



# Blazing the 5G trail

From 2011 to 2020 – and beyond

Ericsson and its key industry partners have reached several important milestones on the road to global 5G standardization.

Early research lays the foundation for 5G

## 2011

**5G** Our vision for 5G was developed, bringing benefits to people, business and society

We managed the METIS project, collaborating with the top four mobile infrastructure vendors to address the challenges of 5G mobile and wireless communications

## 2012–2015

We built a 5G radio testbed

## 2015–2016

**We proved several tech concepts, including:**  
• 5G-LTE dual connectivity  
• 5G multipoint connectivity with distributed multiple-input and multiple-output (MIMO)

Landmark 5G patent application filed – the largest in terms of inventors in the cellular industry in the world (source: Derwent Innovation)

## 2016

**5G advances**

**We won several early 5G awards**

- Outstanding Contribution to Standards Development – Ericsson 5G Program Glotel, Global Telecoms Awards
- Biggest Contribution to 5G Development LTE Asia Awards
- Biggest Contribution to 5G Standards LTE & 5G World Awards

**Use cases delivered:**

Test peak rates of 15 Gbps per user, and a latency below 3 milliseconds (with Telia)

20 Gbps with 2 connected mobile devices outdoors (with DOCOMO)

25 Gbps downlink throughput (with NTT DOCOMO and Korea Telecom)

## 2017

5G network tested at the historic Indianapolis motor speedway (with Verizon)

The most advanced outdoor 5G field trial reached a record-breaking 3.6 Gbps at 170 kmph (with SK Telecom and BMW)

**5G** First public 5G live network use cases deployed in Europe (with Telia and Intel)

Ericsson performed the world's first federated network slicing live demo, providing seamless network service end-to-end between Korea and Germany (with SK Telecom and Deutsche Telekom)

38 5G Memorandums of Understanding (MoU) signed with operators, including with Vodafone, Telefónica and China Mobile, to help define industry standards, drive innovation and launch equipment demonstrations

First deals including 5G technology, with Vodafone UK, Swisscom and Verizon

Global 3GPP standard for 5G New Radio (NR) Non-standalone (NSA) approved

Technology milestone reached: Ericsson and Qualcomm, in collaboration with AT&T, NTT DOCOMO, Orange, SK Telecom, Sprint, Telstra, T-Mobile US, Verizon, and Vodafone, showcased 5G NR multi-vendor interoperability

## TODAY

**Our partnerships are growing**

## TOMORROW

**We will see 5G in action**

There will be even more use cases and applications deployed, such as remote-controlled robots and fixed wireless access, ready for 5G subscription uptake in 2020

