

# Challenges of Cellular Coverage



It does not matter who your carrier is, challenges exist, and in an emergency you need a solution!

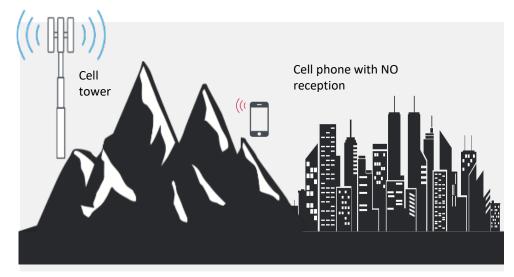
Cellular signals are inhibited or blocked by trees, hills, building materials, and bad weather — regardless of the operator.













# Cel-Fi Smart Cellular Coverage Solutions











Cel-Fi GO **Smart Signal Booster** 



Cel-Fi QUATRA Family Active DAS Hybrid Enterprise Solution



Performance Leadership



Ease of Install



Leaders in Value



**Fastest Project Timeline** 



Carrier Grade

# Cel-Fi: Key Market Segments





SMB, Industrial, & Enterprise



Consumer & Mobile Solutions



Public Safety & Emergence Response

## <u>Public Safety - Emergency Response – Healthcare sub-use cases:</u>

- Check-in Areas, Initial Screening and triage & Drive through testing Canopies where additional signal/backhaul is required to support increased users
- Field Tent Hospitals, Buffer Zones, Overflow waiting Rooms spaces, Surge Tents Quarantine, Containment, & Isolation areas.
- Shelters, Refugee Camps, Shipping & Receiving areas
- Asset tracking enhancement for Medical Equipment storage (IoT/M2M)
- Emergency Operations & Incident Command centers for Business Continuity with LTE failover

## Use Case: Mobile Bundles – Born from Initial Request for Federal Agencies for Coverage in Remote Areas

# Operational and safety enhancements provided:

- Primary: Coverage when operating inside vehicle
- Secondary: Coverage in the area around the vehicle, up to 10+ meters away



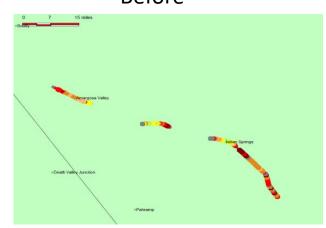
### Immediate Satisfaction:

Coverage in a rural area.

Coverage around the working area.

"Amazing! I got 10 miles radius of additional coverage, in my patrol area."

Before After

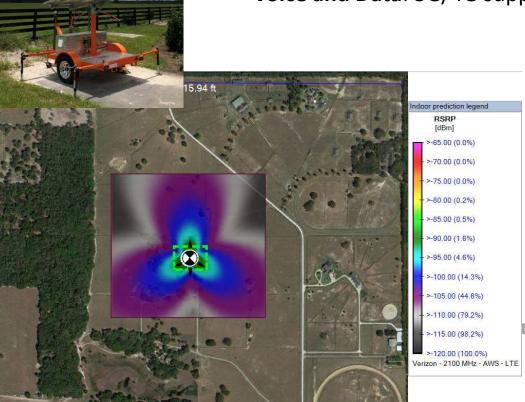




# Use Cases: Portable Bundles for Temporary Coverage needs – "SBOW"



- Remote Coverage: Low cost "COW" alternative for areas at the edge of the cell that have no
  coverage.
- **Key Use Cases:** Remote communications for rural areas with no access to backhaul
  - Construction, Oil and Gas, Agriculture and others.
- Voice and Data: 3G/4G support with gain up to 100 dB



- **Solutions Features**: Configurable solutions which can create different zones of coverage that include additional technologies: Battery backup, Solar Power, Wi-Fi, Digital Surveillance.
- Integrated Management: Switch from Stationary or Mobile Mode with Cel-Fi WAVE setup and management app for GO. Install and optimize with the innovative WAVE portal and smartphone apps

# Use Cases: Portable Bundles for impromptu Coverage needs – "MPA"



- Remote Coverage: up to 15K Sq./Ft. per Unit
- Key Use Cases: Ideal for law enforcement, Department of Forestry, & mobile command centers.
- **Voice and Data**: 3G/4G support with gain up to 100 dB
- Solution Features:
  - Portable Dual Power AC/Battery
  - Customizable coverage footprints.
- Integrated Management: Switch from Stationary or Mobile Mode with Cel-Fi WAVE setup & management app for GO. Install and optimize with the innovative WAVE portal and smartphone apps







## Use Cases: "MPA" in action

Ruggedized, self contained Portable, lightweight, easy to setup and configure





A safe cost effective way to improve coverage

## Use Cases: Fixed Bundles - Fire Station & Police Station



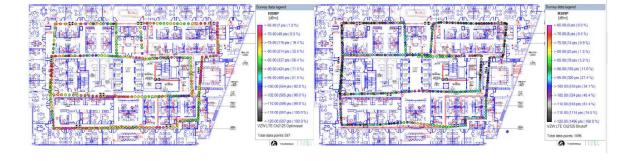
#### LTE 2100 MHz Ch2125



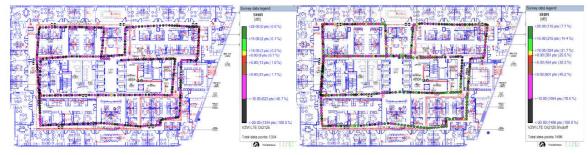
Before

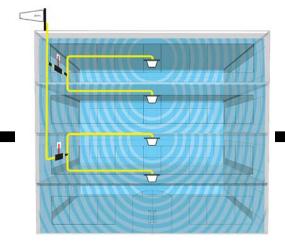
After

**RSRP** 



SINR









## Use Cases: Scalable Emergency Response Solutions for Enterprise Buildings





Government Agencies



**Police Stations** 







Military Bases

# Bigger Buildings, Need Bigger Solutions: Cel-Fi QUATRA 1000 / 2000 /4000

# Cellular Coverage Solution for Enterprise



## Model Number: Q34 **Band Configurations:**

Bands 2/4/5/13 or 4/5/12/13/25







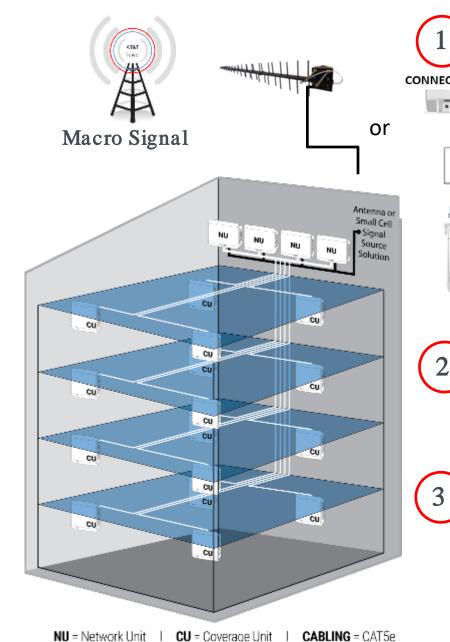


#### Value Proposition:

- Scalable active DAS hybrid solution
- Easiest-to-deploy and manage with regular IT skills
- Lowest installed cost per Sq Ft of coverage
- Carrier-approved and unconditionally network safe for voice &data
- 100 dB gain; signal maximized by AntennaBoost
- Self-configuring and self-optimizing

#### Solves Basic Problems

- Uneconomic to Install DAS Solutions below 500,000 ft<sup>2</sup>
- Addresses the Issues of Poor Coverage Distribution with Small Cell Only Solutions







Installation

Coverage **Footprint**