FirstNet and the Alaska Plan
Today’s Presenters

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“The First Responder Network Authority shall hold the single public safety wireless license and take all actions necessary to ensure the building, deployment, and operation of the nationwide public safety broadband network.”
Mission

FirstNet was created by Congress to fulfill one mission:

“To provide emergency responders with the first nationwide, high-speed, broadband network dedicated to public safety.”
Governor Bill Walker signed a letter of intent to allow the First Responder Network Authority (FirstNet) to proceed with the deployment of the Nationwide Public Safety Broadband Network in Alaska.

“The plan will bring a secure wireless broadband network to the public safety community that will help Alaska’s first responders save lives. **Opting in** to FirstNet is an important step to ensure that Alaska’s first responders can communicate when seconds can mean the difference between life and death,” said Governor Bill Walker. “Putting this technology in the hands of our public safety personnel brings us closer to building a safer Alaska.”
Governor Walker’s “Safer Alaska” Public Safety Action Plan

“Leveraging the FirstNet program” is #29 of Governor Walker’s key public safety recommendations for a Safer Alaska.
Bringing it Together

Applications Base Technologies
- E-citations & court systems
- Digital evidence
- Facial recognition
- Field reporting
- CAD systems
- Integrated dispatch
- NG 9-1-1
- Electronic citizen reporting
- Government records
- Alarm management

Future Technologies
- Personnel biometrics
- Personnel location
- 3D building plans
- Electronic health records
- En-route collaboration
- Telemedicine

- Z-axis acquisition
- MC-PTT
- MC-Data
- MC-Video
- P2P Apps
- IoT
- Virtual Assistants
- AR/VR
- ICAM
Internet of Life-Saving Things (IoLST)


http://iffmag.mdnpublishing.com/application-fireground-intelligence/
AT&T Smart Cities

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Alaska Smart Communities Forum
1/30/18
36M+ Connected Devices and High Growth Momentum

- Connected Car
- Fleet Management
- Health Care
- Asset Management
- Smart Cities
- Wearables
- Connected Home
- Retail
- Drones

*32M+ connected devices as of 1Q17
What is a smart city?

The integration of technology with a strategic approach to sustainability, cost reduction, citizen well-being and economic development.
Building a Smarter City

Drivers that Influence Development

- Increased Urbanization
- Environmental Sustainability
- Economic Development
- Public Safety
- Aging Infrastructure
AT&T Smart Cities Framework

Highly Secure Connectivity
- 4G LTE
- LTE-M
- Private LTE
- Broadband
- Wi-Fi
- Giga Power
- Satellite

Scalable Platforms
- Control Center
- M2X
- Flow Designer
- Security
- NetBond
- Cloud

Vertically Integrated Solutions
- Energy & Utilities
- Transportation
- Public Safety
- Infrastructure
- Citizen Engagement

Strategic Alliances
- Cisco
- Deloitte
- Ericsson
- GE
- Hitachi
- IBM
- Intel
- Nokia
- Qualcomm
- Southern Company

Thought Leadership
- National Institute of Standards and Technology (NIST)
- Smart Cities Council
- US Ignite
- Envision America
- Spotlight Cities
- DOT Challenge
Vertically Integrated Solutions

Energy & Utilities
- Private LTE Network
- Smart Metering
- Prepay Energy
- Smart Irrigation
- Smart Leak

Infrastructure
- Digital Infrastructure
- Asset Monitoring
- Waste Management

Public Safety
- Smart Surveillance
- Gunshot Detection
- Environmental & Air Quality

Transportation
- Connected Vehicles
- Traffic Light Controls
- Smart Signage
- Public Transit
- Smart Parking

Citizen Engagement
- Digital Kiosk
- Operations Center
- Municipal Wi-Fi
- Way Finding
AT&T Smart Cities Digital Infrastructure in partnership with Current by GE

**Universal arm mount**

**Universal vertical mount**

**Sensors**

- **Camera**
  - 2 x 1080p color
- **2x microphones**

**Environmental**

- **Temperature**
- **Pressure**
- **Humidity**
- **Vibration**

**Hardware**

- **Computer** - Intel Based
- **Solid State Drive** 512GB

**Key Features**

- 120-277v; 480v
- -20C to 40C
- Image/video on demand
- OTA update
- Analytics store
- Computer Vision
- Sensor fusion
- concurrent analytics
- Gun-shot detection

**Communications**

- **Backhaul**
- Cellular
- Ethernet
- Wi-Fi

**External Sensor**

- Wi-Fi
- BLE 4.1

**Certifications**

- RoHS
- FCC
- IP65
- UL

**Edge Metadata**

- **Traffic**
  - Count, Direction, Lane, Speed, Classification
- **Parking**
  - Car-In, Car-out

**Pedestrian**

- Count, Direction
Capturing data on the move

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Traffic Optimization

Pedestrian Safety

Parking Utilization

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The biggest problem with current irrigation methods is that outdoor irrigation makes up about 60%¹ of watering and about 50%² of it is wasted.

