

Cutting the cables: Why reliable, cellular connectivity, IoT and 5G are essential for Industry 4.0

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1887

From empowering consumers to empowering industries



1980: 1G

Voice



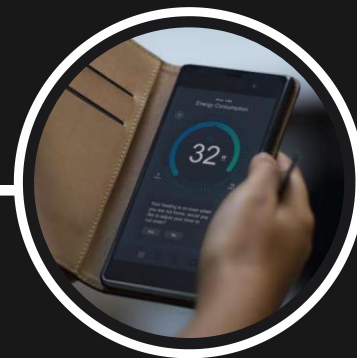
1990: 2G

SMS



2000: 3G

Internet
browsing



2010: 4G

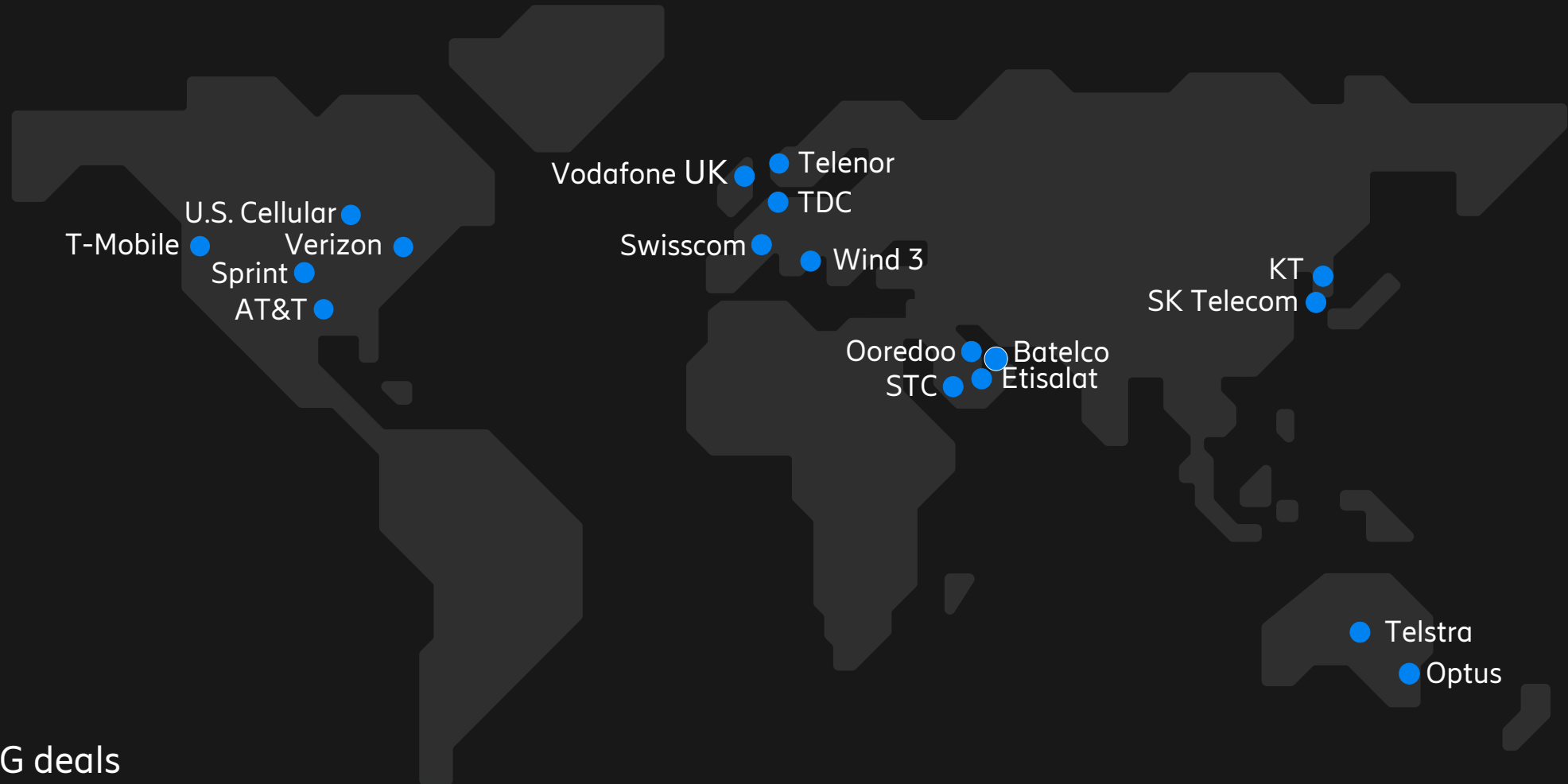
HD
streaming



Now: 5G

Real-time
control

We are busy deploying the first commercial 5G networks



18

Named 5G deals

*As of Mar 2019



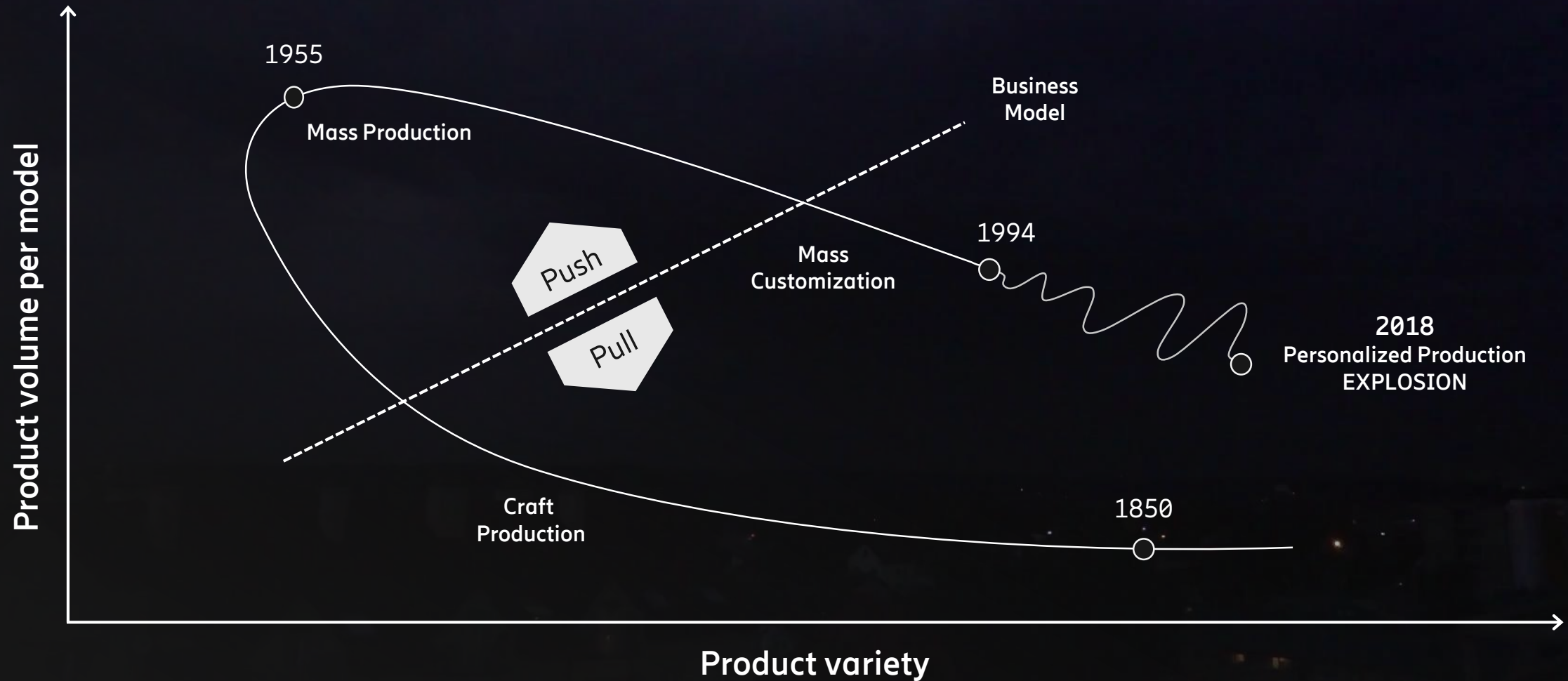


USD 1.5tn

capital efficiency, cost reduction and revenue gains

