

5G Audit - Your path to 5G

Training, demonstration, potential analysis, strategy development and implementation



5G

INDUSTRY
CAMPUS
EUROPE



Fraunhofer

IPT

5G as a key technology for
networked and adaptive
manufacturing systems of the
factory of the future



VISION



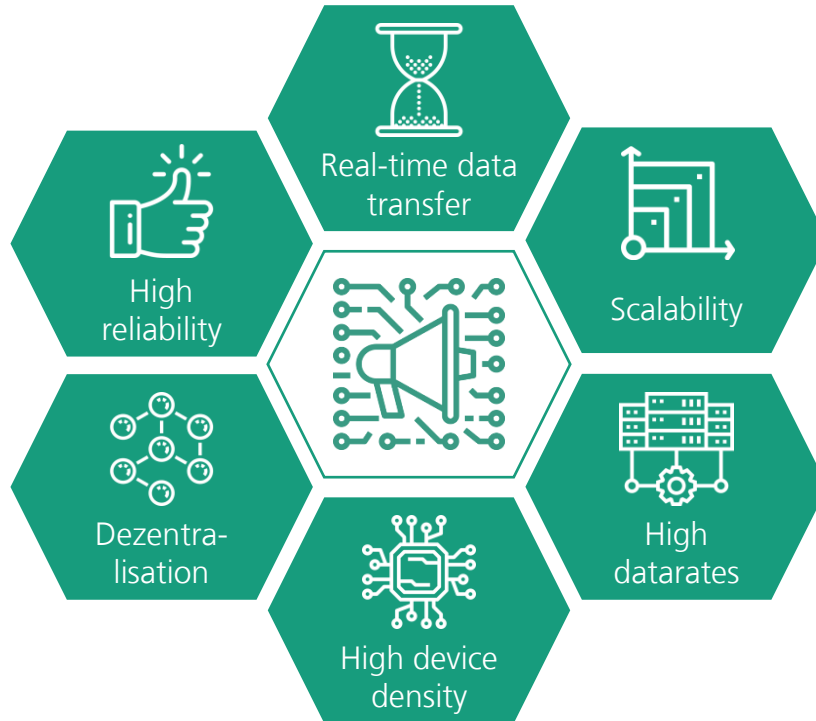
MISSION

We help you to recognize and use
the **potential** of 5G for **YOUR**
production!

5G technology offers great potential for the production

Communication systems as the basis for the factory of the future

To realize the vision of a highly flexible and networked manufacturing system, communication systems require the following characteristics:



5G as future communication standard for production



Enhanced mobile
broadband

20 Gb/s
Downlink max.

10 Gb/s
Uplink max.

10 Tbps pro km²
Capacity

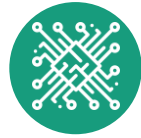


Ultra-reliable and low
latency
communication

<1ms
Latency

99,999%
Reliability

500 km/h
Mobility



Massive machine type
communication

100x
Connected devices

~ 15 Jahre
Battery run-time

1.000.000/km²
Device density

5G technology offers enormous potential for the production

5G is the first mobile standard that meets the requirements of future industry

5G Audit - Your way to 5G

Our offer

OUR OFFER TO YOU



5G Audit - in 5 steps to your own application of 5G

- Individual consulting for the implementation of 5G in your own company
- Modular structure
- Continuing education, potential analysis, strategy development and implementation from a single source
- Comprehensive on-site test environment at 5G Industry Campus Europe
- Experience with the development of private IT infrastructures
- All-round expertise from a single source - from the sensor to the cloud
- Benefit from comprehensive technology expertise in production
- Collaborative approach

YOUR ADVANTAGES

- Promote technology understanding and expertise 
- Recognize potentials and challenges 
- Objective evaluation of one's own situation 
- New impulses to increase performance 
- Support for internal resources 

