ITAPA 2019

Building of a digital ecosystem

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MINISTERSTVO
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R&D spending

CZECHIA

FINANCIAL RESOURCES

R&D spending as % of GDP
2%

R&D spending in PPP$
$6,699.4M

R&D spending by sector of performance

Business	$3,698.3M
Government	$1,271.0M
Universities	$1,702.5M
Private non-profit	$27,620.7k

HUMAN RESOURCES
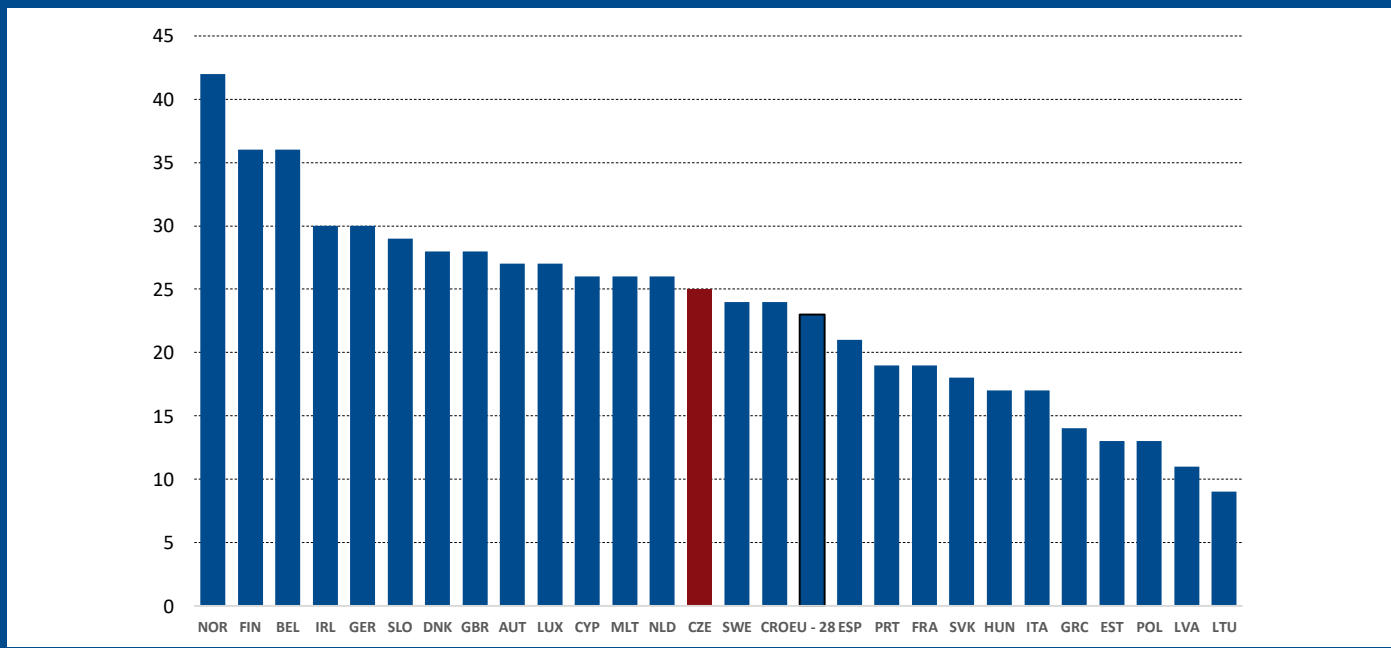
Number of researchers per million inhabitants
3,400

Male researchers	Female researchers
73%	27%

Source: http://data.uis.unesco.org/

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The increase of digital skills among employees, 2018 (% share)

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National Cyber Security Index

Rank ▾	Country	National Cyber Security Index	Digital Development Level	Difference
1.	Greece	90.91	65.44	25.47
2.	Czech Republic	90.91	69.37	21.54
3.	Estonia	90.91	79.27	11.64
4.	Spain	89.61	73.24	16.37
5.	Lithuania	88.31	70.95	17.36
6.	France	83.12	79.06	4.06
7.	Finland	81.82	82.26	-0.44
8.	Denmark	81.82	83.55	-1.73
9.	Netherlands	81.82	83.88	-2.06
10.	Germany	80.52	81.95	-1.43
11.	Singapore	80.52	83.11	-2.59
12.	Slovakia	79.22	66.73	12.49

