



LONMARK[®]
INTERNATIONAL

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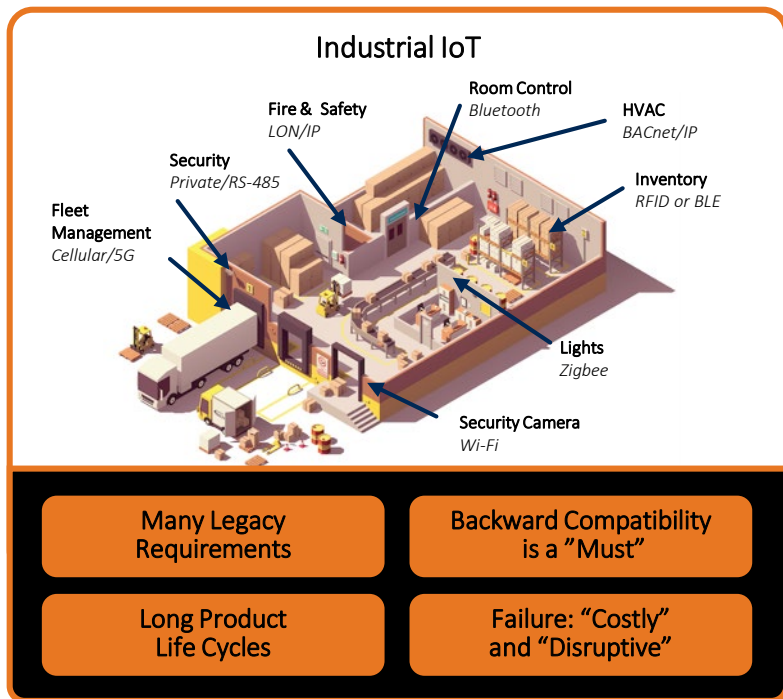
Echelon
by Adesto 

Control Networking and Automation in the IoT Age



Realizing Value of the IoT is Difficult and Costly

Multiple field protocols present a challenge



Energy Optimization

Predictive Maintenance

Space Utilization

Personalization & Productivity

Network
Integration

Data Integration

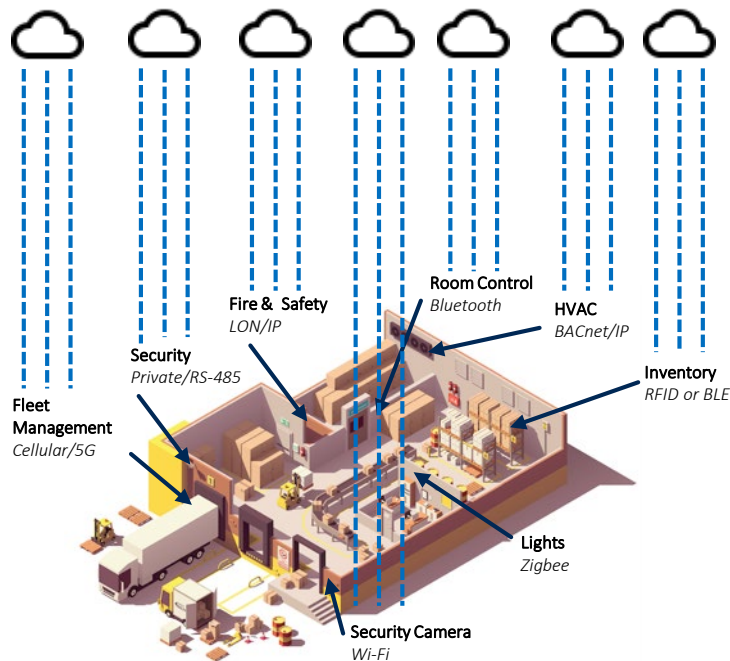
Application
Development

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IoT Cloud Siloes Bring on the Tears of the IoT

