Connect smarter

Globalstar

Global private 5G connectivity:

Solving the problems of challenging environments

The future of private 5G networks

- Opening up spectrum for private use has been one of the drivers for enterprise customers to consider using 5G in their networks.
- However, interference risk, capacity efficiency, maintaining costs, and other challenges must be considered when deploying in dense, complex wireless environments
- N53 + XCOMP Technology enables capacity gains and greater efficiencies

Globalstar overview

- Globalstar is a next-generation telecommunications infrastructure provider and technology disruptor
- Significant asset value with satellite network, long-term contracts and licensed spectrum assets
- Wireless technology which dramatically increases system capacity and ease of deployment
- High-growth, commercial IoT solutions
- Multifaceted business model driven by **four pillars of value**

Four pillars of value

Our value creation strategy to drive value is divided into four pillars, the foundation for a telecom infrastructure company offering satellite and terrestrial connectivity around the globe.

Globalstar Timeline

1991
Globalstar founded

2000
First voice & data product launched

2007
First SPOT device launched

First IoT modem launched

2010
Second gen satellite launched

2013
SPOT Trace launched

SPOT Gen3 launched

2014
3,000 rescues initiated

2015
SmartOne C launched

2017
SmartOne Solar launched

5,000 SPOT rescues initiated

2018
SPOT X launched

Band 53 3GPP approval

2019
6,300 rescues initiated

2020
ST100 launched

SPOT Gen4 launched

2022
Realm Enablement Suite introduced

Spare satellite launched

Announced Apple service

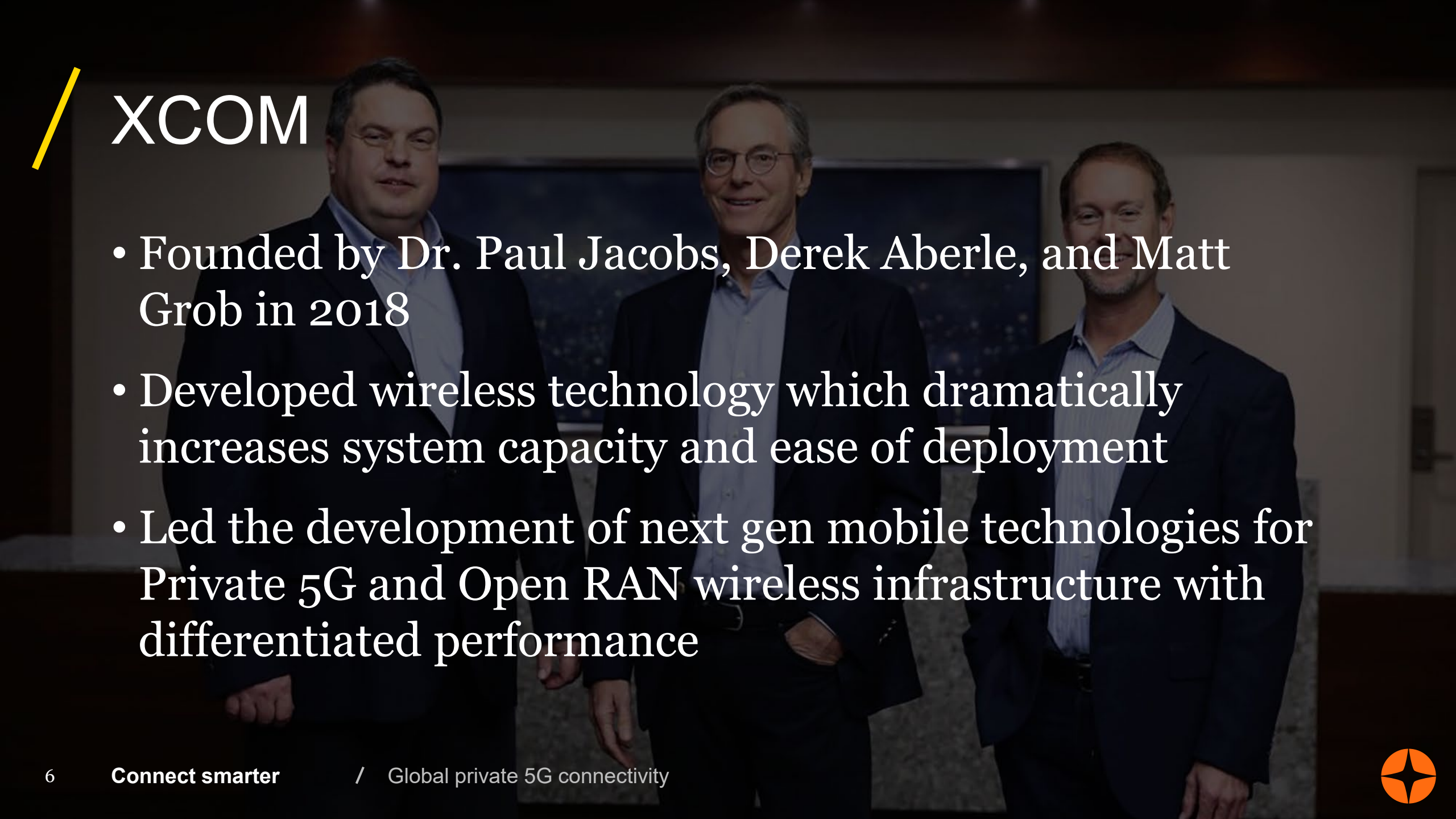
9,000 rescues initiated

2023
Appoint Dr. Paul Jacobs as CEO

XCOMP Technology

New module & device integrations

XCOM

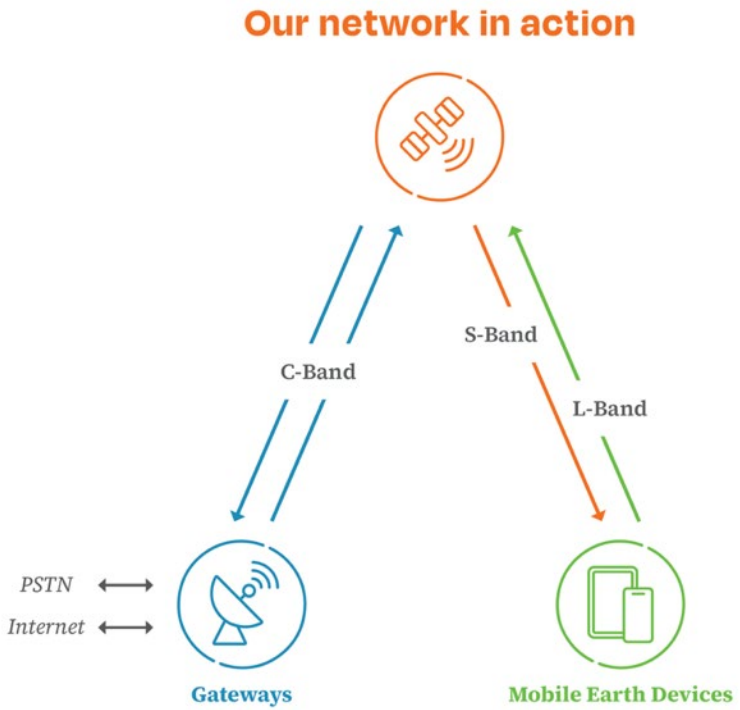


- Founded by Dr. Paul Jacobs, Derek Aberle, and Matt Grob in 2018
- Developed wireless technology which dramatically increases system capacity and ease of deployment
- Led the development of next gen mobile technologies for Private 5G and Open RAN wireless infrastructure with differentiated performance

Globalstar gateways and offices

Globalstar's LEO satellite system

- Mid-band spectrum for mobility
- Available system capacity in retained 15% to support IoT growth
- Allows for small, lower cost and energy efficient terminals
- Bent pipe architecture allows for on ground upgrades
- Satellite coverage across ~99% of world's population
- Low-latency and high-quality transmissions
- 2022 satellite procurement agreement with MDA to ensure continuity of service



