

Network slicing: myth or reality?

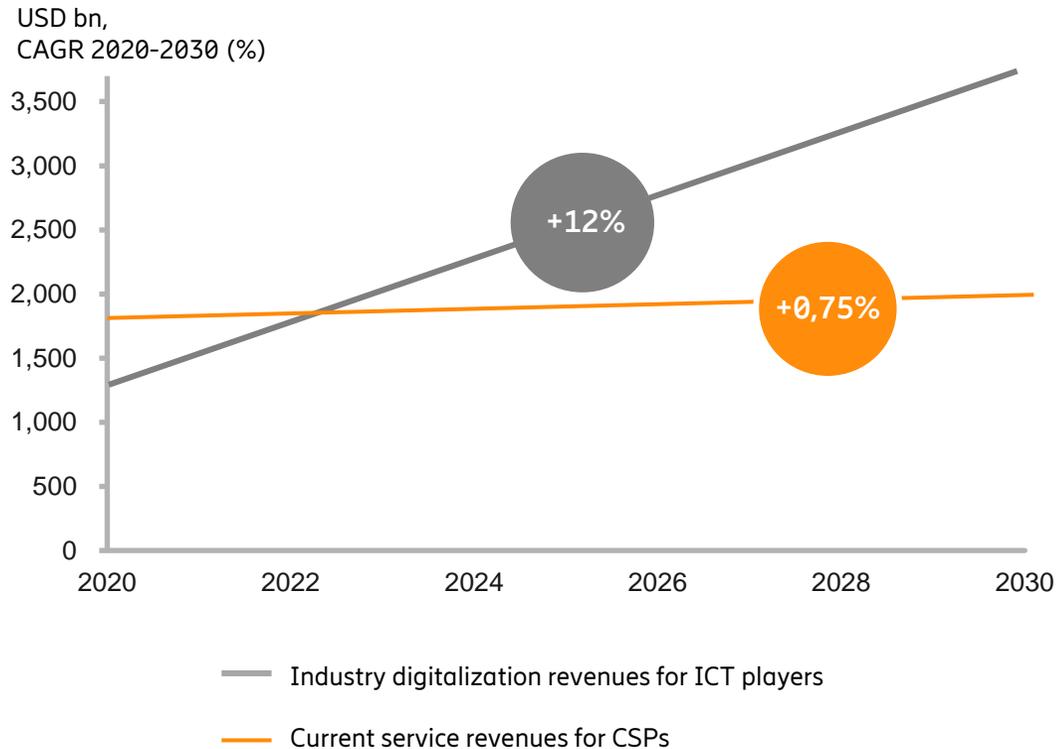
Practical industrial deployment examples

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CSPs strategic shift required



The service provider growth opportunity from industry digitalization



Strategic shifts required to overcome revenue growth challenge



New enterprise use cases

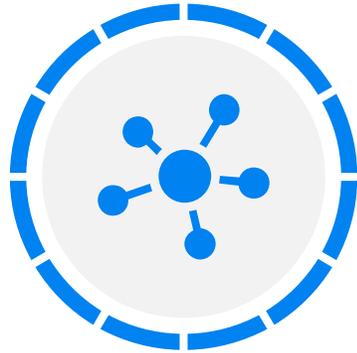


Positions beyond connectivity



Co-creation of business with partners

As 5G enables new industrial digital use cases, the size, scope and diversity of requirements will grow



