Benefits of Private LoRaWAN® Networks

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LoRa Alliance North America Regional Vice Chair
Traditional LoRaWAN® – NS, JS, & AS in Cloud

- End Nodes
  - Pet Tracking
  - Smoke Alarm
  - Water Meter
  - Trash Container
  - Vending Machine
  - Gas Monitoring

Concentrator/Gateway

LoRa Network Server

3G/4G Ethernet Backhaul

TCP/IP SSL

LoRaRF LoRaWAN

TCP/IP SSL

LoRaRF LoRaWAN

Application Server

Data Visualization

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What is Driving Enterprise Networks

Demand for Robust & Agile Local Connectivity:
Cost Efficient deployment architecture
Improved Resiliency & Security

Lowest Total Cost of Ownership:
Less data backhaul, cloud routing, storage and compute costs and OpEx

Deep Local Coverage:
Clustered assets mostly Static

Data Privacy:
Data remains On-Prem
Own keys for secure data transfer

Network designed to serve an Enterprise:
Deployed to cover specific Enterprise Application needs
Improved coverage, range, density with custom QoS
Lens LoRaWAN®- only Join Server in Cloud

- End Nodes
  - Pet Tracking
  - Smoke Alarm
  - Water Meter
  - Trash Container
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  - Gas Monitoring

Gateway with LoRa NS & AS

LoRa Join Server

3G/4G Ethernet Backhaul

Data Visualization

LoRa RF LoRaWAN

TCP/IP SSL LoRaWAN

TCP/IP SSL Secure Payload

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NETWORK TYPES

Public
Subscription Based
Just like a cell phone
Well-established network providers
Better for:
  • Low CapEX
  • Mobility
  • Speed of deployment
  • QoS/SLA-based Network Management

Enterprise (private)
Owner Operated
Mission-Critical System
Well established companies
Better for:
  • Low OpEx
  • Control of Data over own network
  • Leveraging edge intelligence
  • Reduced backhaul costs

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Case Study: Yokogawa Sushi Sensor – Efficient Field Work

Before
Outsourced vibration measurement for 200 items
$20 \times 12 \times 200 = \$48,000 / \text{yr}

Inspection results were not digitalized.

→ Customer could not utilize the data.

After
No recurring fees
• Realtime equipment status check
• Automatic warnings to technicians.

→ Enables digital transformation.
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<th>Overview</th>
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<tbody>
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<td><strong>Industry:</strong> Digital Pest Management</td>
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<td><strong>Description:</strong> Operates as a life science company through four divisions including Pharmaceuticals, Consumer Health, Crop Science, and Animal Health segments</td>
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<th>Business Issue, Solution, and Business Value</th>
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<tr>
<td><strong>Business Issue</strong></td>
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<td>Build a better mouse trap” and create a rapid-response system that enables companies to spot, thwart—and eventually predict—rodent incursions before they grow out of control. Wanted local decision-making and networks to reduce backhaul costs, control data flow over network and mitigate against internet loss.</td>
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| **Solution**  |
| MultiTech® partnered with the customer and added sensors to the rodent trap, paired with a LoRaWAN radio to transmit capture data to a central gateway, which relays the real-time data to a cloud platform.  |

| **Business Value**  |
| This system **reduced** the time needed to manually inspect traps by an average of **60%** while enabling improved food safety and compliance monitoring and reporting.  |
LoRaWAN® Private Network Benefits

• Custom application deployment
  • Load and manage your application on gateways
• Reduced cost and greater control of data packets
  • Only Join Request packets sent to the cloud
  • Your custom application decides what data is sent to the cloud for visualization
  • Network Availability
• Realization of edge intelligence and event processing capability
• No geographic restrictions
• Your own private LoRaWAN® network
About MultiTech

MultiTech Industrial IoT Assets

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WELCOME TO LoRaWAN® LIVE
BUSINESS TRACK 2.00PM – 6.00PM
BERLIN, JUNE 13, 2019

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IoT Connections