NOKIA | **accenture**

Accenture Collaborates with Nokia to Demonstrate the Value of 5G-Enabled Industrial Robotics Applications

The companies are co-creating innovative solutions at Accenture's X Innovation Center in Garching

Private 5G networks are giving manufacturing and other companies the chance to build smart factories to take advantage of technologies such as Artificial Intelligence, Augmented Reality, and the Internet of Things (IoT).

With 5G private campus networks, companies can create new revenue streams by developing new products and services, such as predictive maintenance.

Accenture has set up a LTE/5G Ready Private Campus Network at our Garching Industry X Innovation Center. At the Innovation Center, which resembles an industrial "shop floor," clients can design and prototype their digital solutions.
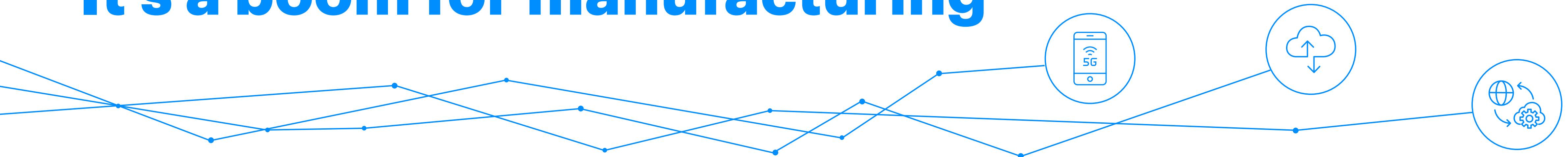
Use cases that will be showcased include:

— Connected worker and connected assets
— Flexible digital plant design
— Automatic inspection
— Big data analytics
— Autonomous shop floor
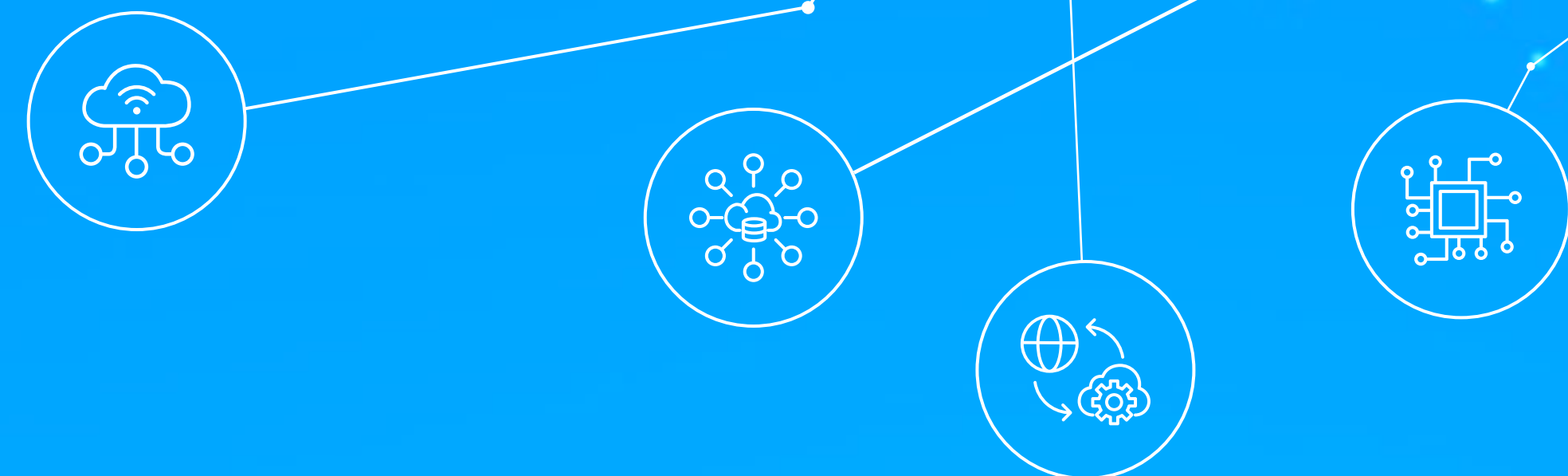
What happens when the cloud, edge processing, and 5G private networks come together?
It's a boom for manufacturing

When new technologies hit the market, they often go through a "hype" cycle, that includes a slow buildup until the time when the technology is actually used for new business cases at scale. So far, this is what has happened with the Industrial Internet of Things (IIoT), for example.

Now, a "perfect storm" of factors have converged that are likely to end the quiet period for many IIoT-type applications: Not only are cloud computing and on-premise edge computing mature and widely available, but private LTE/5G-ready networks are becoming increasingly available as well.

