

5G – one of the enablers of Industry4.0

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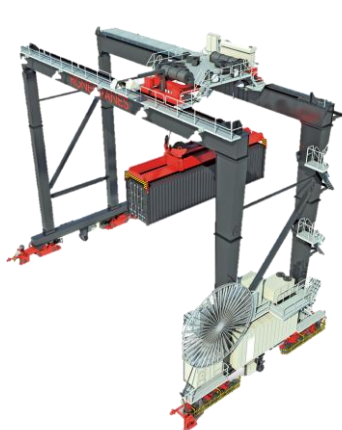
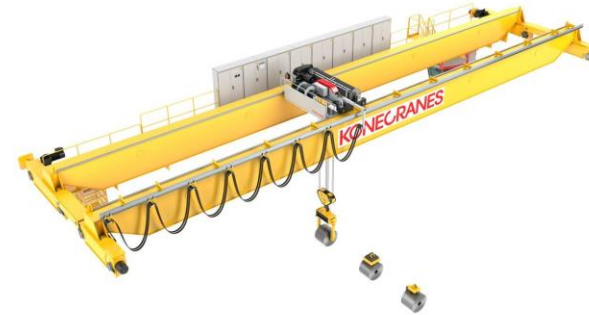
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Lifting Businesses™



KONECRANES®

Konecranes is a world-leading group of Lifting Businesses™, serving a broad range of customers, including manufacturing and process industries, shipyards, ports and terminals.

Konecranes provides productivity enhancing lifting solutions as well as services for lifting equipment of all makes.

