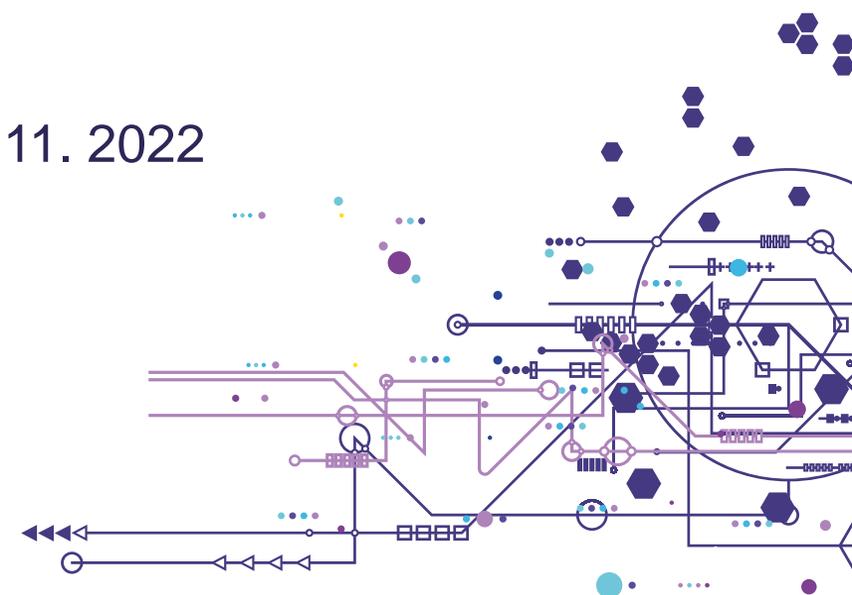
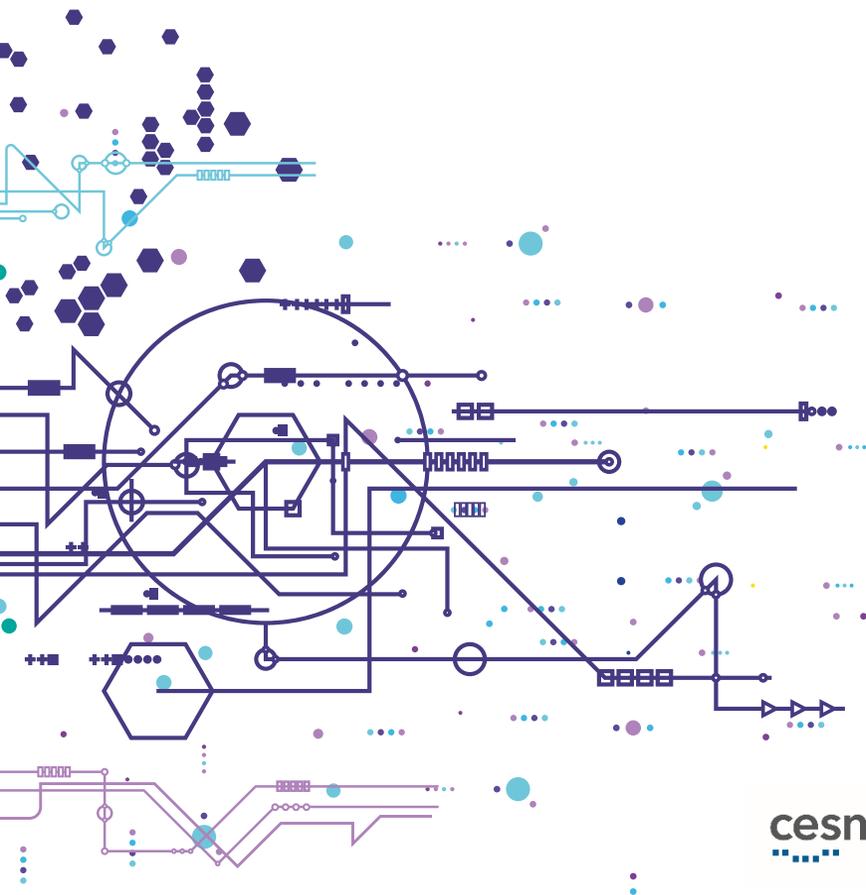


CESNET & e-INFRA CZ

Radovan Igliar

CESNET Day, ELI ERIC, 23. 11. 2022



About CESNET



Czech Education and Research Network

- Established in 1996 - 26 Public universities and Academy of science
- Research institution
- National Research and Education Network -> e-Infrastructure -> integrated e-INFRA CZ
 - Roadmap of Large Research Infrastructures of the Czech Republic