Licensed MSS Spectrum

L-Band:	***S-Band:***	***C-Band:***
8.725 MHz [1]	16.5 MHz	339 MHz

[1] *0.95 MHz shared with Iridium Satellite Communications*

Terrestrial spectrum

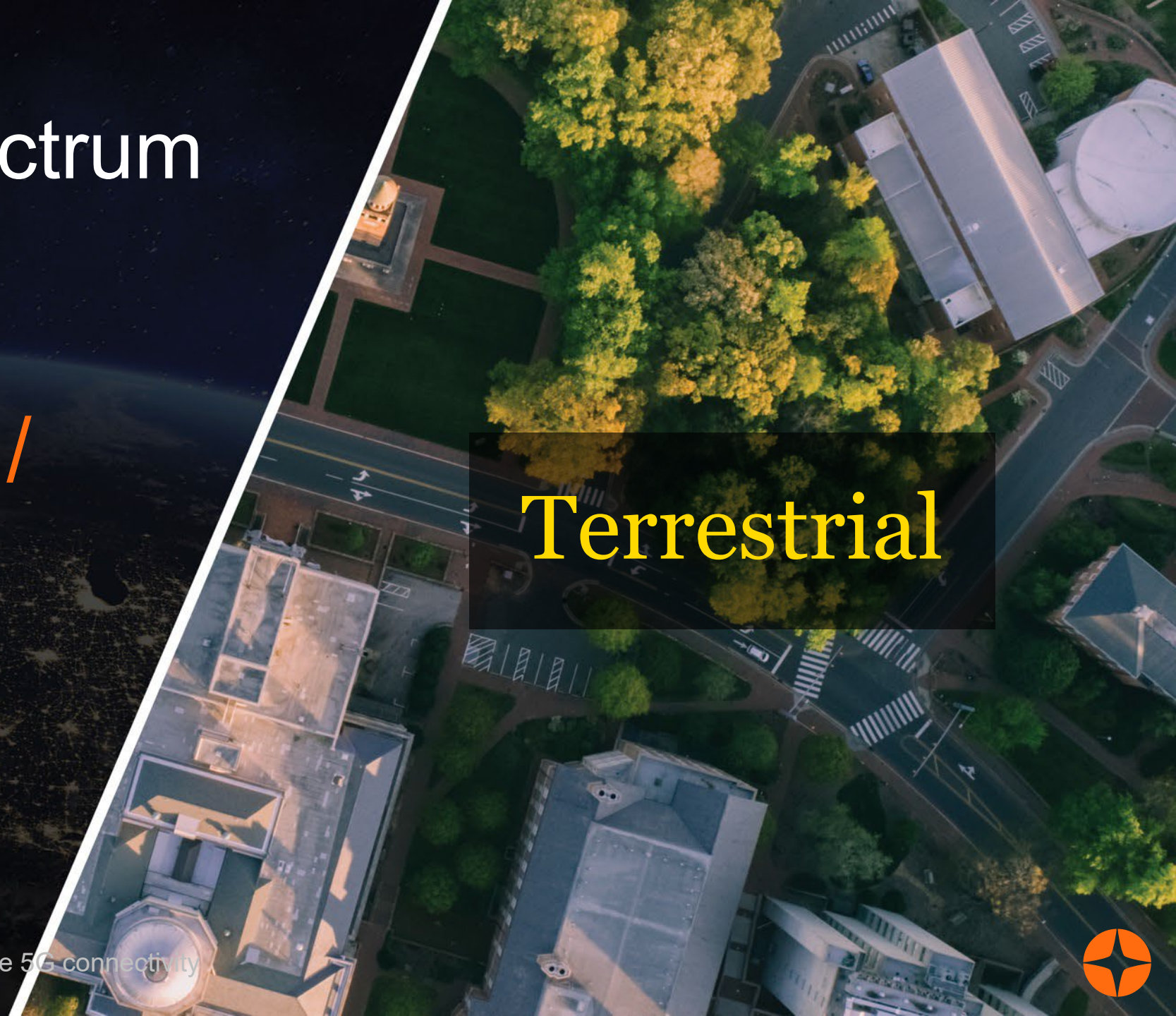
Band n53 is our uniform and increasingly "borderless" spectrum resource with multiple commercial applications.

Our partners — cable companies, legacy or upstart wireless carriers, system integrators, utilities and others — will be able to benefit through a growing device ecosystem.

