



17 – 21 APRIL 2023

# MAKING THE DIFFERENCE

#HM23 [hannovermesse.com](http://hannovermesse.com)

Invitation

## Hannover Messe 2023

The Transformation with Industrial 5G starts here!

**HOME OF INDUSTRIAL PIONEERS**

5G Alliance for Connected Industries and Automation

## Hannover Messe 2023



## About

Year after year, groundbreaking innovations and products for driving the further evolution and transformation of industry internationally are showcased at the world's leading industry trade show, HANNOVER MESSE. From development across production and logistics to energy supply and services, it's the number one stage for presenting solutions and technologies for the entire industrial ecosystem.

Industry 4.0 is the future of manufacturing, with smart factories linked to the Industrial Internet of Things (IIoT). But an appropriate communication framework and comprehensive connectivity are also essential ingredients for achieving flexible, autonomous, and efficient production plants and intralogistics (the organization, implementation, and optimization of material flows). The Industrial 5G standard opens up major new opportunities for achieving flexible, scalable connectivity that can be precisely tailored to the specific needs of industry.

At HANNOVER MESSE 2023, 5G-ACIA and its partners will team up to present the "Industrial Wireless Arena + 5G Networks & Applications" (5G Arena for short) as a practical illustration of how it all works. It will feature live demos and the participation of companies and organizations of the industrial 5G ecosystem within the scope of a comprehensive five-day on-stage program and forum.

[>>](http://www.hannovermesse.de)

## Venue / Tickets

Fairgrounds  
D-30521 Hannover  
Germany  
[Open in Google Maps >>](#)

**Dates**  
April 17-21, 2023

**Hours**  
Daily from 9 a.m. to 6 p.m.



**5G-ACIA invites you to Hannover Messe.**

Take advantage of this unique opportunity to meet experts from around the world and learn all about Industrial 5G and its potential for taking your business to the next level.

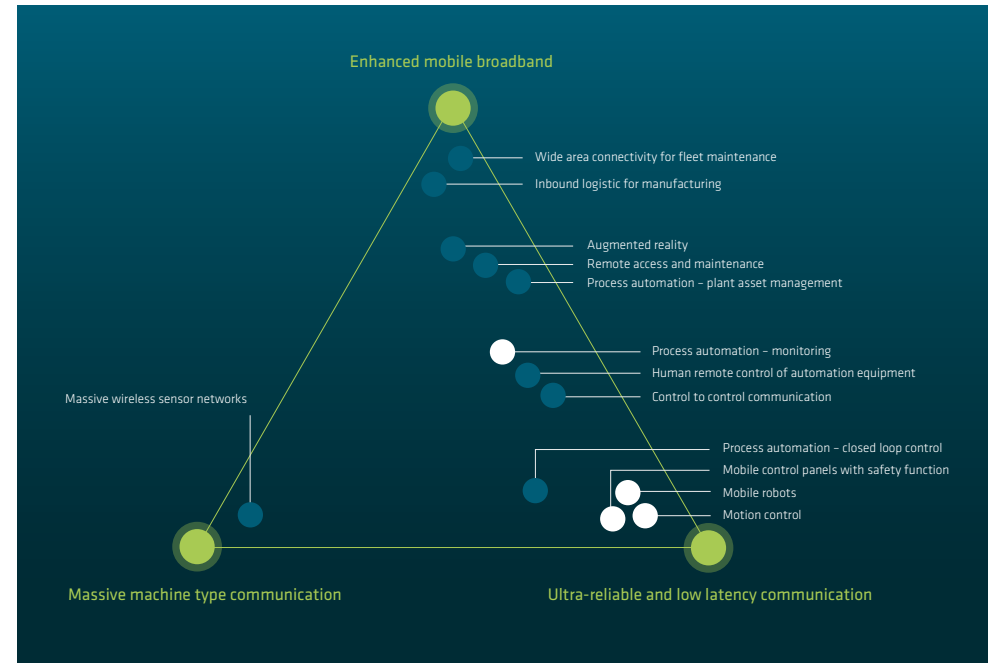
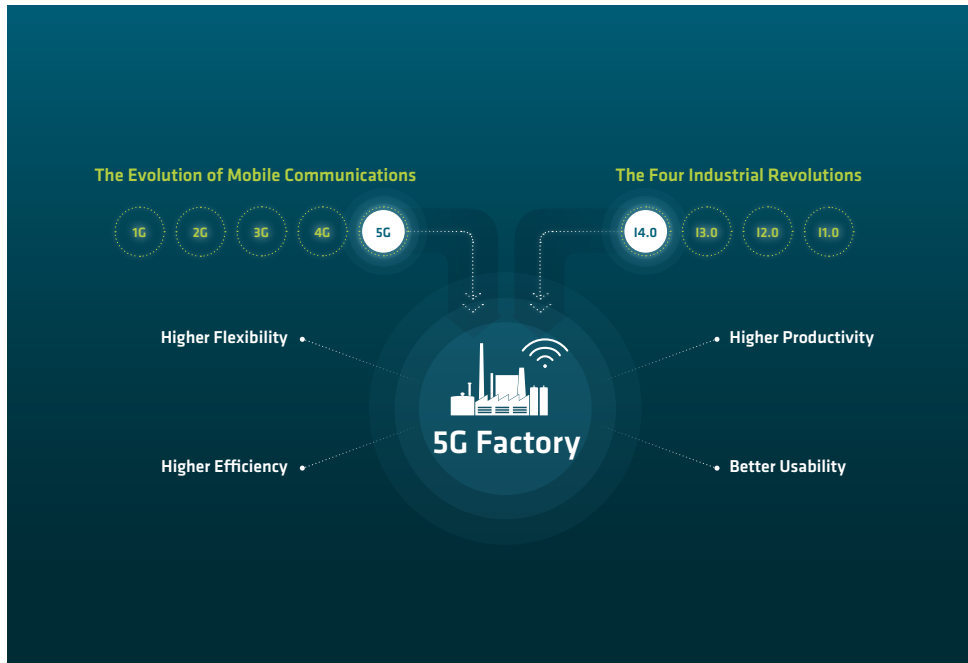
5G-ACIA invites you to Hannover Messe. You'll find us in Hall 14 at the "Industrial Wireless Arena + 5G Networks & Applications".