The perfect storm

Need for flexibility and mass customization

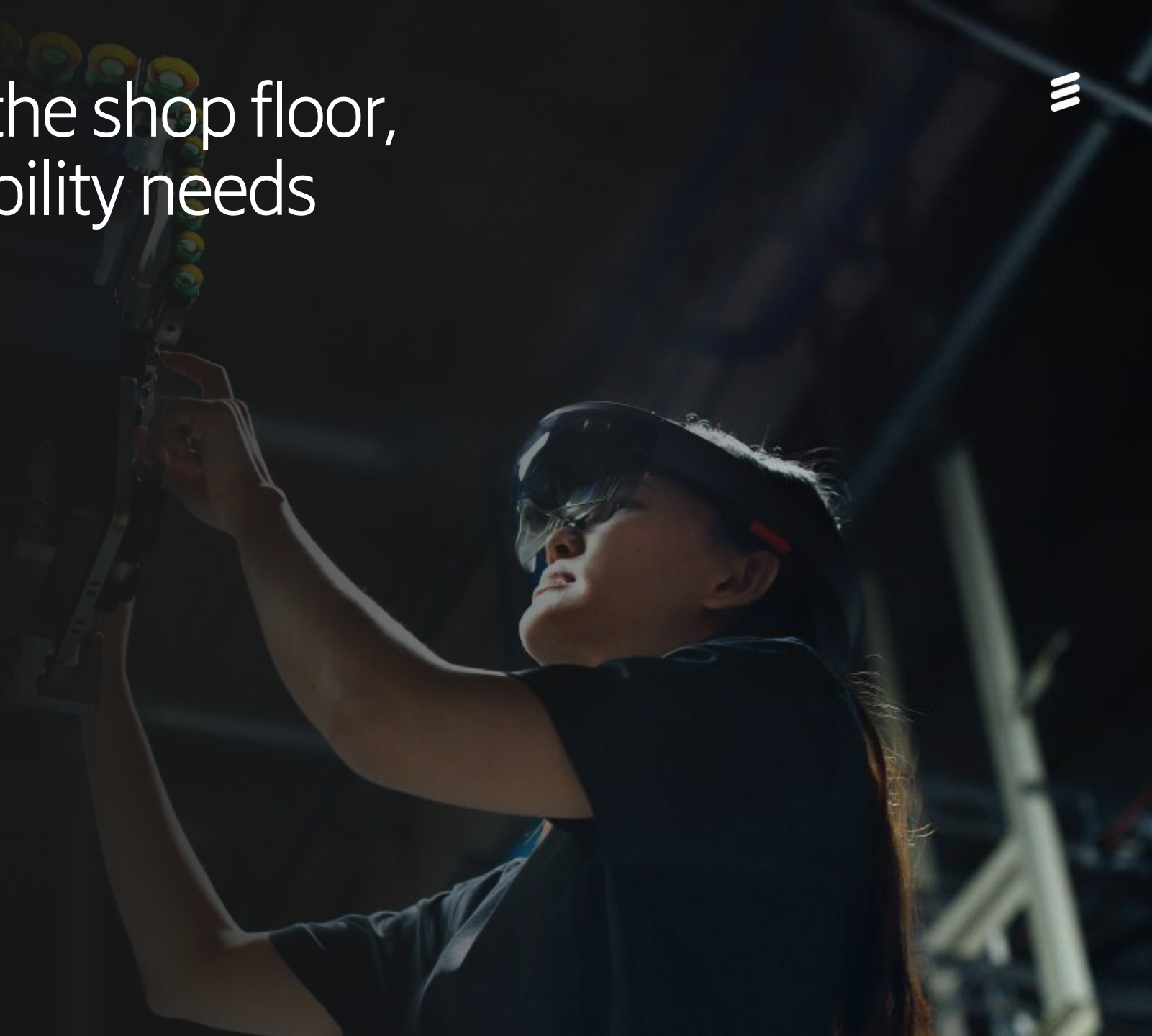


Mobility moves into the shop floor, industries varied mobility needs



Sample mobility drivers:

- AGV adoption
- Modernization lifecycle
- Size of campus
- Labor dependency
- Days in inventory