Combine all three and companies now have everything they need to implement a smart factory, use autonomous and robotics in production, do real-time inventory and production tracking, perform predictive maintenance or monitor the health and well-being of their workers on the shop floor.

With private LTE/5G-ready wireless networks, companies can run critical applications on their industrial sites and in their field area networks, connecting a large number of devices with secure, ultra-reliable, low-latency, high-bandwidth connectivity.

The Time is Now

Research organizations and a few large companies within manufacturing around the world are already testing on their own private LTE/5G-ready campus networks.

Recently, Accenture teamed up with Nokia as part of The **Nokia** Accenture Business Group ,to be among the first professional services companies with its own private LTE/5G-ready network as a testbed, experience center and playground for clients.

Clients from all industries are invited to test their equipment and applications at Accenture's live demonstration site.

GARCHING INDUSTRY X INNOVATION CENTER
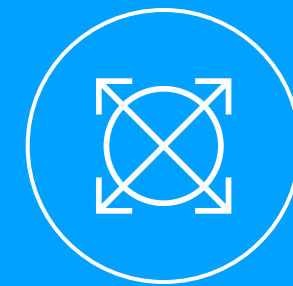
Located in Garching, Germany, the Garching Industry X Innovation Center is set up as an industrial "shop floor" where clients can design, prototype and test digital solutions for their businesses and customers. Clients can see how their solutions run in a live, end-to-end setting and test how they react when using solutions from different providers, such as different cloud providers.

Across 1,400 square meters of industrial shop floor space, clients can experiment with dozens of industry-relevant use cases.
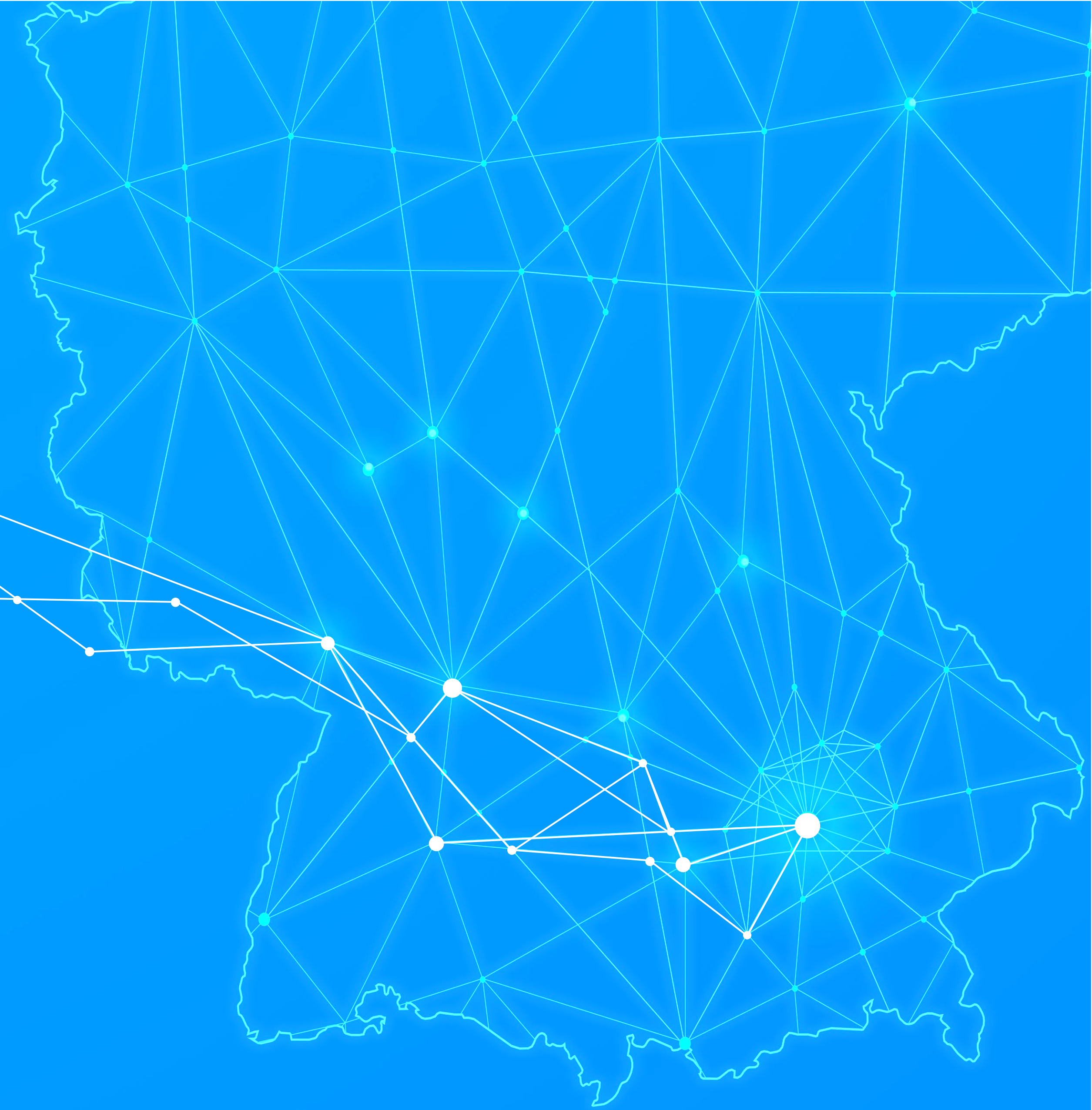
GARCHING INDUSTRY X INNOVATION CENTER