[Tickets & Exhibitor Passes >>](#)

## Making Industrial 5G Happen

5G-ACIA is the number one global forum for shaping 5G in the industrial domain.

It's the leading platform for companies and organizations spanning a variety of industries worldwide to create a new ICT and OT ecosystem and forge the framework of a highly attractive new market. To learn more about the emerging market for Industrial 5G, visit our booth.



## Designing 5G for Industrial Use

One of the main ways in which 5G differs from previous generations of cellular networks is its strong focus on machine-type communication and the Internet of Things (IoT). This paves the way for the next era in industrial production, dubbed „Industry 4.0“, which aims to significantly improve the flexibility, versatility, usability, and efficiency of future smart factories and industrial plants.

## A Key Enabler of Industrial 5G

The rationale for developing 5G was not only to expand the broadband capabilities of mobile networks, but also to provide advanced wireless connectivity for a wide variety of vertically integrated industries.

To achieve this, 5G supports three essential types of communication: enhanced mobile broadband (eMBB), massive machine-type communication (mMTC), and ultra-reliable low-latency communication (URLLC).

## Exhibition Halls

- Future Hub**  
Hall 2
- Engineered Parts & Solutions**  
Hall 3
- Automation, Motion & Drives**  
Hall 5–9 / 11–12
- Energy Solutions**  
Hall 11–13
- Digital Ecosystems**  
Hall 14–17
- Compressed Air and Vacuum**  
Hall 4
- Conference Stages**  
TECH TRANSFER (Hall 2)  
INDUSTRIAL TRANSFORMATION (Hall 3)  
INDUSTRIE 4.0 (Hall 8)  
ENERGY 4.0 (Hall 12)



Hall 14 | 5G Arena  
 "Industrial Wireless Arena +  
 5G Networks & Applications"

## 5G-ACIA Members in the 5G Arena

# Exhibition

## Insights and Value Adds



Live Demo of 5G-ACIA-Endorsed Testbeds in a private 5G network by Deutsche Messe.



### The Evolution of 5G Performance for Materials Handling in Manufacturing

Demag, ifak, Nokia, and Rohde & Schwarz are teaming up to demonstrate how the performance of 5G is evolving and impacting intralogistics applications.



### 5G Performance for PROFINET and PROFI-safe Communications

HMS, ifak, NXP and Radisys implemented a PROFINET network via 5G. This testbed evaluates whether failsafe applications are possible on a 5G NPN and how the network performs PROFINET communication.



### Industrial 5G Connected Multi-Sensor Platform

Ericsson, Fraunhofer IPT and u-blox have collaborated to evaluate adaptive machining with an acoustic emission sensor and multi-sensor platform for monitoring production processes.

## 5G-ACIA Members in the 5G Arena

# Exhibition

## Insights and Value Adds

Deutsche Messe, which is also a member of 5G-ACIA, has built-up a private 5G network that supports industrial applications in the industrial frequency range (3.7-3.8 GHz).

Optimized for industrial applications, it will be used by several live demonstrations developed by various 5G-ACIA members.



## 5G-ACIA Members on Stage

# Forum

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## Sharing Experiences

### Taking Industrial 5G from Theory to Practice

5G has the potential to provide (wireless) connectivity for a wide range of use cases and applications in industry. In this forum, the following 5G-ACIA members will contribute interesting points of view:





## 5G-ACIA Members on Stage

# Forum

## Sharing Experiences

5G-ACIA brings together key stakeholders for advancing the standardization and regulation of 5G in the industrial domain. In this forum, several 5G-ACIA members will present key 5G-ACIA deliverables for Hannover Messe 2023. Detailed information on the entire forum program is available on the [Hannover Messe website](#).



