop **foundation** for Power System's **digital backbone**
- Leverage **intelligence** to automatically **self-heal** grid issues
- Greatly **reduce outage** duration and frequency
- Expand use of **AMI** throughout the service territory
- Enable **data driven** decisions through **advanced insights**

# Distribution Automation Program

## Overview

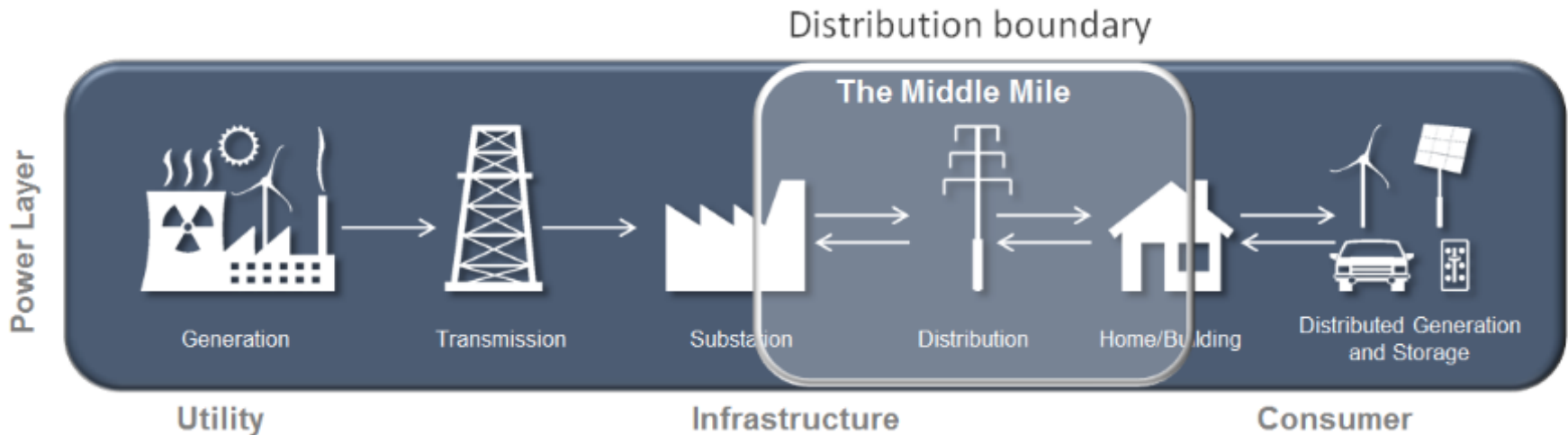
### Phase 1

- Deploy Communication Network for field devices
- Initial Deployments of DA Devices on Selected Circuits
  - Targeting Worst-Performing 10% of 34.5kV and 4.8kV Circuits
- Begin DA Applications
  - Volt-VAR Optimization
  - System Health Monitoring
  - Fault Location, Isolation, and Service Restoration (FLISR)
- System Integration
  - GIS, OMS, DMS, Pi, CCB

