

# KONTRON TRANSPORTATION

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## Company Presentation

July 2022

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COMPANY OVERVIEW

# OVERVIEW

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## Key Facts Kontron Transportation

**Kontron Transportation GmbH** is a global leading supplier of dedicated end-to-end communication solutions for mission-critical networks that offers tailor made solutions to support its customers with their communication challenges.

The company's focus is to produce, transport and process voice, data and video information reliably and securely in an efficient and sustainable way. The core product portfolio includes GSM-Railways, FRMCS (future railway mobile communication system), MCx (mission-critical over public networks), 4G/5G public network solutions and IIoT solutions focusing on data processing. Main customers are railways and public transport operators all over Europe.

Kontron Transportation drives the evolution into the next generation of broadband solutions for mission-critical networks, for instance as an associated member of the European research initiative Shift2Rail.

The company has more than 450 employees, 10 sites all over Europe and is headquartered in Vienna.

# OUR VISION AND MISSION

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## Our vision

is to develop and deliver leadingedge communication solutions for mission-critical environments and enable our customers digital evolution.

## Our mission

is to support our customers with their communication challenges - today and in the future. The availability and transmission of secure and reliable data is a key success factor of the information age and it's reshaping of industries.



# KONTRON TRANSPORTATION



## At a glance



### Market focus

Mission-critical networks for mission-critical infrastructure operators: railways, public transport, airports, emergency, rescue services, utilities and verticals



### Our approach

With competence in the technical field and innovation KontronTransportation's dedicated network portfolio is like tailor-made suits.

### Competences

Consulting, research & development, design, commercial and technical operation and maintenance, installation and commissioning, system integration, general contracting