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Cumulative mobility index

Automotive

Chemicals

Consumer goods

Heavy industrial equipment

Industrial Equipment

Mining

Electronic components

Life science and food

Aerospace and defence

Energy

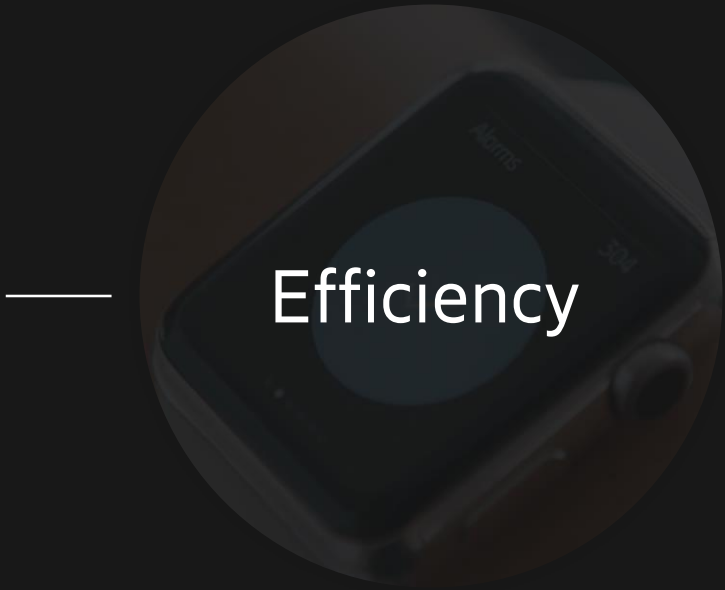
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Cumulative mobility index





Efficiency



Quality



Sustainability

A close-up, low-angle shot of several dark, metallic turbine blades from a jet engine. The blades are arranged in a curved, radial pattern, and their surfaces show fine, concentric grooves. The lighting is dramatic, highlighting the texture and curvature of the blades against a dark background. In the top right corner, there is a small white icon consisting of three horizontal lines.

BLISK, monitoring the sensitive process of jet-engine components

- 1ms latency
- €27M savings per factory
- 16M tonnes of CO₂



Increasing efficiency and improving safety as mines are digitalized

- Optimize air supply, accounting for up 50% of the total energy consumptions today
- Connected rock bolt solution providing information.
- Collaboration with Boliden, Epiroc, ABB, RISE, and Volvo

Transforming transportation



- 60% cost savings
- 90% reduction in CO2 emissions
- Collaboration between Einride, DB Schenker, Telia & Ericsson

Building ecosystems, not egosystems



Devices &
gateways

Academia
& industry
alliances

Mobile
operators

Industrial
pioneers

Industrial
software

System
integrators

Building ecosystems, not egosystems





Our quest is to make
cellular connectivity
easy for industries

Factories need better connectivity!