Industrial IoT – The Reality



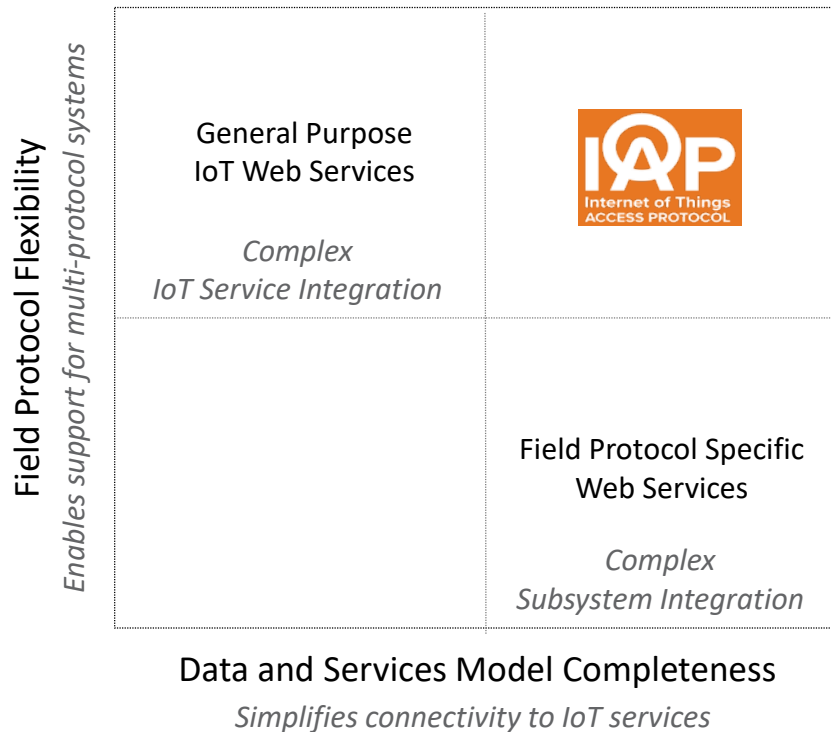
- There is not one IoT cloud
- There may be more than one cloud per system
- The clouds don't communicate
- Imagine every cloud connected to every subsystem – no don't!

Extensible Data and Services Fabric Is Required



- **Connectivity interoperability**
 - Bridge physical media
 - Connect to legacy and emerging network protocols
- **Data interoperability**
 - Events seamlessly flow between devices and cloud services
- **Service interoperability**
 - Share common scheduling, logging, and alarming services

