LAKE NONA TOWN CENTER

ILLUSTRATIONS, PLANS, AND INFORMATION ARE SUBJECT TO CHANGE WITHOUT NOTICE

FREMONT ST
EXPERIENCE
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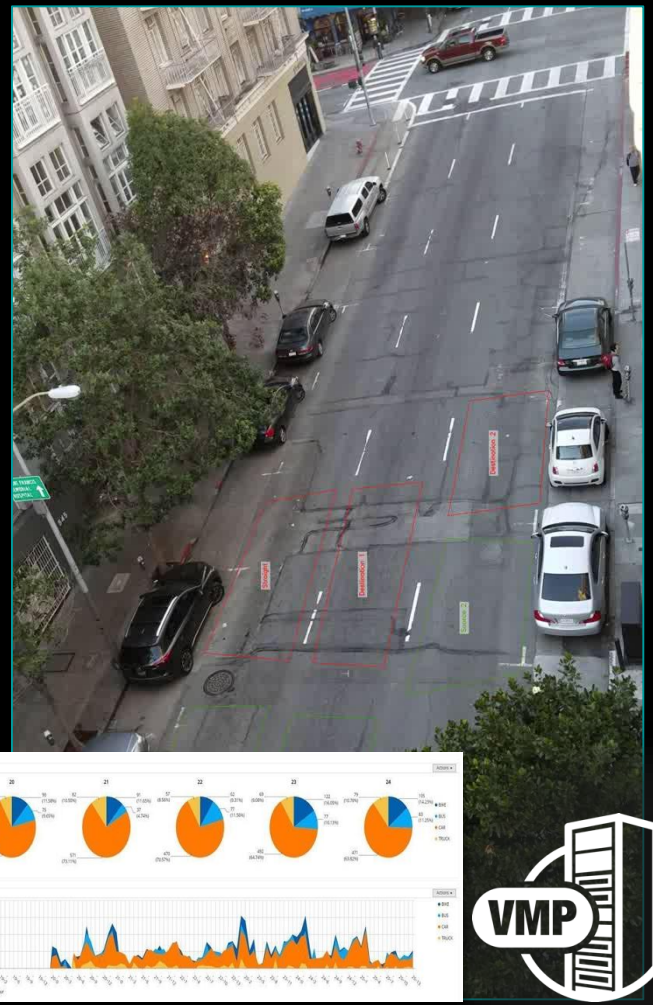
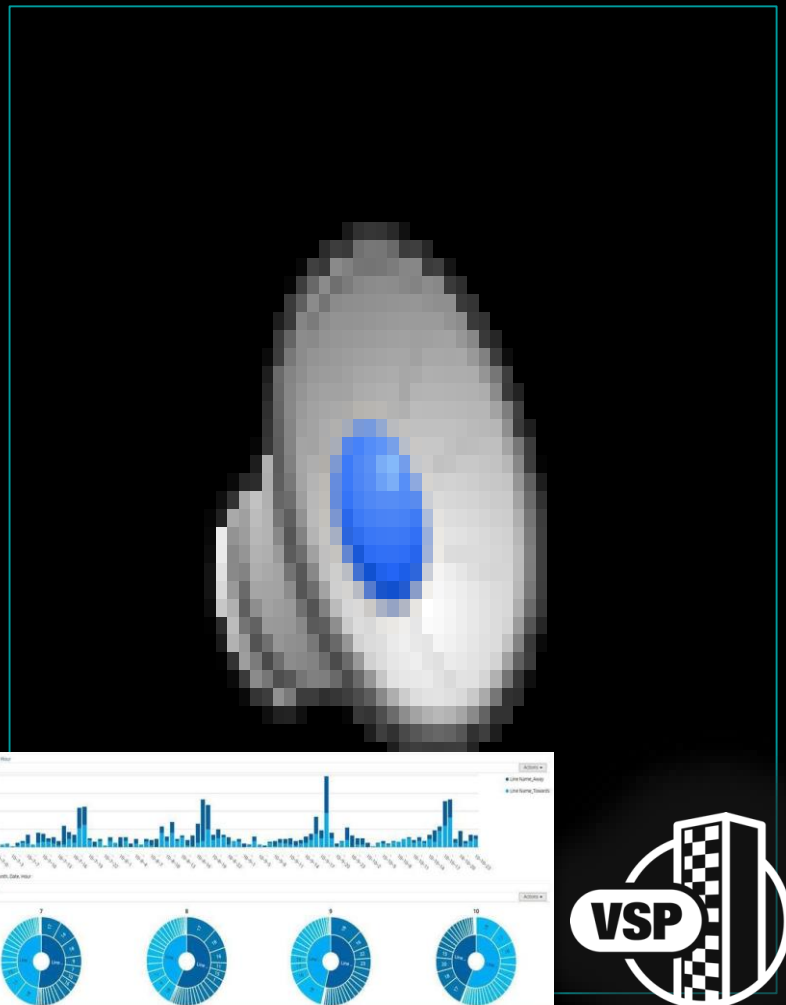
Video + AI = Rich Insights and Alerts
Operations, Business and Safety Intelligence

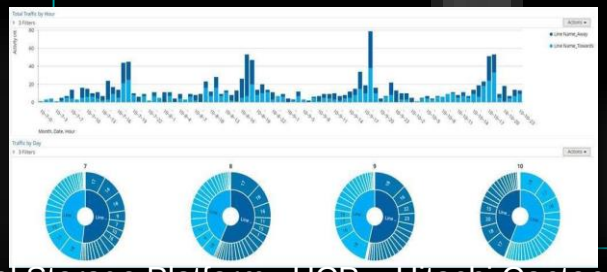
NEXT 2018

Traffic Analysis

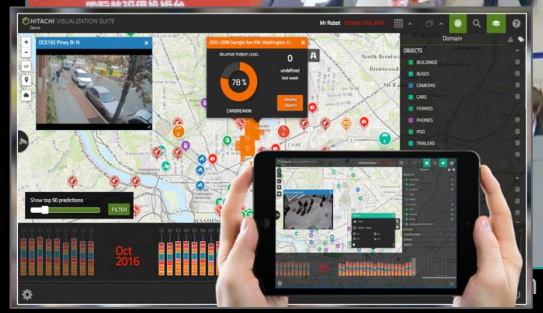


People Counting





Operations and Privacy



*VMP = Video Management Platform VSP = Virtual Storage Platform HCP = Hitachi Content Platform

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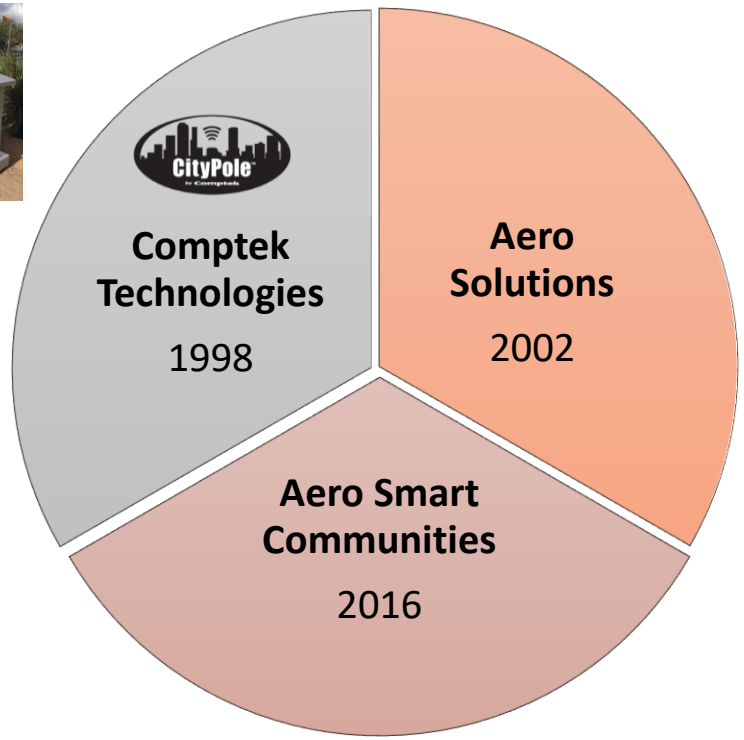
About Landmark Dividend