Source: https://ncsi.ega.ee

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Strategies, conceptions and programmes

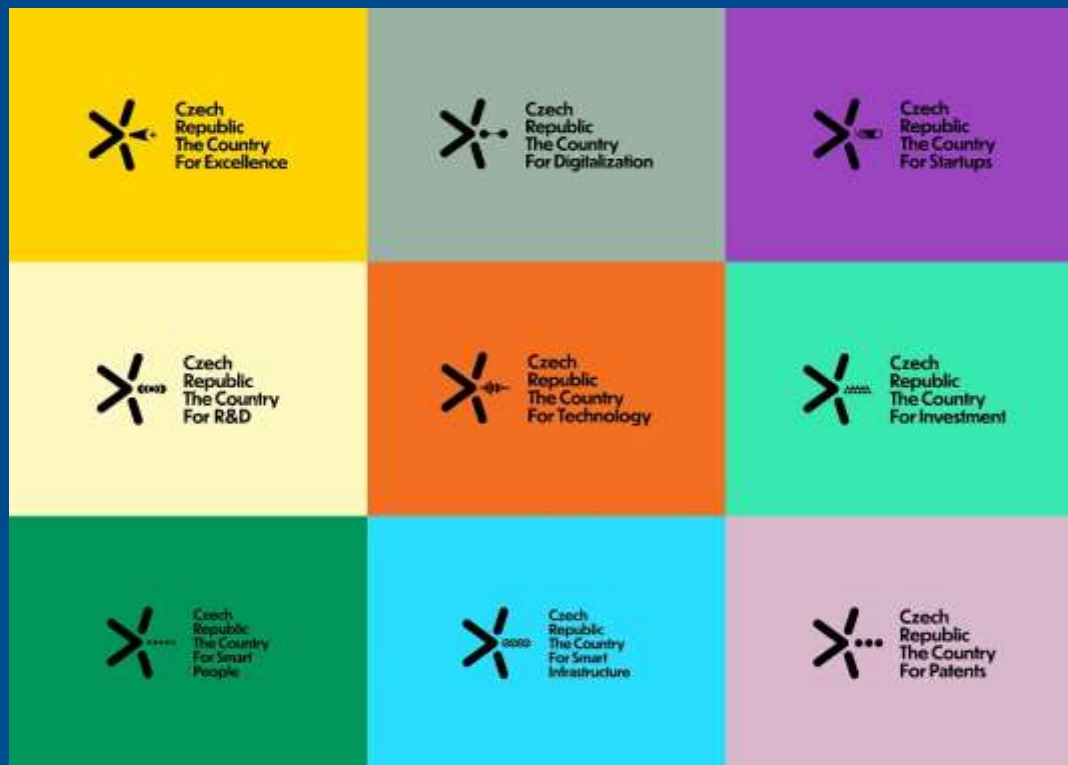➡️ Innovation Strategy 2030

➡️ Digital Economy and Society

➡️ National AI Strategy

➡️ Programme The Country for the Future

➡️ Digital Europe Programme

➡️ RIS3 Strategy

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Innovation Strategy of the CZE 2019–2030

- Approved on February 4, 2019
- Key document
- Prepared by the RD&I Council
- Sets out new priorities
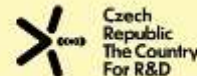 - Put the Czech Republic among the **most innovative countries** in Europe by **2030**

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Innovation Strategy of the CZE 2019–2030

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Innovation Strategy of the CZE 2019–2030

➡️ Strengthen R&D funding (measured as % of GDP):

▶ 2020 2.0%,

▶ 2025 2.5%,

▶ 2030 3.0%,

➡️ of which 1% from public resources and from company resources,

▶ 1.5% in 2025

▶ 2% in 2030.

