



Alef

Enterprise Mobile Connectivity APIs

Private Mobile Network Use Cases

Warehouse & Logistics Use Case

Smart Warehouse initiatives will drive P-LTE adoption leveraging IoT use cases for process improvement

High Bandwidth Video Cameras

HD video cameras enable security, biometric analysis and process monitoring

Autonomous Mobile Robots (AMR)

AMRs transport goods around the warehouse, scan barcodes or RFID tags for continuous inventory updates

Quality Control

Sensors for process monitoring

Asset Tracking

Sensors for Real Time Location Services (RTLS) to track mobile and portable equipment to optimize utilization

Sensors

Sensors for condition-based monitoring of equipment for predictive maintenance

Collaborative Robots (Cobots)

Cobots perform dangerous and tedious tasks such as moving, palletizing, and packing goods

Automated Storage & Retrieval Systems

Increase order fulfillment rates, maximize warehouse space and optimize labor resources

Inventory Pallet Tracking

RTLS for item and pallet tracking to increase pick and pack operations

Employee Connectivity

Connectivity to Warehouse Management System (WMS) for job allocation and handling

Push to Talk/Video

Communications for crew and security employees.

Education Use Case



Expand wireless mobility

To those hard-to-reach corners of the campus with dependable carrier-class technologies.



Less manpower & cost with the same performance & security inside your firewall



Improve performance for latency-sensitive applications



Better than cloud because data is kept local and secure and integrated into the service layer

Enhancing the Campus Sports Experience

High speed broadband connectivity to every seat. Video replay on your device, post to social media, text, and order merchandise. New revenue potential – the smartphone is the personal portal for entrance, transactions, alternative viewing, real time communications, and direct marketing before, during, and after the event.

Targeted Communications

Class notifications, campus weather alerts, new ticket availability, schedule changes - tailored to specific audiences ranging from individual student to class to specific school to entire community.

The Connected Building

Securely connect and manage BMS to optimize operational costs and staff resources – drive down costs for the smart campus.

Expanded Security & Monitoring

Easily deploy video cameras without new cabling and view these video streams from any location.

Economically Extend Existing Wi-Fi

Cover hard-to-reach locations at school vehicles/buses.

Asset Tracking

Gain physical awareness of all faculty as they transit across campus, increasing safety for personnel and while in remote campus locations.

Digital Signage and IoT

Deploy and update indoor/outdoor signage in real time from anywhere with no new cabling.

First Responders

Enabling first responders with dedicated network capacity at all times.



Manufacturing Use Case



BETTER COVERAGE

Blanket facilities with reliable wireless signals without the interference issues of Wi-Fi



MORE CONTROL

Segment access for mission critical machinery or provide tiered service for guaranteed throughput



