

NOKIA

Scaling IoT globally

Ankur Bhan

Head of Nokia WING



IoT business potential is well-known but how to accelerate

1-3%

% Revenues for
Operators from IoT
connectivity

<10%

% data collected
used for decision
making

~70%

% respondents
suggesting IoT data not
integrated in business
processes

Gaps: Security, costs, standardization, scale,
devices, skills, unclear ROI, protocols...

Overcoming barriers to enable the mass-scaling of IoT

A photograph of three cyclists riding away from the camera on a paved road that curves to the right. They are wearing black cycling gear and helmets. The road is bordered by a metal guardrail, and the background is a dense forest of green trees. The overall scene is bright and clear.

Seamless
connectivity
enablement

Device
interoperability
services

Improve
ecosystem
federation

A photograph of a cable car system against a cloudy sky. The cables are visible, and a cable car is seen in the lower right. The text is overlaid on the image.

#1

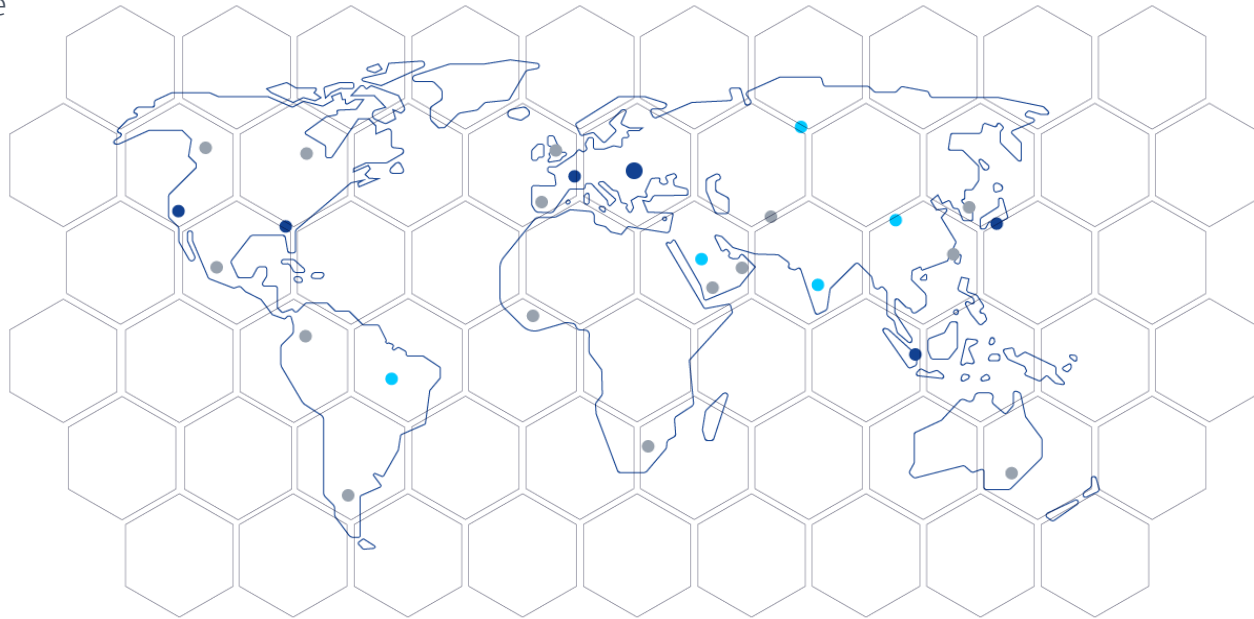
Seamless connectivity
enablement

What do enterprise require for a seamless connectivity experience

One-stop-shop
service experience

Global Coverage
with reliability
and security

Cost-effective
local connectivity
characteristics



● Shared Control Plane ● Dedicated Control Plane ● User Plane

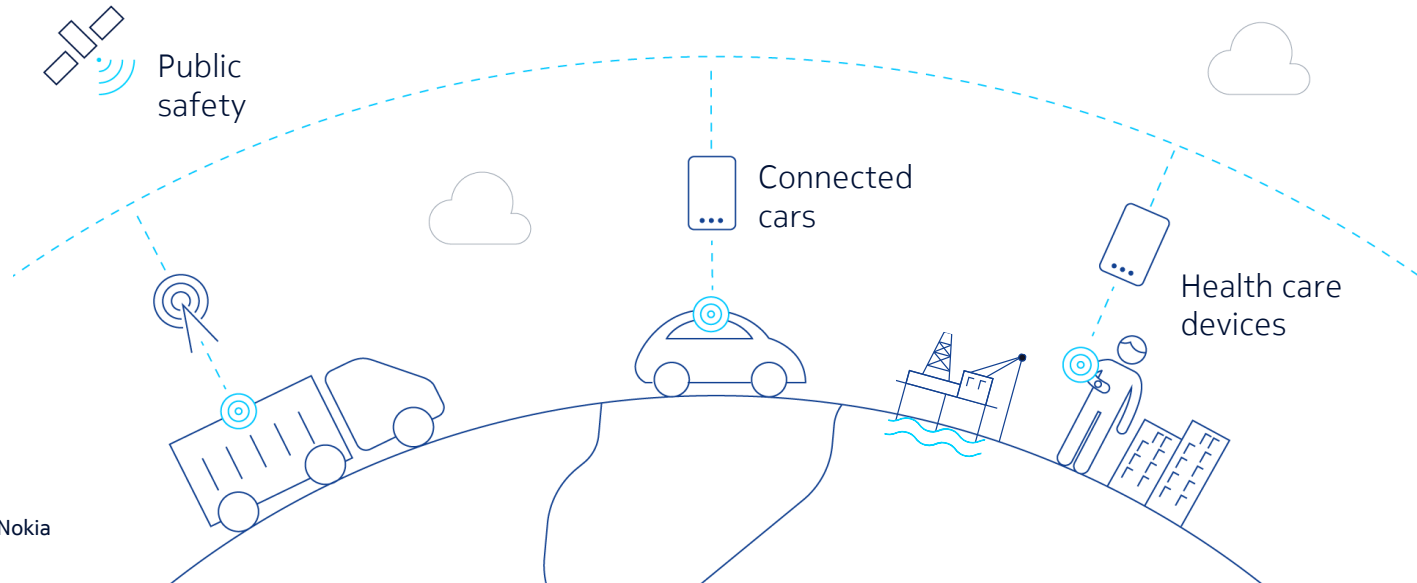
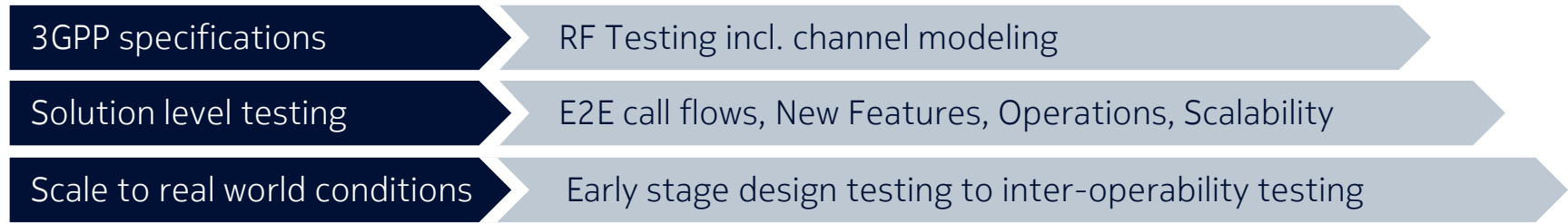


#2

Device interoperability services

Key challenges in device inter-operability

Performance validation is a must prior to global deployment



Device testing – Lab as a service

Solution testing to accelerate IoT deployments

What is Nokia Lab as a Service?

- State of the art infrastructure in Murray Hill, US and Paris Saclay, France
- Capabilities for self-testing chipsets, devices, applications, and services
- Complete RAN and Core Network
- All wireless technologies in one place
- Worldwide frequency bands
- Network Releases: N-1, N, N+1
- Scalable support and deep technical consulting expertise from Nokia



