
ERICSSON
5G USE CASES

5G USE CASES

BROADBAND EXPERIENCE EVERYWHERE, ANYTIME

SMART VEHICLES, TRANSPORT & INFRASTRUCTURE

MEDIA EVERYWHERE

CRITICAL CONTROL OF REMOTE DEVICES

INTERACTION HUMAN-IOT

USE CASE 1

BROADBAND EXPERIENCE EVERYWHERE, ANYTIME

BROADBAND EXPERIENCE EVERYWHERE, ANYTIME

SUB-USE CASES

- Broadband access in crowded areas
- Broadband access in public transport
- Event platform

BENEFITS

- **Maximizes customer experience** in both indoor & outdoor connectivity
- **High QoS broadband** even in challenging network conditions

Opportunity Areas

- Security
- Sustainability
- Mobility
- Capacity
- Coverage

Target Users

- Generic mobile users
- Network operators
- Event venue
- Olympic games

BROADBAND
EXPERIENCE
EVERYWHERE,
ANYTIME

TECHNOLOGY ENABLERS

ENABLERS

5G radio access	High-data rates High volumes High mobility Spectrum efficiency Maximize capacity
5G core network	QoS support for e.g. emergency/safety related communication. Aggregated data rates are targeted. Roundtrip latency significantly reduced to be in the 1 ms range
5G management & orchestration	Congestion handling per subscriber/service or based on usage. Dynamic allocation of resources according to traffic variation. Reduce load on transport links and central processing units.

USE CASE 2

SMART VEHICLES, TRANSPORT AND INFRASTRUCTURE

SMART VEHICLES TRANSPORT & INFRASTRUCTURE

SUB-USE CASES

- Smart infrastructures
- Connected bus-stops
- Connected trucks
- Connected cars

BENEFITS

- Focused on **massive machine type communication**.
- We can consider **sensors** embedded in **roads**, **railways** and **airfields** to communicate each other and/or with **smart vehicles**.

Opportunity Areas

- Sustainability
- Security
- Mobility
- Deployment
- Scalability

Target Users

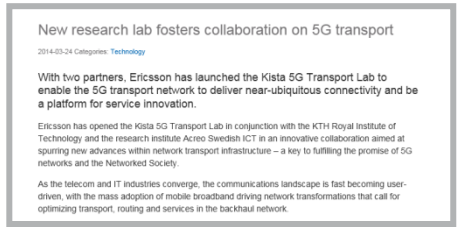
- Automotive
- Infrastructures
- Transport companies
- Administration/governments

SMART VEHICLES TRANSPORT & INFRASTRUCTURE

TECHNOLOGY ENABLERS

ENABLERS

5G radio access	Massive density Device energy consumption Device cost Significantly reduced signalling overhead compared to today. Soft-SIM or no-SIM operation for (at least) sensor type devices.
5G core network	Integrate public infrastructure network within network slices Support for pub/sub message oriented communication.
5G management & orchestration	Orchestration of a big amount of data and input interfaces. Common view for all the utility/infrastructures suppliers. Define different user profiles to access the same network.


New research lab fosters collaboration on 5G transport

2014-03-24 Categories: Technology

With two partners, Ericsson has launched the Kista 5G Transport Lab to enable the 5G transport network to deliver near-ubiquitous connectivity and be a platform for service innovation.

Ericsson has opened the Kista 5G Transport Lab in conjunction with the KTH Royal Institute of Technology and the research institute Acreo Swedish ICT in an innovative collaboration aimed at spurring new advances within network transport infrastructure – a key to fulfilling the promise of 5G networks and the Networked Society.

As the telecom and IT industries converge, the communications landscape is fast becoming user-driven, with the mass adoption of mobile broadband driving network transformations that call for optimizing transport, routing and services in the backhaul network.

USE CASE 3

MEDIA EVERYWHERE

MEDIA EVERYWHERE

SUB-USE CASES

- Live TV at scale
- On-demand anything
- Mobile for In-home TV
- Accelerating emerging markets

BENEFITS

- **Ultimate** video quality **anywhere** – 4K, 8K, HDR, HFR
- Enables industry **transformation to all IP**
- Meeting **consumer demands** for TV on their terms

Opportunity Areas

- Broadcast/Multicast
- Shift to all media consumption on consumers terms
- 5G for TV for in-home screens and devices
- Enabling media vision for ‘mobile first’ markets

Target Users

- Consumers
- Pay TV Operators
- Broadcasters
- New content owners and aggregators
- OTT providers

MEDIA EVERYWHERE

TECHNOLOGY ENABLERS

ENABLERS

5G Radio	Improved beam forming Massive MIMO Carrier aggregation New high frequency spectrum
Service agility	Cloud based flexible deployment of media services Hybrid
5G management & orchestration	Flexible and dynamic deployment of media services Network slices all optimized media delivery and managed services enabling enhanced business models, performance, and consumer experiences

USE CASE 4

CRITICAL CONTROL OF REMOTE DEVICES

CRITICAL CONTROL OF REMOTE DEVICES

SUB-USE CASES

- Remote control of heavy machineries
- Factory automation
- Real-time monitoring of plant / process conditions
- Smart grids
- Remote surgery

BENEFITS

- Controlling heavy machinery remotely to **lower risks** in **hazardous environments**
- Increase **efficiency** and **reduce costs**. Replace communication bus with wireless links

Opportunity Areas

- Safety
- Sustainability
- Mobility
- Data
- Legal

Target Users

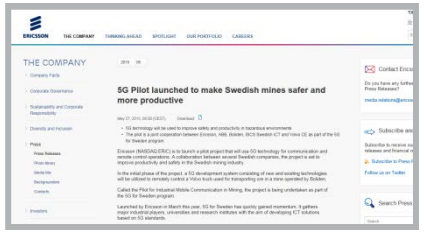
- Manufacturing
- Mines
- Healthcare

CRITICAL CONTROL OF REMOTE DEVICES

TECHNOLOGY ENABLERS

ENABLERS

5G radio access	Enhanced radio connections for accessibility and retainability Estimate and report about achieved reliability of a connection. High node/service availability at least 99.999% node availability Uplink for high quality video
5G core network	QoS functions to “guarantee” deadlines match 99.9% accessibility and retainability for comm. services
5G management & orchestration	Improve response time for diagnostic questions. Meet real-time constraints Estimate and report about achieved reliability of a connection. The system shall be able to estimate and report about the achieved reliability of a connection (per user, per service).