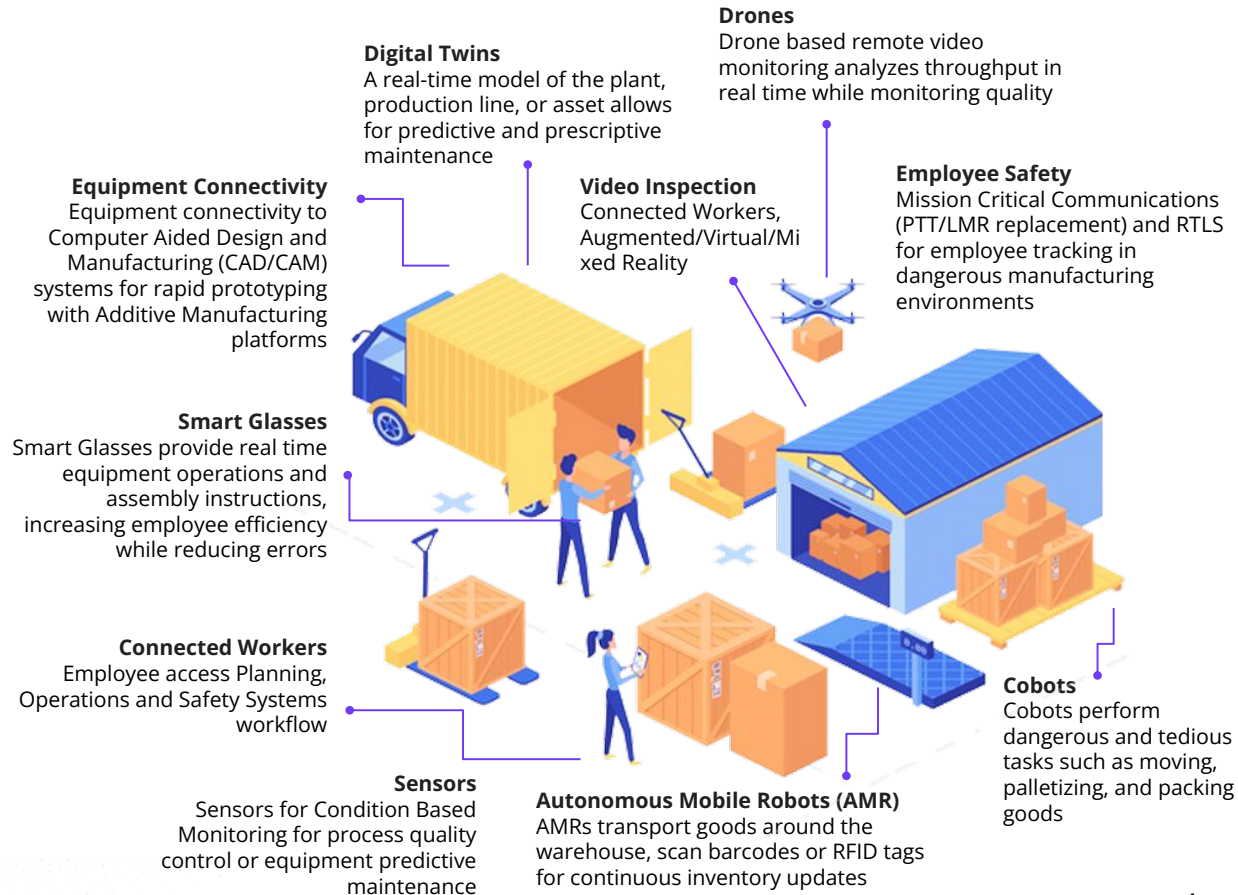
CARRIER CLASS SECURITY

Secure data end-to-end with managed spectrum, keeping data within your existing firewalls



COST, SPACE & TIME SAVINGS

Remove the need for expensive on prem solutions and the massive footprint they require



Integrated Application Use Case - Retail

Back of Store & Warehouse

- Video Applications
- Inventory Control
- Supply Chain Robotics
- In-Vehicle Connectivity
- Temporary location backhaul

Technology Merits

- Inherent Air Encryption
- Zero RF Interference
- No Wi-Fi Hacking/Spoofing
- Integral IoT
- WAN Consolidation
- PABX & Copper Replacement
- 5G Readiness



Staff Tool/Efficiency

- Auto Punch-in/Punch-out
- VIP Client Identity
- Mobile Transactions (POS)
- Secure Staff Messaging
- BYOD for Vendors

Operations

- Connect/Client Analytics
- QOS for Voice
- QOS for Automation
- PTT Devices
- Tablets
- Secured IoT Devices

Venue & Stadium Use Cases

Smart Venue initiatives will drive P-LTE adoption leveraging use cases to move point of sale (POS) off wi-fi and into a private network

Fan experience streamlined from entry ticketing facial recognition to parking, digital signage, real-time fan applications such as venue maps, contactless concession stands, and geo-locators, to interactive and personalized fan engagement.

Digital Signage and IoT

Deploy and update indoor/outdoor signage in real time from anywhere with no new cabling.

Connect wireless systems with private or public networks, on-site or off-site on an event by event basis.

Less manpower & cost with the same performance & security inside firewall

Push to Talk/Video Communications for staff and security employees

Interactive in-house experiences require networks to deliver more capacity, bandwidth, and lower latency.

Expanded Security & Monitoring

Easily deploy video cameras without new cabling and view these video streams from any location.