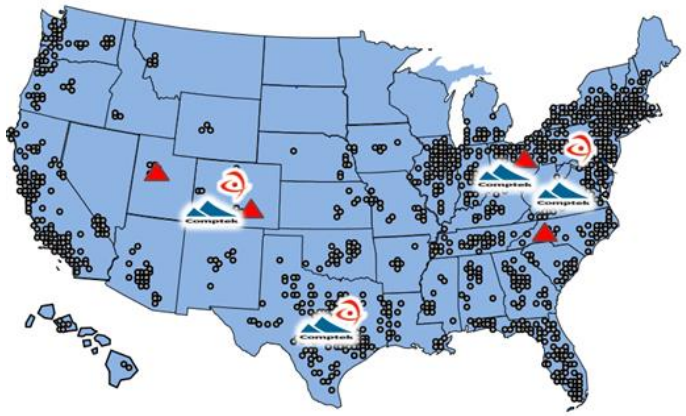
LANDMARK DIVIDEND

Landmark Dividend LLC is a real estate and infrastructure investment firm specializing in the telecom and renewable energy industries. Our key areas of focus for acquisition and development include:

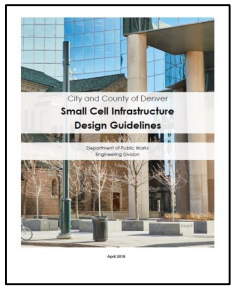
- Telecommunications (4G/5G Tower & Concealment Solutions)
- Data Centers
- Fiber Optic Infrastructure
- Smart Cities
- Renewable Power Generation and Energy Storage (Microgrids including EV charging)
- Outdoor Digital Media & Advertising

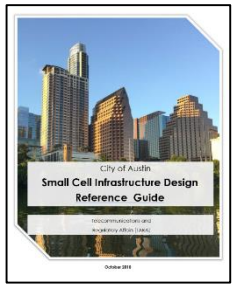
Aero Wireless Group



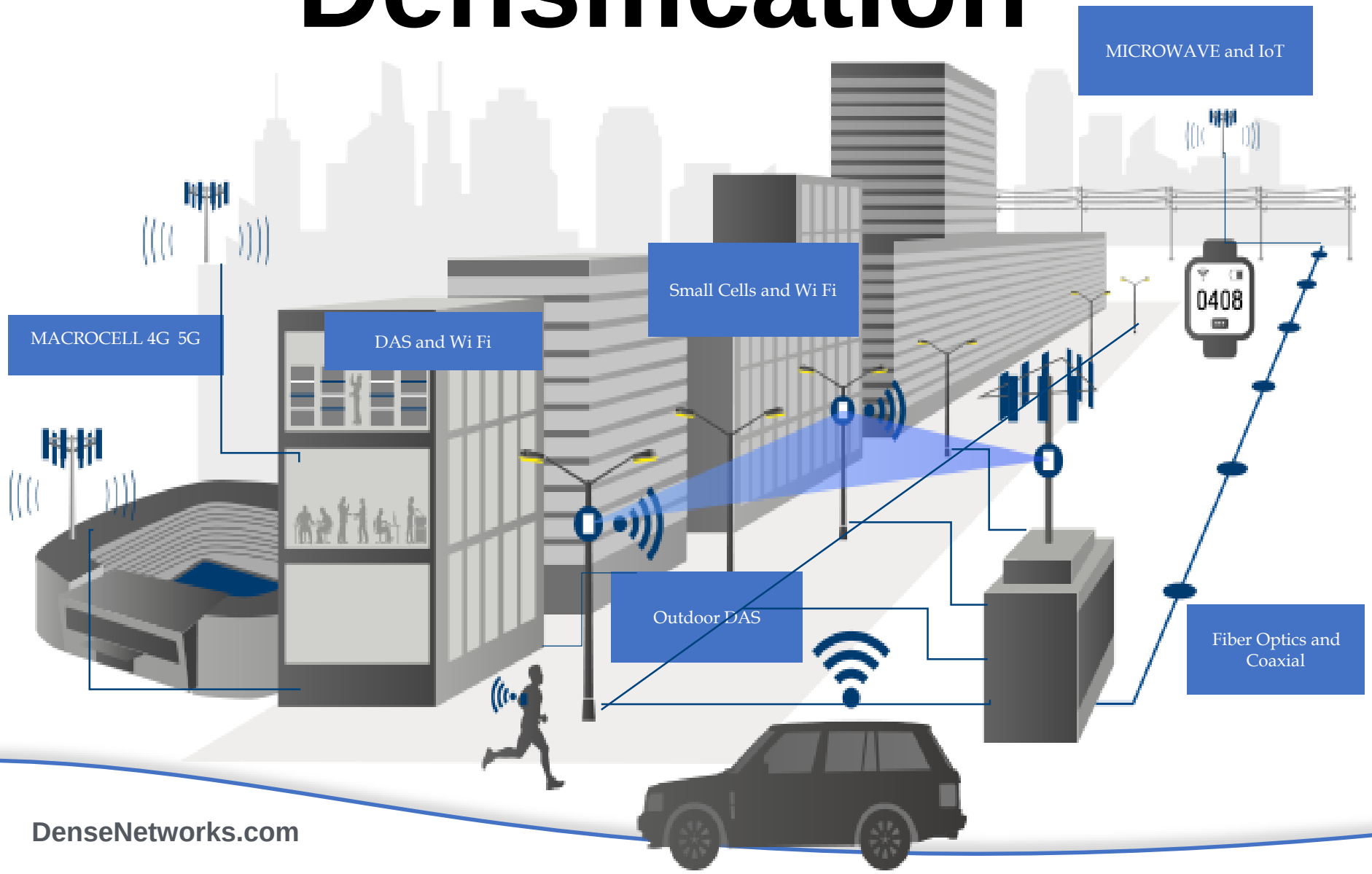


> 4,000 Tower Collocations

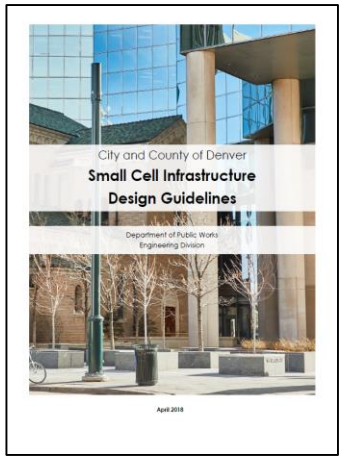




Densification

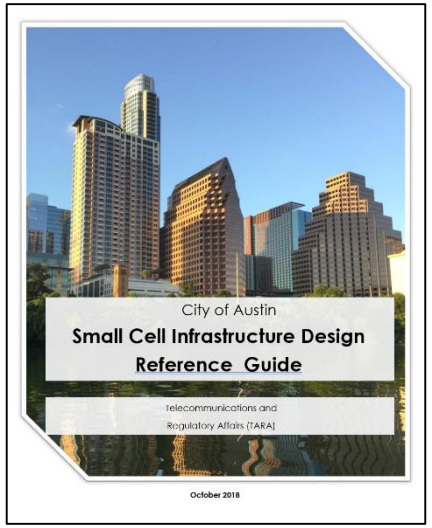


Establish Design Guidelines – Supports Expediting Small Cell Deployments



- Public-facing review process including Districts, City Departments, Neighborhood Orgs
- Policy for co-location first
- Notification of adjacent property owner
- Restricting new pole density through min 250' spacing
- Restricting placement (along parks, historic & residential frontages)
- Restricting placement in front of residential & valuable sight lines
- Requiring camouflage and concealment
- Limiting height and equipment size
- Opportunity to coordinate fiber conduit

Detailed PROCESS Guidance



Each Municipality is Unique, and Each Should Create its Own Plans Informed by the Local Stakeholders