5G Audit - Your way to 5G

Building blocks

IN 5 STEPS TO YOUR OWN APPLICATION OF 5G

Module 0



EXPERIENCE DAY IN AACHEN



Getting to know the 5G use cases implemented at 5G-Industry Campus Europe



1 day

Building block 1



PROCESS IDENTIFICATION



Identification of potential 5G use cases



2-5 days

Building block 2



POTENTIAL ANALYSIS

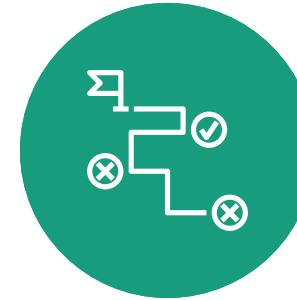


Analysis of the economic potential of the 5G use cases



1-3 days

Building block 3



ROADMAPPING & IMPLEMENTATION STRATEGY



Concrete Implementation strategy for the introduction of 5G



3-5 days

Building block 4



IMPLEMENTATION SUPPORT



Implementation of the defined 5G implementation strategy



5-10 days

Module 1 – Experience Day in Aachen



Objectives



- Gain deep insights into industrial 5G applications
- Knowledge about industrial 5G applications
- Well-founded derivation of potentials for the production

Approach



- Presentation of 5G technology and possible applications
- Guided tour on the *5G-Industry Campus Europe* in Aachen
- Presentation of currently implemented 5G-Use Cases

Output



- Getting to know the currently implemented 5G-Use Cases of *5G-Industry Campus Europe*
- Insights into the current state of technology & generation of practical knowledge using concrete implementation examples

Duration

1 day



Module 2 – Process Identification



Objective



Identification of possible use cases & processes in your production that can be optimized by using 5G technology

Approach



- Joint classification of the company's processes regarding possible 5G-Use Cases
- Technical analysis of the identified processes with regard to the need for 5G

Output



- Identification of potential 5G-Use Cases for your company

Duration

2-5 days



Module 3 – Potenzial Analysis



Objective

Analysis & derivation of the added value that can be realized in your company using 5G technology



Approach

- Economic analysis of the identified 5G use cases specifically tailored to your production



Output

- Derivation of the economic potential of specific 5G-Use Cases
- Business Case Analysis of the specific Use Cases

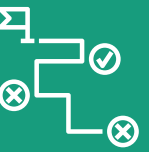


Duration

1-3 days



Module 4 – Roadmapping



Objectives



- Customized implementation plan of the economically promising 5G-Use Cases for your company
- Roadmap for the successful roll-out of 5G & ensuring of the integration into your current production

Approach



- Consideration of essential aspects for the integration of 5G into an existing production
- Discussion of different aspects of 5G network architectures & derivation of possible implementation strategies

Output



- Concrete implementation strategy for the realization of the identified & economically evaluated 5G-Use Cases for your production

Duration

3-5 days



Module 5 – Implementation Support



Objectives



- Testing of 5G applications through the realization of 5G demonstrators or 5G-Use Cases
- **Roll-out** of an own private 5G network for your production

Approach



- **Active support** in the implementation of 5G applications and the roll-out of your private 5G network
- Realization of tailor-made demonstrators or 5G-Use Cases

Output



- Realized 5G-Use Cases in your company

Duration

5-10 days



5G Audit - Your way to 5G

Who are we?