### Industrial 5G | State of the Union

Overview of 5G ACIA objectives, program, and key deliverables

**Monday, April 17 | 10:20 – 10:45 a.m.**

Speakers: Dr. Andreas Mueller, 5G-ACIA General Chair  
Dr. Afif Osseiran, 5G-ACIA General Vice Chair



### Industrial 5G | Devices – Architecture and Capabilities

Presentation of a new 5G-ACIA white paper on industrial 5G devices

**Monday, April 17 | 4:10 – 4:30 p.m.**

Speaker: Dr. Jens Jakobsen, 5G-ACIA expert



### Industrial 5G | Where Do We Stand with Shopfloor Integration?

Overview of how key shopfloor technologies interact with 5G

**Tuesday, April 18 | 4:20 – 4:40 p.m.**

Speaker: Atte Lämsä, 5G-ACIA WG3 Chair



### Industrial 5G | Edge Computing: Use Cases, Architecture, and Deployments

Presentation of a new 5G-ACIA white paper on edge computing

**Wednesday, April 19 | 4:20 – 4:50 p.m.**

Speakers: Dr. Benedek Kovács, 5G-ACIA expert  
Samita Chakrabarti, 5G-ACIA expert

## SIEMENS

### Industrial 5G | The Most Promising Use Cases for the Shopfloor

Insights on use cases that have been evaluated within 5G-ACIA

**Thursday, April 20 | 1:05 – 1:20 p.m.**

Speakers: Michael Bahr, 5G-ACIA WG1 Chair  
Sander Rotmensen, 5G-ACIA expert



### Industrial 5G | How to Test Across OT / ICT Domains

A guide to successful cross-domain validation

**Thursday, April 20 | 2:40 – 3:00 p.m.**

Speaker: Dr. Lisa Underberg, 5G-ACIA WG5 Chair



### Industrial 5G | Integration of Time-Sensitive Networking (TSN) for Deterministic Communication in Production

Interworking of industrial 5G with TSN ethernet technologies

**Friday, April 21 | 9:35 – 9:55 a.m.**

Speaker: Pierre Kehl, 5G-ACIA expert



## 5G-ACIA Members on Stage

# Panels

## Insights on Experiences

### The Superlative Industrial 5G Communication Standard

5G-ACIA member companies in various sectors are working on Industrial 5G integration and early-stage manufacturing implementations.

These panels, automotive and aviation end users, and key technology partners of the Industrial 5G ecosystem will contribute fascinating insights while discussing Industrial 5G deployments with 5G-ACIA members:

Tuesday, April 18, 2023, 10:30 – 12:00 a.m.

Moderated by Dr. Afif Osseiran, Ericsson, 5G-ACIA General Vice Chair

### Market Adaptation of Industrial 5G. Where are we currently along the path of Industrial 5G deployments?

In this panel, end users will provide insights on how Industrial 5G adds value in their fields of business and discuss the challenges involved. The aim is to show how the overall ecosystem can accelerate the adoption of Industrial 5G and identify any barriers to its large-scale deployment in the manufacturing industry. This panel will start with a concise presentation of initial experiences with Industrial 5G in the automotive and aerospace industries, and then discuss the potential of this technology and the remaining challenges for applying it to serial production.



Panelists: **Jirka Klaue**, Airbus (guest)

**Dr. David Chen**, Moxa

**Prasad Kodaypak**, Radisys

**Dr. Andreas Mueller**, Bosch

**Sander Rotmensen**, Siemens

**Dr. Klaus Tuchs**, Volkswagen

Featured with GSMA

Wednesday, April 19, 2023, 1:30 – 3:00 p.m.

Moderated by Uwe Rueddenklau, Infineon, 5G-ACIA WG4 Vice Chair

### Technology Ecosystem for the Factory of the Future. How do we get individual technology building blocks to meaningfully work together to enable the factory of the future?

Shop floor environments employ a variety of technologies involving Ethernet protocols as well as new developments such as digital twins with interoperable data models, cloud computing applying the OPC Foundation standards, and real-time Ethernet capabilities in time-sensitive networks. This panel will shed light on how 5G-ACIA is meaningfully applying Industrial 5G to all of them. This panel will begin with a concise presentation on the 5G-ACIA global partner network by Sylvia Lu of u-blox, who chairs our Working Group 4, and speakers of two key technologies for the horizontal and vertical shopfloor integration of Industrial 5G.



Panelists: **Peter Lutz**, OPC Foundation (guest)

**Dr. Xueli An**, Huawei

**Jagadeesh Dantuluri**, Keysight

**Kurt Essigmann**, Ericsson

**Oliver Kleineberg**, Belden

**Jörgen Palmhager**, HMS Networks

Featured with OPC FOUNDATION

# See you in Hannover!

If you have any questions in connection with your visit to our booth,  
please don't hesitate to contact us!

ZVEI e. V.  
5G-ACIA  
Lyoner Strasse 9  
60528 Frankfurt am Main  
Germany  
Phone: +49 69 6302-292  
Email: [info@5g-acia.org](mailto:info@5g-acia.org)

**5G-ACIA.org**

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