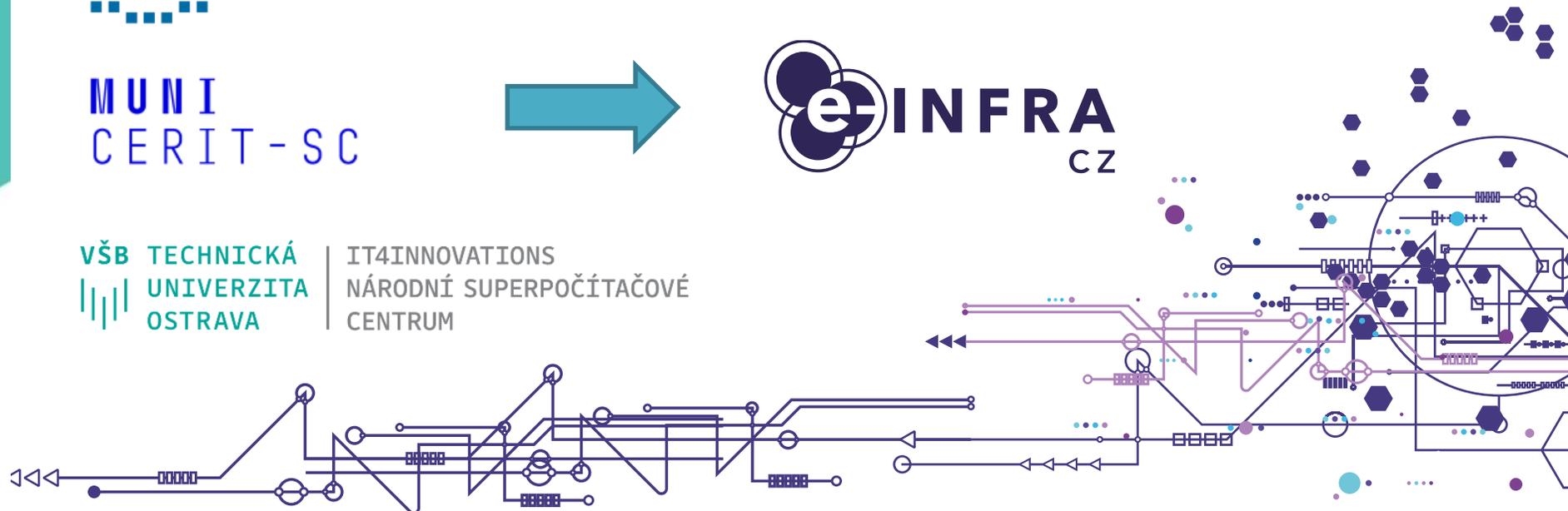


cesnet

MUNI
CERIT-SC

VŠB TECHNICKÁ
UNIVERZITA
OSTRAVA

IT4INNOVATIONS
NÁRODNÍ SUPERPOČÍTAČOVÉ
CENTRUM



Provide complex of ICT services to support research and education

Build environment, capacities and resources for the transmission, storage and processing of scientific data

Support communities of users with specific ICT needs

Services

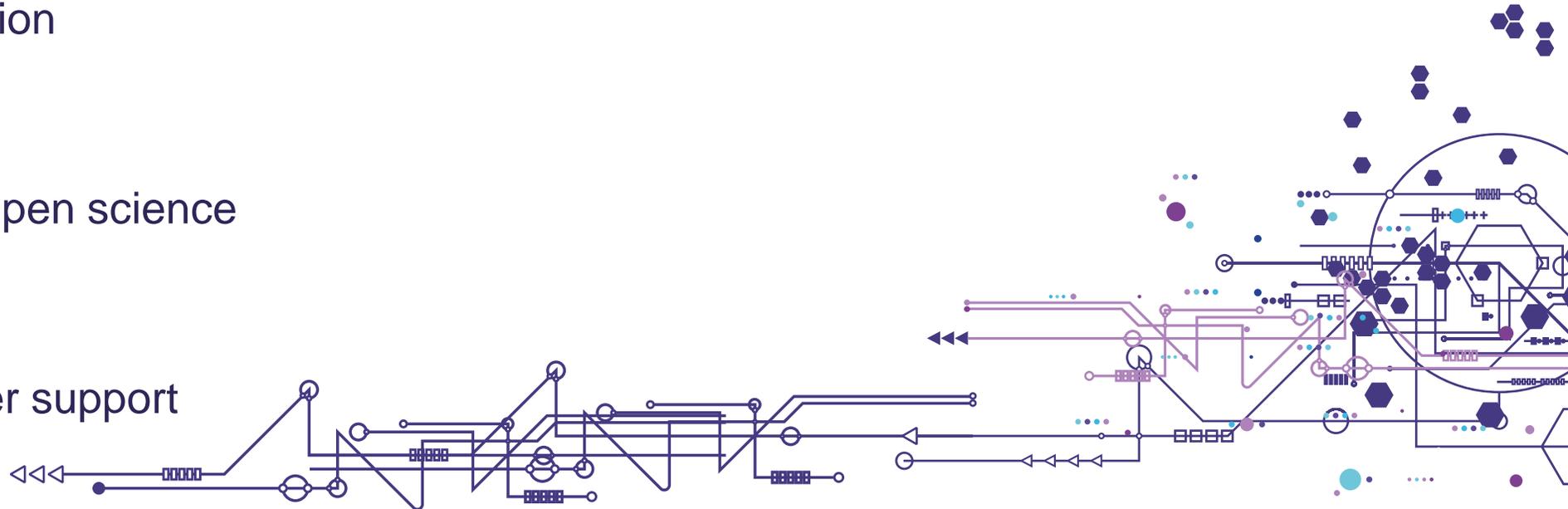
- Fast and secure network
- Scientific computing
- Data storages and Data management
- Seamless integration

