



**Börje Ekholm**  
President & CEO  
Ericsson

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	Digital transformation
	Digital infrastructure
	
	
	Ensuring Europe's future competitiveness and digital sovereignty.
	Limited investment incentives
	
	
	
	
	Enables digitalisation and innovation across industry

# 6G yes, but first the real 5G

Network capabilities have grown exponentially for decades laying the ground for advancements in digital innovation. 1G made communication personal: we stopped calling places and started calling people. 2G enabled digital voice, 3G made mobile data possible, and today's app economy depends on 4G. They will continue to do so – with each generation building on the last one.

Many now focus on the promise of 6G – but the world needs a step-change toward the real 5G first. 5G isn't just the most recent generation of mobile networks – it is transformative: an open innovation platform, capable of having an exponentially positive impact on our society, economy, and transition towards a greener future.

## The 5G promise – making it real

At Ericsson, we believe that the instruments of 5G-enabled digital innovation, with faster speed, better latency, and the capability of network slicing, can be achievable on a global scale. But to get there, and to achieve that potential, 5G needs to be built right, both ensuring ubiquitous coverage as well as the right capacity through mid-band coverage and the functionality provided by 5G standalone.

With such a step change in 5G, billions of connected devices can gather and share information in real time; production lines can be capable of predicting and preventing interruptions before they occur; and industrial processes can transform to cut carbon, thereby contributing to the Green transition. Not only

does 5G provide for economy wide innovation today, but it is also the foundation upon which 6G will be built, where the digital and physical worlds will combine. 6G is an evolution of 5G; if we don't urgently build out 5G, we will not even have the ecosystem needed to benefit from 6G.

## Towards 6G: 5G is a step on the way

Critical to the 6G innovation are the 5G application programming interfaces (APIs) that can enable new services and anchor networks within the edge computing ecosystem. We are already witnessing significant evolution. In the 4G era, sophisticated communication platform services (CPaaS) were developed throughout the digital ecosystems enabling innovative SMS, voice and video capabilities. As 5G networks are built out globally, the opportunity for exposing 5G capabilities to developers is increasing.

With real 5G and network slicing, the next generation of CPaaS can leverage unique network capabilities to make networks a key driver of enterprise digitalisation. These APIs simplify the complexity of the underlying network, thereby enabling a vast developer community to drive innovation. This is a fundamental change, achieved by harmonising the exposure of APIs in 5G networks together with service providers to enable developers to innovate at scale, launch differentiated services, and thereby drive incremental revenues for the entire digital ecosystem.

## 5G Innovation leader & implementation laggard: Europe at a tipping point?

Europe needs a step-change. 5G has to be urgently and extensively deployed. The stakes are high: McKinsey estimates that 5G and other advanced technologies could contribute up to €4 trillion to the global economy by 2030. Europe's future competitiveness and digital sovereignty will be compromised if it continues to lag in the critical standalone 5G digital infrastructure which should be of concern to all industrial sectors and policymakers. That lag will make it harder for Europe's industrial base and small and medium enterprises to create a meaningful share of future jobs. And much of the €4 trillion of value will migrate to those countries and regions that lead the connected economy. And it will delay the horizon for 6G.

As we navigate through the 5G era, Europe's starting position is of major concern. The paradox is that some of Europe's main competitors in Asia, the Gulf and the Americas are racing ahead with digitisation using innovative European network technology. It is noteworthy that across all frontrunner countries, mobile markets have consolidated, establishing sustainable and competitive market structures where firms are incentivised to invest.

In Europe, three years after the launch of 5G, only 7% of existing 4G base stations were upgraded to 5G on the critical midband.<sup>1</sup> The US, China, South Korea, the Gulf states, and Australia are already far ahead,<sup>2</sup> and India, where 5G was only launched in Q4 last year is expected to leapfrog

<sup>1</sup> <https://5gobservatory.eu/observatory-overview/eu-scoreboard/>

<sup>2</sup> <https://data.gsmaintelligence.com/api-web/v2/research-file-download?id=74383633&file=101122-Competition-Dynamics-in-Mobile-Markets.pdf>

Europe by Q4 this year. This means that priority must be given to actions that close this gap.

Those that can innovate in the digital economy have the best chance of creating job opportunities for the future. These jobs will in turn drive more innovation creating a new digital virtuous circle. But these advancements in digitisation will not be achieved without a step change in connectivity.

### What has to change

Europe has a robust base for innovation: a strong education system including great universities, a large common market, and a stable political system. But European innovators lack the digital infrastructure. Would there be automotive industry without

roads? Let's now build the road towards 6G by enabling the real 5G.

To make this happen, European policymakers should look at the wider environment. They should consider allowing for sustainable market structures to evolve via in-market consolidation. Maximising spectrum release, extending license durations and trading off fees for deployment commitments, would also help. Moreover, it would be key to remove artificial hurdles that delay or add cost to infrastructure deployment.

One innovation lesson is that, sometimes, 'everything must change for everything to remain the same'. Unless Europe creates an environment in which 5G can be implemented to the fullest – and fast – our leadership in innovation is at risk.