Enhancing the Campus Sports Experience

High speed broadband connectivity to every seat. Video replay on devices, social media posts, text, order merchandise. New revenue potential – the smartphone is the personal portal for entrance, transactions, alternative viewing, real time communications, and direct marketing before, during, and after the event.

POS

Seamless on-site experiences extending from Point of Sales

High Bandwidth Video Cameras

HD video cameras enable security, biometric analysis and process monitoring

Create secure, dedicated, wireless connections based on venue event needs, on an event by event basis.

Private Mobile Networks implement carrier-class dependability and rock-solid mobility—the kind arena network managers, teams and fans can depend on.

Healthcare Facility Use Case

Push to Talk/Video

Communications for staff and security employees to relay mission critical information or emergencies on-site. Allow patients & caregivers to seamless stay in communication.

Support Throughput Optimization

Maximize the flow of information for essential medical services such as surgeries, diagnostic imaging and emergency room (ER) activities

Records & Data Reporting

Ensure lab results and patient data records are accessible and updated in real-time to doctors in other areas of your facility

Targeted Communications

Event notifications, incident alerts, schedule changes - tailored to specific audiences ranging from individuals to departments to entire facility

Patient and Asset Tracking

Find medical equipment and locate patients in your hospital quickly & efficiently

Health Environment Monitoring

Monitor and maintain environmental quality factors such as airflow, directional pressure and air quality