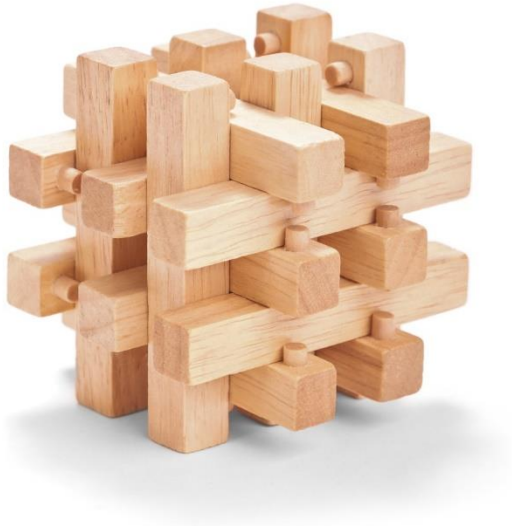
The Important Part: There's a Plan

Densification Planning Requires Early Collaboration

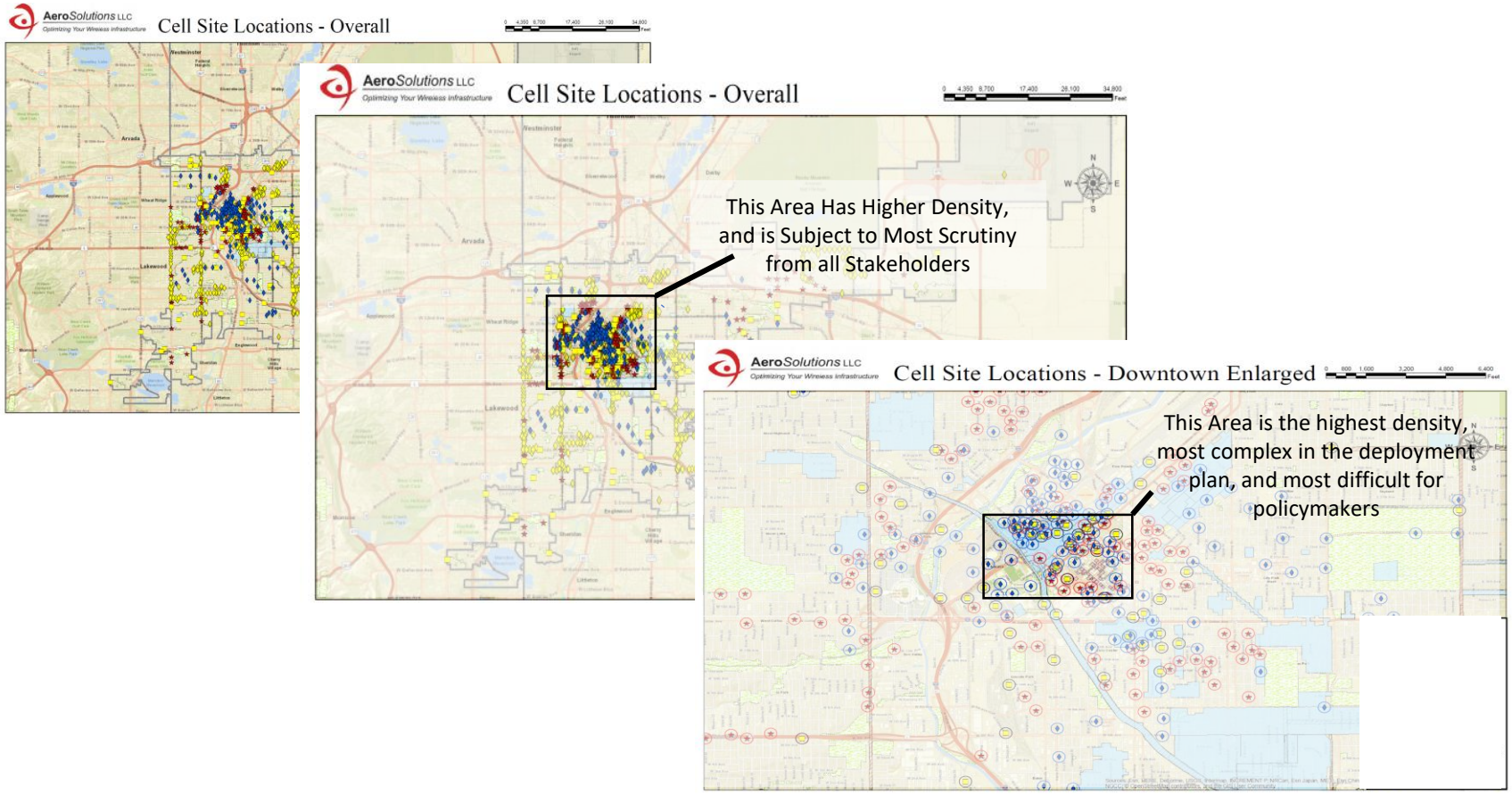
- Wireless Operator(s)
- Municipality
- Utility

Recognize Complexity Exists

- Technologically
- Socially
- Politically



Map Small Cell Deployment Plan Early under NDA's to Inform Policy Making



Example FlexGrid Deployment

FLEXGRID™

1: Radio Colocation & Core Network

Landmark deploys state-of-the-art stealth tower infrastructure that enables the deployment of 4G/5G in marquee locations typically resistant to traditional macro/micro cell towers. Landmark's offerings provide prospective tenants a neutral host solution for small cell connectivity and various smart city and IoT applications.

2: Connected Kiosk

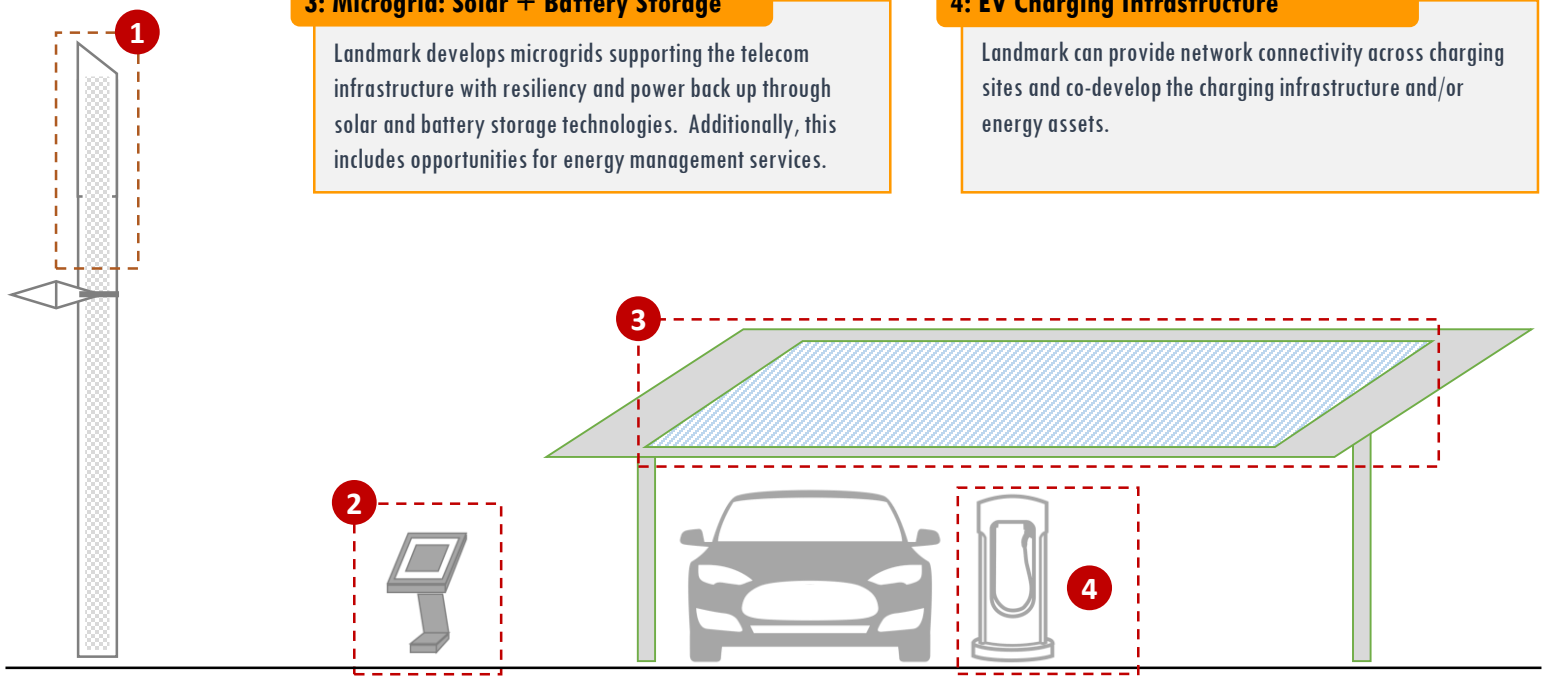
Landmark brings high-speed connectivity fostering a rich environment for out-of-home digital kiosk network operators. Kiosk networks can be leveraged for public safety announcements and advertising revenues.

3: Microgrid: Solar + Battery Storage

Landmark develops microgrids supporting the telecom infrastructure with resiliency and power back up through solar and battery storage technologies. Additionally, this includes opportunities for energy management services.

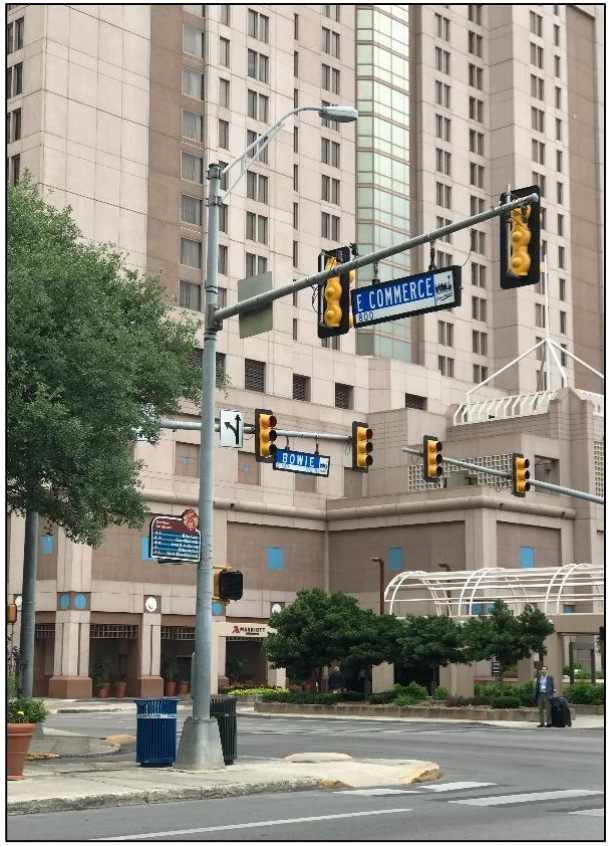
4: EV Charging Infrastructure

Landmark can provide network connectivity across charging sites and co-develop the charging infrastructure and/or energy assets.

