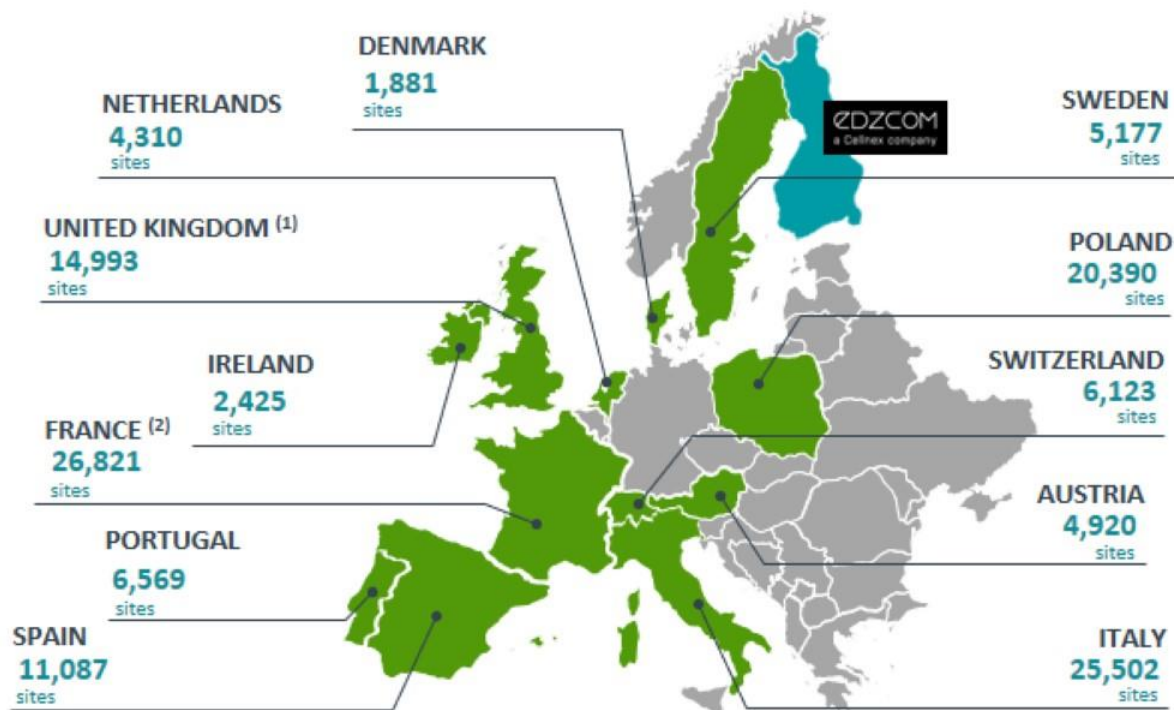


# CELTIC Proposers Day: Evolution of Tower Business and 5G Private Networks



*Jose Antonio Aranda, Global Director of Innovation and Product Strategy - 26 January 2022*

# The Cellnex portfolio – The leading tower operator in Europe



More than 130,000 sites (1), towers and communication nodes

(1) Including transactions not yet closed  
(2) In addition, a Fiber-to-the-Tower project with Bouygues Telecom in place

15+ Cellnex customers



A tall, slender telecommunications tower stands prominently in the center of the image. The tower has a cylindrical base, a spherical observation deck with a glass railing, and a complex lattice structure at the top with a red-tipped antenna. In the background, a city skyline is visible, featuring several modern skyscrapers with glass facades. Beyond the city, a range of mountains with patches of snow is visible under a clear blue sky. A semi-transparent green horizontal band is overlaid across the middle of the image, containing the word "Broadcast" in white text.