mMTC

Massive Machine Type Communication

Example applications



Logistics, tracking, fleet management



Smart city



Smart agriculture

Key characteristics

Low cost, low energy
Small data volumes
Massive numbers



eMBB

Enhanced Mobile Broadband



4K/8K UHD, Broadcasting



AR/VR



Gaming

Extremely high throughput
Improved capacity
Improved coverage



cMTC

Critical Machine Type Communication



Traffic & safety control



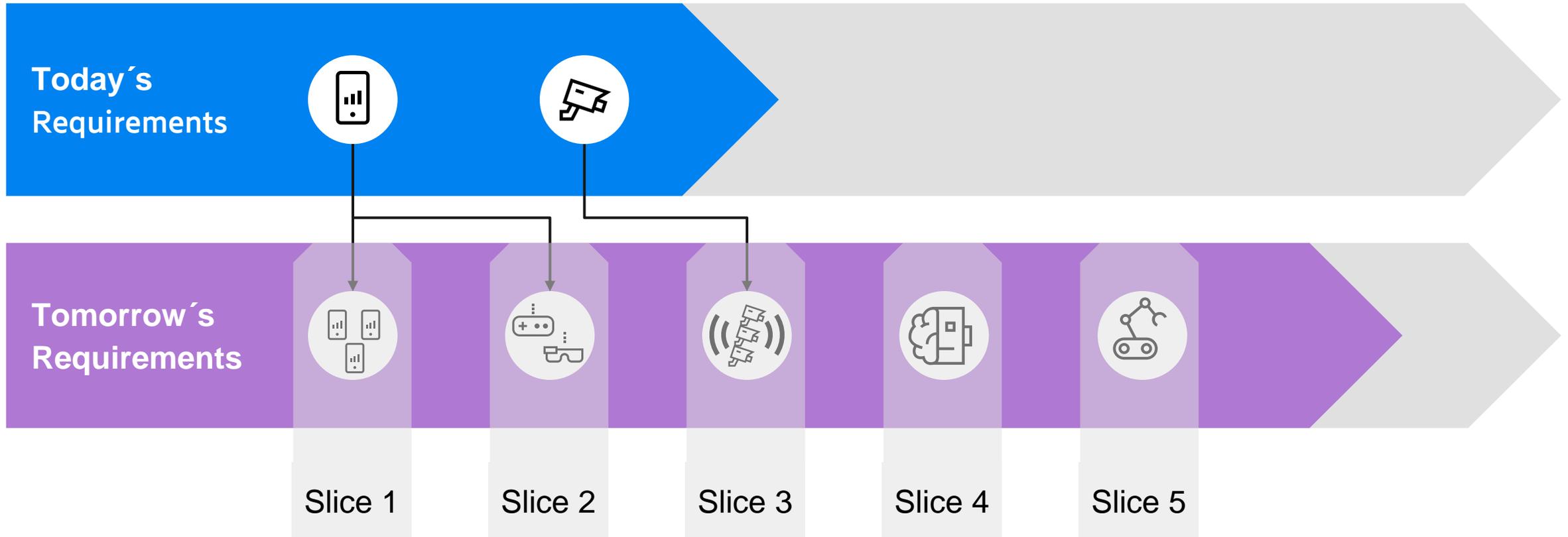
Industrial applications



Remote surgery

Ultra reliable
Very low latency
Very high availability

Network slicing is the solution to enable the continued digitalization journey

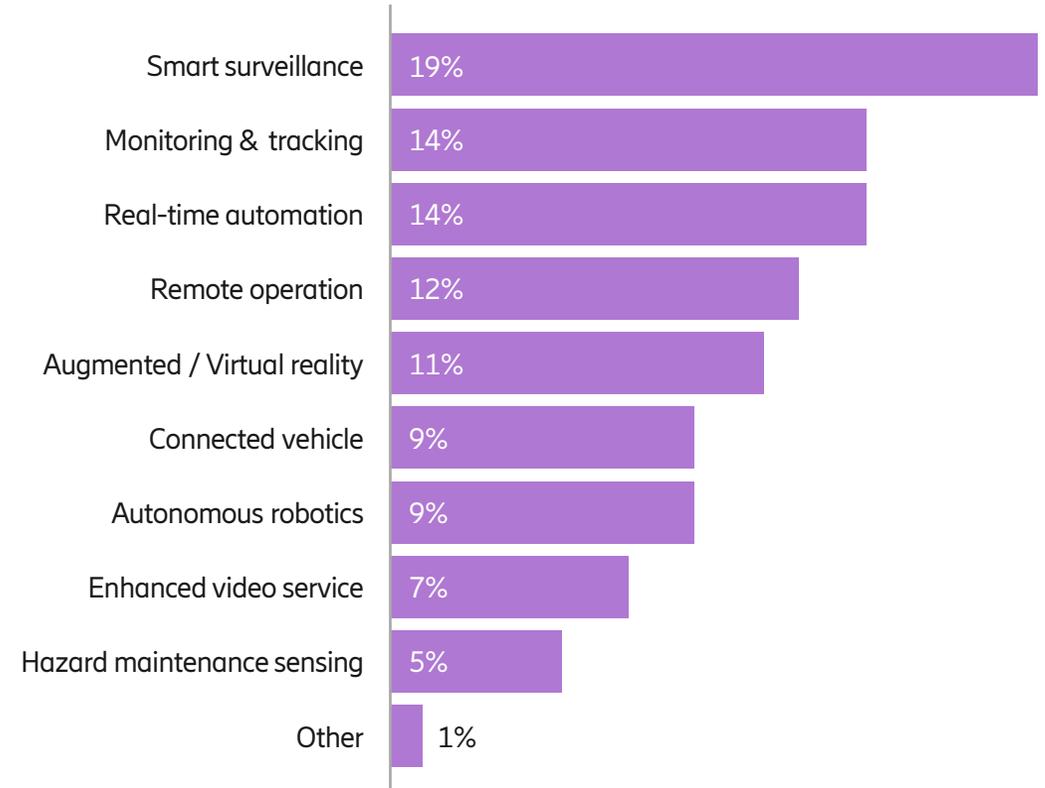
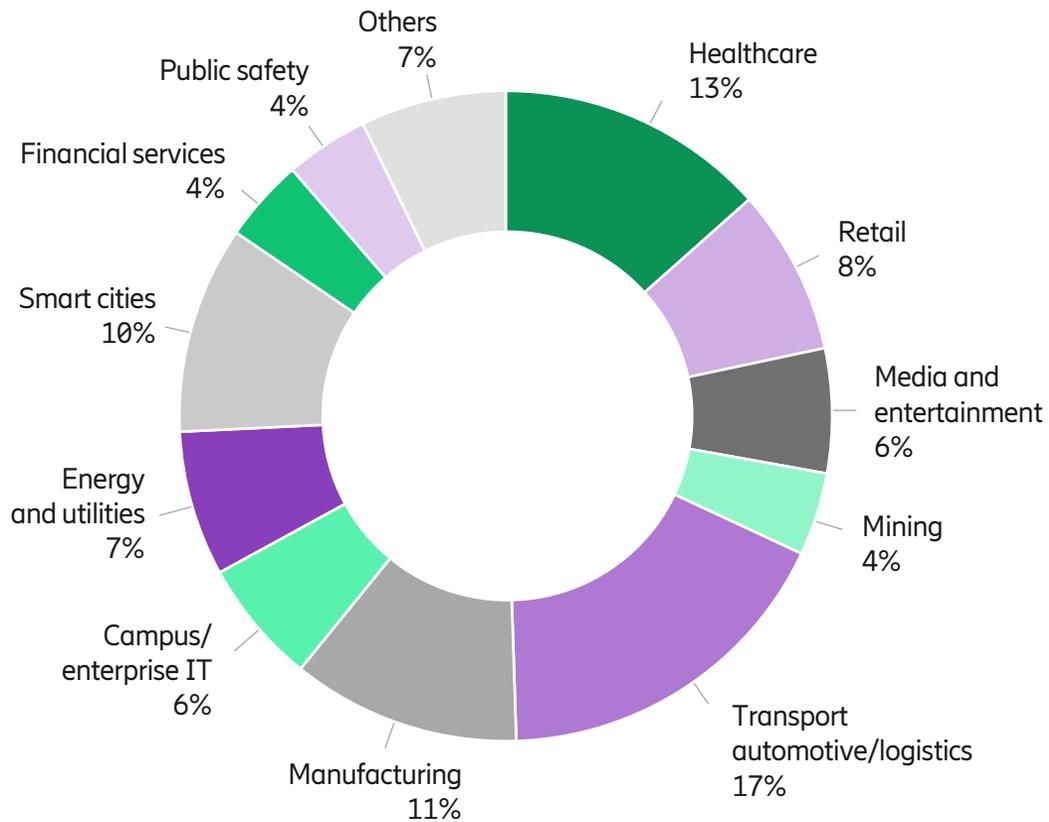