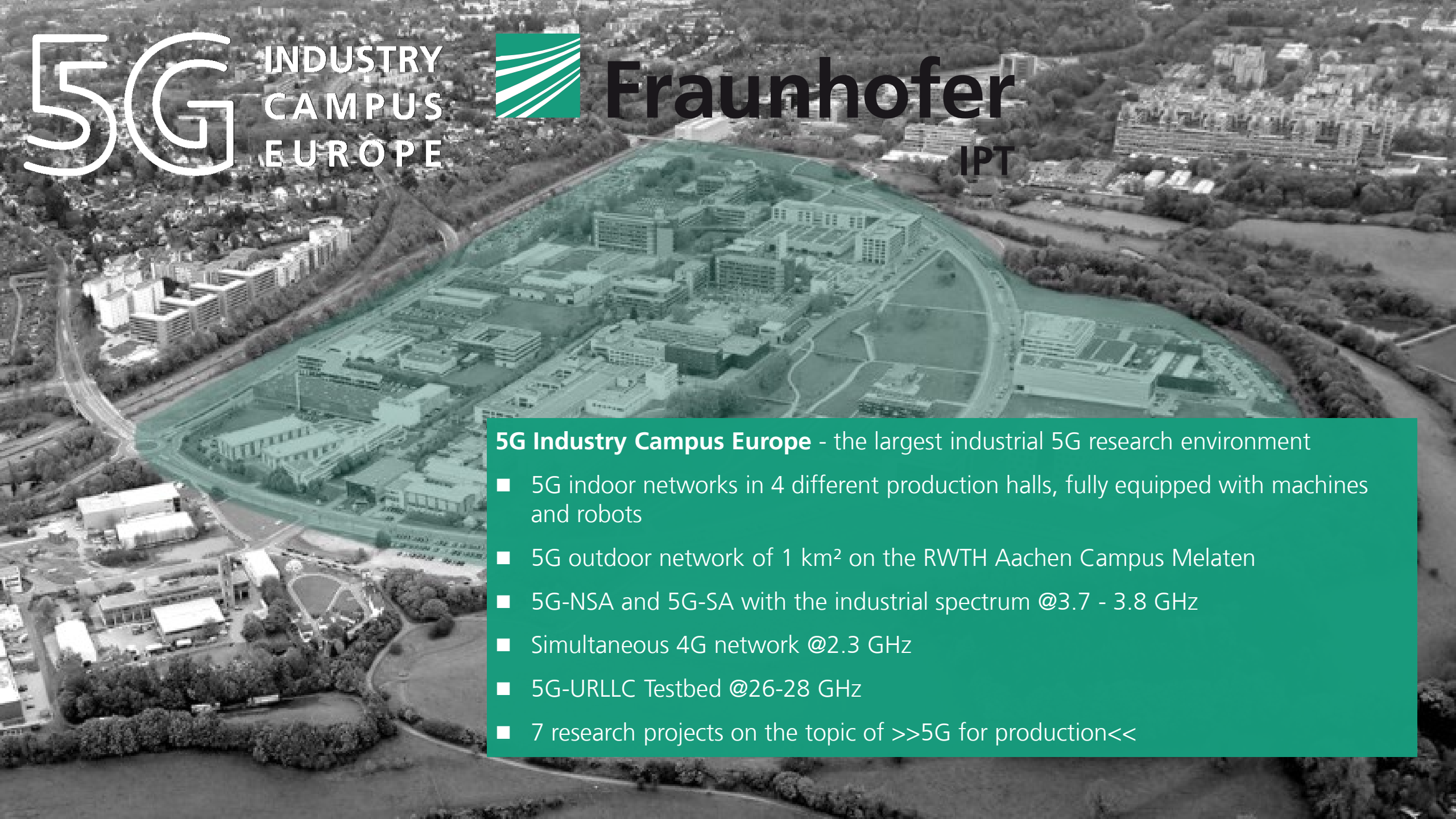


- Many years of knowledge and experience from all areas of production technology
- Applied research and development for business and society
- Extensive on-site infrastructure - machine park, 5G network, edge cloud

Digital Infrastructures Group

- Flexible production control
- Networked sensor systems
- Monitoring and control of process conditions
- Cloud-based production orchestration





5G

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5G Industry Campus Europe - the largest industrial 5G research environment

- 5G indoor networks in 4 different production halls, fully equipped with machines and robots
- 5G outdoor network of 1 km² on the RWTH Aachen Campus Melaten
- 5G-NSA and 5G-SA with the industrial spectrum @3.7 - 3.8 GHz
- Simultaneous 4G network @2.3 GHz
- 5G-URLLC Testbed @26-28 GHz
- 7 research projects on the topic of >>5G for production<<

Are you interested? – Your contact persons



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