**Broadcast**



**Towers**



**Street Furniture**



**Rooftops**

# From TowerCo to InfraCo



Objectives

- Specialist in passive infrastructure management

Search for network efficiency

- Rationalization strategy
- Commercialization
- Site hunting
- Full portfolio commercialization

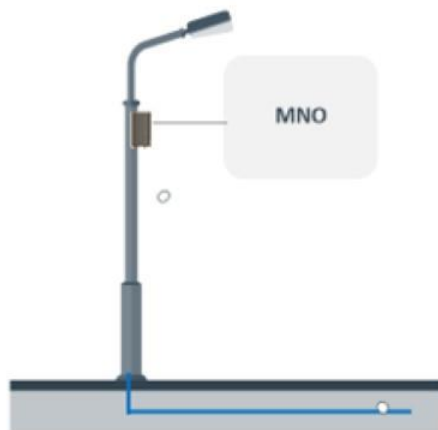
Become an MNO partner of trust

- Manage & invest on other passive assets
- Push for network sharing amongst operators

Increased presence in value chain

## Hosted Location

Neutral Host:



London



Erice



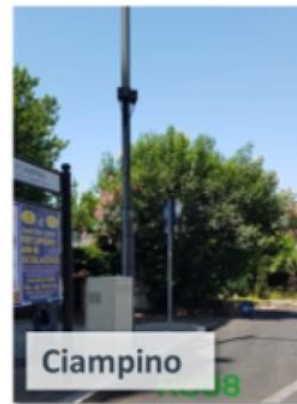
Barcelona



Milan



Dublin



Ciampino

# Distributed Antenna System



**Stadiums**



**Sport Halls**



**Concert Halls**



**Shopping Centers**



**Skyscrapers**



**Hospitals**



**Underground**



**Railways**



**Tunnels**



**Airports**



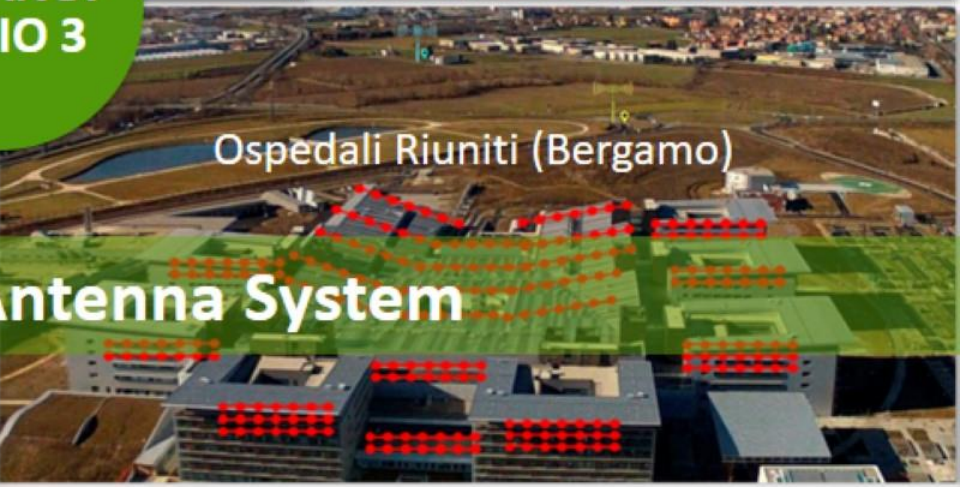
**City Centers**



**Car Parks**



TENANCY  
RATIO 3





# Smart City Solutions





Bomberos Murcia



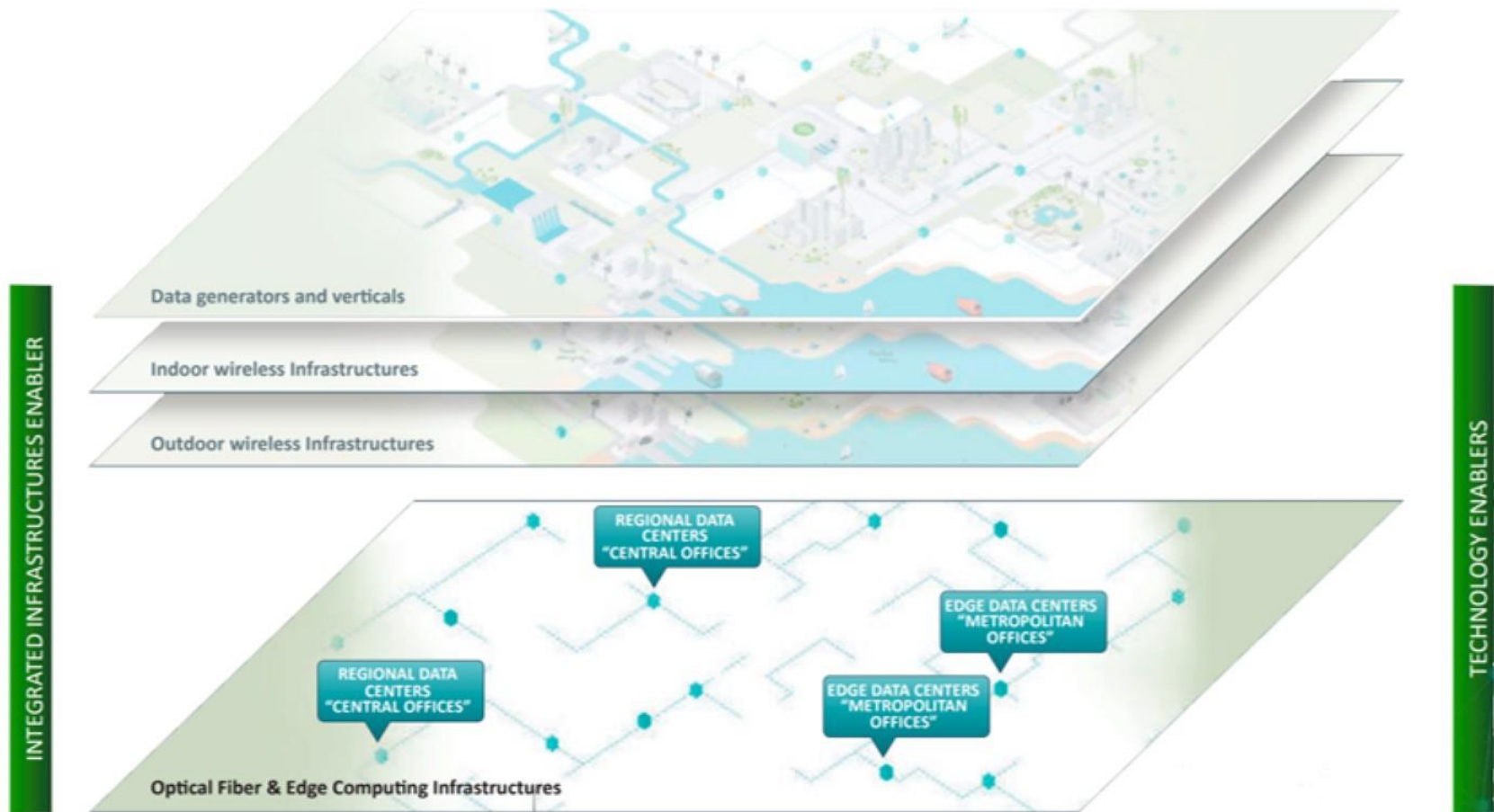
# Emergencias



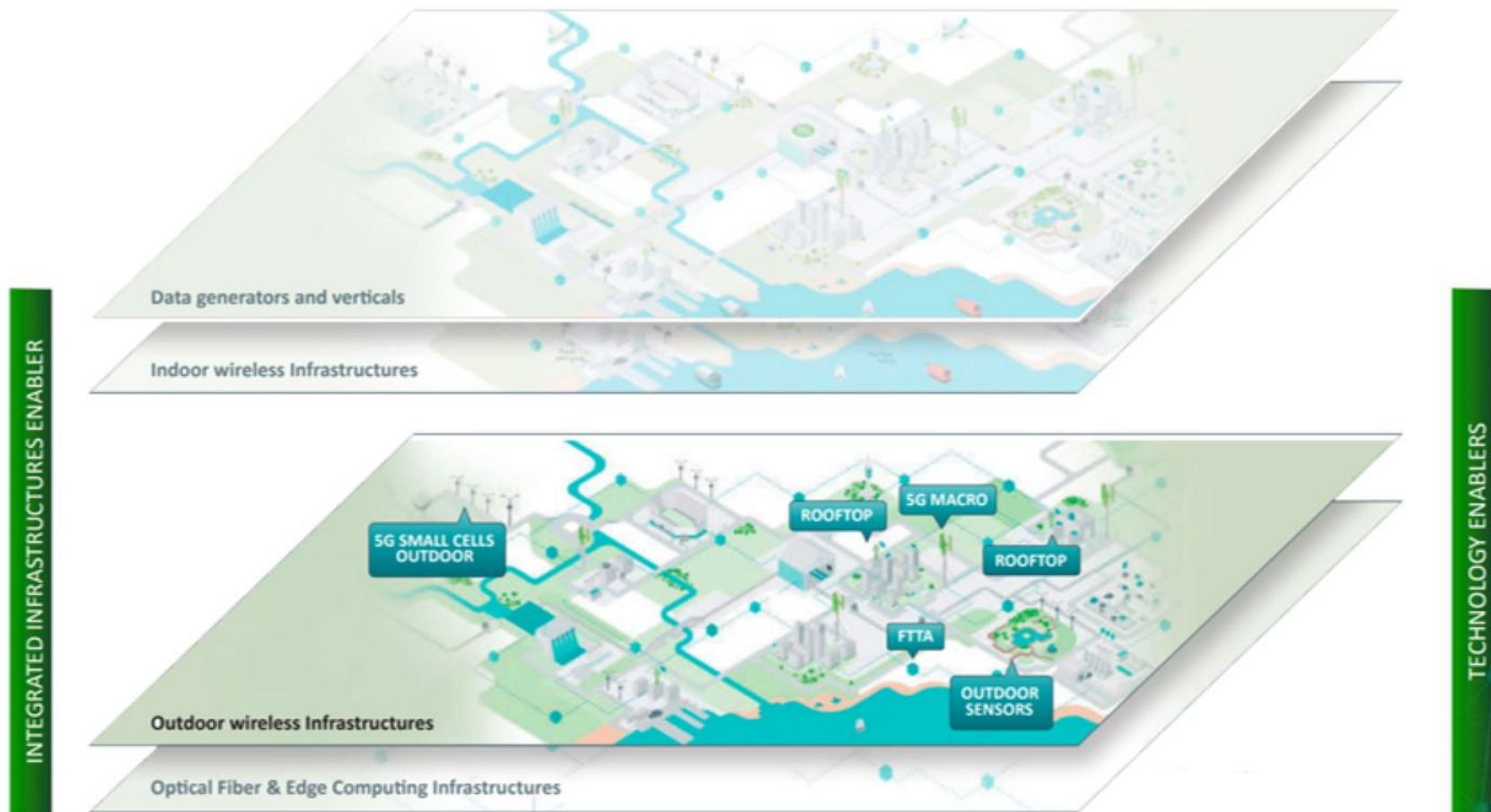