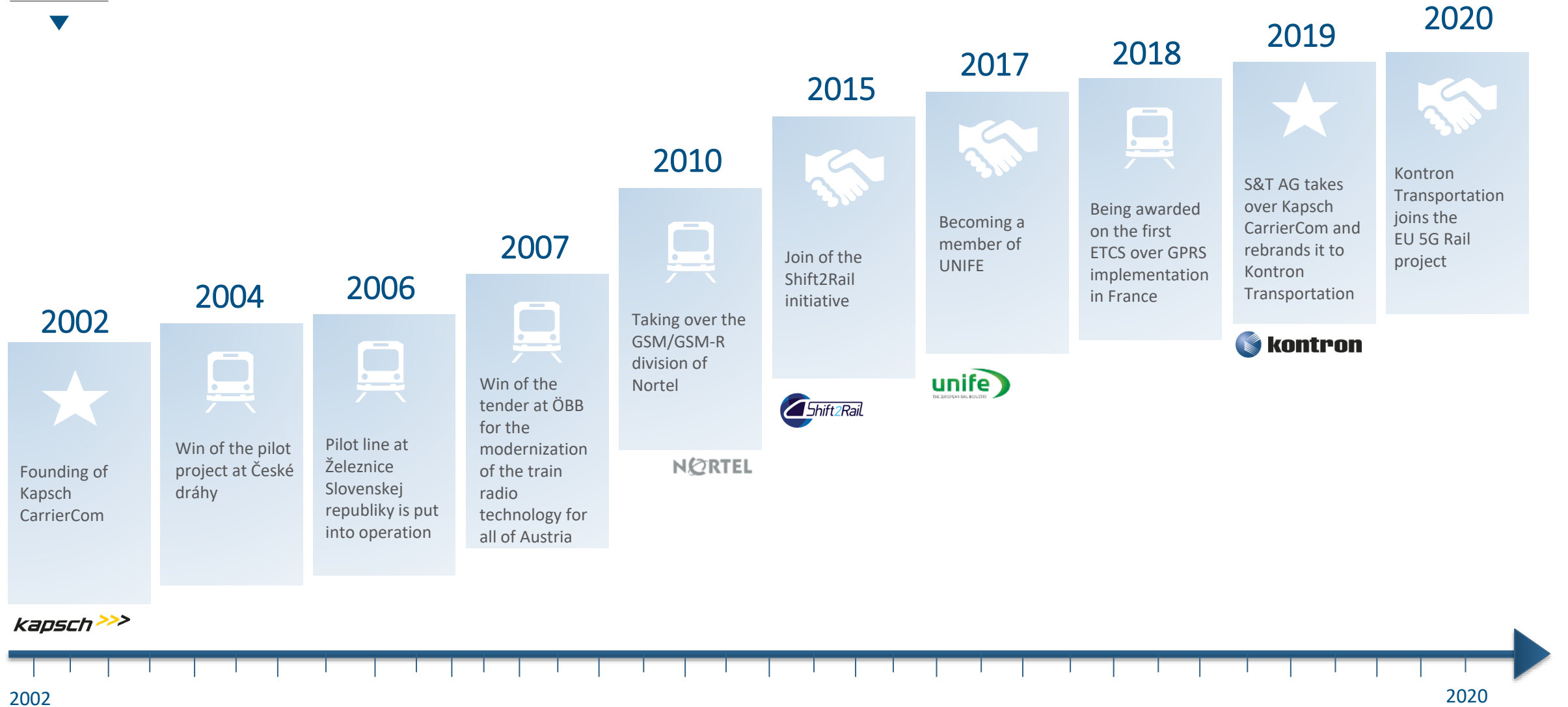


### Solutions

End-to-end solutions for mission-critical networks including system integration:  
GSM-R, eGPRS, 4G/5G private network solution, FRMCS, Cybersecurity solutions, Industrial IOT, SD-WAN, transmission



# COMPANY HISTORY



# KEY FACTS

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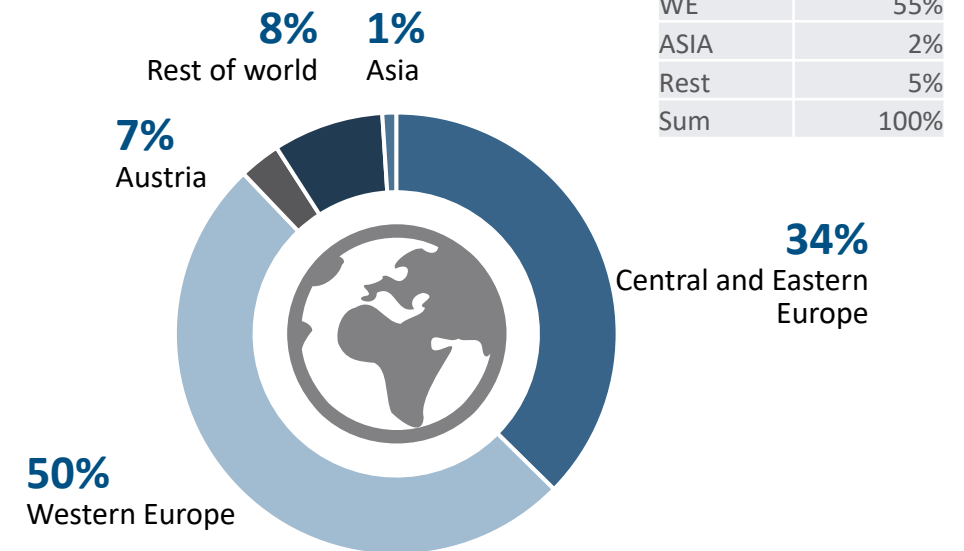


# KONTRON TRANSPORTATION MANAGEMENT AND KEY FACTS

## Executive Board

	
<b>Michael Riegert</b>	<b>Bernd Eder</b>
CEO	COO

## Revenue by region



## Key facts



### Kontron Transportation:

- ▶ World-wide business activities: more than 25 countries
- ▶ Number of subsidiaries: 10 (R&D sites Paris, Vienna, Diegem)
- ▶ Number of employees: ~406 as of 250 engineers
- ▶ Research and development centers and partners around the globe



- ▶ Revenue plan Kontron Transportation 2022: EUR 118 Mio.
- ▶ EBITDA: > 10%
- ▶ Growth plan p.a.: > 5%
- ▶ EU funding programs: 3 in 2019 + 1 starting in 2020



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MARKET SEGMENTS

# MARKET SEGMENTS



## Railways

### Leader in railway dedicated networks

Supporting safe and efficient travel on more than 84,000 km of railway tracks across Europe, Africa and Asia.