IoT Web Services Comparison



Data Model

Data Types

Data Semantics

Data Priorities

Device Interface
Definition

Configuration
Data Definition

Data Flow
Definition

Services Model

Device
Discovery

Device
Provisioning

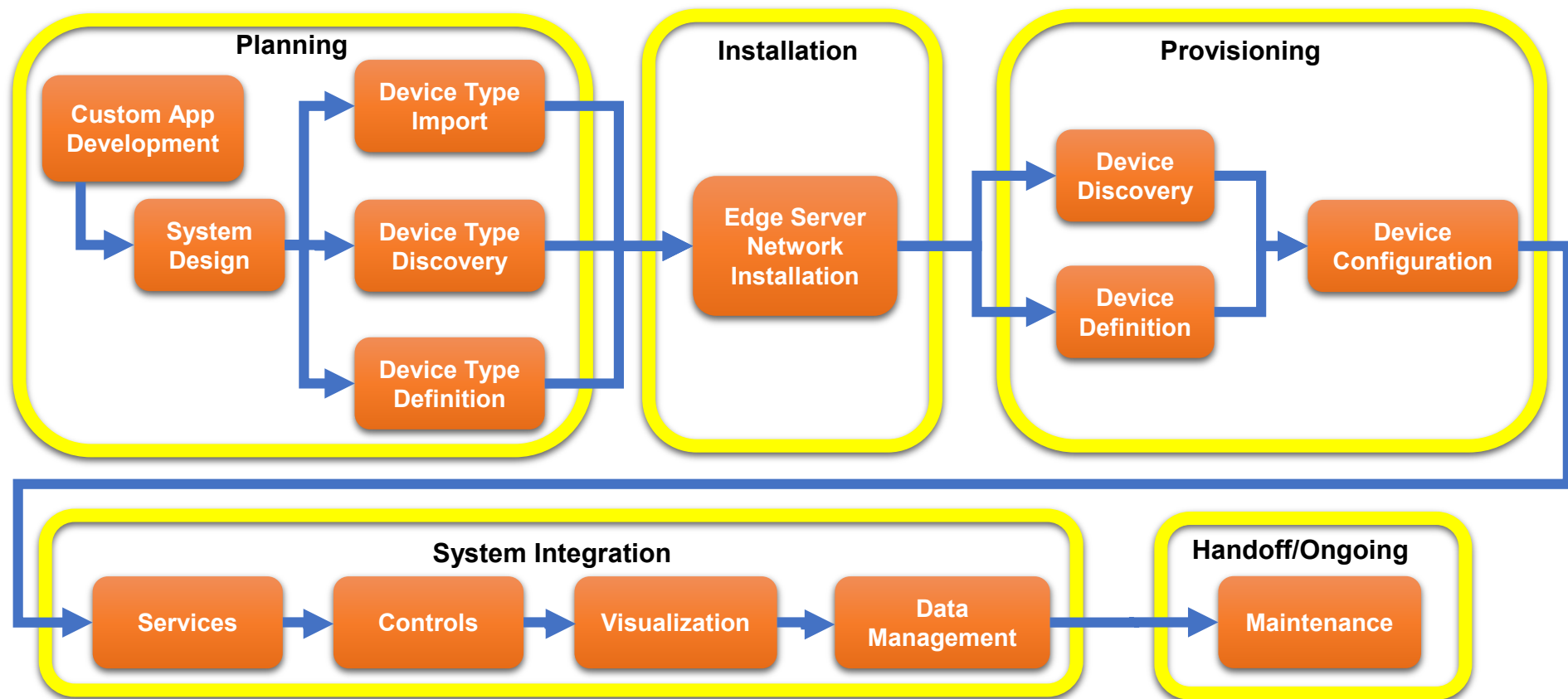
Connection
Management

Scheduling

Logging

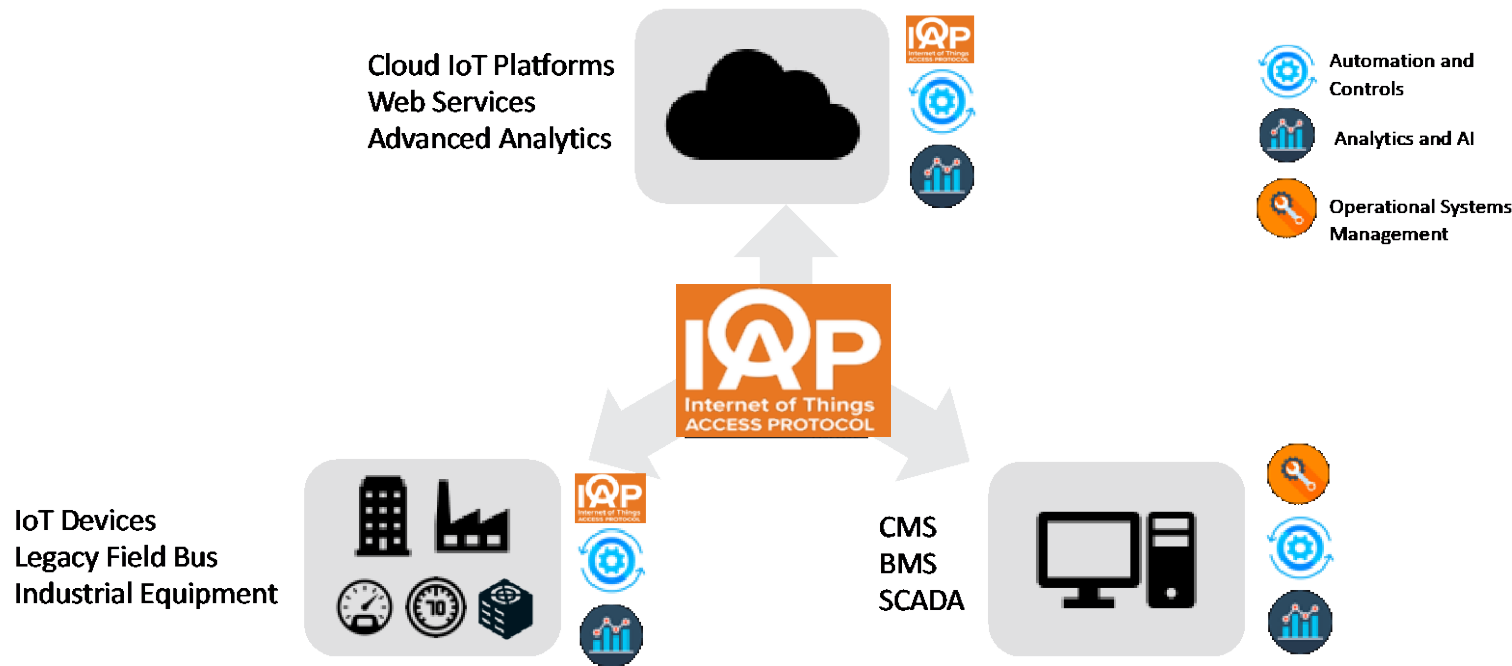
Alarming

Deeper Look at Data and Services Model



Deeper Look at Open Architecture

Enable analytics and applications to run anywhere and talk to anything



LonMark Web Services Draft Standard

LonMark Web Services Draft Standard

Revision 1
4 February 2020

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- LonMark task group is developing the web services standard
- Join the task group to participate in the standard development

Summary

- Realizing the value of the IoT is difficult and costly
- IoT cloud siloes bring on the tears of the IoT
- An extensible data and services fabric is required
- The IAP LonMark web services standard unlocks the value of IoT
- Join the LonMark web services task group to contribute to the solution