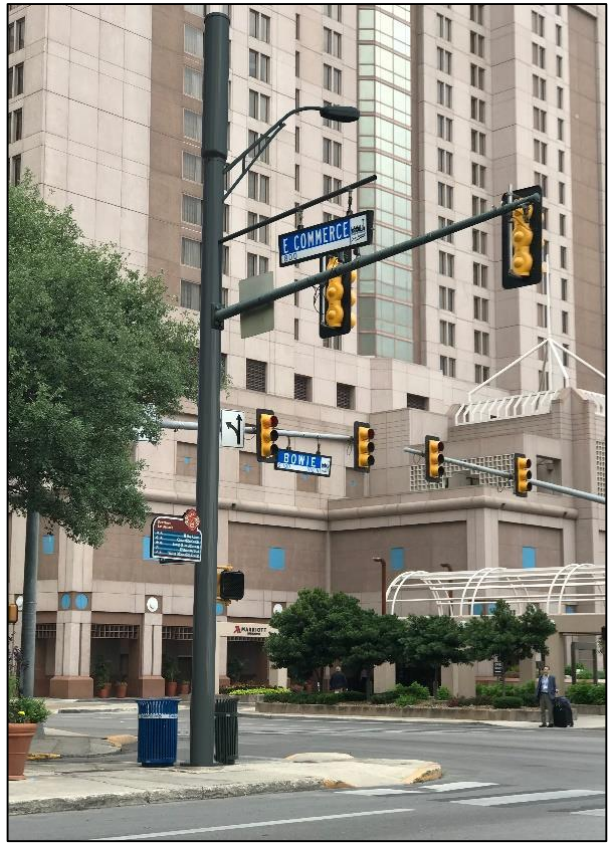


Urban Design - Architectural Blending

Existing Traffic Structure

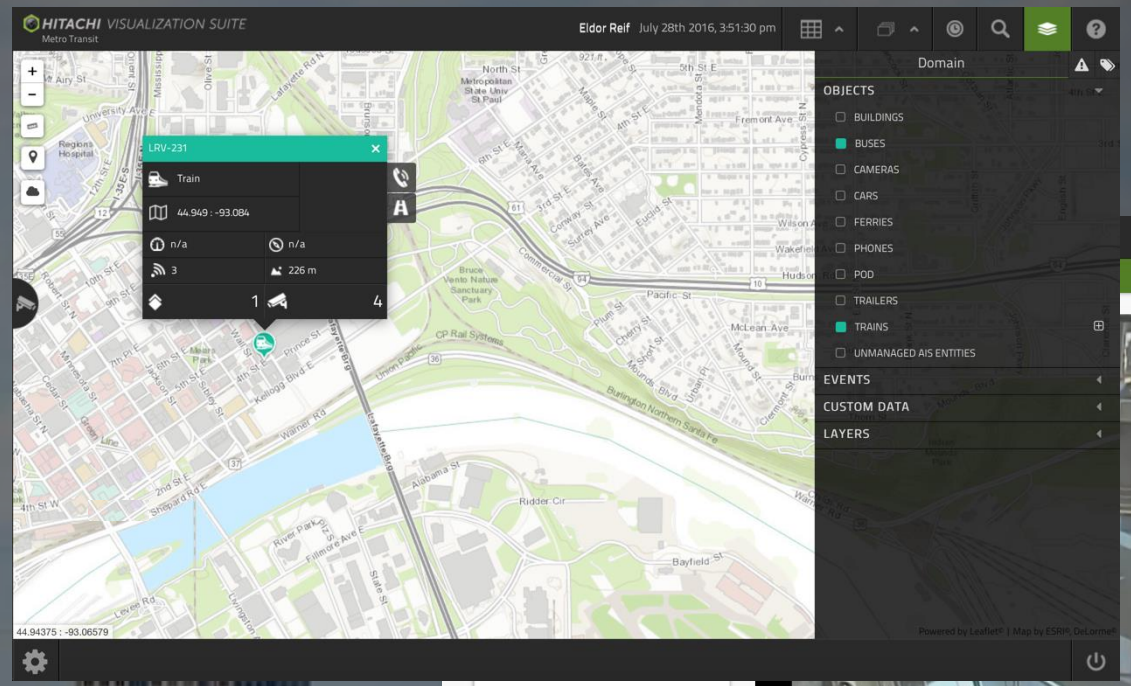


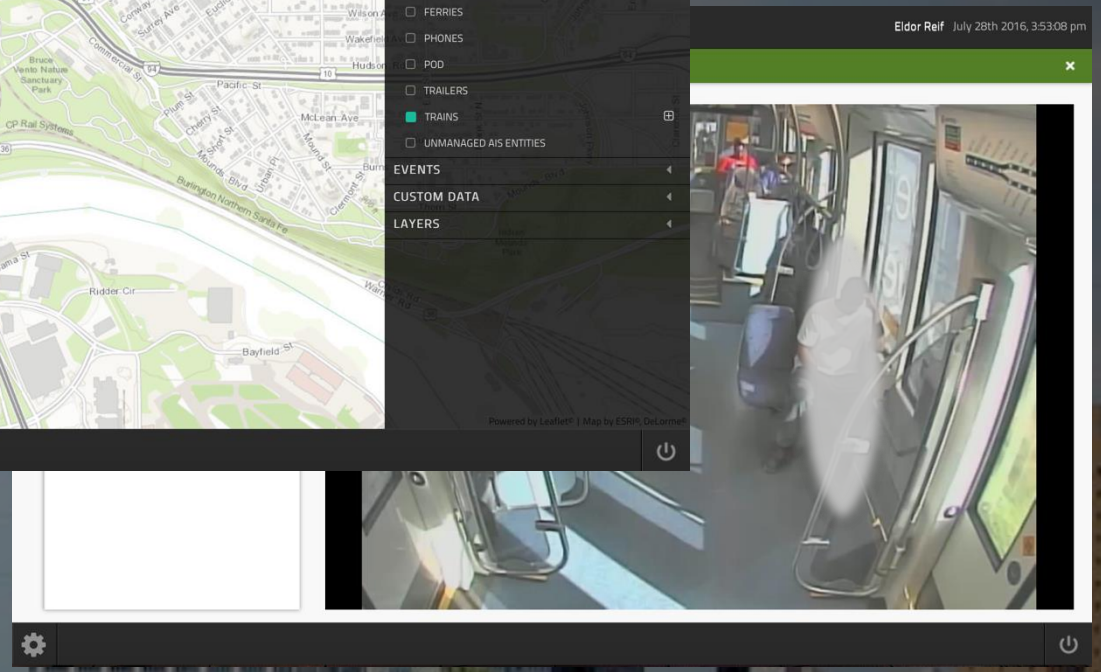
CityPole Traffic Signal Reduced Footprint in ROW

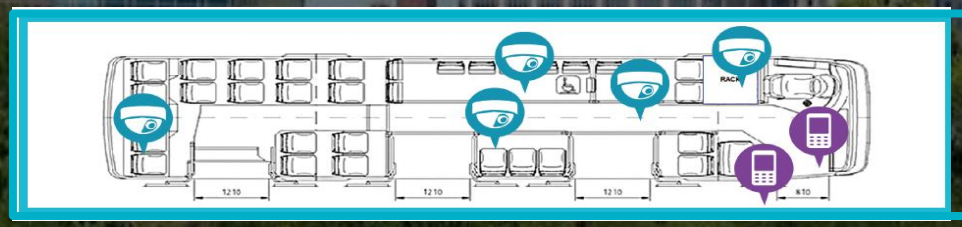


Smart Transportation Use Case

- Ensure public safety with real time and recorded video
- Integrate Disparate Fixed and Mobile Video Systems
- Provide situational awareness for first responders
- Track vehicle locations
- Count and track people and crowds
- Find objects left behind
- Integrate traffic data and video
- View IoT data for trains, stations, and infrastructure







Vehicle schematics give real-time access to cameras and IoT data.

