

Czech strategy for 5G networks development



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International context



- EU 5G action plan COM(2016) 588
 - ▶ co-ordinated approach to 5G networks solutions
 - ▶ support to timely roll-out of 5G networks in big city agglomerations and by important transport routes
 - ▶ support to Europe-wide testing
- ITU
 - defines and approves 5G standards (IMT-2020)
 - WRC-19 – 5G frequency bands specification

National context



Innovation Strategy 2030 → Digital state, production and services → Building the high-speed infrastructure as a base for online services

Digital Czechia → Digital economy and society → basic pillar of the 4th industrial revolution

Ministerial strategy for particular areas → national AI strategy, Action plan 2.0, National plan for development of very high capacity networks

→ **5G networks are part of CZ strategic development vision**

Innovation strategy CZ 2030

Digital state,
production and
services

Building the
high-speed
infrastructure
as a basis for
online services

Digital Czechia

Digital economy
is a basic pillar
of the societal
changes brought
about by the so-
called Fourth
Industrial
Revolution

Strategies for particular areas

National AI
strategy

Action plan
2.0

National NGA
plan

5G strategy

5G network opportunities



Advanced mobile high-speed networks
Highly reliable communication with low latency
Massive M2M communication
Fixed and mobile networks convergence



Industrial enterprises, transport incl. traffic management, IoT – smart cities, smart homes; health-care, meteorology, entertainment and education, virtual and augmented reality

Czech situation



Strategic vision on 5G networks implementation and development

Prepared by the Ministry of Industry and Trade together with other relevant parts of state administration, reflecting comments from relevant stakeholders

Approved by Government resolution of 13 January 2020

National 5G document



Implementation and Development of 5G Networks in the Czech Republic – Towards the Digital Economy

- ➔ strategic approach to the deployment and use of 5G networks
- ➔ promote new opportunities for the CZ industry
- ➔ to engage the professionals, local authorities, academia
- ➔ to boost Smart City & Smart Region concepts

Implementing steps in 5G network infrastructure development



Frequency allocation in CZ and conditions of the usage

Basic preconditions of 5G networks implementation in CZ, eg. :

- Support to speed-up building and development of 5G networks

- Support of 5G spectrum harmonization at global and European level

- Use of 5G in development of Industry 4.0 and AI

- Support of possible common use of passive infrastructure (collocation) for the roll-out of 5G cells

- Access to 26 GHz frequency band

Support to Smart Cities solutions

Coverage of main transport hubs and corridors

Role of the state by building 5G networks

Support to the development of 5G-based ecosystem



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Common 5G networks platform (operators, companies, state administration, academia)

Support to testing and pilot projects

Use of European and national resources

Development of Smart Cities concept within the 5G frame

Initiative „5G Ready Municipality“

Support to industrial applications

Cybersecurity

Financial support from public resources

Implementation milestones in 5G network infrastructure development



→ 2019

- ▶ Preparations of 5G Smart Cities project
- ▶ Calls for support to implementation of business innovations
- ▶ Development of cross-border cooperation

→ 2020

- ▶ Selection of five testing Smart Cities in the context of 5G network development
- ▶ 700 MHz band frequencies auction
- ▶ Finalization of the amendment to the Radio Spectrum Utilization Plan for 26 GHz band
- ▶ Finalization of the National Plan for the Development of Very-High-Capacity Networks

Implementation milestones in 5G network infrastructure development



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2025

100% coverage of selected sections of railway and road corridors

95% coverage of the territory of each city with more than 50,000 inhabitants

70% CZ residents' coverage

2030

99% residents' and 90% area's coverage in each CZ county/district

5G for 5 cities



Testing 5G technologies in Smart Cities concept for both urban and rural areas

Pilot testing of cooperation between main players

5G for 5 cities – beauty contest results:

Bílina, Jeseník, Karlovy Vary, Plzeň, Ústí nad Labem

Best practice sharing out of these winning projects across CZ

Focus of tested apps:

Quality of life improvement for residents

Boosting town's attractiveness for entrepreneurship and trade

Ensuring data security and accessibility

5G alliance



- ➔ To help in developing the fifth-generation networks
- ➔ Established in August 2020
- ➔ representatives of the private, public and academic spheres
- ➔ 5 key areas:
 - ▶ industry,
 - ▶ smart cities,
 - ▶ cyber security,
 - ▶ disinformation and education,
 - ▶ transport corridors

5G alliance



5 working groups covering the 5 areas

To disseminate information on 5G, education

To combat fake news and misinformation

Cybersecurity



Digital economy brings about an extreme growth of

- number of points of connection (IoT devices, cars, industrial control systems, industrial robots etc.)
- bit rates in fixed and mobile networks
- volume of transferred data (rise of virtual/augmented reality)

This all means greater responsibility in terms of cybersecurity across the whole system

Fighting misinformation / fake news



- ➔ Bringing together reliable (public) authorities
- ➔ Dissemination of impacted studies and information
- ➔ Close cooperation of industry, state and academic sphere
- ➔ Digital economy brings about an extreme growth of
 - ▶ number of points of connection (IoT devices, cars, industrial control systems, industrial robots etc.)
 - ▶ bit rates in fixed and mobile networks
 - ▶ volume of transferred data (rise of virtual/augmented reality)

Main links



bit.ly/5GimplementationCZ

www.5galliance.cz

www.countryforfuture.com

Thank you for your attention.

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