Fast, secure wireless connectivity for Industry 4.0

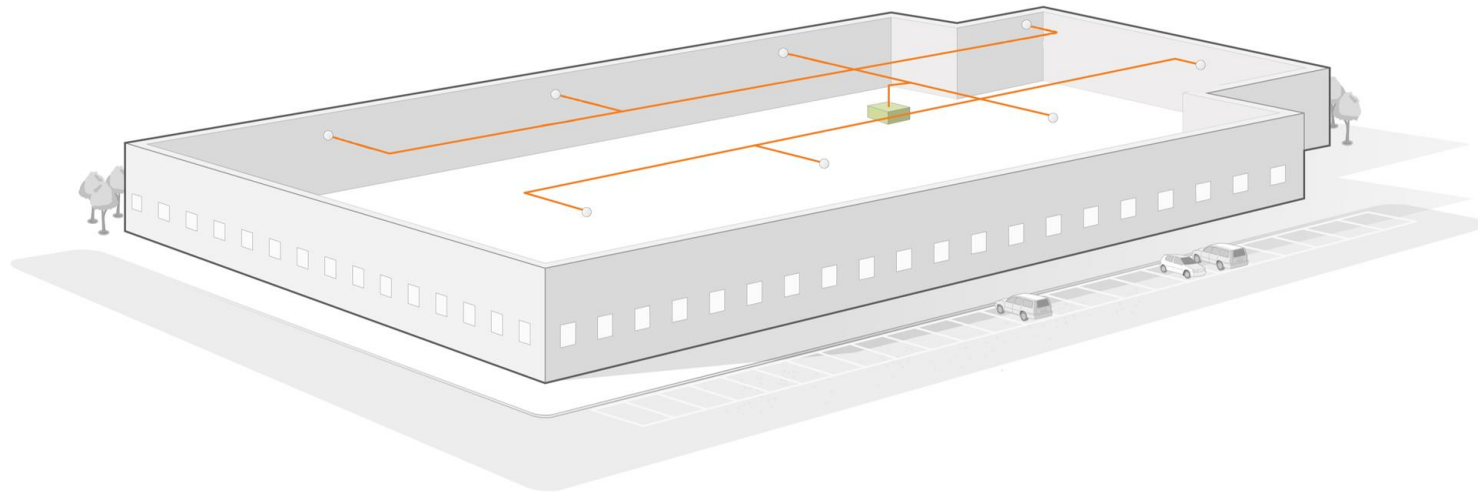


✓ Easy

✓ Turnkey

✓ Reliable

✓ Path to 5G





Digital twin inspection



Mobility by human machine interface



Collision avoidance and remote control AGV's



Collaborative robotics for automated operations

Ericsson & Bosch private LTE trial - Tele-operated driving



BOSCH

Connection: Private LTE

Throughput: 5.75 Mbps up, 0.13 Mbps down

Latency: 31 ms

51ms

0ms

L | R

D1

MMS

ECU Status: **Connected**

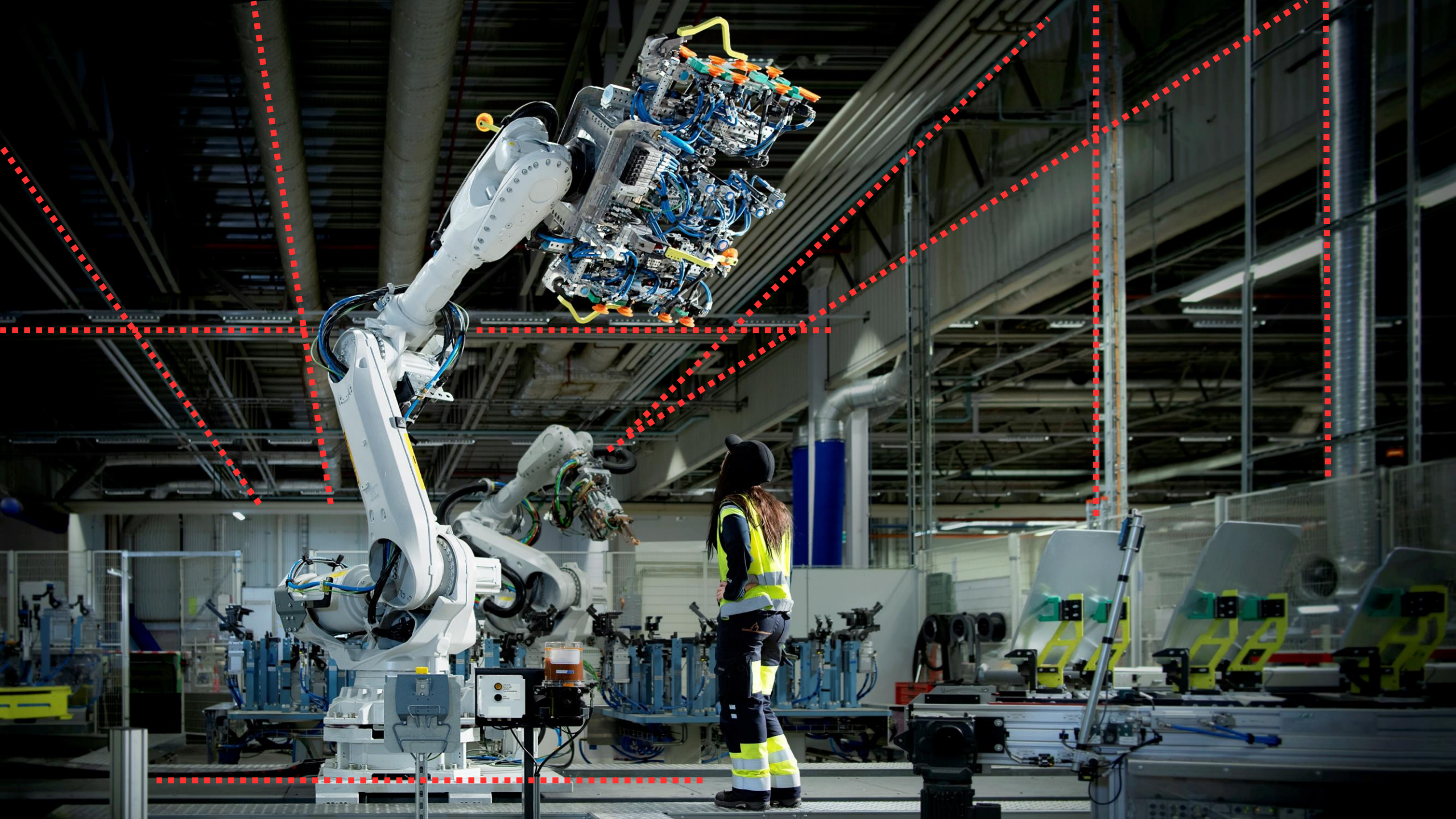
The interface displays a first-person view from a car's perspective inside a tunnel. On the left, a Bosch logo is at the top, followed by connection details: 'Connection: Private LTE', a throughput gauge showing '5.75 Mbps up' and '0.13 Mbps down', and a latency gauge showing '31 ms'. Below these is a latency waveform graph with a peak at '51ms' and a baseline at '0ms'. At the bottom center, a steering wheel overlay shows 'L' and 'R' for left and right, and a gear indicator 'D1'. On the right, an MMS logo is at the top, followed by a top-down car view with green curved lines above and below it, and 'ECU Status: Connected' at the bottom.



