Private 5G networks.

Helping you achieve secure Industry 4.0 connectivity across your business

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Private 5G networks.
An overview

Digital transformation continues to dominate most business' future initiatives, with many across the globe already adopting digital technologies, including Industry 4.0.

Allowing for the leverage of smart technologies such as AI, IoT and big data, Industry 4.0 enables companies to automate and improve operations. However, evolving to next-generation capabilities often exposes the limits of Wi-Fi and existing cellular networks – particularly due to Industry 4.0's use of highly automated, intelligent, and collaborative systems that require highly stable and low-latency wireless connections.

Move away from established network operators and adopt private 5G networks

A catalyst for Industry 4.0 transformation, private 5G networks open the way for a technological leap forward, playing a fundamental role in revolutionising entire industries. Architected to address the need for critical wireless communication in industrial operations, IoT applications and infrastructure technology, **private 5G is essential for the implementation of Industry 4.0.**

In 2020, Ofcom published their decision to support local connectivity requirements by opening radio spectrum previously only available for certain services and shared use. Working to support innovation in new wireless technologies and applications, Ofcom has made new local licences available in a range of spectrum bands, broadening the opportunities for users from a range of sectors to transform their operations via wireless connectivity.

Why 5G?

High multi-user capabilities, providing adequate coverage and capacity. Offering unified connectivity, a dedicated network, and optimised services.

Better coverage than wireless access points, with high, predictable performance. Meeting the increased demand for mobile and flexible production.

Security policies can be custom designed and fully controlled within an organisation, meaning private 5G is more secure than all current wireless networks.

Why 5G?

Lower latency and enhanced bandwidth allow for the transmission of greater data much faster. Essential for simultaneous upload and download speeds for video conferencing and IoT.

Ability to connect up to a million IoT sensors and devices per square kilometre, allowing for high performing mission critical reliabilities.

Why now?

Generally speaking, Industry 4.0 is associated with the growing trend towards automation and data exchange in technology and processes within the manufacturing industry:

- **The internet of things (IoT)**
- **Smart manufacture**
- **Big data and data analytics**
- **Cloud computing**
- **3D printing**
- **Artificial intelligence**

Industry 4.0 will make smart machines smarter, factories more efficient, processes less wasteful, production lines more flexible and productivity higher. And, to implement Industry 4.0 efficiently, enterprises need fast, reliable, secure and wireless connectivity solutions.

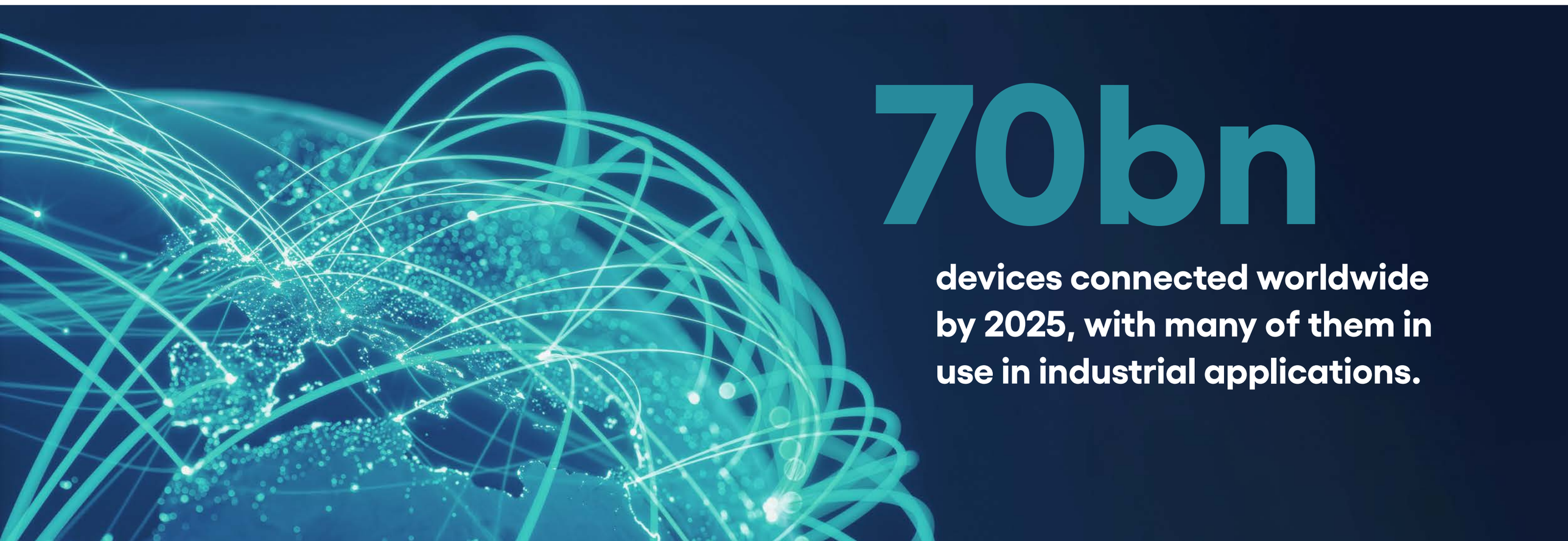
“The number of devices connected on IoT is now greater than the number of human users on the internet”