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Digital Economy and Society

➡️ The main pillar of societal changes

➡️ Coordination of digital economy agendas

➡️ Long-term competitiveness and overall prosperity of the Czech Republic

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Main Pillars of the DES

➡️ Involvement of the Czech Republic in the Digital Europe programme

➡️ Support the creation and maintenance of the infrastructure of the Digital innovation hubs, HPC

➡️ National Research and Innovation Strategy for Smart Specialization (National RIS3 Strategy)

➡️ National research development and innovation policy

➡️ National AI Strategy

➡️ Education across the society

➡️ Vzdělávání napříč společností (VŠ, učitelé, žáci, občané)

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Czech National Artificial Intelligence Strategy

- On January 28, 2019, the Czech government ordered the Ministry of Industry and Trade to prepare the National AI Strategy
- Structure of chapters according to the Communication and the EC Coordinated Plan
- In accordance with the Digital Economy and Society and other documents
- E.g. Innovation stratégy 2019 - 2030, RIS3, The Competitiveness Strategy, Action Plan Work 4.0 etc.
- Approved by the government on 06/05/2019

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Visions and goals of the NAIS

Principal vision: CZE as one of the leaders in AI and innovation in CEE / EU
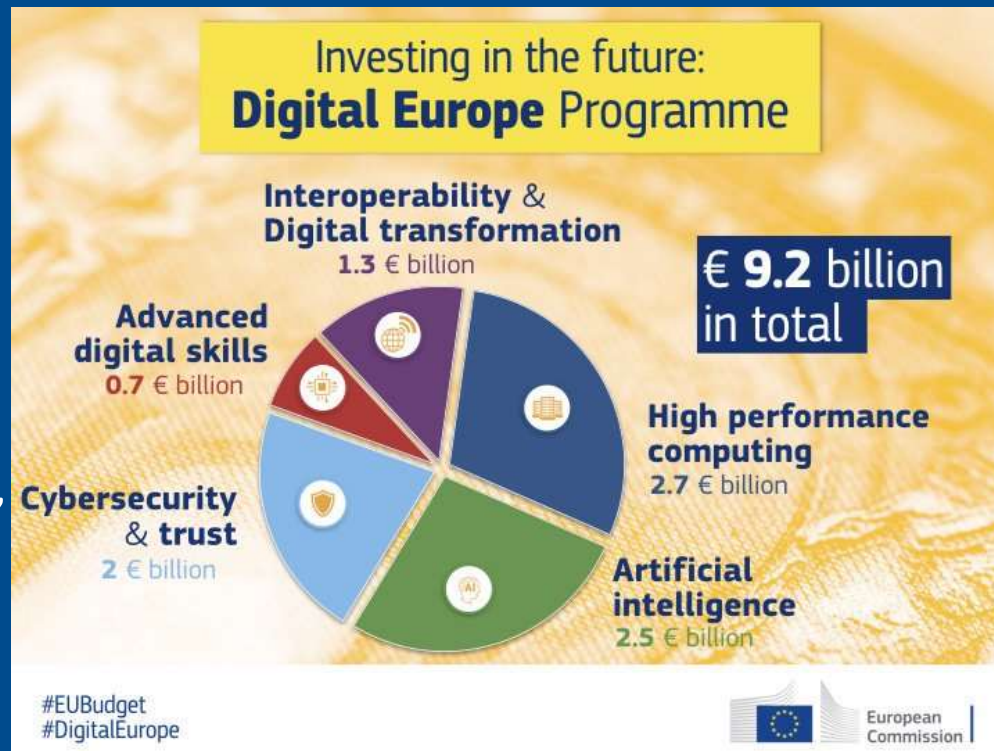
Main goals:

- Cutting-edge science and research, support of enterprises (especially SMEs), development of quality education and human capital
- Definition of specific support tools
- Coordination of the public and private spheres
- Prime Ministers and Governments priority: building the European Center of Excellence in AI

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Financial instruments

→ Digital Europe Programme

→ RIS3 Strategy

→ European Regional Development Funds

→ Programme The Country for the Future

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Digital Europe Programme

➤ Multiannual Financial Framework

➤ Focus on building the strategic digital capacities

➤ Deployment of digital technologies

➤ Investments in supercomputing, artificial intelligence, cybersecurity, advanced digital skills

