



5G-Landscape in Bavaria

Dr. Maika Gruber

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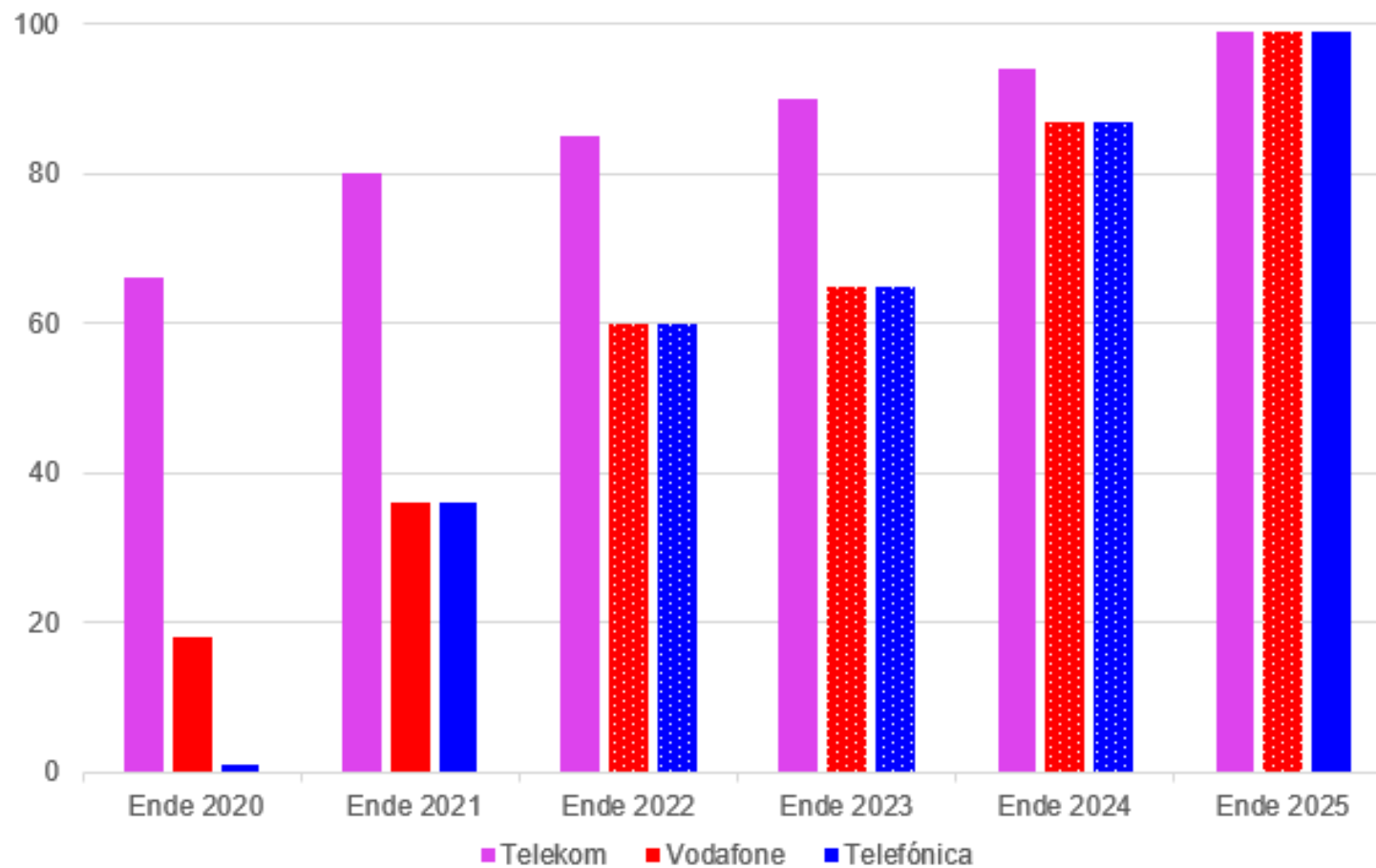