Hitachi Video Analytics Delivers Digital Insights

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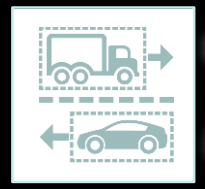
Operational & Business Intelligence

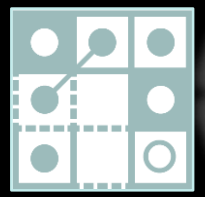
People Counter



Traffic Analyzer

Queue Detector

License Plate Recognizer



Activity Visualizer

Parking Space Analyzer

Direction Controller

Camera Health Monitor

Security

Intrusion Detector

Facial Recognition

Object Detector

Video Enhancer

Privacy

Privacy Protector

European Privacy Seal
EP-P-F9LDTM / Valid till 2017-10

Police • Hospitals • Campuses • City Agencies • Retail • Financial Services • Transportation • Utilities

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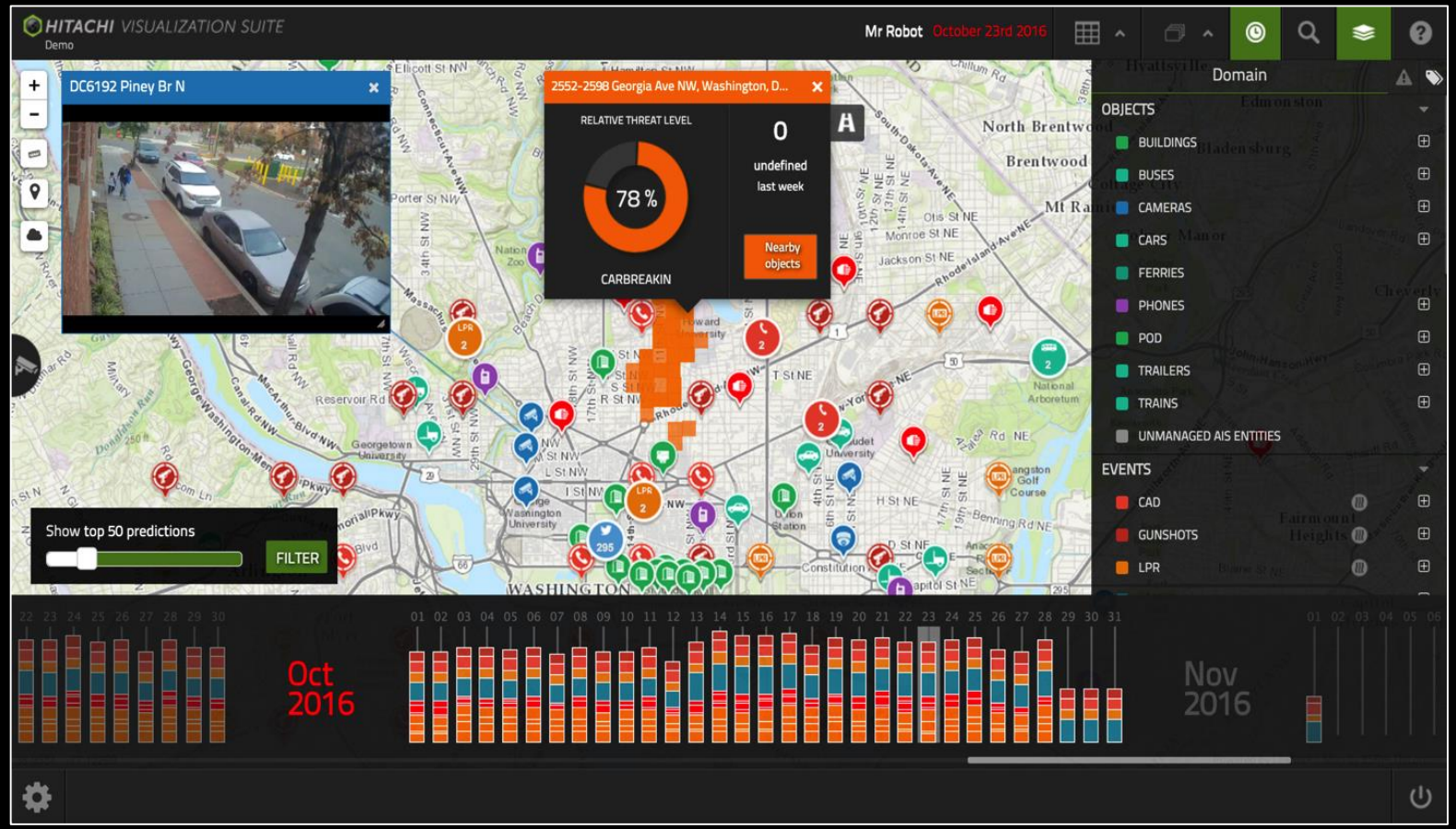
Situational Awareness Through Hitachi Visualization Suite

NEXT 2018

- Real-time video and IoT data from facilities, vehicles, infrastructure, security, and shops
- Unlimited data layers on a single pane of glass
- Distributed intelligence for all staff with browser-based desktop or mobile capability
- Workflow automation for setting alerts for customer needs or security incidents



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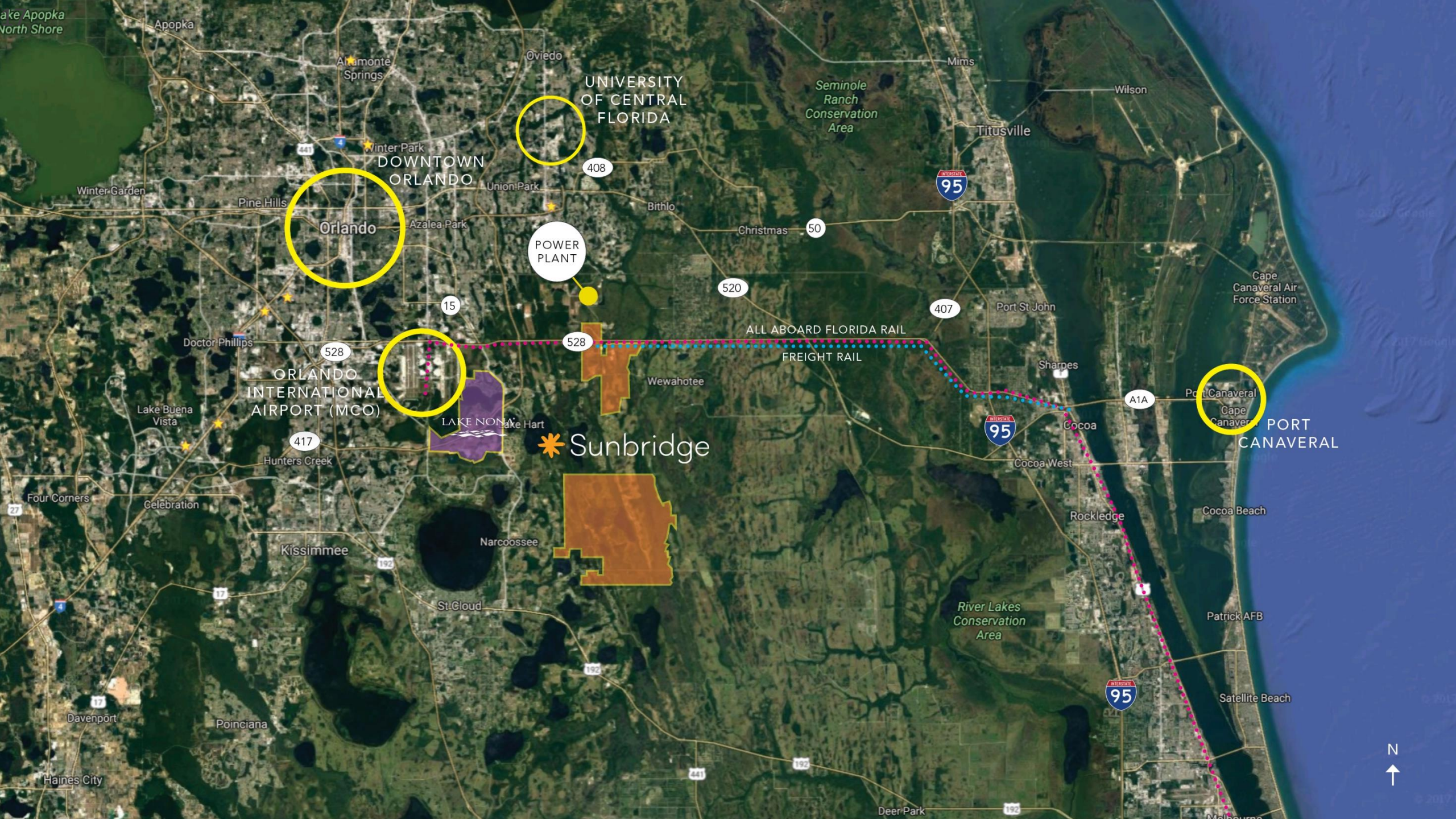
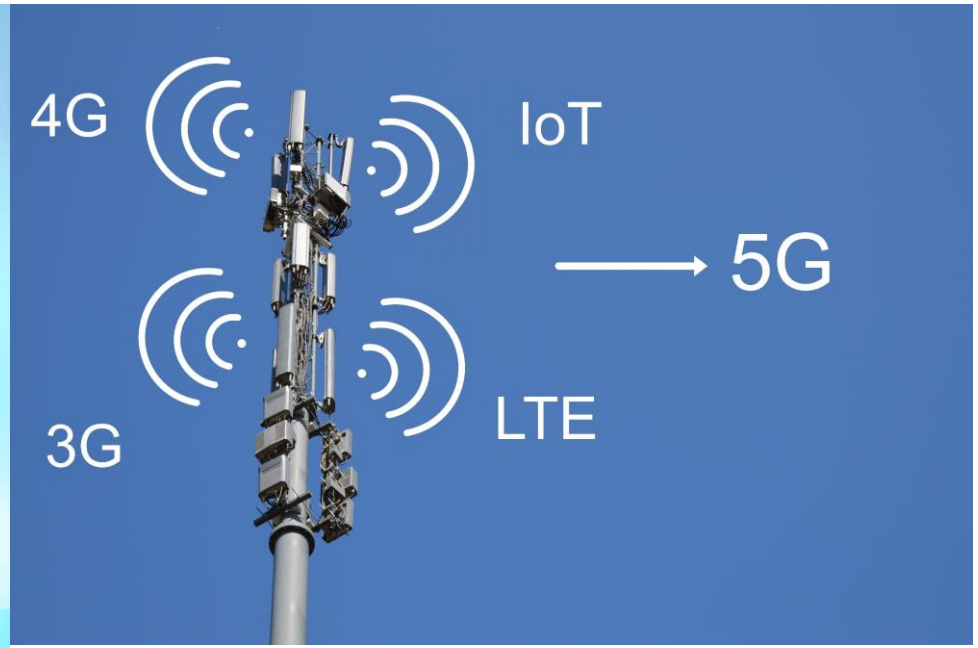
A WELLNESS HOME BUILT ON INNOVATION AND TECHNOLOGY