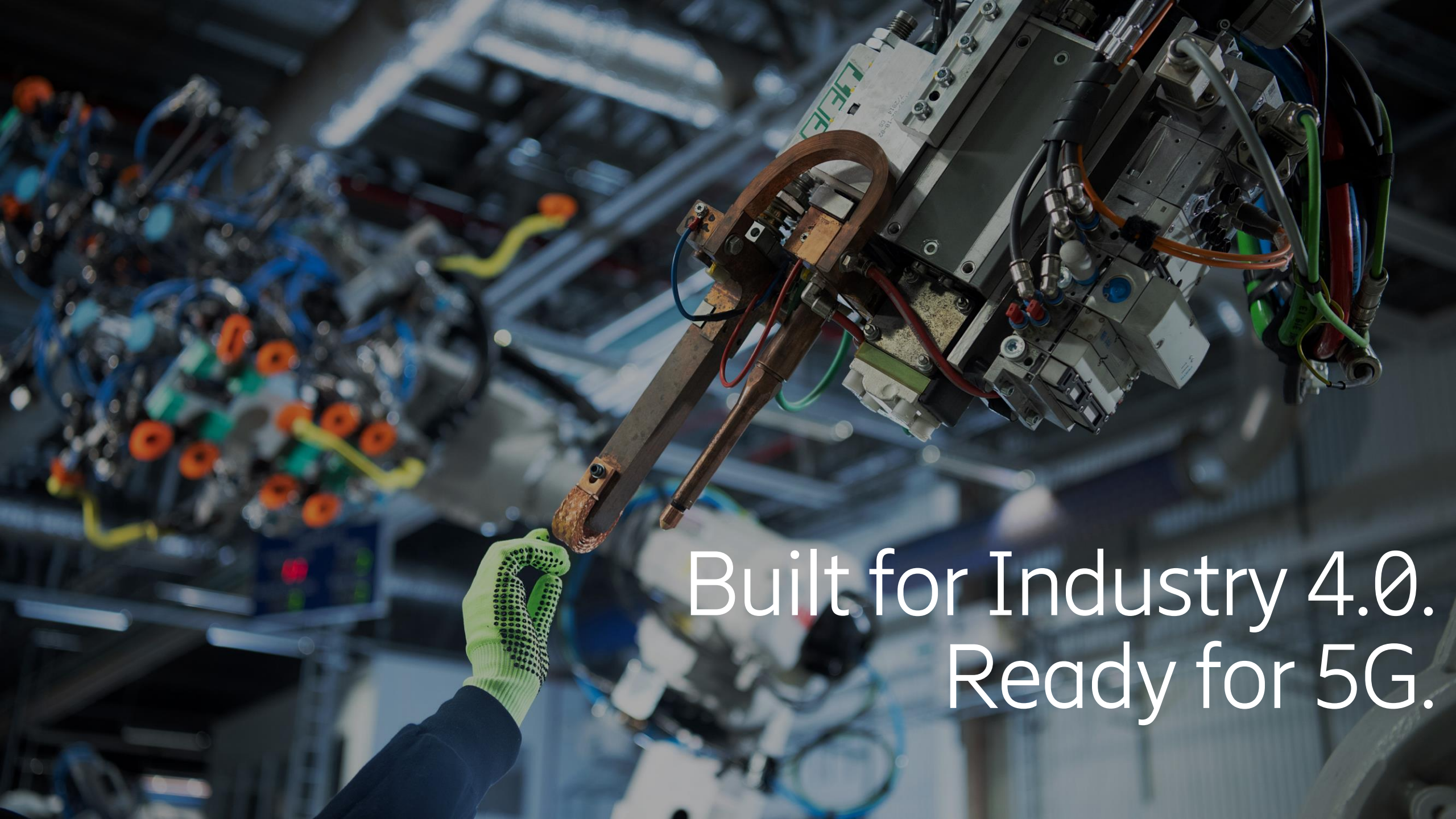


Introducing radio stripes

Better coverage – invisible – easy







Built for Industry 4.0.
Ready for 5G.



ericsson.com/industry4.0