The New LTE/5G-ready testbed is run on a standalone private campus network using dedicated spectrum licensed from the German Federal Network Agency. It is completely independent from public networks. The network is based on the Nokia Digital Automation Cloud (NDAC), a leading 5G-ready private campus network technology.

For companies, the new technology will make it possible to overcome the hurdles which have prevented IIoT projects from being implemented at scale. In the past, these hurdles have kept applications from delivering the promised cost reductions, higher productivity and new revenue streams. Hurdles include insufficient integration between the shop floor and the "top floor," no single database, and no single source of the truth about the associated process, such as production or inventory. The new technology will make all of these things easier and enable more flexible, efficient, reliable and secure connectivity o devices on the shop floor.

In Garching, companies can now test how it all works from end to end on their own equipment, without investing a penny upfront in their own private campus network. Claus Friedl, who is responsible for robotics at Accenture in Austria, Switzerland, Germany and Russia, said, *"We brought together our understanding of manufacturing, supply chains and communications networks to make the testbed possible."*

We want to show our clients the amazing value they can create with different use cases and solutions. This offering is as much for clients who are focusing on how to improve their manufacturing operations as those who want to test their own products in a LTE/5G-ready environment. All industries are welcome – whether you're working in discrete manufacturing, process industries, life science, ood & beverage, travel & transportation, retail or finance and insurance."

How it works –
the example of
Predictive Maintenance

Predictive Maintenance is just one of the applications companies got excited about when they began to understand the potential of IIoT. However, using data to predict which machines on a shop floor will need which repairs and when they will need them requires an abundance of information delivered in real-time. Collecting and connecting this data to backend systems can be costly and has in the past made the business case uninteresting. Private LTE/5G-ready networks offer a secure, reliable and cost-effective way for companies to collect and connect data to backend systems.

LTE/ 5G-READY PRIVATE CAMPUS NETWORKS

LTE/ 5G-ready private campus networks represent an evolution in mobile network technology, not just through their reduced latency. One key part is that all equipment involved in an implementation can be under the physical control of the client and can be configured exactly to the client's needs.

Friedl said, *"Public networks might be an alternative in some cases. But with public networks, there is additional risk since companies may not know who has access to their data. In addition, certain real-time or security requirements might not be met in public networks."*

All in all, Accenture and Nokia see strong potential for the technology and the digital solutions that can be designed and enabled with LTE/ 5G-ready private campus networks.

Jürg Matweber, Accenture Managing Director for High-Tech in Austria, Switzerland, Germany and Russia, said, *"We teamed up with Nokia because Nokia offers a leading technology for private campus networks based on Nokia Digital Automation Cloud. We have a long-standing relationship with Nokia in Germany and are already go-to-market partners through our Nokia Accenture business group."*

Friedl added, *"On behalf of Nokia and Accenture, we cordially invite all clients to come to Garching. We want to help you unleash your creativity in our LTE/5G-ready testbed. I'm very excited to see our clients' applications in action."*

About Accenture

Accenture is a leading global professional services company, providing a broad range of services in strategy and consulting, interactive, technology and operations, with digital capabilities across all of these services. We combine unmatched experience and specialized capabilities across more than 40 industries — powered by the world's largest network of Advanced Technology and Intelligent Operations centers. With 513,000 people serving clients in more than 120 countries, Accenture brings continuous innovation to help clients improve their performance and create lasting value across their enterprises. Visit us at www.accenture.com.