

5G-Strategy

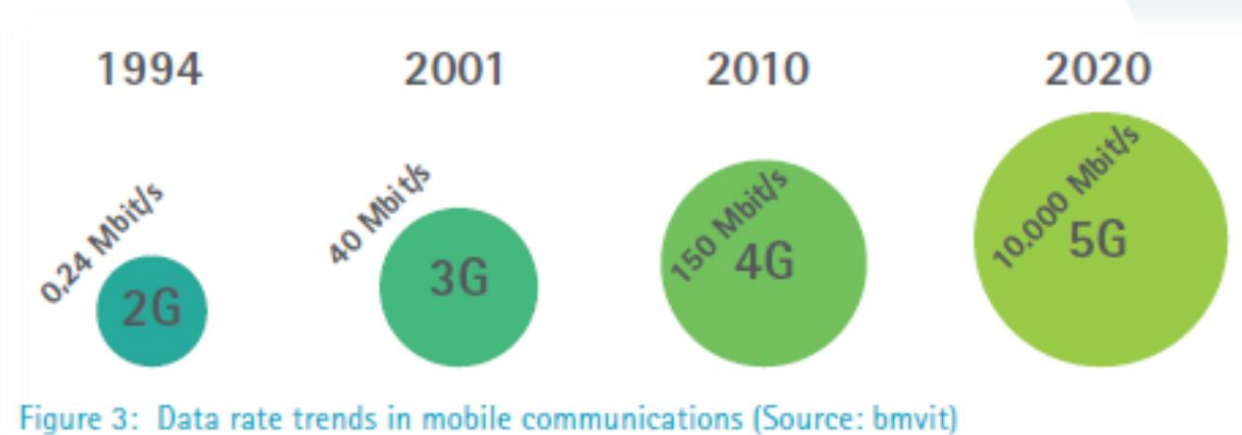
Austria's way to become a 5G pioneer in Europe



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Goals

- foster the introduction of 5G – mobile technologies with optimal framework conditions
- realize new chances for citizens, economy, industry and science
- nationwide coverage with 5G by 2025



5G - Technology

- 1.000 –times more capacity
- 100-times more dense connectivity
- 10 Gbit/s peak data rate
- 10-times more energy efficiency
- 5G is key for Industry 4.0, autonomous Mobility, Smart Cities and Smart Villages, enhanced cybersicherheit, modernised education and for IoT
- Early and fast roll-out to have optimal conditions for the development of modern digital services – Research and development as basis for successful digital products and services

Initial situation

- Austria is well-positioned and ranks above the European average
- Austria lags behind in particular with regard to the availability of fiber-optic networks
- Networked Readiness - Index (NRI). Austria ranked 20th in the world in 2016, and 11th within Europe
- Austria among Europe's top countries in terms of mobile Internet use, its fixed digital infrastructure is clearly below the European average

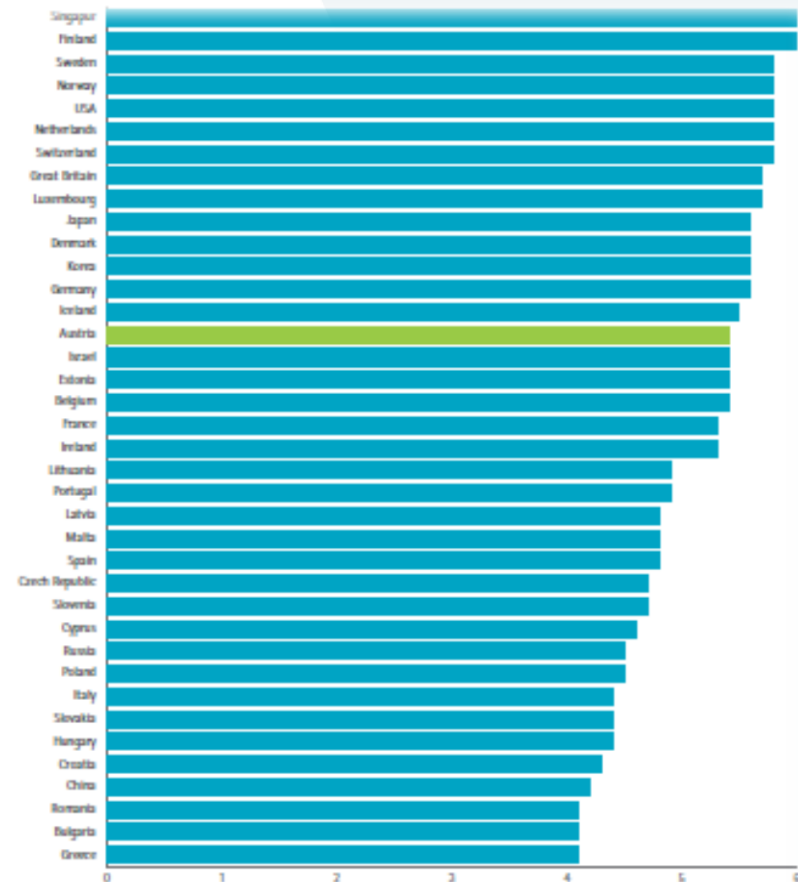


Figure 4: Excerpt of best countries in the World Economic Forum Networked Readiness Index 2016
<http://reports.weforum.org/global-information-technology-report-2016/networked-readiness-index>