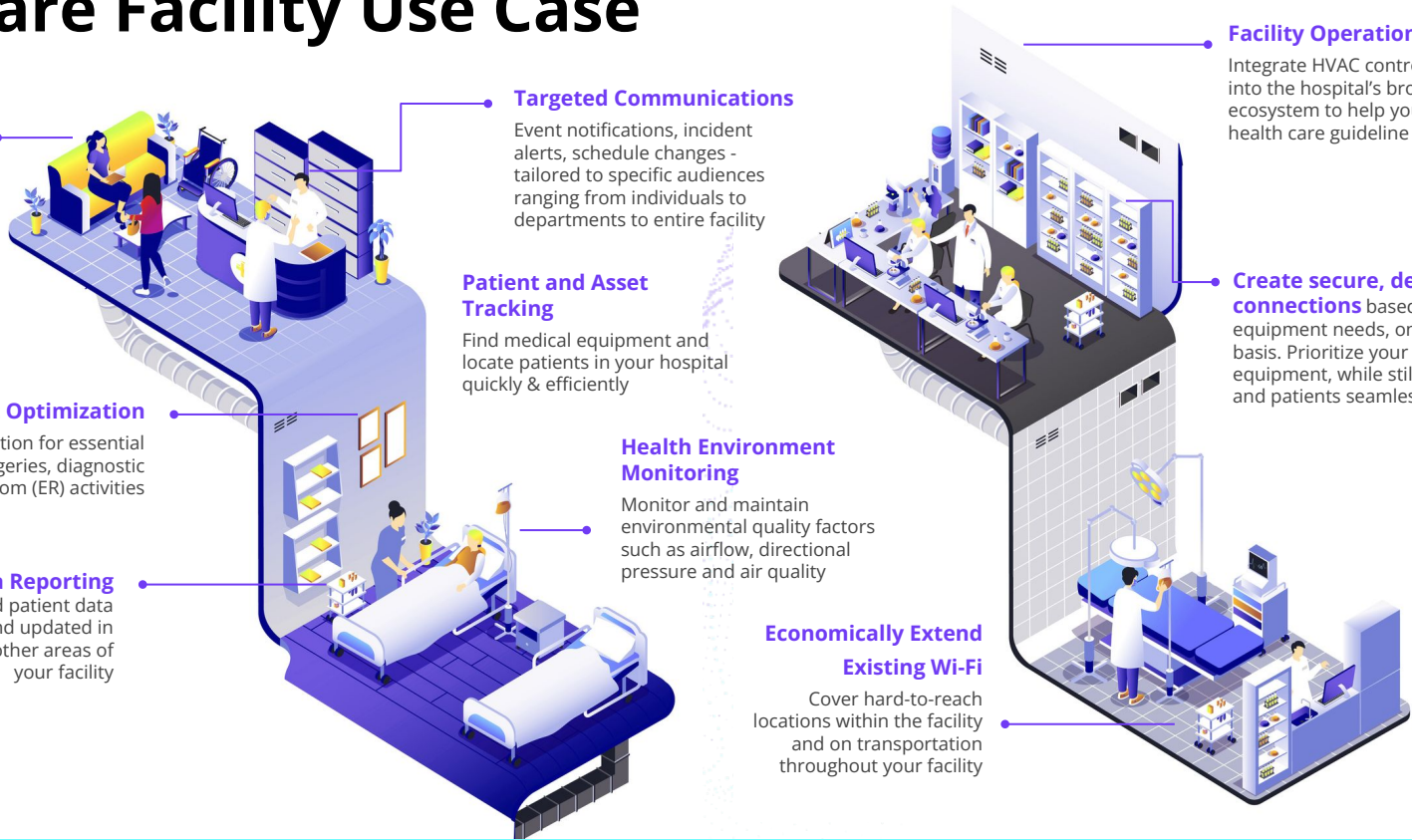
Economically Extend Existing Wi-Fi

Cover hard-to-reach locations within the facility and on transportation throughout your facility

Facility Operations

Integrate HVAC controls and strategies into the hospital's broader technology ecosystem to help you meet emerging health care guideline requirements

Create secure, dedicated, connections based on facility and equipment needs, on a day by day basis. Prioritize your life-saving equipment, while still allowing staff and patients seamless connectivity



Private Mobile Networks implement carrier-class dependability and rock-solid mobility—the kind healthcare network managers and doctors can depend on.

Precision Agriculture Use Case



BETTER COVERAGE

Blanket facilities with reliable wireless signals without the interference issues of Wi-Fi



MORE CONTROL

Segment access for mission critical machinery or provide tiered service for guaranteed throughput



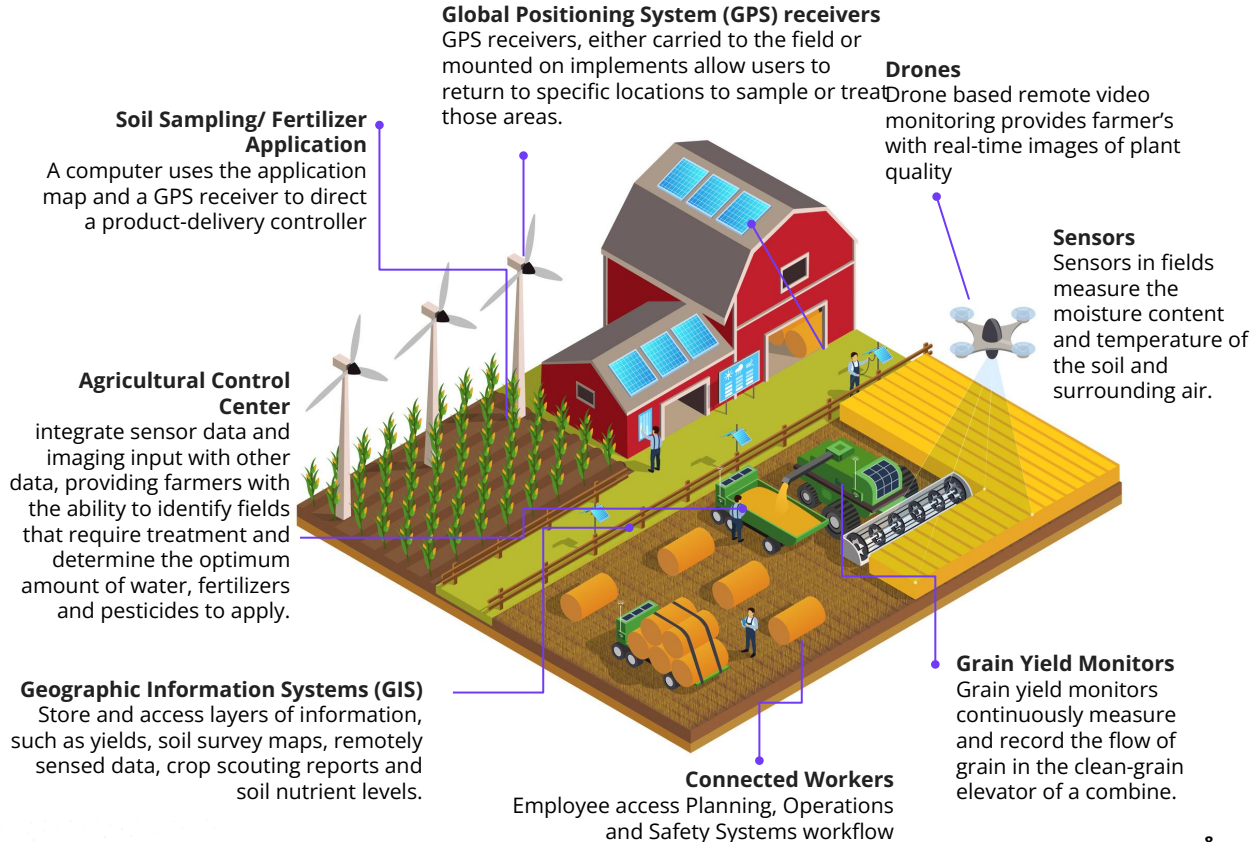
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Smart Construction Use Case