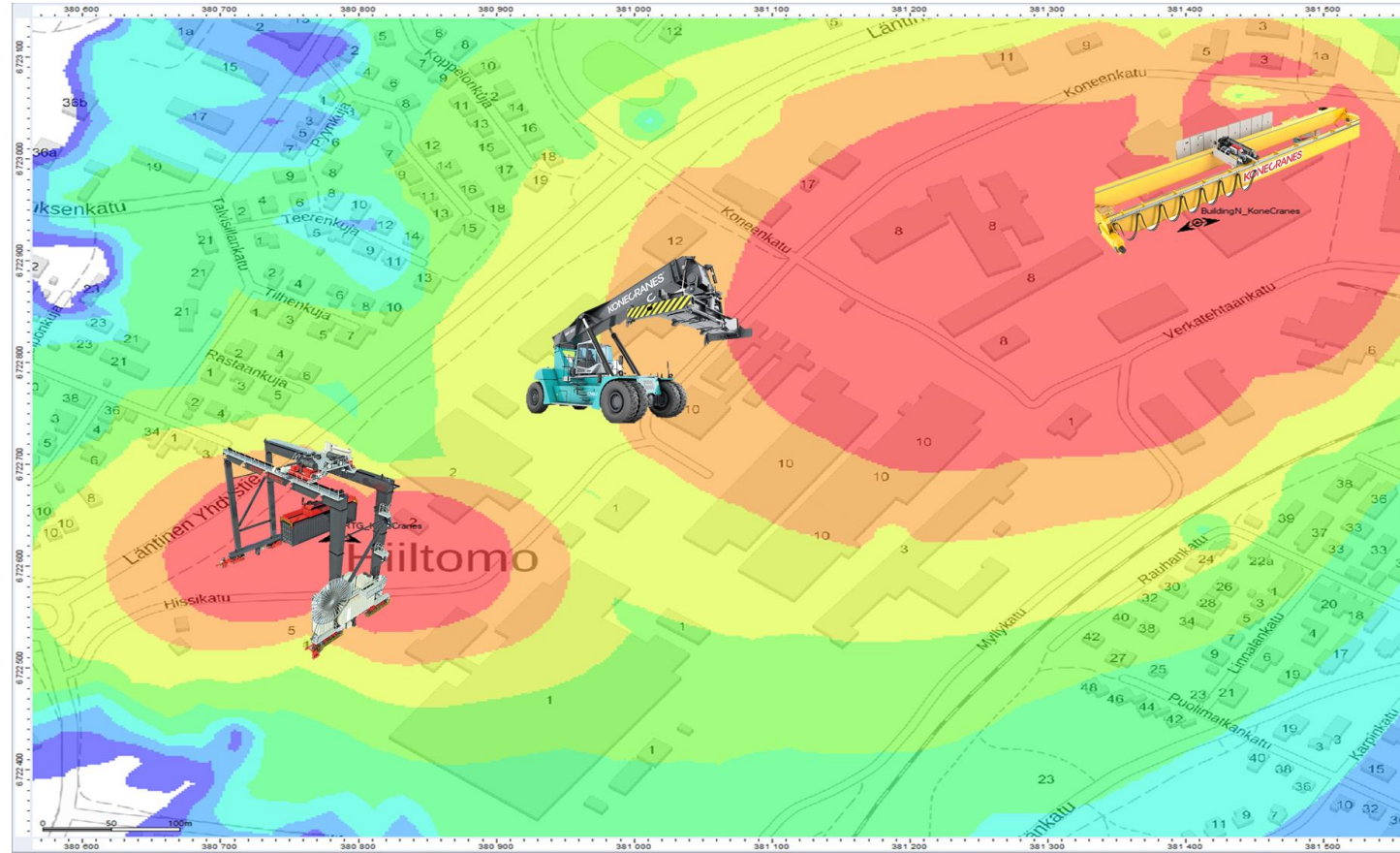


5G SA R&D network at Hyvinkää factory

Network to fuel Konecranes' 5G research and digitalized solution development for factories and ports

Nokia and Edzcom announced that they will jointly deliver a 5G standalone (SA) private wireless network for Konecranes at its Hyvinkää smart factory in Finland.

Edzcom and Nokia collaboration builds the 5G SA network on existing Konecranes LTE private wireless investment



Industry4.0?

The **Fourth Industrial Revolution** is the ongoing automation of traditional industrial practices.

Idea in brief is change operation model from series of individual machines to ecosystem of machines which performs the production itself.



What that means for Konecranes

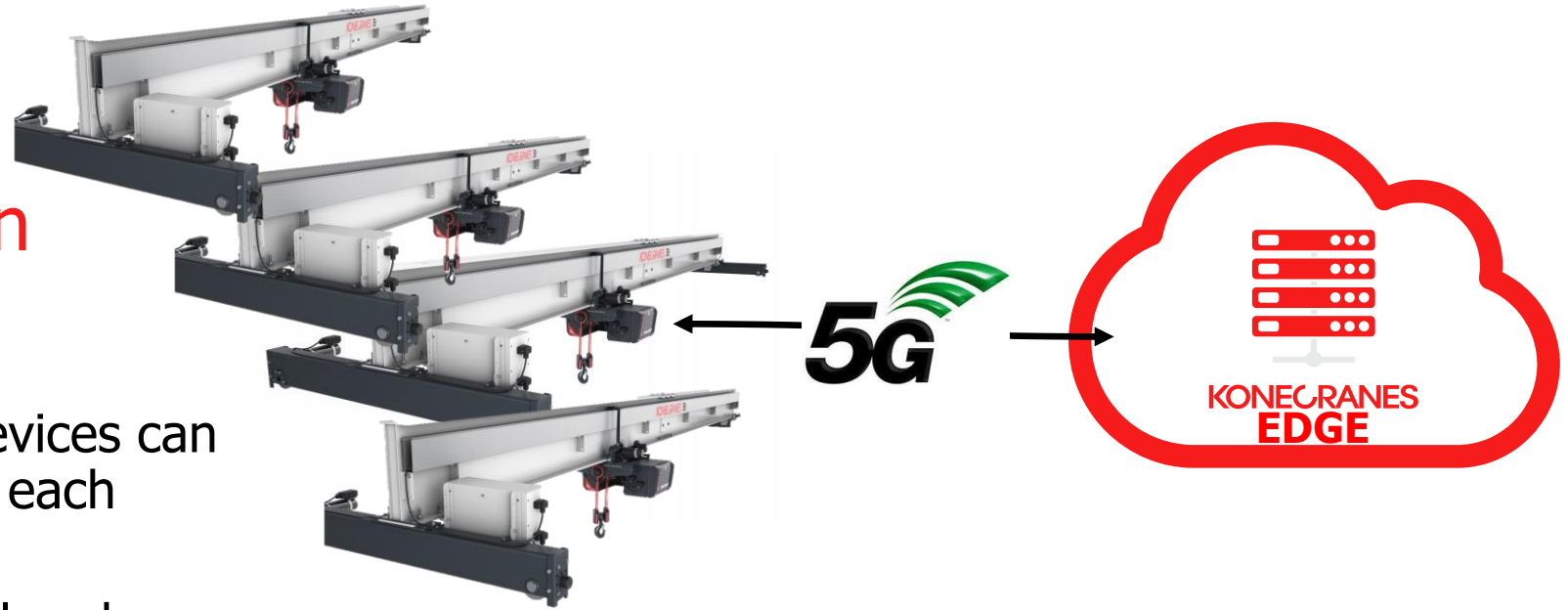
Our products need to be Industry4.0
compatible

Our factories should utilize Industry4.0.