Action Fields for concrete Measures

- investment-friendly climate for new technologies
- Fibre-optic infrastructure available and accessible nationwide
- Availability of significant amount of new spectrum
- Demand for digital technologies and applications
- New digital value chains and business models
- 5G-compatible network components and devices
- two segments for specific measures: **Infrastructure** and **Applications**
- **24 measures for infrastructure and 10 measures for applications**

Measures – Infrastructure I

- Timely **allocation of frequencies** in line with European requirements
 - 700 / 1500 / 2100 and 3400-3800 MHz this and next year
 - Update of **spectrum release plan** with newly identified bands (26 GHz and 76 GHz) in context with global developments (WRC-19)
 - Creation of **legal certainty** for sustainable use cases and planing
 - Invent new **sharing modells** to foster flexibilisation (infrastructure sharing and pooling, secondary use)
 - **Coverage obligations** in accordance with political goals

Measures – Infrastructure II

- public funds for the **expansion of digital infrastructure** (broadband plan – BBa2020 - necessary funds for 5G infrastructure roll-out by telecom operators)
- Notification of point of presence sites by telecommunications companies / sharing of infrastructure
- evaluation fees for radio frequency usage
- Expansion of facilitation
 - Small cells
 - Cooperation in event of work on public property
 - Ease building ICT networks not subject to authorization / one-stop shop

Measures – Applications I

- Traffic and transport: Cooperative, connected and automated mobility
- Industry 4.0 - Factory of the future
- Energy
- E-Health
- Education
- Smart Cities
- Administration
- ...

Measures – Applications II

... steps on the way to 5G applications

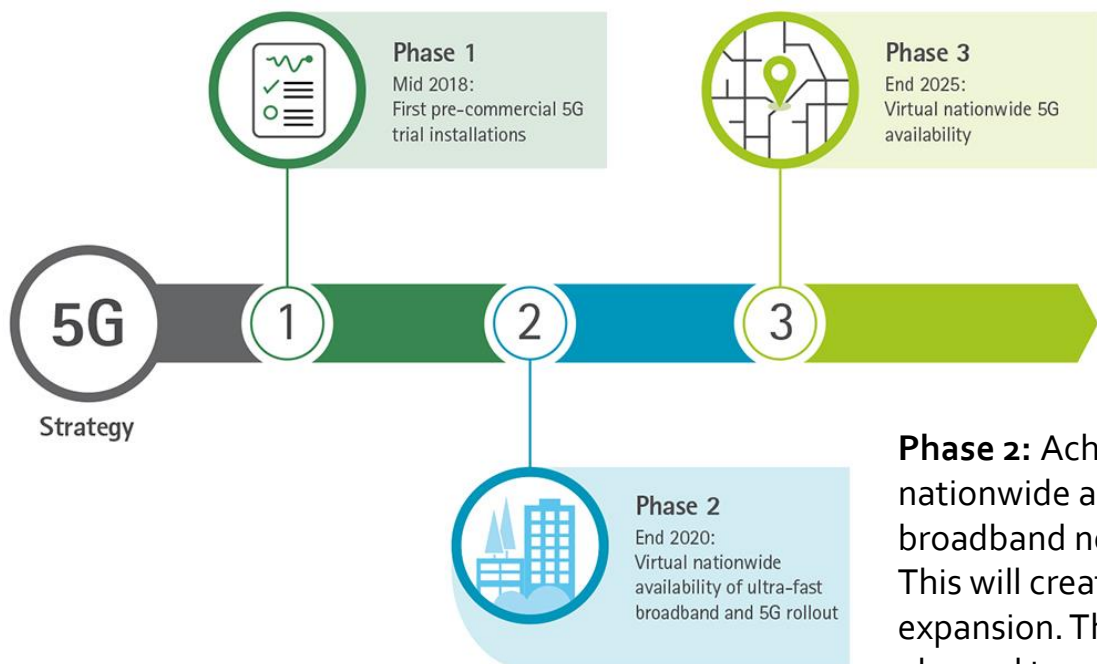
- promoting connectivity – establishing a 5G platform
- international inclusion
- Research and development of 5G applications
- implementation of 5G pilot projects in public administration
- Regional flagship projects for 5G applications
- Creating 5G test beds and sandboxes - experimental application at large events

Current developments

- 3.6 GHz tender launched in September 2018
- Discussion of legal changes in telecommunications act in parliament ongoing, finalization in November 2018
- 5G Playground Carinthia started with the aim of having 5G testfield close to Science Parks, Researchcentres and Academia in Villach and Klagenfurt, Establishment of 5G Labs, Cooperation of research and Industry, Creation of 5G infrastructure for education, Increase acceptance of new technologies and foster new business cases
- Plattform for 5G (Agency for digitalisation) established

Austria's 5G strategy and future broadband availability

Phase 1: Implement the first pre-commercial 5G trial installations by mid-2018.



Phase 3: Aim to bring 5G service availability to main traffic routes by the end of 2023; accomplish virtually nationwide 5G availability by the end of 2025.

Phase 2: Achieve the interim goal of an almost nationwide availability of the ultrafast broadband network (100 Mbps) by the end of 2020. This will create the basis for a nationwide 5G expansion. The rollout of 5G in all provincial capitals is planned to ensue at the same time.

Thanks for attention!



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