6G FOR A SUSTAINABLE FUTURE

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170m subscribers
166 years
8 markets
Research in Telenor

• To help Telenor be prepared for and leverage emerging technologies, customer, organisational and regulatory trends.

• To challenge and support Group and BUs in decision-making and technology-choice.

• To help solve some of the most intricate problems facing the company, where a science based approach is optimal.

• To be an active contributor to Telenor’s fulfilment of its vision of empowering society and in strengthening Telenor's Brand position.
What is the **5G shift** within mobile communications?

1G: Analog Voice

2G: Digital Voice

3G: Mobile Data

4G: Mobile Broadband

5G: **Verticals**

6G: ???

We have just started the 5G journey!

- Rel 15
- Rel 16
- Rel 17

Performance
Functionality
Features

Sustainability
6G for a Sustainable Future
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6G Visions

• Resource usage
• Empowering society
• Open innovation
Whitepapers outlining 6G visions

«In the coming decade, 6G will bring a new era in which billions of things, humans, and connected vehicles, robots and drones will generate Zettabytes of digital information»
  • «European vision for the 6G network ecosystem», 5G IA Vision paper, June 2021

«We expect that 6G will provide ultimate experience for all through hyper-connectivity involving humans and everything»
  • «6G. The Next Hyper-Connected Experience for All», Samsung White paper

«It is anticipated that new use cases will appear, demanding a combination of requirements that cannot be covered by the 3 categories of 5G»
  • «5G Evolution and 6G», NTT DoCoMo White Paper, February 2021

«Our future society will be increasingly digitized, hyper-connected and globally data-driven»
6G for a Sustainable Future

Challenges

- Support UN SDGs
- Security, Trust & Resilience
- Super-flexibility
6G supporting UN Sustainability Development Goals

- Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- Reduce inequality within and among countries
- Take urgent action to combat climate change and its impacts
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Research directions

- Enabling Technologies
- Consumers and verticals
- 6G ecosystems
Research directions on enabling technologies

**Evolutions**

- Machine communications
- Security and trustworthiness
- Higher frequencies and new radio technologies
- Everything becomes SW

**New and radical**

- Native AI
- Joint communications, sensing and positioning
- New network architectures
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Questions?

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