Agenda

1. Current State of the 5G Deployment
2. Use Cases
3. 5G Industry Networks in Bavaria
4. 5G Projects in Bavaria



5G-Coverage Announced by German Providers

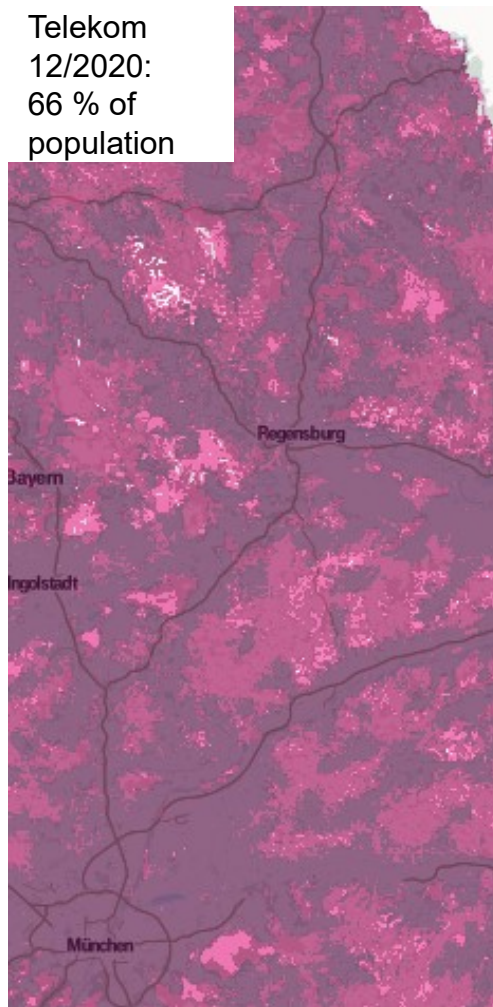


(source: press releases of mobile network providers 2020)

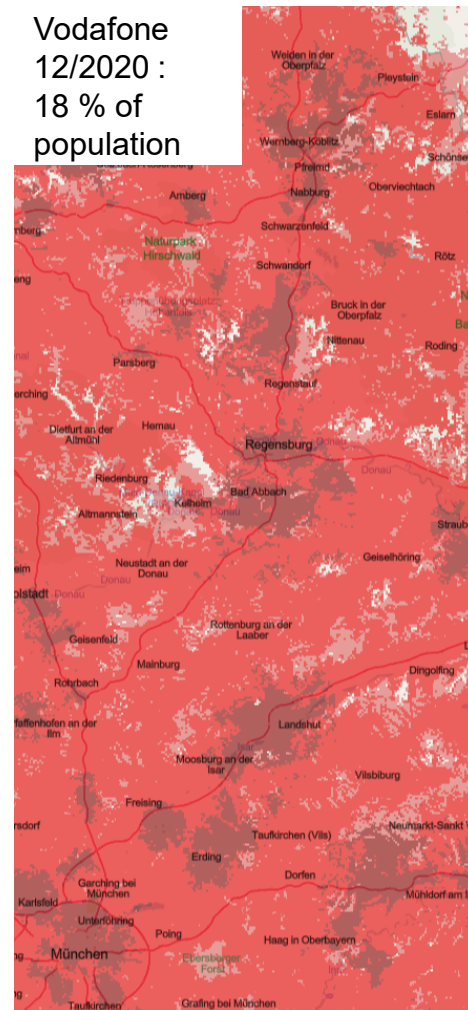


5G-Coverage of the Corridor (January 2021)

Telekom
12/2020:
66 % of
population



Vodafone
12/2020 :
18 % of
population





5G-Spectrum Used in Germany

3,5 GHz / 3,6 GHz

Bandwidth of



Up to 1000 mbits

5G signal does not enter buildings easily



Short distances



Ideal for factories, stadiums, stations and airports



1,8 GHz / 2,1 GHz

Bandwidth of



Up to 500 mbits

5G also for buildings



5G also for larger areas



5G-coverage for cities and semi-urban areas



700 MHz

Bandwidth of

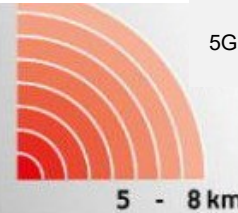


Up to 200 mbits

Fast internet at home



5G for rural areas



Perfect for smart working and fast internet in rural areas





The 5G Era Has Already Arrived





Use Cases for 5G

5G single network handles a variety of use cases:

- for everybody: faster downloads, faster ping
- eHealth
- Autonomous Vehicles
- IoT (Smart City / Smart House)
- Medien / Entertainment
- Industrial Automation, logistics
- Smart grids
- Augmented Reality (AR) and Virtual Reality (VR)





5G-Campus Networks in Bavaria



- Companies can use 5G frequencies for their premises
 - Application at federal authority required (BNetzA)
 - Industry is highly interested:
 - 106 applications
 - 101 allocated
- (1/21, from all over Germany)



5G Projects in Bavaria



5G Bavaria

- 5G Test Center at Fraunhofer IIS (Erlangen)
- Local 5G-testbeds:
 - eHealth (TU Munich)
 - Automotive (Rosenheim)
 - Industry 4.0 (Nürnberg)
 - Satellite navigation (Würzburg)
- Funding of Cooperation Projects

Other funding schemes

- 5G4Healthcare (BMBF)