# Maritime



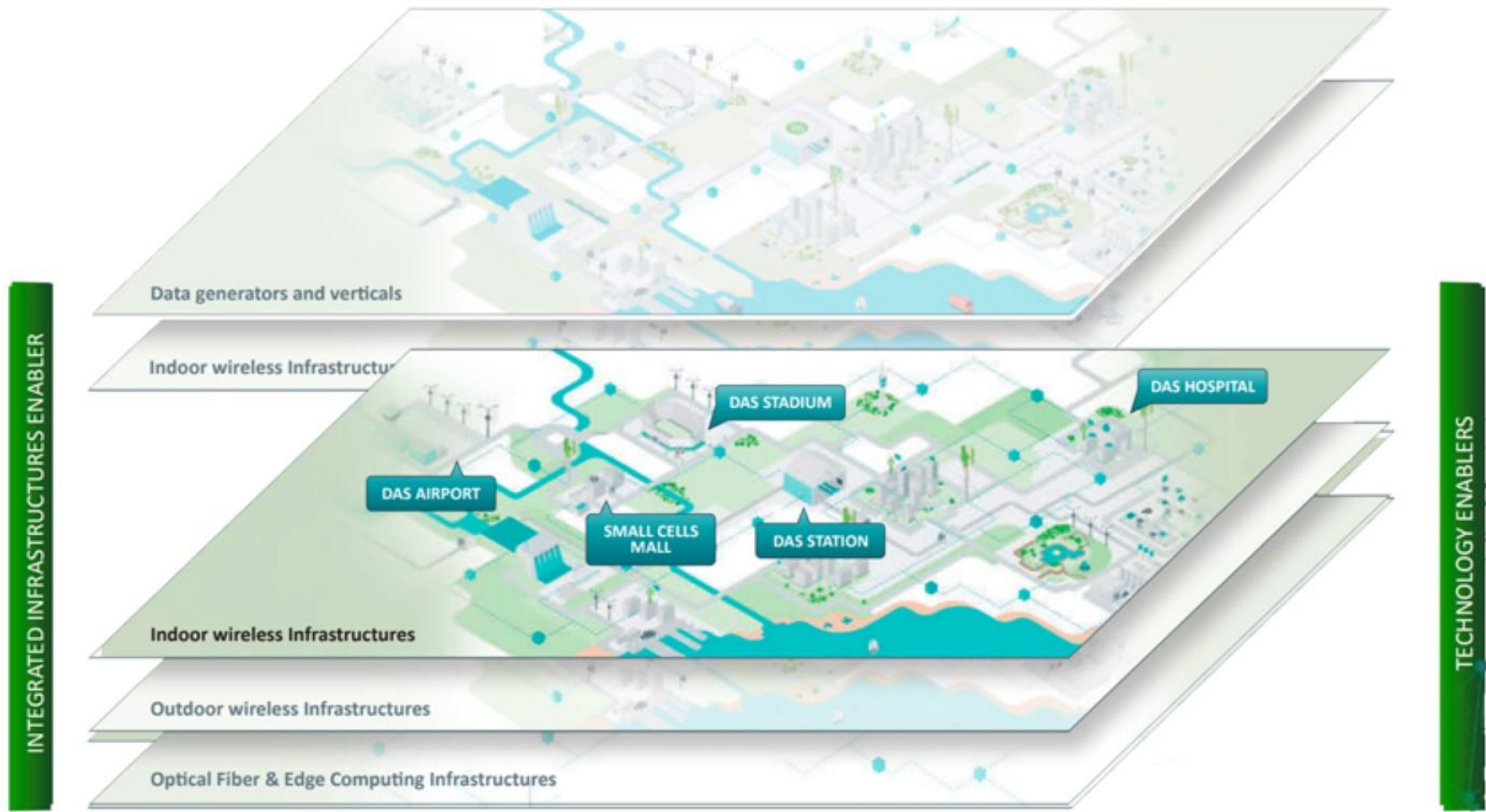
# 5G FOR TOWERCOS: DATACENTERS



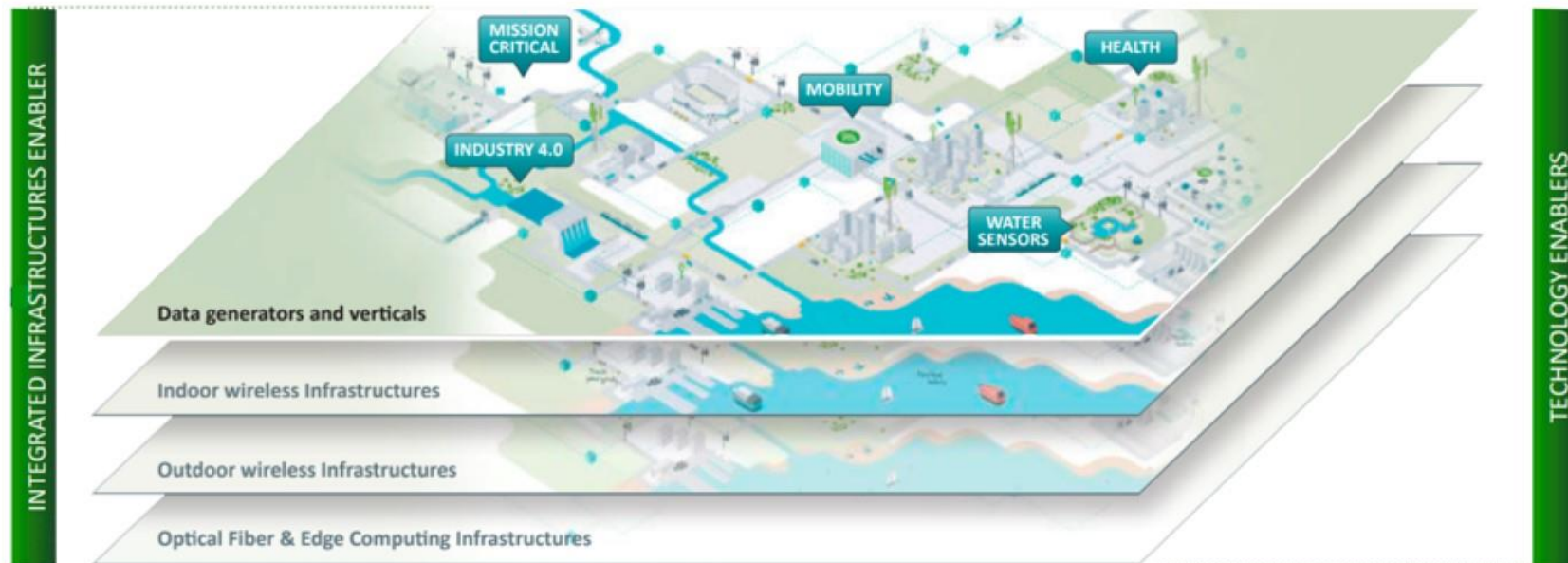
# 5G FOR TOWERCOS: OUTDOOR

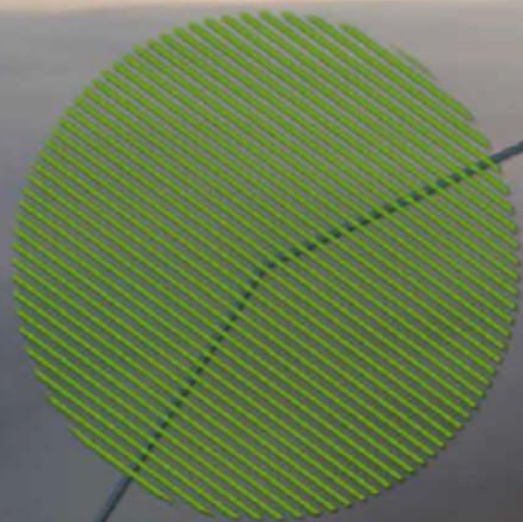


# 5G FOR TOWERCOS: INDOOR



# 5G FOR TOWERCOS: VERTICALS





## Central and Regional Datacenters







## Fiber To The Tower – XoC/Nextloop



**SUSTAINABILITY**



SECUTIL



# SECURITY-PNs



**RESISTO**

## Certification

*Certified from outset for safe flight in civil airspace*

## Aircraft Design

*SPL platform can carry 120kg payload for high-spec antennas*