Need of communication

- To enhance the production, devices can be set to share information to each others
- Data need to be transmitted elsewhere, if devices cannot handle the information on their own



5G use cases

Enhanced Mobile Broadband

High data rates, high traffic volumes



Massive Machine Type Communication

Massive number of devices,
low cost, low energy consumptions

Ultra-Reliable and Low Latency Communication

Very low latency,
Very high reliability and availability

Massive sensing



Massive sensoring



Remote crane inspection



Image source: amazon.com

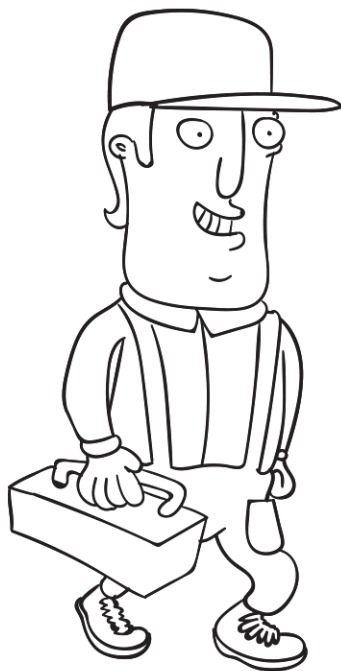
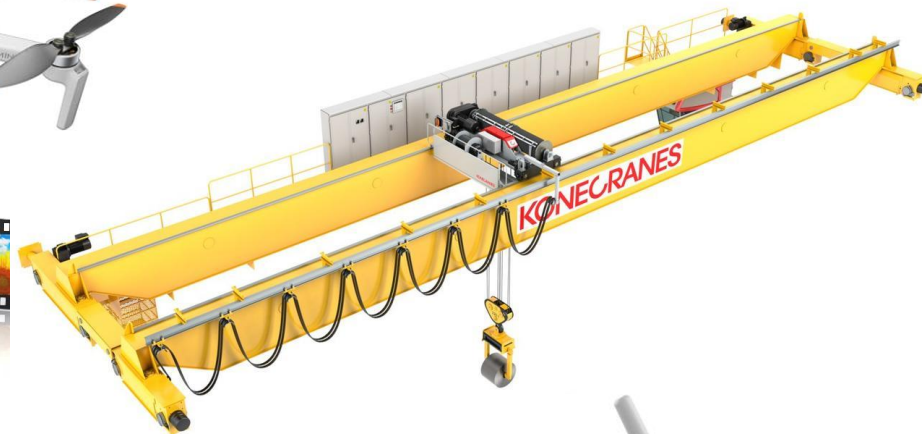
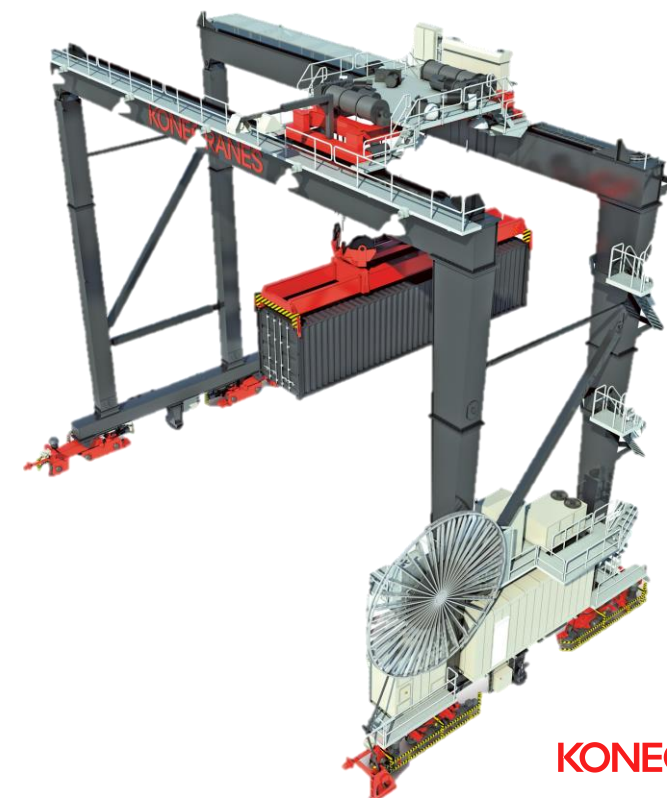
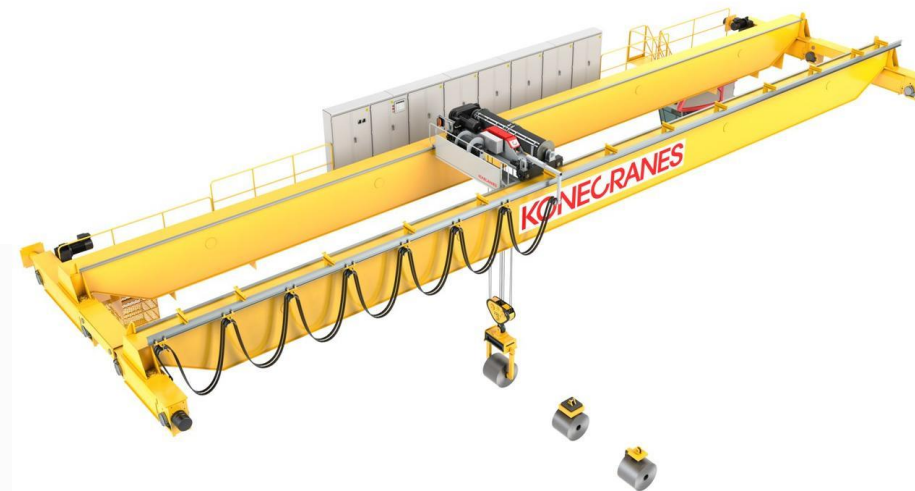