A slicing enabled network

allocating and isolating the network resources for where they are most needed and to the right specification

CSP insights for network slicing

Top choice of verticals and use case clusters



Based on Ericsson's enterprise business survey with over 35 CSP business leaders

Vodafone, Sky and Bundesliga

End-to-end 5G network slicing for media broadcast with Germany's Bundesliga



Customer need

- Live sports out-side broadcasting is traditionally very expensive and on-site production is difficult to make COVID secure
- TV cameras require miles of cabling which limits the flexibility and options for coverage
- Pre-COVID existing 5G/LTE technologies struggle to support media broadcasting particularly when competing with 1000's of spectators for band-width
- Post-COVID bans on spectators is driving the need for a new, more immersive fan experience



Solution

Vodafone, Sky and Ericsson worked with the Bundesliga to demonstrate how 5G could change live sports broadcast

- 5G enabling Dusseldorf's Merkur Spiel-Arena:
 - Use a sliced 5G network to protect media broadcast activity with prioritization, guaranteed band-width and QoS
 - Use 5G enabled (cable-free) cameras for more coverage, more locations and more flexibility improving fan experience
 - Virtual transmission center enabled COVID secure, home-based media production

BENEFITS

Sliced 5g network for media broadcast

The sliced network allowed 5G wireless transmission from cameras reducing the need for miles of cable and long set-up times

Virtual transmission center

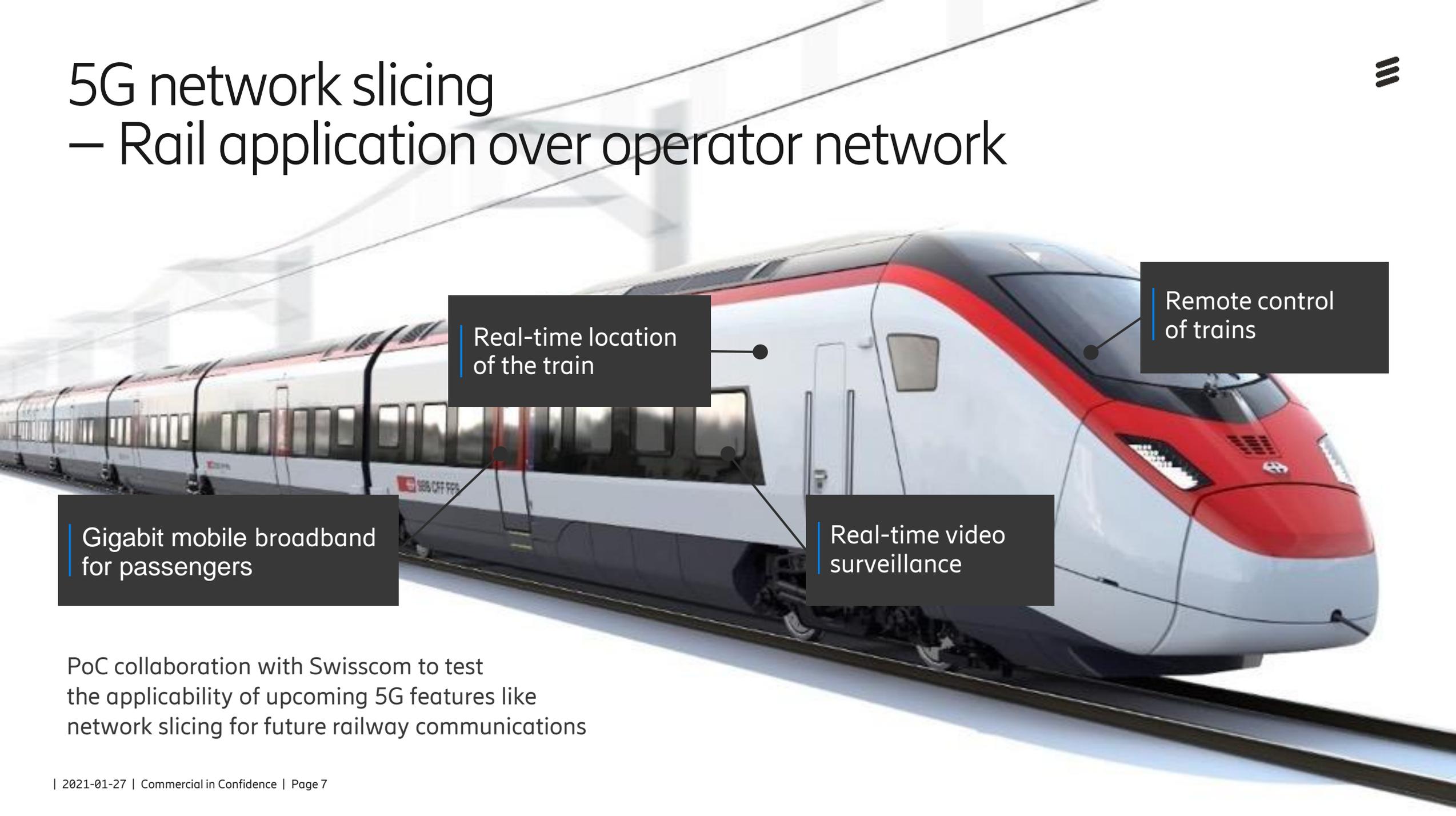
Media editing and production can be carried out off-site or at home avoiding the need for expensive non-COVID secure OB trucks on at the arena.