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Security Video Ingest & Analytics

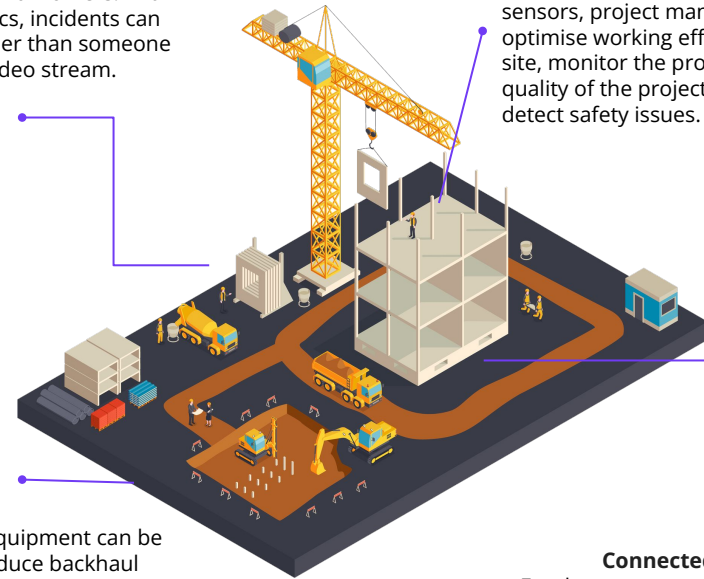
Construction sites use CCTV to ensure the safety and security of sites and workers. With the addition of video analytics, incidents can trigger automatic alerts rather than someone having to monitor the live video stream.

Advanced Predictive Maintenance

Advanced predictive maintenance monitors data from equipment to ensure it is in good condition and flag preemptively if there is a need to repair it, eliminating the need for scheduled maintenance.

Data from sensors across equipment can be processed at the edge to reduce backhaul and strain on the network and central server and minimise latency for a real-time view of the equipment.

Sensors are installed on site or worn by construction workers. By analysing data collected from the sensors, project managers may optimise working efficiency on site, monitor the progress and quality of the project and/or detect safety issues.



Connected Workers
Employee access to Planning, Operations and Safety Systems workflow while on the job.

Unified Communications as a Service (UCaaS) Use Case

Whether on-site or in the cloud, devices using these applications on-premise enjoy true mobility they require throughout the enterprise footprint. **UCaaS is a cloud-delivered unified communications model that supports six communications functions:**



Enterprise telephony



Instant Messaging and presence (personal & team)



Unified Messaging



Meetings (audio/video/web conferencing)



Mobility



Communications-enabled business processes

WHAT ALEF SOLVES FOR:

- Mobility handoffs from Wi-Fi
- Quick deployment / Scale across your enterprise
- Agnostic - Any Radio
- Quickly onboard devices inside the firewall
- Existing security policies and governance rules can be enforced without alteration
- Allow employees to bring their own device and still manage access inside the enterprise