Image source: amazon.com

Service technician's AR/VR application

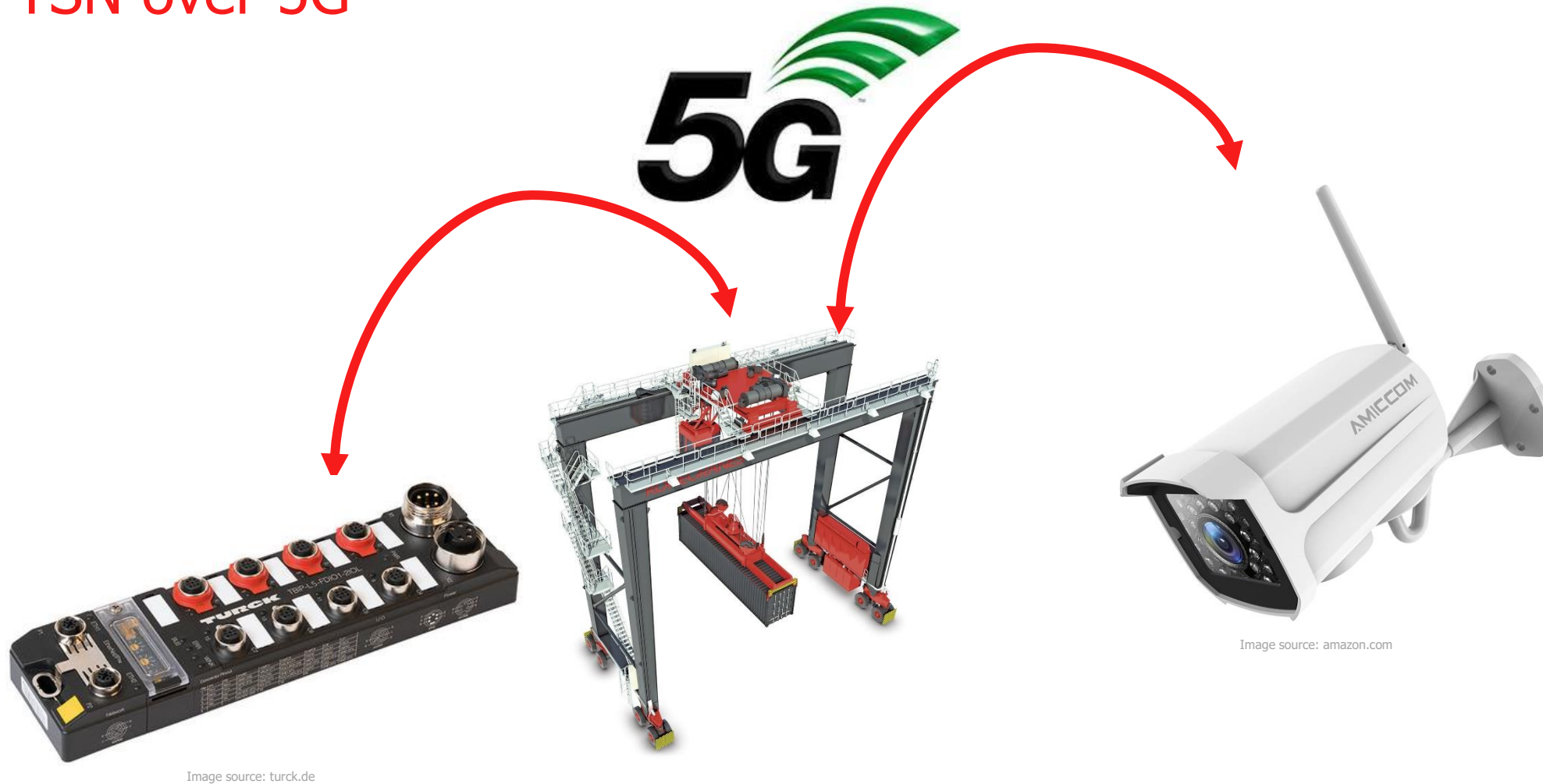


Remote operating station



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TSN over 5G





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