Licensed spectrum

Band n53 / S-Band

11.5 MHz



Global footprint

Globalstar's terrestrial licenses **currently cover 11 countries and approximately 850 million people**, which will continue to expand as the we find many more ways to bring our robust Band 53 ecosystem to new users.

Why private networks?

Organizations of all types are:

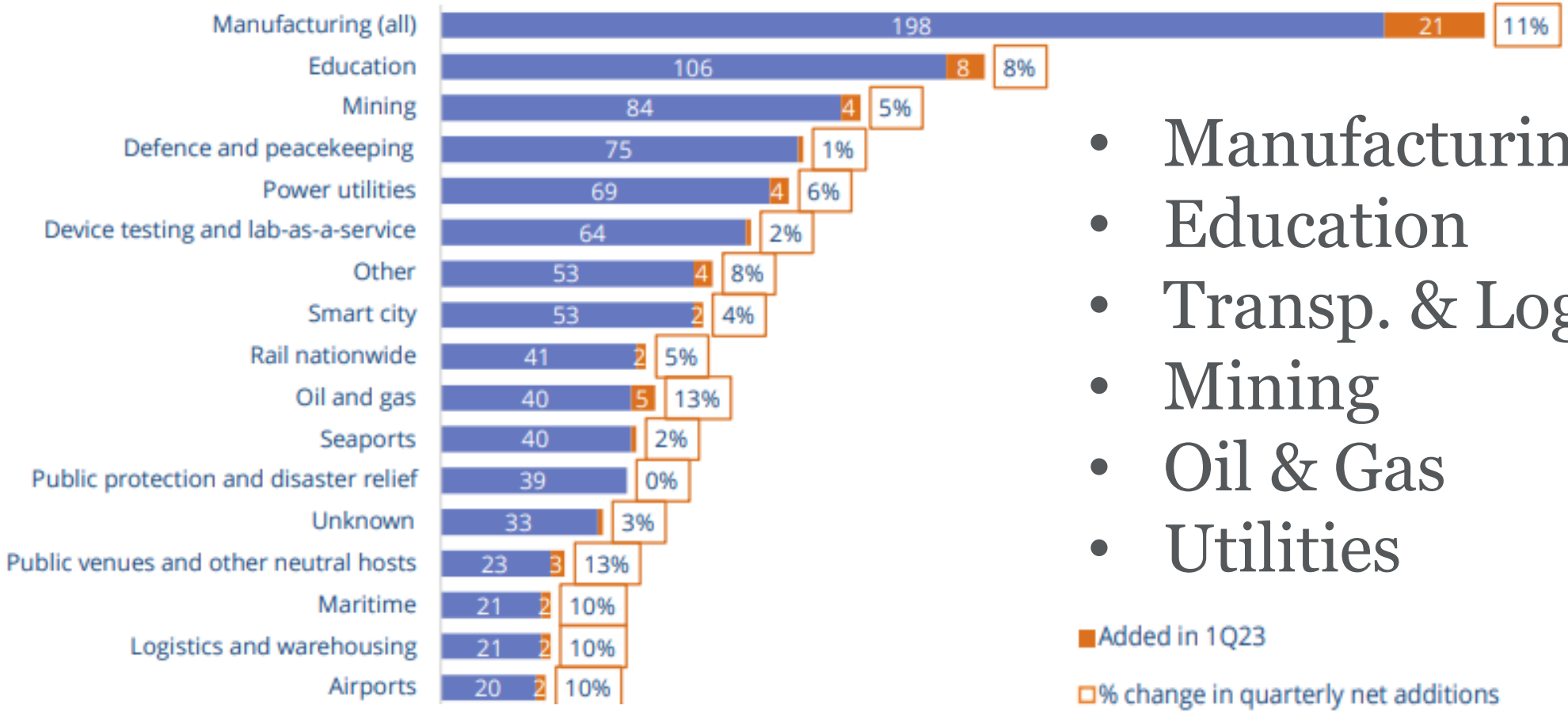
- Combining connected systems with big data and analytics
- Transforming operations
- Increasing automation and efficiency
- Delivering new services to their users
- Supporting mission critical applications