USE CASE 5

INTERACTION HUMAN - IOT

INTERACTION HUMAN - IOT

SUB-USE CASES

- Immersive augmented reality
- Immersive gaming
- Surveillance
- Tactile internet
- Smart biker-helmets
- Child monitoring
- Smart houses
- Smart shipping/post

BENEFITS

- Fills a gap between **humans and IoT**.
- **Context awareness** is the main difference from M2M.

Opportunity Areas

- Non Intrusiveness
- Privacy
- Real-time
- Sustainability
- Mobility

Target Users

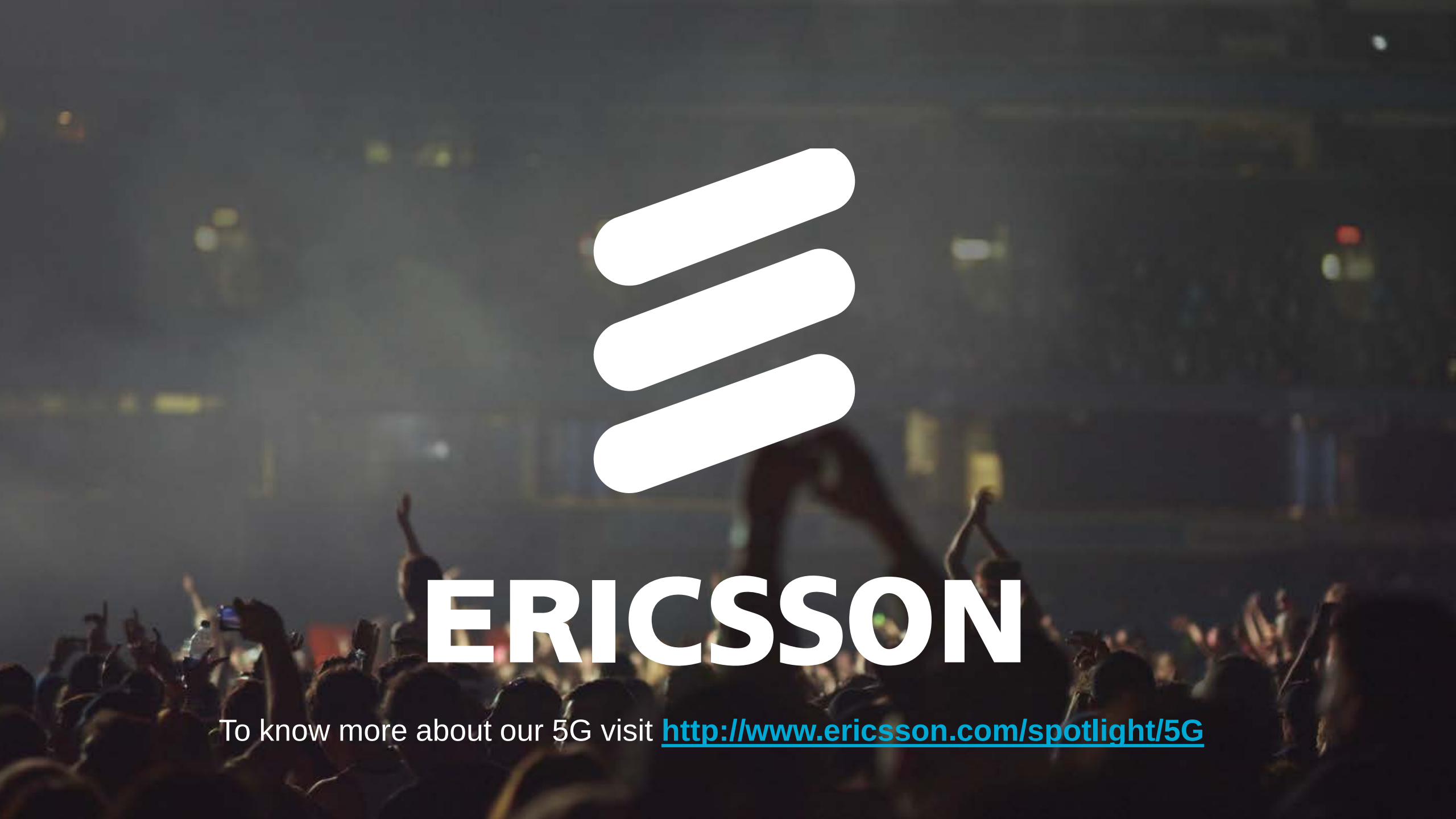
- Public safety
- Fitness
- Health care
- Family life, everyday life

INTERACTION
HUMAN - IOT

TECHNOLOGY ENABLERS

ENABLERS

5G radio access	Many of the things are already provided by LTE. This is the LTE evolution effect and 5G will improve performance and make things more flexible
5G core network	Integrate environment network within network slices Support for pub/sub message oriented communication.
5G management & orchestration	Achieve a data management system that can address device heterogeneity. Support for different departments/users



To know more about our 5G visit http://www.ericsson.com/spotlight/5G