Source:
   http://water.usgs.gov/edu/wuir.html

2. WaterSense, United States Environmental Protection Agency, 2016
   https://www3.epa.gov/watersense/pubs/outdoor.html
Reduced water consumption by an average of 40%\(^1\)

Reduced landscape run-off by up to 71%\(^2\)

Thousands of dollars saved per site with a typical payback in 12–36 months

97% customer satisfaction rates\(^3\)

Sources:
2. Irvine ET Controller Residential Runoff Reduction Study
3. HydroPoint Data Systems, Inc.
Smart irrigation for water management

8 Million daily data points aggregated by HydroPoint
(e.g. rainfall, relative humidity, solar radiation, temperature, wind speed)

Weather stations
Over 40,000 weather stations across the U.S. and Canada

Climate center
Calculates virtual weather station data for every customer site

SaaS conservation applications
Optimizes settings, reports water savings, and provides email alerts for leaks or sprinkler failures

Smart controller
- Manages schedule and monitors water use
- Programmable (e.g. soil type, shade level, root depth, sprinkler type)
- Wireless-enabled

Customer Installation
Sprinklers with flow and valve controls

Internet

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### Overview
Structure Monitoring provides governmental and private entities with the ability to remotely monitor key infrastructure which has been equipped with AT&T LTE enabled crack and tilt sensors. Monitoring occurs in near real-time via any web-enabled device.

### Solution Components
- Crack sensor
- Tilt sensor
- Remote monitoring portal
- IBM Cognitive Cloud ®

### Benefits may include:
- Increase efficiency, safety and awareness
- Make more informed decisions
- Lower operations cost
AT&T Platform Innovation: Smart Cities Operations Center

- **WATER**
  - TRENDING USE: Historic Average | Current Day
  - CL: 200 PPM, Average System Temperature: 65°
  - STAGE 2: River Base Flow Conditions
  - 3 DAYS: Since Major Valve Break
  - BIN STATUS: 61% Collection Needed, 6% Over Capacity

- **WASTE**
  - STAGE 2: River Base Flow Conditions
  - BIN STATUS: 61% Collection Needed, 6% Over Capacity

- **ENERGY**
  - POWER CONSUMPTION: Historic Average | Current Day
  - SMART LIGHT ENERGY SAVINGS: 745k YTD

- **PARKING**
  - OCCUPANCY: 85%
  - TIME: 24/7
  - 94 MINUTES: Average Duration

- **SOCIAL**
  - OCCUPANCY: 85%
  - TIME: 24/7
  - 94 MINUTES: Average Duration

- **TRAFFIC**
  - OCCUPANCY: 85%
  - TIME: 24/7
  - 27 MINUTES: On Time Performance

- **TOTAL IMPRESSIONS**
  - 204,216,576

Other sections include:
- Transportation: Major Blockages
- Revenue: Hourly Revenue £326k YTD
- Social: 537,236 Engaged Users
- Traffic: 10% On Time Performance
- Smart Cities: 89% Average Vehicle Speed
AT&T Spotlight Cities Across the U.S.

- Miami-Dade County, FL
- Dallas, TX
- Portland, OR
- Chicago, IL
- Atlanta, GA
- Georgia Tech
- Chapel Hill, NC
- Montgomery County, MD

Plus:
- Columbus, OH USDOT challenge winner
- 77 US DOT Applicant Cities
- 20 Envision America Cities
Multi-layered approach to securing IoT

AT&T recommends a multi-layered approach to security to help protect the IoT ecosystem end-to-end.

- **Endpoint**
  - IoT endpoints vary in type, processing power & capability

- **Connectivity**
  - Securing the network (across multiple connectivity types)

- **Data/Application**
  - Securing workloads/applications

- **Strategy & Governance**
  - IoT Security Consulting

- **Threat Management**
  - IoT threat detection & response
A cloud-based solution that allows users to automate the management of mobile services for their connected devices. AT&T Control Center has been designed ground-up to help enterprises launch, manage and monetize their connected devices.

**Lower Costs**
Rules-driven automation drives down costs by eliminating manual processes and taking action when exception activity occurs

**Service Reliability**
Automated real-time diagnostics and control capabilities allow users to identify potential connectivity problems and take corrective actions

**Scalability**
Lets users define a mobile services lifecycle specific to their business needs freeing them up from the tasks of everyday connectivity management
AT&T Control Center – Ensuring your M2M Success

Automatic, Customizable Life Cycle Management

Real time Visibility in all devices

Diagnostics Wizard

Real Time Problem Identification and Status Tool “SpotLight”

Global SIM
Get our team behind you – Professional Services

Our solution includes experts to help you plan, deploy and manage your system.

**Strategy & Design**
Based on your business and application requirements

**Solution Development & Integration**
Extensive experience with developing fixed and mobile enterprise-grade M2M applications

**Deployment**
Experts help stage complex roll-outs and plan for success

**Managed Services & Service Assurance**
You can focus on core activities while leveraging our specialized IT services
MOBILIZING YOUR WORLD™