### Future

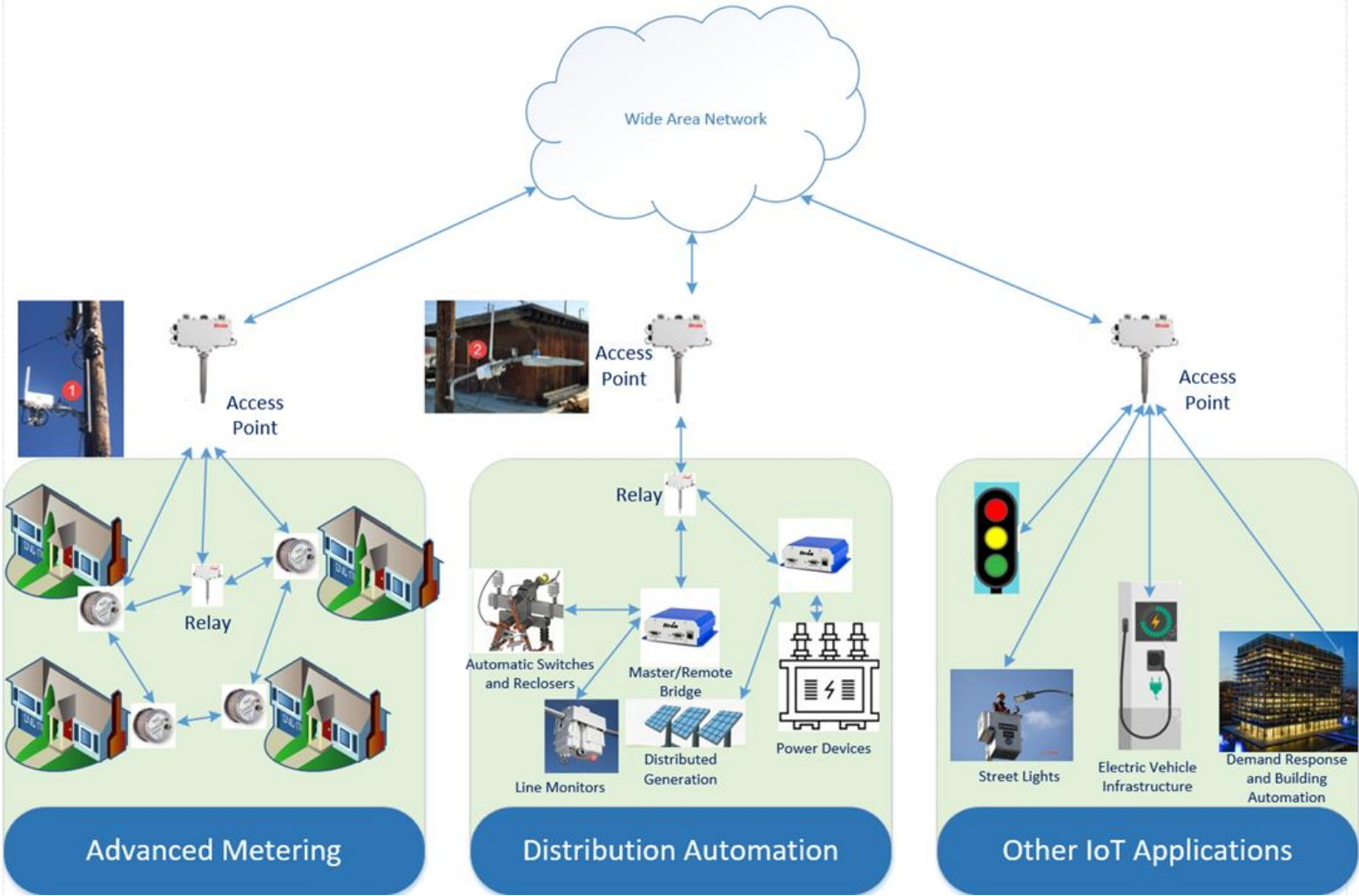
- Full Deployment of DA Devices and Applications