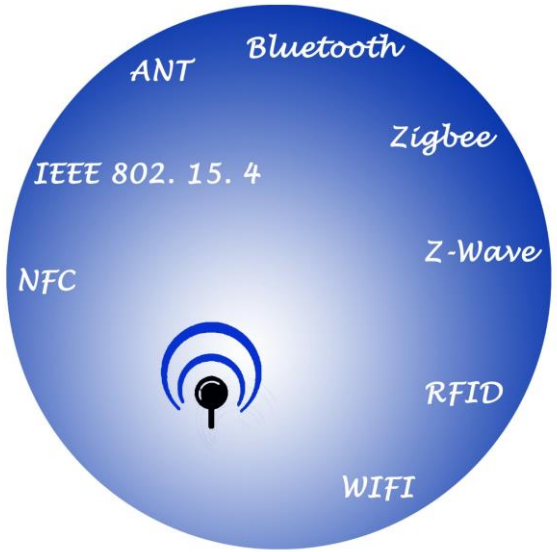
MeetWHIT.com


UNIVERSITY OF CENTRAL FLORIDA
DOWNTOWN ORLANDO
Orlando
POWER PLANT
ORLANDO INTERNATIONAL AIRPORT (MCO)
ALL ABOARD FLORIDA RAIL
FREIGHT RAIL
Sunbridge
LAKE NONA
PORT CANAVERAL
Seminole Ranch Conservation Area
River Lakes Conservation Area
Apopka
Oviedo
Mims
Wilson
Titusville
Winter Park
Winter Garden
Pine Hills
Union Park
Bithlo
Christmas
Azalea Park
Doctor Phillips
Lake Buena Vista
Hunters Creek
Lake Hart
Wewahotee
Sharpes
Port St John
Cape Canaveral Air Force Station
Cocoa
Cocoa West
Rockledge
Cocoa Beach
Patrick AFB
Satellite Beach
Four Corners
Celebration
Kissimmee
Narcoossee
St Cloud
Davenport
Poinciana
Haines City
Deer Park
408
50
520
15
528
417
407
A1A
95
N

How Many Networks?

Capacity, Coverage, Compliance





The Lifecycle of Smart Poles and Design Responsibilities

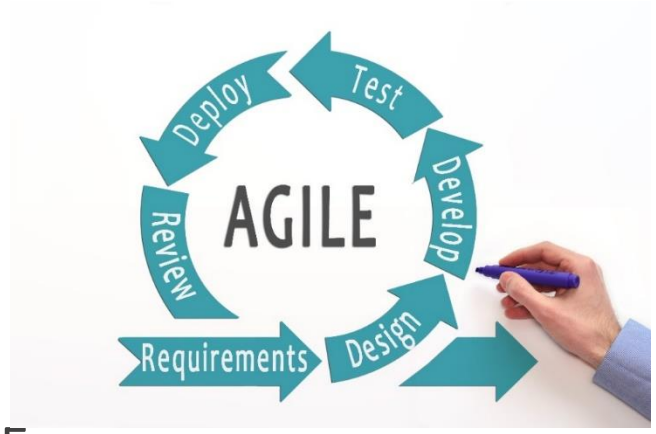
- **Fixed Infrastructure (Poles, Foundations)**

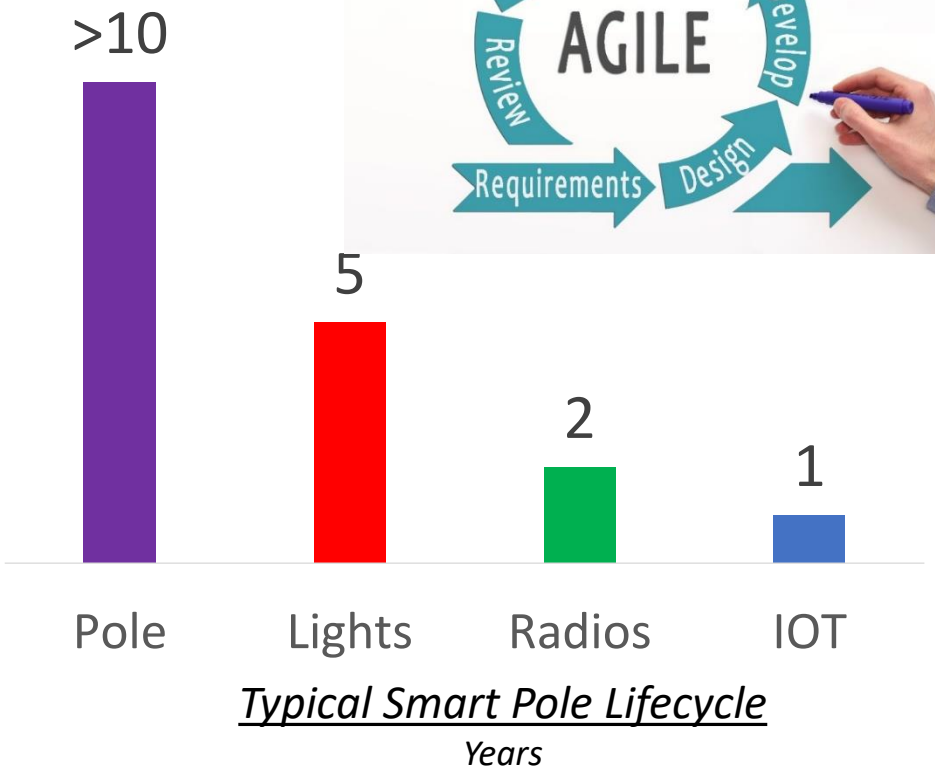
  ‘Permanent to Community’