Investing in the future: **Digital Europe** Programme

Interoperability & **Digital transformation**
1.3 € billion

Advanced digital skills
0.7 € billion

€ **9.2** billion in total

High performance computing
2.7 € billion

Cybersecurity & trust
2 € billion

Artificial intelligence
2.5 € billion

#EUBudget
#DigitalEurope

European Commission

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European Regional Development Funds

→ Policy objective "Smarter Europe"

→ Synergies with Digital Europe Programme

→ Interregional Innovation Investment Instrument

▸ Operational Programme Competitiveness (OPK)

→ Policy goal 1.

▸ Making a smarter Europe by supporting innovative and intelligent transformation of the economy

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Operational Programme Competitiveness

➡️ Specific goal 1.1

 ▶ Strengthening the research and innovation capacities and introducing advanced technologies

➡️ Specific goal 1.2

 ▶ Utilizing the benefits of digitization for citizens, businesses and governments

➡️ Specific goal 1.3

 ▶ Developing the skills for smart specialization, industrial transformation and entrepreneurship

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RIS3 Strategy

→ RIS 3 Strategy is one of the crucial tools that the Czech Republic uses to become the innovation leader.

→ The RIS3 Strategy of the Czech Republic identifies the key economic areas, which have the highest potential to **boost competitiveness, knowledge-driven growth and innovation capacity** of the Czech Republic.

→ Moreover the Strategy also detects and stimulates actions that **harness the country's potential to contribute to solving current major societal and technological challenges** (e.g. using AI to for addressing security issues).

→ The RIS3 Strategy provides a **framework for streamlining support of various public funding instruments** (EU and national funds and programmes) **to the identified key specialization areas** and also to elimination of major barriers in the innovation system.

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Horizontal priorities in National RIS3 Strategy

- Higher innovation performance of companies
- Higher quality of public research
- Increase economic benefits of public research
- Increased number and quality of available human resources for innovation entrepreneurship, research and development
- Developing eGovernment and eBusiness to increase competitiveness
- Enhancement and better use of the social capital and creativity in addressing complex societal challenges

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Areas of economic specialisation

➡ Advanced machines/technologies for a strong and globally competitive industry

➡ Mechanical engineering, power engineering, industrial chemistry

➡ Digital market technologies and electrical engineering

➡ Electronics and electrical engineering in the digital age

➡ Digital economy and digital content

➡ Transport equipment for the 21st century

➡ Automotive, railway and rail vehicles, aerospace industry

➡ Healthcare, advanced medicine

➡ Pharmaceuticals, biotechnology, medical devices and life sciences

➡ Cultural and creative industries

➡ Sustainable agriculture and environmental application sectors

➡ Societal challenges

➡ Region-specific application sectors (textile, glass ...)

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Programme The Country For The Future

➡ Three chapters:

➤ Chapter 1 „Start-ups"

➤ Chapter 2 „Digital Leaders"

➡ Creation and co-investment of EDIH

➡ Synergistic and complementary activities to the Digital Europe Programme

➤ Chapter 3 „Innovations into practice"

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Digital innovation hubs

➡️ Digitalization of SMEs

➡️ Main services:

- ▶ Test before invest
- ▶ Skills and training
- ▶ Support to find investments
- ▶ Innovation ekosystém & networking

➡️ Alignment linked to the RIS3 strategy

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Digital innovation hubs

➡️ Focus on:

   ➤ AI, HPC, advanced digital skills and cybersecurity

➡️ Building a interconnected & sustainable network of DIHs

➡️ Ensuring a broad geographical coverage across Europe

➡️ 4-8 European DIH in CZE (3-5 in SVK)

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The development of 5G networks in the CZE

➡ The Czech 5G strategy expects the creation of the 5G ecosystem in two main phases.