*Endurance target of > 9 days*

*Wingspan: 65m*

*Wing area: 197m<sup>2</sup>*

*Length: 21m*

*Height: 5.3m*

*Altitude: 60,000ft*

SPL Platform

# NON TERRESTRIAL NETWORK

Power System

*SPL platform uses hydrogen fuel cell power system which provides high power levels for communications equipment and long endurance*  
*Does not rely on low power solar energy*


## Connectivity System

*Phased-array antenna designed for unmodified*

*5G phones delivering ubiquitous broadband connectivity at high speeds and low latency*

*Next generation technology (CAIB)\* enables very high bandwidth*

*\*Co-Operative Aerial Inter-Antenna Beamforming*



# ACTIVE INFRASTRUCTURE

# Private Networks

Utilities & Energy Generation



NESTE

Airports



FINAVIA

Manufacturing



STORAENSO

Transport & Logistics



PORT OULU KONECRANES STEVECO PORT OF KOKKOLA

Mining



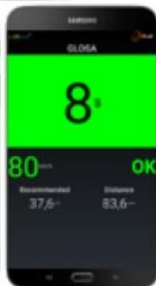
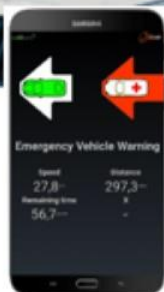
BOLIDEN SANDVIK

Chemical



BASF  
We create chemistry

## V2XArch → 2015-2017



## Castelloi → 2018



## 5GMED → 2020



## AVGs → 2022