Why now?

With connectivity remaining a critical barrier to realising the true potential of Industry 4.0, a high performing private 5G network can provide the solution.

Enabling critical communications, such as the wireless control of machines and manufacturing robots, 5G offers manufacturers the chance to build smart factories that take advantage of the emerging technology that's changing industries. Plus, designed to handle critical communications from the start, industrial-grade private network solutions deliver heightened reliability, predictable performance, built in security and essential connectivity for everything, while providing the flexibility to respond to new demands and opportunities of industry 4.0.

All under one network.



In the spotlight.

Manufacturing.

A 5G private network:

- Provides a crucial platform for continuous optimisation of machine performance
- Avoids slow and costly infrastructure changes
- Makes it easier to implement smarter manufacturing technologies run in the IoT
- Creates a quicker roll out of AI and machine learning
- Allows full operational and business control
- Is versatile and optimised for Industry 4.0

In the spotlight.

Education.

A 5G private network:

- Aligns itself with Education 4.0 – focusing on smart tech, AI and robotics
- Allows R&D initiatives to develop more efficient IoT products
- Combines cutting-edge thermal imaging and IoT to monitor the temperature of a moving object in real time across campuses
- Creates opportunities for academic institutions to make contributions to the 5G vision by conducting research and creating test beds
- Equips graduates with the skills and credibility to plan, design, operate and manage today's advanced telecommunications network

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Our solution.

Designed to accelerate your digital transformation, Nokia Digital Automation Cloud (DAC) is a high-performance, end-to-end, secure and simple private wireless network platform. Equipped with plug-and-play 5G connectivity to support on-premises data management and real-time applications, Nokia's DAC is cost-effective, secure and simple to deploy. Comprised of network equipment and a cloud-based monitoring system, it makes private wireless networking, remote operations, IoT, analytics and automation effortless and easily accessible for locations of all sizes, including ports, mines, factories and airports.

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5G and Industry 4.0: Ready to go.

With demand expected to grow over just three years, it'll be all too easy for companies to fall behind the curve unless they adopt, implement and deploy private 5G and Industry 4.0 now.

It's not a matter of if but when, as private wireless infrastructure is already used by select verticals worldwide to solve mission-critical network challenges, enabling organisations to accelerate growth and keep up with the fast-paced evolvement of Industry 4.0.

Solving the inevitable inadequacies of existing mobile and network capabilities will be paramount to every business' digital transformation – **and Nokia DAC makes the unachievable, achievable.**

Find out more.

Enterprises implementing Industry 4.0 need fast, reliable, secure wireless connectivity solutions that provide high device density, predictable latency and full visibility of processes, machines and data. **Find your connectivity solution with UCtel by calling 0333 344 4417 or emailing sales@uctel.co.uk.**

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