3GPP-based private networks

3GPP-based private networks further enable these organization to dynamically transform their product and services by offering:

- Highly secure environments
- Benefits of scale
- Rich ecosystem of networks and applications

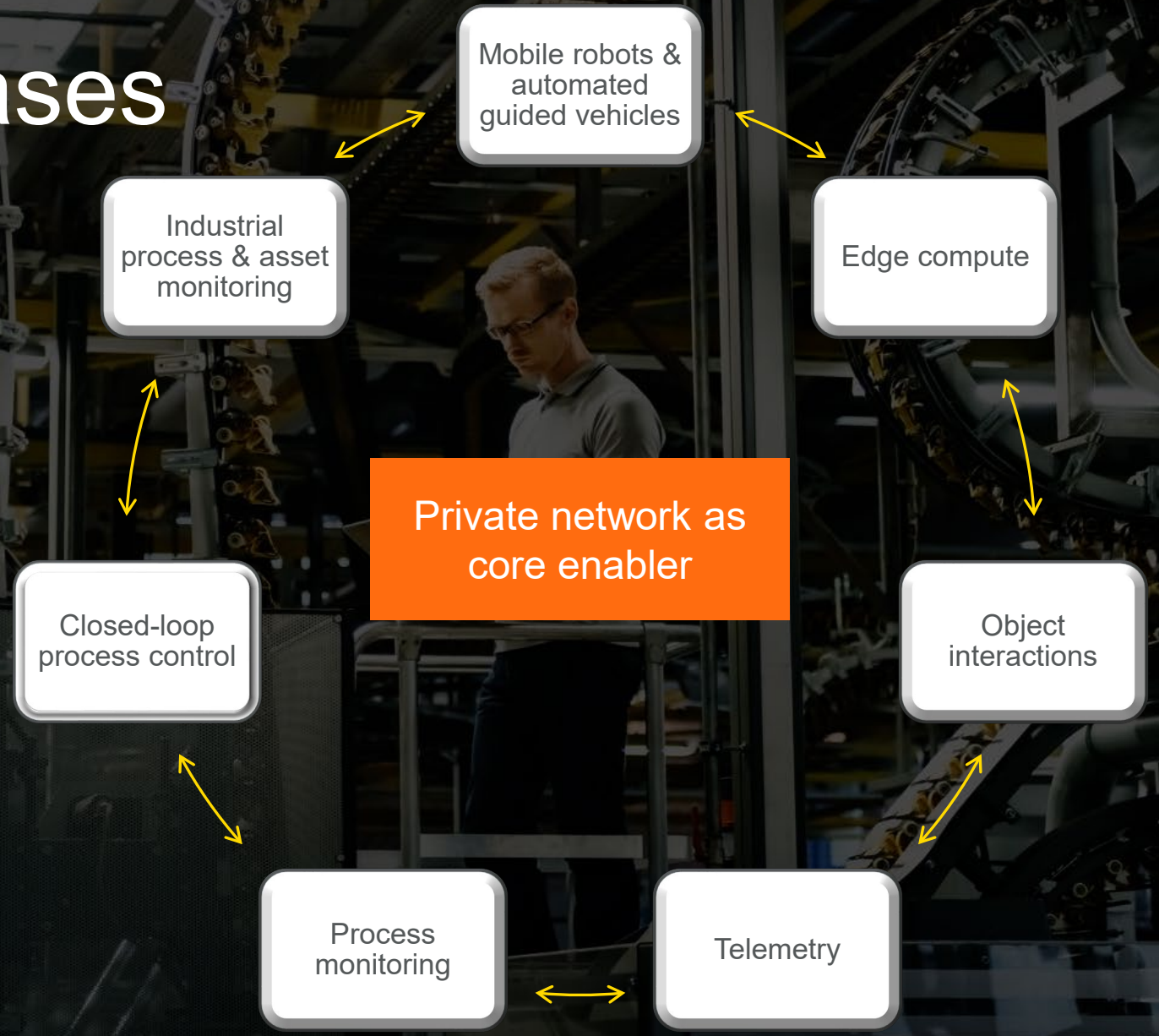
Private networks demand driven by



- Manufacturing
- Education
- Transp. & Logistics
- Mining
- Oil & Gas
- Utilities