Improved fan experience

Better 5G coverage for spectators. More camera angles, better coverage and more immersive fan experience

5G network slicing

- Rail application over operator network



Real-time location of the train

Remote control of trains

Gigabit mobile broadband for passengers

Real-time video surveillance

PoC collaboration with Swisscom to test the applicability of upcoming 5G features like network slicing for future railway communications

Verizon, King's, Ericsson and Unmanned Life launched a fleet of drones using a slice



Autonomous control and management of drones

Year: 2018

Location: London

Customer: Emergency response team



In 2018, BT, Verizon, King's, Unmanned Life and Ericsson collaborated together to demonstrate a launch of autonomous control management on a dedicated 5G network slice

The use cases that were part of the demonstrations included:

Recovery zones search mission using HD imaging

Using drones to deploy temporary cellular network during disaster recovery scenarios

Unmanned Life provide an AI driven autonomous platform that enabled the use cases

“The demonstration, which utilized new pre-commercial 5G radio, was achieved by building a 5G core and creating two network slices with similar characteristics: one, a low latency breakout for a BT end user; the other, a Verizon low latency breakout. This advancement opens up a wide range of opportunities and makes it possible to deliver applications such as remote and/or autonomous control of drones and rovers, to real-time search and rescue applications – something that was not previously possible.” - Ericsson

Deutsche Telekom provides a dual slice campus solution in OSRAM's factory



Dual slice for mobile robotics solutions



“Key business needs involved automation with the flexibility of implementing new production layouts, on site security and guaranteed on site mobile performance”

“DT is currently shifting CAPEX into this model, providing automation solutions on a subscription basis”

Year: 2018

Location: Germany

Customer: OSRAM

Slicing: Partly



OSRAM commissioned a deployment of campus network in its Schwabmünchen factory to prototype and test mobile robotics solutions. In addition to the campus network, a local Edge Cloud was deployed to exchange and store control data

Deutsche Telekom provided the campus solution based on the **dual slice, public and private LTE connectivity** approach as a stepping stone towards 5G and Industry 4.0

Start Now – insights from network slicing trials



Slicing of Core, transport, RAN
is available in our products today



Organization and process
transformation is crucial



Orchestration and automation are
key enablers but also key challenges



All areas of network, operations (OSS) and
business (BSS) layers are affected.

Start simple, learn and manage the transformation gradually

Ericsson is the right partner for the journey





ericsson.com/network-slicing