## Secondary Lines

### Solutions for mission-critical customers and infrastructure operators

MCx solution based on a 3GPP IMS/MCx architecture.



## Public Transport

### Specialization in System Migration

Designs and build powerful, scalable networks to improve operational communications in a cybersecure environment.



## Utilities & Energy

### Reliable communication in real-time

Kontron is a strong transformation partner with expertise and experience in digital transformation.



## Enterprises

### Expert in developing capabilities and digital transformation

Kontron helps by enhancing current digital capabilities and developing new ones.



## Telcos

### Where telecommunication meets IT

We take on system integration projects that are geared to the future.

# RAILWAY SOLUTION FOCUS



**From GSM-R to FRMCS**  
Kontron Transportation prepares a smooth transition to FRMCS and has developed an innovative and seamless approach ensuring services continuity and reuse of installed infrastructure between technologies.



**Driving Role in Next Generation**  
Kontron Transportation is actively driving the definition of the next generation architecture in railway standards and European research programs as well as acknowledging the stringent requirement for service convergence and interoperability on rails.

## Benefits of Kontron Transportation railway solutions

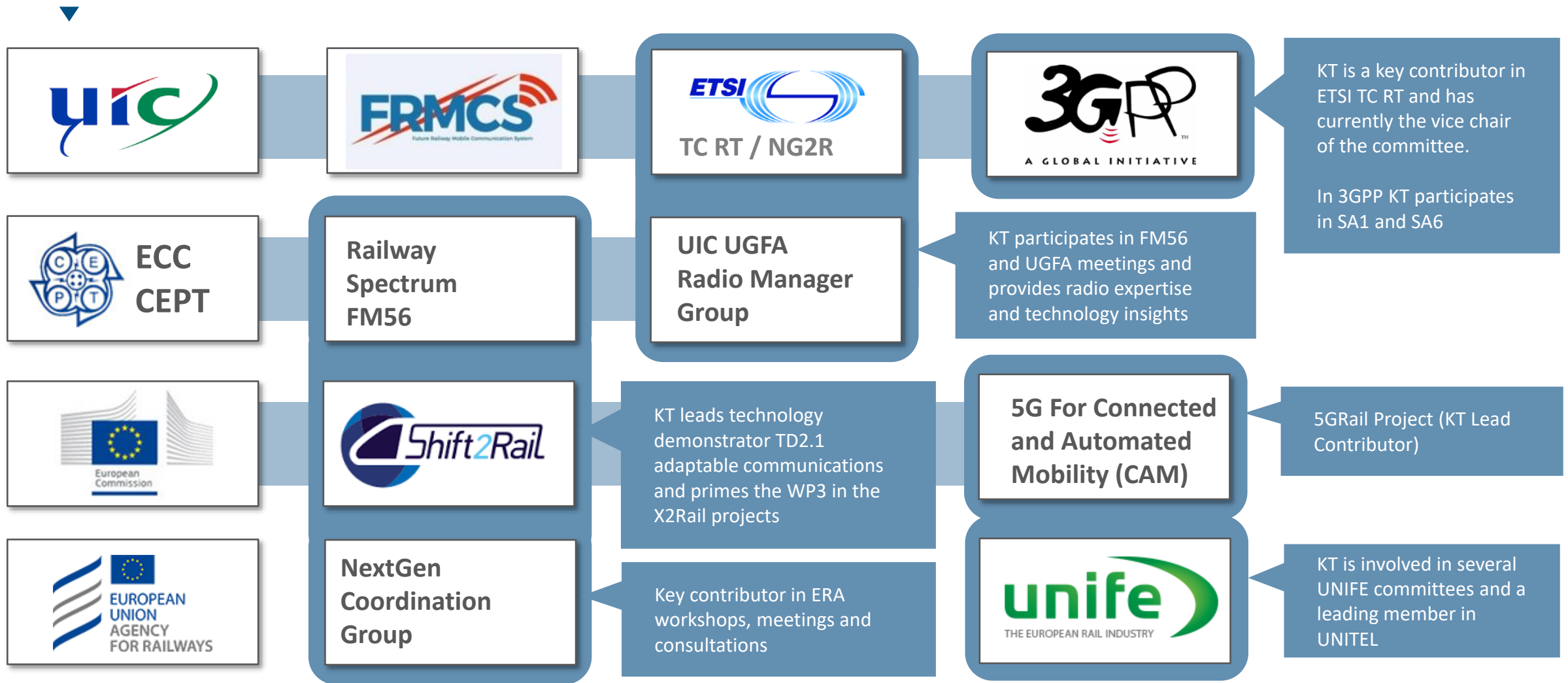
Safe and secure, innovative, best of breed solutions, railway dedicated, end to end portfolio, railway lifecycle support, standards based, future proof



