5G CAMPUS

5G campus network

Approx. 80,000 m² area

Railway siding available

Elbe port Torgau in immediate vicinity

Easement for Stadtwerke Torgau for medium-voltage and low-voltage lines

Easement for Stadtwerke Torgau for heating line

No contaminated sites

Redesign of the park according to your requirements

Close cooperation with local business development

Company-owned 5G campus network

Efficiency improvement

Process monitoring

Central control

Predictive Maintenance

Real-time maintenance work via remote access

Autonomous plant traffic

Data security

Real-time data exchange

Flexibility & speed

A self-sufficient in-house mobile network on your own premises is able to fulfill all your operational network demands both today and in the future. Connect all machines, sensors and end devices simply and directly via a 5G-capable SIM card slot and start monitoring, controlling and exchanging data from your PC.
Track the movement of your products in real time, secure your production against unauthorised access and use this digitalisation boost for your company at the MRK industrial park in Torgau through the 5G campus network. Secure. Faster. 5G.

5G for the SME sector

Advantages and potentials

5G brings a digitalisation boost to companies, from large to small
Both in production, logistics, transport and surveillance and classical communication

Advantages

Increase of efficiency in many processes.
- Process monitoring
- Central control
- Predictive maintenance
- Real-time maintenance work via remote access
- Autonomous factory traffic

Connection of machines to digital infrastructure
- Real-time data exchange

Independence from previous systems such as WLAN and public mobile communications
- Bundling of previous data communication in a superordinate system

Data security
- A highly secure network, developed according to its own needs

Flexibility
- Free configuration of the network according to your own needs

Speed and real time
- Very short response times up to 1 ms

Mobile broadband
- Data rates up to 20 Gbit/s in download

Bridging a shortage of skilled workers and process automation

Simple connection, partly by using SIM cards in modern devices or replacing of modules

Potential

Supply
- Where large amounts of data have to be transmitted

Availability
- Where WLAN and other radio communications cannot reach, on the premises as well as in buildings

Connection
- Vehicles, forklifts, mobile phones, tablets, drones, cameras, sensors, robotic arms, Security

Tracking
- Positioning and live tracking of material, goods and vehicles

Use-Cases

Use case for industrial estates and innovation parks

Involved parties:
- Technology Innovation Park (TIP) Nordheide
- Trade and local press
- Ministry of Economics of Lower Saxony

This use case will be carried out in Nordheide.
The Media Broadcast 5G Blue Box and its components, as well as its functionality will be presented.

Benefits for the customer include:
- Positioning the Nordheide TIP as a driver of innovation.
- Increasing the attractiveness of the TIP for potential tenants
- Possibility of participating in funding programmes

Use case for drone control

Based on the 5G network of Media Broadcast and the 5G Blue Box, drones will be tested in a 5G environment. The drones will be controlled from a control centre via the 5G network.

This use case will be developed and implemented in cooperation with Globe UAV for industrial applications.
Industrial applications developed and executed.

Benefits for the potential customer:
- Stable control and data/video transmission.
- Transport of medical goods on campus
- Surveillance of larger areas even in the event of a disaster

Use Case MRK 5G Construction Kit

Proof of Concept for SMEs in Germany

Application-oriented consulting for small and medium-sized enterprises in the context of 5G in existing infrastructures, the „brownfield approach", brings about a realignment and expansion of business models.

5G-based consulting approaches for the expansion and realignment of business models
- Potential studies for SMEs
- Modular approach as a solution for new business areas

Building, testing and hardening specific concepts in the approach of the 5G Lab in Torgau

Expertise based on „MRK 5G construction kit" for clients
Objectives - Increasing competitiveness by:
- Saving costs
- Digitalisation, reorientation and development of new business models

Concept of applications „5x5G

Care and harvesting in the agricultural context of crops is a major cost factor in the agricultural industry. An increase in the effectiveness of these operations can be implemented by using automated robots in closed infrastructure.

MRK offers the following services:
- Ensuring the temporary and short-term required maintenance and harvesting potential through robotics
- Cost and time savings compared to conventionally deployed temporary workers

- Conception and development of 5G-based solutions and implementation in campus networks in the agricultural enterprise

- Test setup and validation of the concept on dedicated brownfield approaches in MRK's own campus network in Torgau (North Saxony)

Outlook: Automation in the maritime environment

Climate change, with low water levels and other external influences, increasingly hinders shipping in inland waters and results in considerable direct and indirect economic effects.

Modern solutions for loading, unloading and transport are therefore necessary.

We offer advice on the automation and digitalisation of the maritime environment:

- Review and collaboration in maritime research networks.

- Autonomous handling operations at small and medium-sized port facilities for loading and unloading

- Deployment of a large number of autonomously operating vessels of flexible size in areas with a low water level.

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