An aerial photograph of a large group of skydivers in various poses, arranged in a circular pattern over a landscape. The sky is a pale, hazy blue, and the ground below shows a mix of green and brown terrain. The skydivers are scattered across the frame, with a denser cluster in the center. The overall scene is dynamic and captures a moment of collective activity from a high altitude.

#3

Improve ecosystem
federation

Building an ecosystem to enable the Internet of Things

Good industry focus

Extended coverage

Installed base max. coupling loss

Security

Established LTE mechanisms

Reliability

Licensed spectrum

Path to 5G

Global 3GPP standardization for continuous evolution

Additional focus needed

Longevity

Extending battery life

Economies of scale

Cost of device modules

Applications

Leverage new LPWA capabilities

Ecosystem

Large portfolio of integrated solutions

Work together to solve the business problem for enterprise Market entry services to accelerate the IoT

1. Discovery Workshop

2. Sales Attack Plans

3. Benefit Realization



Which targets?

- Geographical client filter
- Client potential filter

What product?

- Customer needs analysis
- Product definition
- Technical partner selection

What price?

- Business model definition
- Business plan

How to go?

- Go-to-market analysis
- Internal sales plan
- Commercial partners selection

NB-IoT in safety jacket for automated help requests in mountain areas

Increase hiker's safety with NB-IoT around the globe



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 **KOLON INDUSTRIES, INC.**

Accelerate the IoT

The background of the slide is a high-angle photograph of two skydivers in white and blue suits falling over a vast, rugged mountain range. The sky is a clear, pale blue, and the mountains below are covered in green and brown vegetation, with some snow patches visible. The skydivers are positioned in the upper right quadrant of the frame, moving towards the bottom right.

Seamless
connectivity
across borders

Improve device
interoperability

Improve
ecosystem
federation

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