**Digitalization is transforming rail transport**  
The process of digital transformation prepares operators and authorities for future technologies and wireless standards and helps to increase the capacity and reliability of railway infrastructure.



# ENGAGEMENTS IN STANDARDIZATION



# SECONDARY LINES SOLUTION FOCUS



**Our solutions include:**  
MCx OTT, MCx, FRMCS, GSM-R,  
passenger information system,  
crowd management, health &  
safety solutions, Wifi solutions,  
DMR, Tetra, asset management



**Optimized exactly on your needs**  
With our professional team,  
experts and as integrator we will  
find the right tailor-made solution  
for your individual requirement.

**Our market focus in  
Secondary Lines**  
Solutions for mission-critical  
customers and infrastructure  
operators  
solutions for railways, ÖPNV  
trams, busses and trains



**Our service approach:**  
Consulting, research &  
development, design &  
engineering, installation,  
commissioning, system integration  
and acceptance, technical  
operation and maintenance, E2E-  
responsibility, general contracting





# PUBLIC TRANSPORT SOLUTION FOCUS



**Working with industrial partners** based on their agility and ability to work in full collaboration with our research and development teams. Allowing the supply of a state-of-the-art product and yet flexible approach to our customers.



**Transforming your business**  
We create opportunities, integrate technology for optimized mobility and a more efficient transport system and maximize employee productivity on the move, keep passengers safe, and achieve the best business outcomes.

**Kontron Transportation's converged solutions developed in house**

Next-Gen hyper-secured radio infrastructure for operational communications, certified onboard computers for various edge computing, Industrial IoT applications, ticketing platform



**Looking to the future**  
Kontron Transportation designs and builds powerful, scalable networks that support the next generation of high bandwidth voice and data services.



# UTILITIES & ENERGY SOLUTION FOCUS



**Be on the safe side**  
by making sure that failures which are very costly to the organization itself, and potentially be harmful to people and the environment, are anticipated upfront.



**Increasing safety and operational efficiency**  
Having mission-critical communications technology at the heart of utilities and a strong transformation partner with expertise and experience in digital transformation is a crucial first step towards increasing safety and operational efficiency.

**Be prepared for the digital transformation**  
Electricity, gas and water companies provide critical services to communities and go through major changes due to the digital transformation.



**Real-time communication**  
Detect any problems quickly and respond as fast as possible. Reliable communication in real-time is key for customers and other affected people.



# ENTERPRISE SOLUTION FOCUS



**Based on Tier One partners and in-house products**  
Benefit from our development capabilities, strong support organization and customer-oriented teams.



**Set the next steps**  
Driving innovation, implementing a digital strategy and making necessary investments in a digital program are the cornerstones of the transformation into a digital enterprise.

**Kontron as your strong transformation partner**  
Focusing on the following digital technologies: Cybersecurity, SDWAN, cloud connectivity, digitalization, intelligent network edge.



**Developing new business processes and digital skills**  
IoT, SaaS, automation, cloud computing and machine learning lead to a greater customer experience and to an increase in business growth.





# TELCO FOCUS



**Security solutions**  
The major goal is to use state of the art IT technologies adapted to telco business needs to best protect all types of telco networks.



**Technical consulting**  
Our technical consulting professionals are experienced industry experts combining IT with legacy and state of the art telecommunications expertise in terms of protocol, architecture and engineering capabilities to help you to transform your networks.

**Network virtualization**  
As an experienced systems and service integrator we are able to keep pace with the telco industry's move to software defined architectures and virtualized networks. We put the puzzle together to integrate any solution into your existing systems.



**Professional services**  
Kontron offers clearly structured service-packages tailored to technical and commercial business needs and works closely with you to define the individual service deliverables in each project.