Source: GSA

Industrial use cases



Challenges for deploying private networks

- Unregulated spectrum is overburdened and unreliable
- Capacity insufficiency
- Lack of scalability
- Inefficient automation
- Remote, dense, dynamic environments
- Hard to test and deploy

Next gen 5G private network framework

VERTICALS

Spectrum	Network	Operations	Applications
MNO	Proprietary	In-house	Command & control
CBRS	ORAN	As-a-service	Asset tracking
WIFI		System integrator	Monitoring
		MNO	Safety & security
			Mission Critical
			Automation
			Efficiency
			Cost Optimization

The value of spectrum

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Spectrum	Network	Operations	Applications
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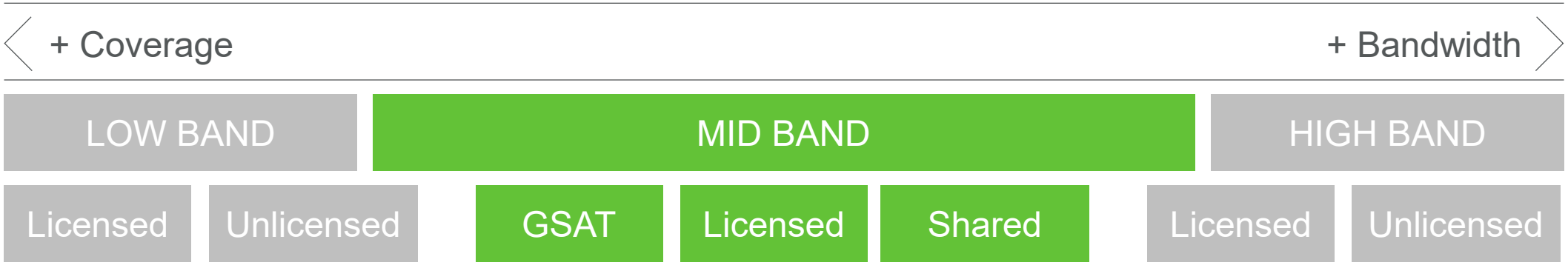
N53		MNO	Safety & security
			Mission Critical
			Automation
			Efficiency
			Cost Optimization

- Regulated terrestrial spectrum n53
- Full scalability with higher performance
- Ubiquitous coverage