- **Lighting System**

- **Radios, Antennas, Technology**

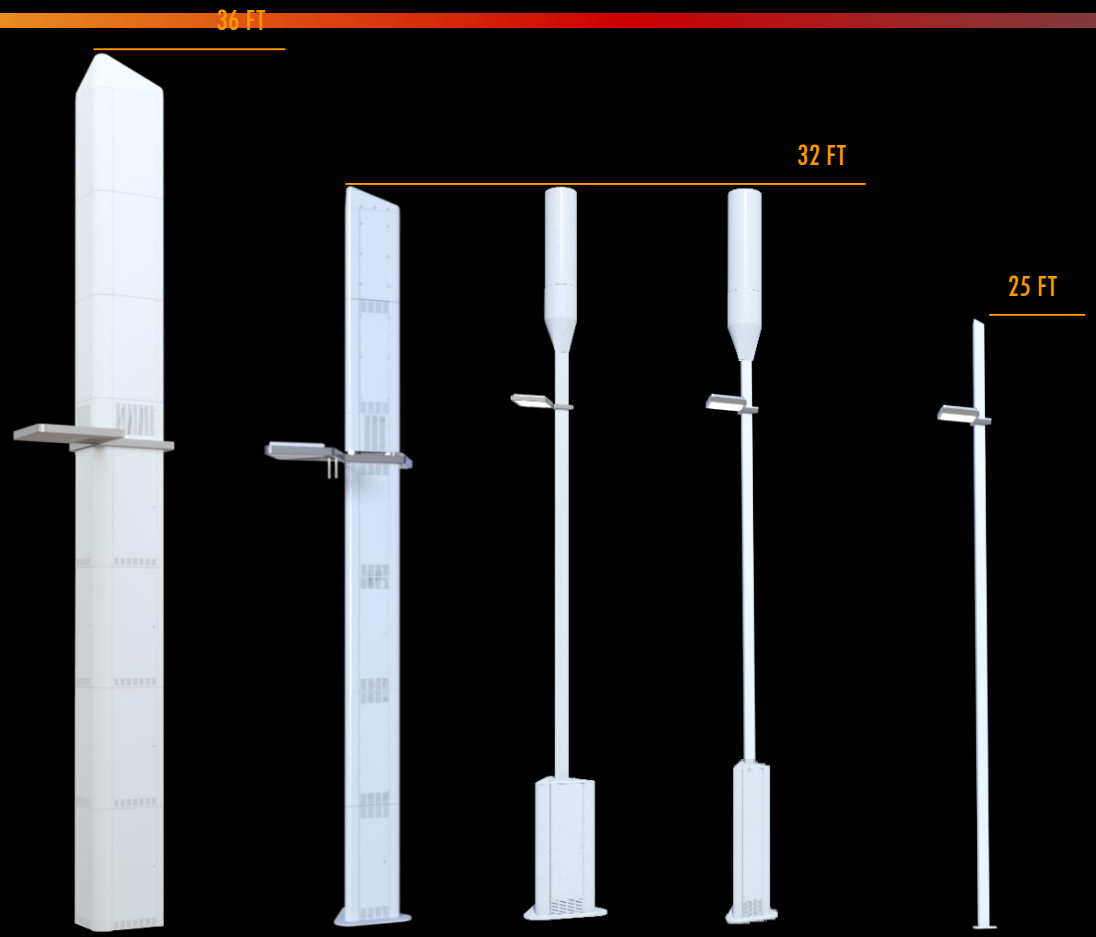
- **IoT Technologies and Information Management**





Our Portfolio of Telecommunication Infrastructure

FLEXGRID NEXT 2018



Vertex 1
High Power

Vertex 2
Low Power

Vertex 3
Mixed Class

Vertex 0^T
Low Power

Vertex 0^L
Light Only

INTEGRATED POLE SPECIFICATIONS

- ❑ Radio Vendor Neutral
- ❑ ASHTO Light Standard Compliant ASCE 7-93
- ❑ GR487, NEMA and TIA-222 Compliant
- ❑ UL/ULC Approved Portfolio
- ❑ Vendor approved operating environment (preserving radio warranties)
- ❑ Universal foundation allowing for rapid site development/changes
- ❑ Stainless steel construction offering the longest life expectancy
- ❑ Engineered for coastal zone hurricane force winds and seismic zone 4
- ❑ Unmatched radio density across all classes of infrastructure

Back Offset Front

FDC – Configurable Site Cabinet

Vertex Integrated Pole Portfolio for 4G/5G

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Important Design Considerations

5. **Anticipate Future Technology Changes**
6. **Multi-Tenant w/ Use Cases 4G > 4G+5G > IoT > Multi 4G/5G**

Versus >

Aero *Wireless Group*

Future Proof Poles - Interchangeable Equipment Modules

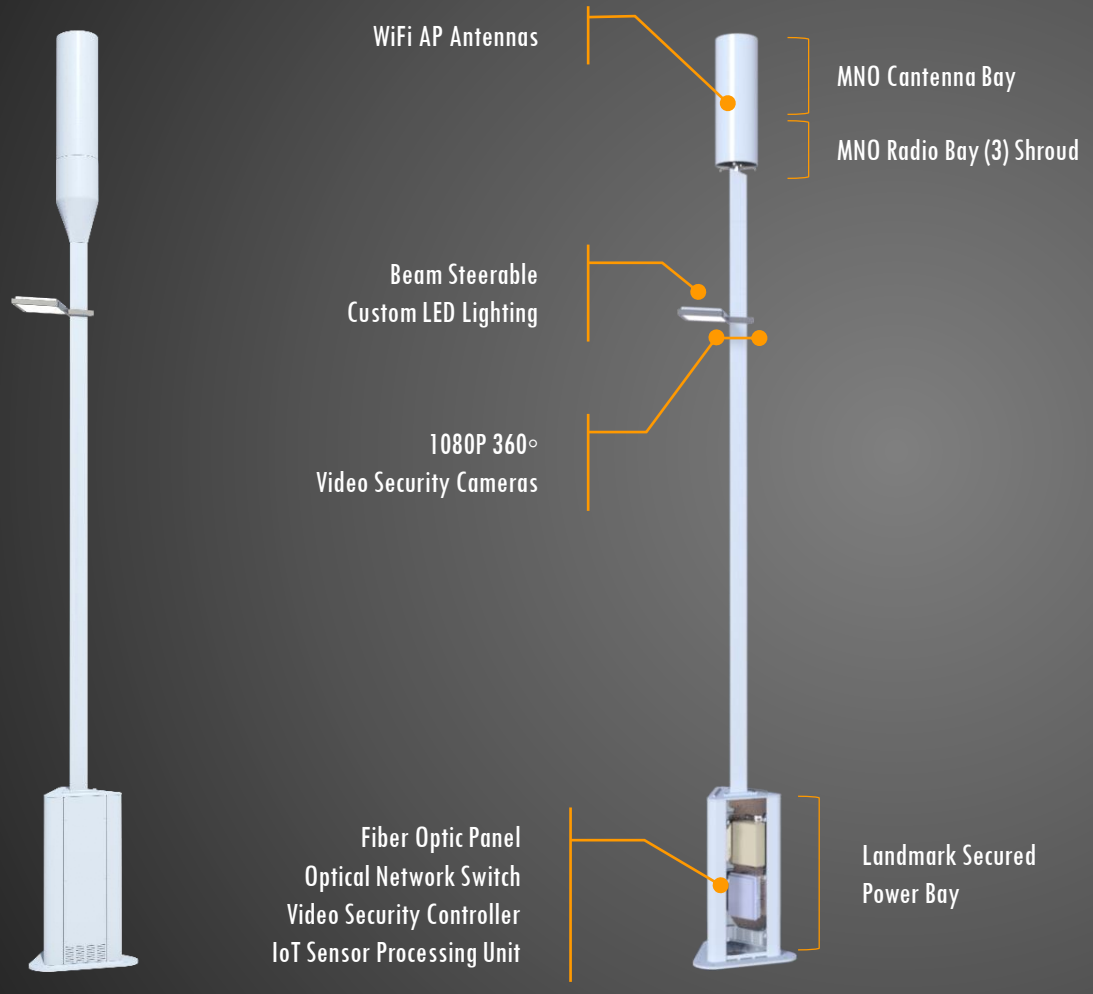
Flex Space for Multiple Equipment Loadouts.

Allows New Pole Configurations with minimal impact.

Flex-Rail System to simplify mounting.

Thermal Management System and remote monitoring.