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SOLUTIONS

# SOLUTIONS



## Critical Communication

### Mission-critical networks for voice and data

based on

GSM-R, eGPRS, TETRA, DMR, 4G/5G private network solution, 5G-based FRMCS, Packet Networks, Cybersecurity solutions, Dispatchers

## Cloud Digital Solutions

### Dedicated cloud oriented solutions

covering

NFVi and Cybersecurity concepts / consulting and SD-WAN solutions based on partnership with VMWare – transmission solutions

## Digitalization

### Internet of Things for mission-critical networks

based on

an ecosystem with tailor-made solutions from one single source. End-to-end IoT framework, cloud based service platform, on board WiFi infrastructure, asset management

## Carrier Solutions

### Telecommunication oriented solutions

covering

network virtualization, security solutions, professional services, technical consulting

# CRITICAL COMMUNICATION



- ▶ Kontron Transportation is an international leader in the development of new solutions for Future Railway Mobile Communication Systems (FRMCS).
- ▶ We are preparing our railway customers for a smooth transition to the next generation with the optimal integration of existing systems.
- ▶ Our portfolio: GSM-Railways, FRMCS, TETRA, DMR, IIoT, LTE solutions for mission-critical networks as well as mobility solutions for public transport
- ▶ Covering the entire value chain from planning, development and production to deployment, integration, maintenance and operation with a focus on maximum cost efficiency.
- ▶ We have a leading role in international research and development projects such as ETSI, 3GPP, Shift2Rail and Victori.
- ▶ We secure railway infrastructure against cyber attacks.



Unique railway communication expertise which safely leads you from GSM-R to FRMCS.

# CLOUD DIGITAL SOLUTIONS



- ▶ We build turnkey solutions and manage your infrastructure as a secured foundation.
- ▶ We support you at your own pace for a smooth transition from legacy to cloud & virtualized environment.
- ▶ Cloud solutions and cloud services are major part of enterprise cost savings, resulting in a higher productivity, and improved flexibility.
- ▶ Kontron services offer assistance and guidance to elaborate the best strategy from on premises & completely isolated infrastructure to hybrid cloud, multi-cloud or public cloud environments.



We build and support a secured foundation for digital Cloud transformation technology.



# DIGITALIZATION



- ▶ Kontron Transportation is a global supplier of end-to-end communications technology and one of the leading key players in the development of the next generation of broadband technology for mission-critical infrastructure.
- ▶ We digitize the railway business, using a wide array of innovative solutions as well as digital technologies. We implement the path to automated business transformation for our customers.
- ▶ Together with our partners, we offer an ecosystem of customized answers and innovations from a single source of tailor-made agile solutions.
- ▶ The Kontron Transportation railway digitalization ecosystem is modularly and dynamically structured and offers customized blueprints, which reflect our rich expertise as a system integrator within the telecommunication market.
- ▶ Clear focus on business value and sophisticated user-friendly analytics functions.
- ▶ All components are also combinable with each other.



Tailor-made digitalization from a single source for a successful digital transformation

# CARRIER SOLUTIONS



- ▶ Network virtualization: A software defined architecture that includes SD-WAN, NFV-I & VNF's, cloud and edge computing networks, open and virtualized RAN and orchestrated zero touch automation is the answer of today's operators' pains and needs in terms of time to market, introduction of new application and operational needs.
- ▶ Security solution: Our major goals are to protect the network and the transferred data in a best practice way also using state of the art IT technologies adapted to telco business needs.
- ▶ Professional services: Kontron Transportation offers clearly structured service-packages tailored to technical and commercial business needs. We work closely with you to define the individual service deliverables in each project according to your requirements. Our service-mission is based on quality, competence, commitment, flexibility and agility.
- ▶ Technical consulting: Kontron Transportation's technical consulting professionals are experienced industry experts, who combine IT with legacy and state of the art telecommunications expertise in terms of protocol, architecture and engineering capabilities to help our customers to transform their networks.



Our key target is highest customer satisfaction with professional consulting and service.

OUR CHANGING WORLD IS FILLED WITH  
**BOUNDLESS OPPORTUNITIES**

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**WE LOOK FORWARD TO  
EXPLORING THEM WITH YOU**