# Distribution Automation Program Overview



**DA Focus is on visibility and control outside of substations on 34.5kV and 4.8kV**

# Communication System Overview



# Building the Future

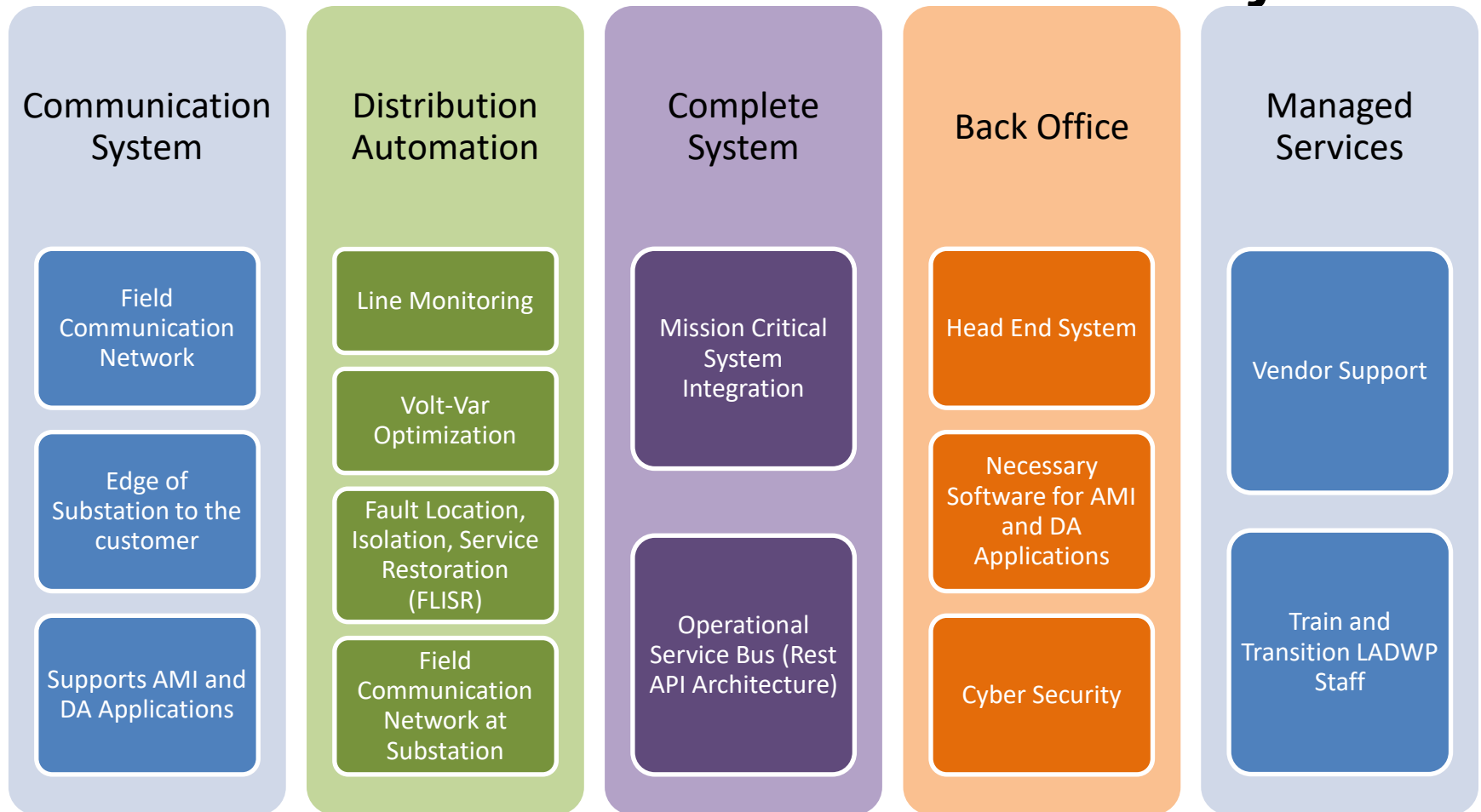
Phase 3:  
Grid Modernization

Phase 2:  
Smart Meter Deployment

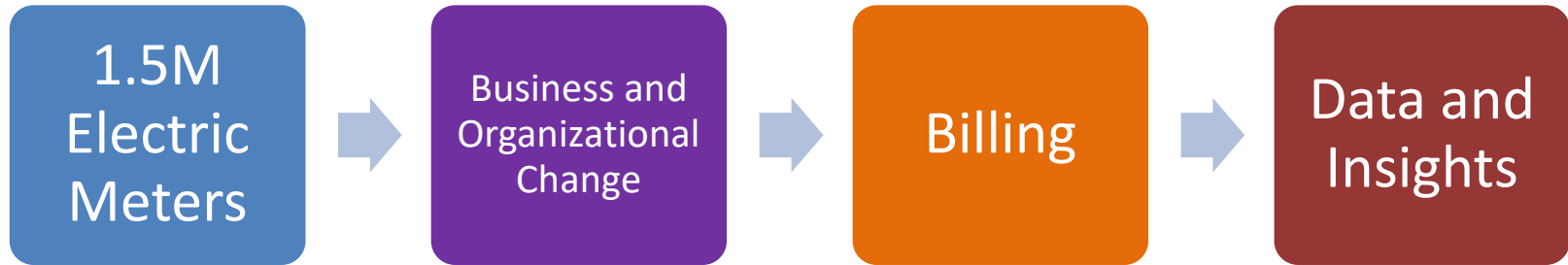
Phase 1:  
Distribution Automation



# Phase 1 - Distribution Automation - Projects



# Phase 2 - Smart Meter Deployment



## Utility Side Benefits

- Energy Savings
- Operational Awareness
- Proactive Decisions
- Reliability



## Customer Benefits

- Customer Awareness
- Customer Portal
- Self Service Options



# Phase 3 – Grid Modernization



# Timeline and Milestones



# Thank You

## Questions or Comments