  ▶ the goals of the 1st phase are to increase the capacity of the current 4G network, to increase its speed and gradually reduce the delay

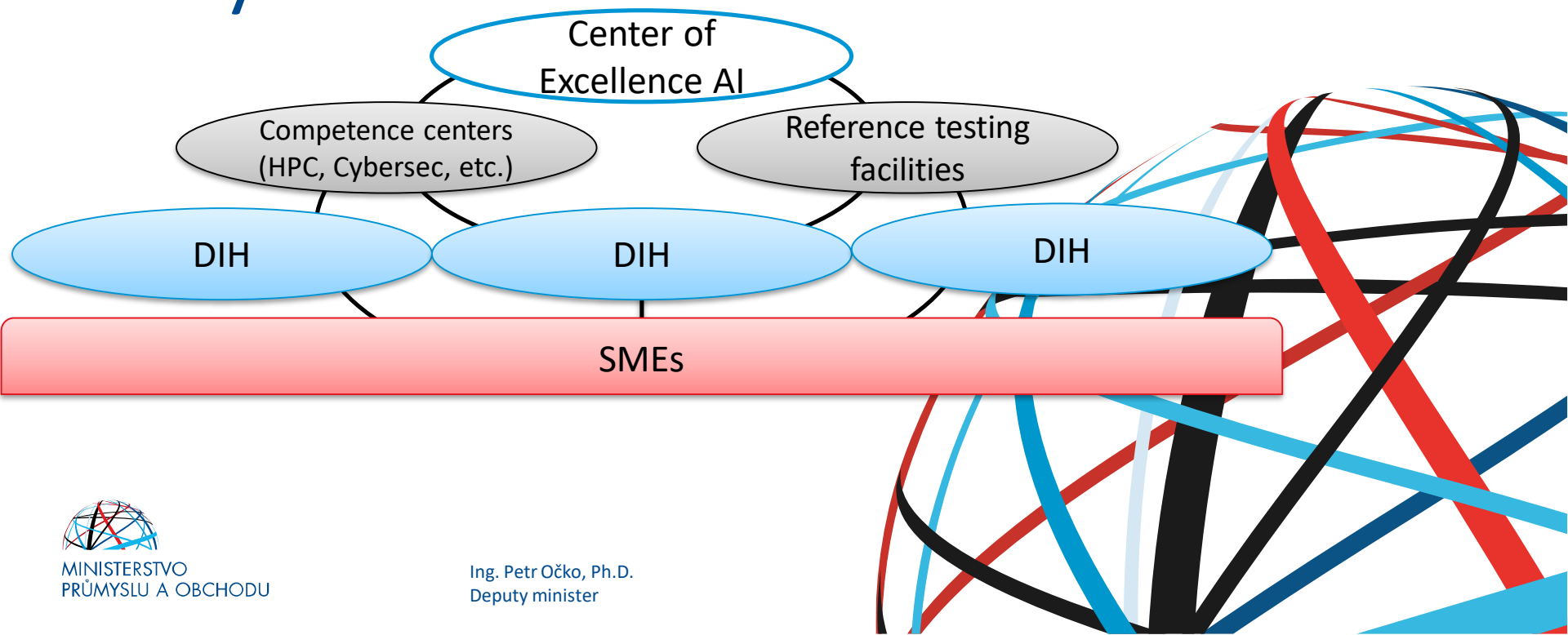 ▶ in the 2nd phase we expect the launch of the 5G network

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The development of 5G networks in the CZE

➡️ The document deals with the technology of 5G networks, their characteristics and the services they provide, such as:

- ▶️ Industry 4.0, Smart Cities, Intelligent Transport Systems, Automated and Autonomous Mobility, e-Health, e-Education, Smart Agriculture, 5G Network Ecosystem and Consumers

➡️ A separate part is the cyber security issue, implementation steps and milestones of 5G network infrastructure development

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The development of 5G networks in the CZE

➡️ Common Platform for 5G Networks

➡️ Support of testing and pilot projects

➡️ Use of European and national funds

➡️ Development of Smart Cities concept within 5G networks - test cities

➡️ Support for industrial applications

➡️ Cyber security

➡️ Specific possibilities of financial support from public sources

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Sustainable and interconnected digital ecosystem

Thank you for your attention

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