Spectrum Goldilocks zone



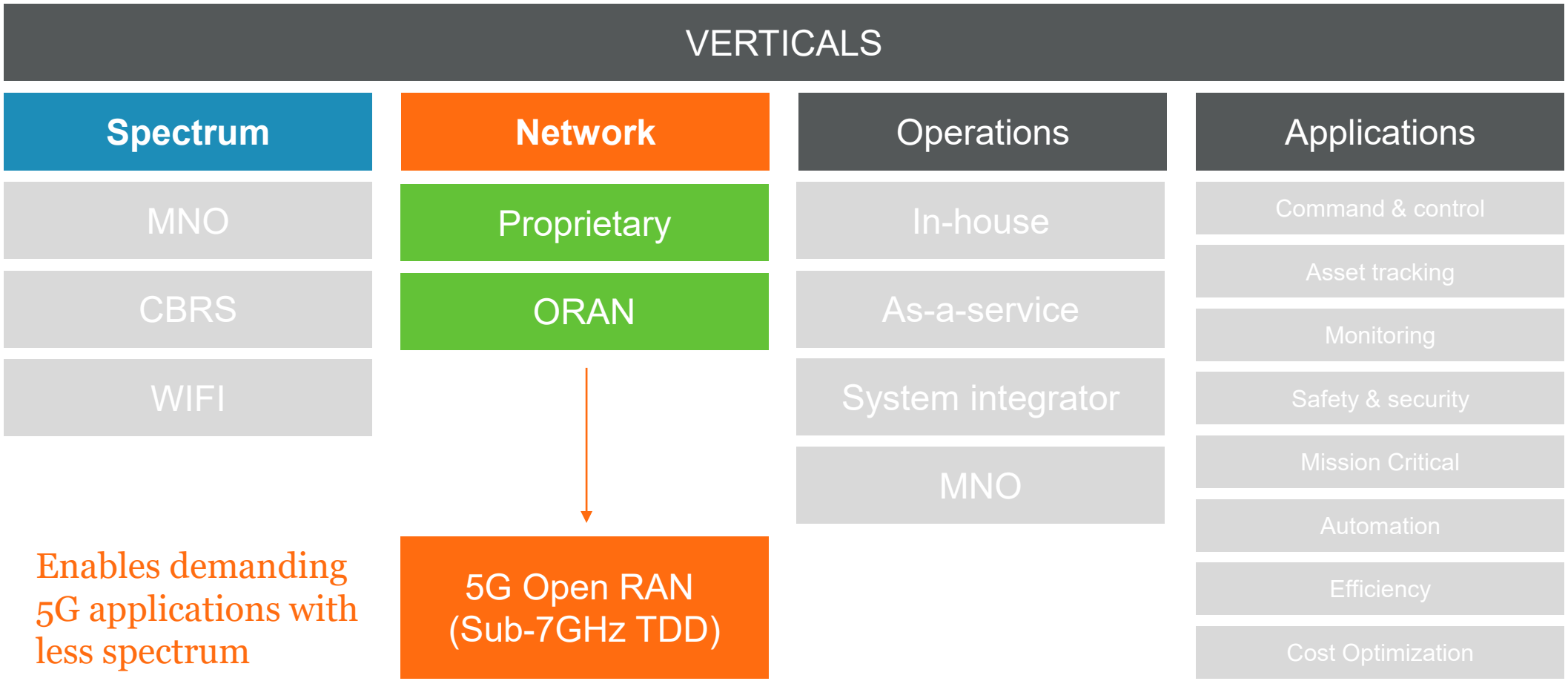
75% of private network deployments

The number of private networks is growing particularly strong in national markets with dedicated spectrum arrangements for licensed or shared spectrum.

BIS Research, May 2023

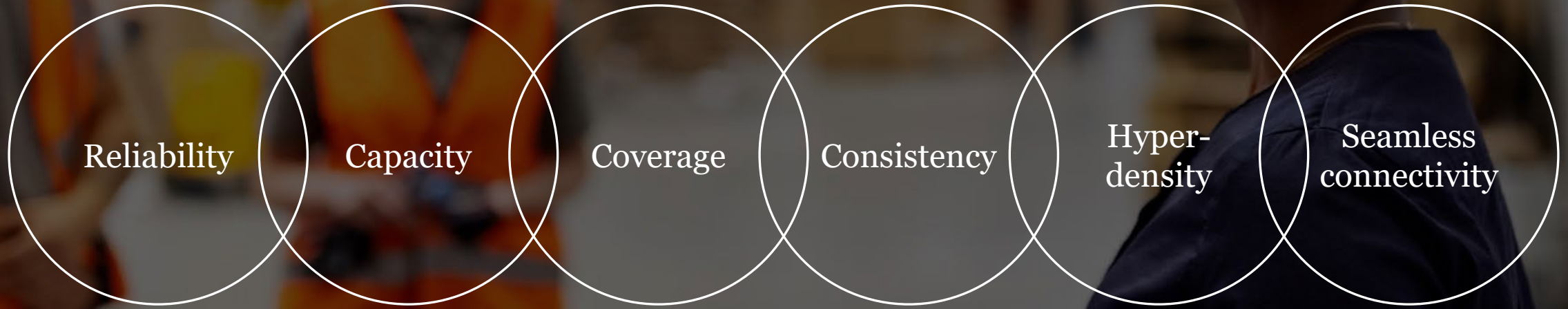
Source GSA Private Mobile Networks May 2023

Industry infrastructure transformation



XCOMP

Effective private networks deliver:

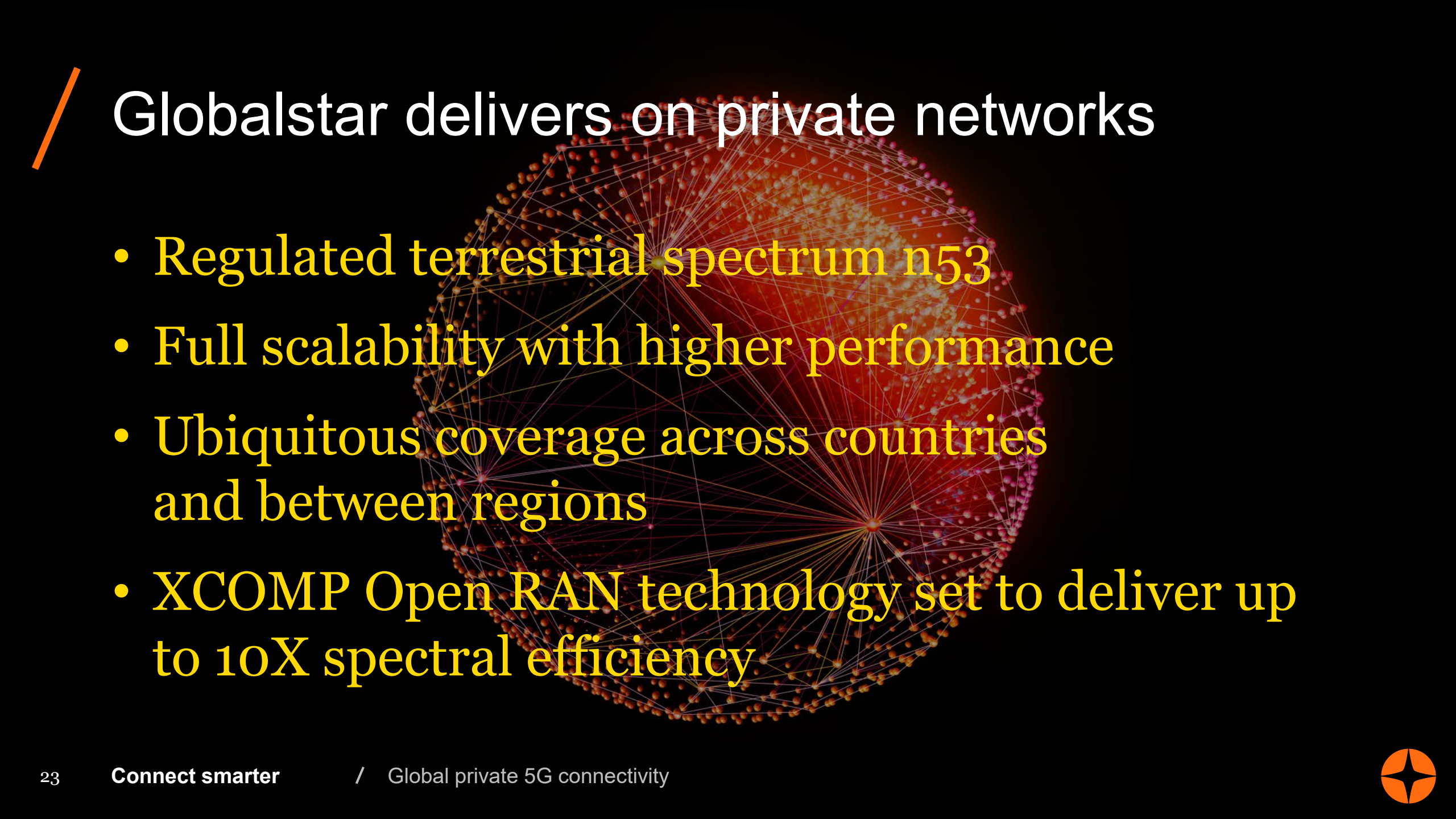


XCOMP: Enabling demanding 5G applications with less spectrum

With improved spectral efficiency & robustness

- Warehouse automation / dense industrial 4.0
- Enterprise, mining, campus networks, sports venues, retail
- “Single cell” seamless mobility
- Enables game changing new paradigms
- Multi-cluster for wider coverage
- Outdoor / indoor scenarios

Globalstar delivers on private networks



- Regulated terrestrial spectrum n53
- Full scalability with higher performance
- Ubiquitous coverage across countries and between regions
- XCOMP Open RAN technology set to deliver up to 10X spectral efficiency

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