Vertex VO^{T} — Micro Cell Concealment



VERTEX INFRASTRUCTURE HIGHLIGHTS

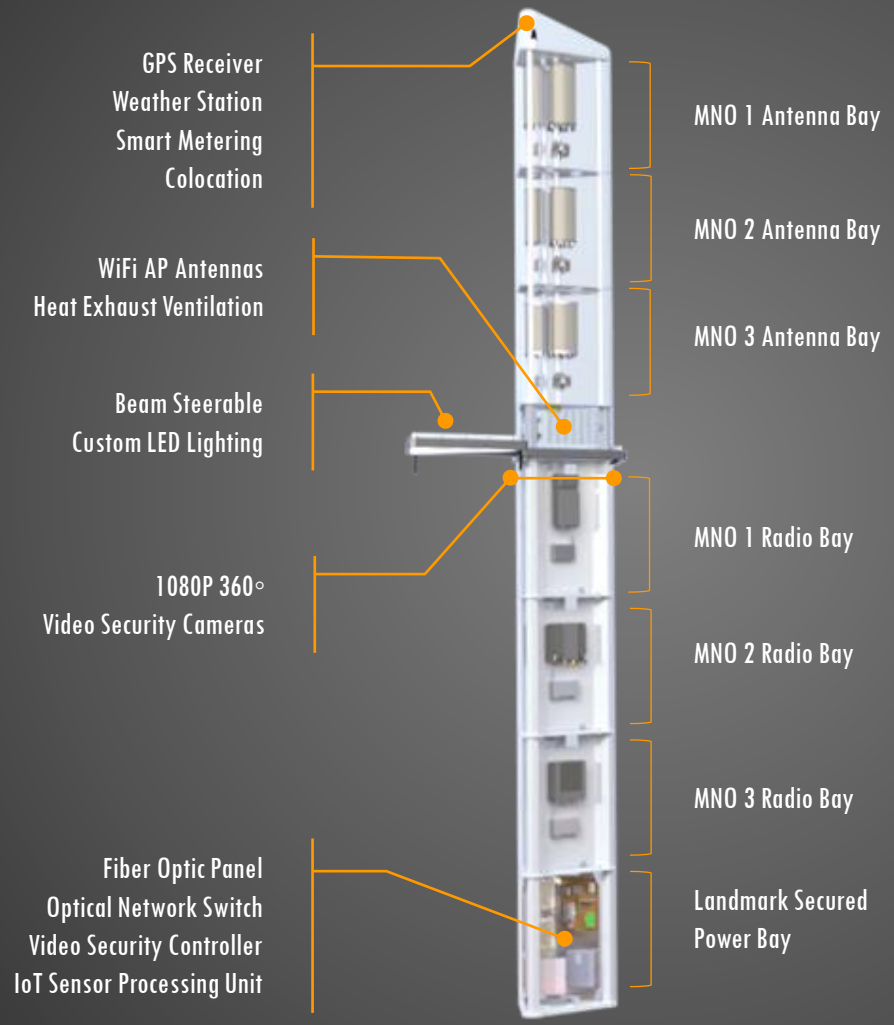
- ❑ Multi-Port 4G / 5G Cantenna Bay (LB + HB + AIR)
- ❑ Vendor Neutral Small Cell Low Power MMRUS Radio Mounting Bay - 3 MRRUS Radios supported
- ❑ 15,000 Cubic Inches of Colocation Space
- ❑ UL/ULC Certified
- ❑ GR487, NEMA, TIA-222 Compliant
- ❑ AC & DC Power Systems
- ❑ Custom Designed LED Luminaires
- ❑ Battery Backup Available

SITE OFFER OPTIONS

- ❑ WiFi Services
- ❑ Fiber Optic Backhaul/Fronthaul
- ❑ Internet Services
- ❑ Encryption
- ❑ Supports Sensor Nets
- ❑ Site Security/Monitoring
- ❑ Video Surveillance
- ❑ Rackspace / Padmount Colocation
- ❑ GPS / SAT Services
- ❑ Supports Special Radio Applications – Utility FAN, Meter Collection

Vertex VO^{T} — Integrated Micro Cell Single Tenant Light Standard

Vertex V1 — Maximum Concealment



VERTEX INFRASTRUCTURE HIGHLIGHTS

- ❑ Radio Vendor Neutral
- ❑ 4G / 5G — High Band & Low Band
- ❑ 80,000 Cubic Inches/Bay
- ❑ 12-18 RRUS & 5G AIR Full Concealment
- ❑ Baseband & CIPRI CRAN Hub Ready
- ❑ Radio / Antenna Vendor Neutral
- ❑ UL/ULC Certified
- ❑ GR487, NEMA, TIA-222 Compliant
- ❑ 240V AC
- ❑ AC & DC Power Systems
- ❑ Custom Designed LED Luminaires
- ❑ Battery Backup Available

SITE OFFER OPTIONS

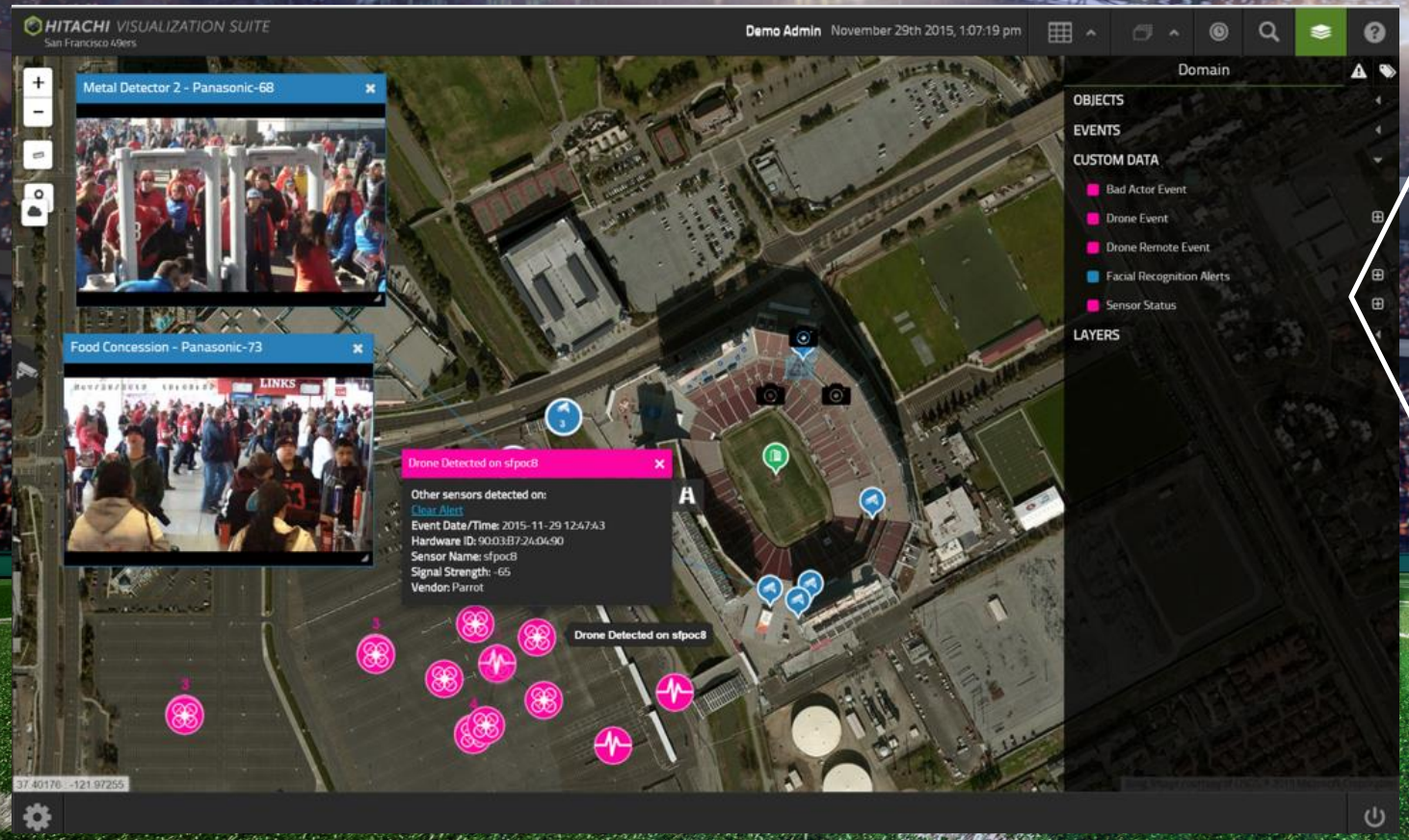
- ❑ WiFi Services
- ❑ Fiber Optic Backhaul/Fronthaul
- ❑ Internet Services
- ❑ Encryption
- ❑ Supports Sensor Nets
- ❑ Site Security/Monitoring
- ❑ Video Surveillance
- ❑ Rackspace / Padmount Colocation
- ❑ GPS / SAT Services
- ❑ Supports Special Radio Applications — Utility FAN, Meter Collection

Vertex V1 — Integrated Mini-Macro Multi-Tenant Light Standard

Smart and Safe Stadiums

NEXT 2018

Challenge: Emerging threats to stadiums and venues, need to improve operations and customer experience while ensuring safety.



TRANSFORMATION

- Drone detection, facial recognition and fan experience
- Millions of fans, visitors and city residents kept safe

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Smart Campus: University

NEXT 2018

- 60,000 students, 4,000 staff smart campus
- **Goal**: Better student experience, increased efficiency and safety
- **Hitachi Smart City Platform** collects, integrates, and analyzes data

Outcomes:

- Campus and facility utilization analysis for operations
- Activity analysis to understand and enhance student experience
- Environmental health and sustainability on campus
- Public safety and prevent testing fraud

Curtin University

"The smart campus is all about looking at what we do at Curtin, and doing it better."

Paul Nicholls, Director, Strategic Projects (R&D), Curtin University