Research and Development

- Supporting and fostering innovation
- Partnership
- International projects

Enable

- Data driven and Open science
- Easy access
- Internalization
- Expertise and User support



User Community



Universities



Faculty and regional hospitals

Institutes of Academy of Science



Research institutions
Research infrastructures



Libraries, Museums, Galleries



ESFRI projects / landmarks
ERIC s



State and Public administration



Primary and Secondary schools



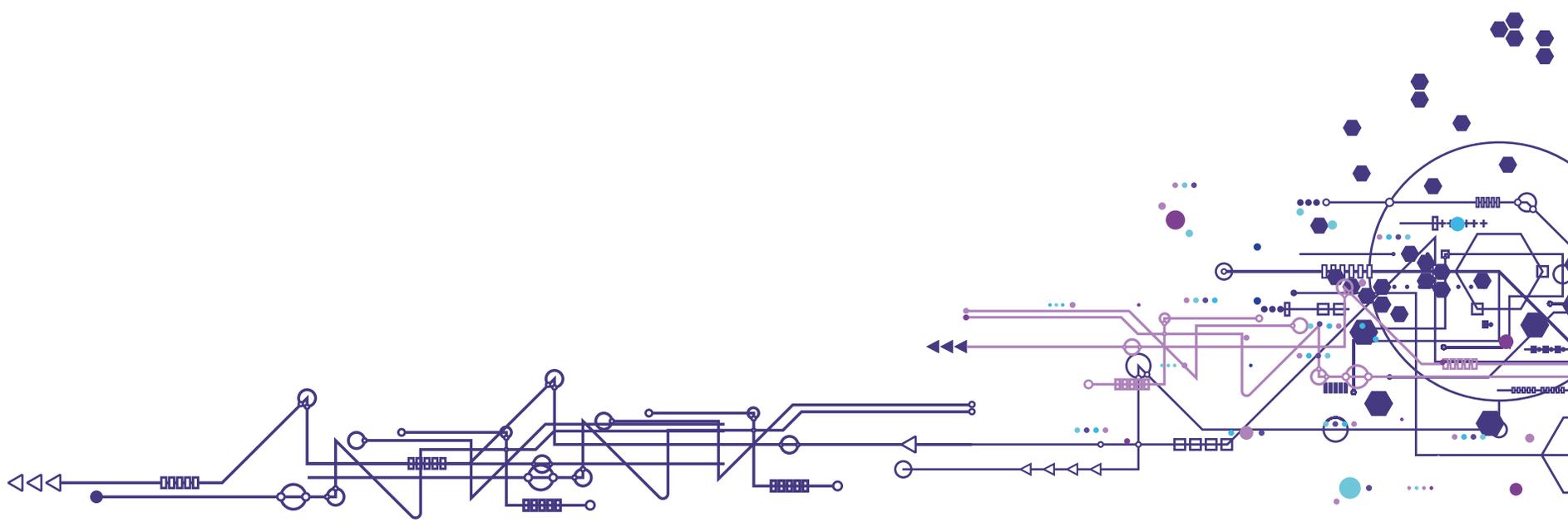
Industry and Commercial research

More than 300 institutions (appx. 500 000 end-users)





INFRASTRUCTURE & SERVICES



Architecture

Cybersecurity, monitoring, helpdesk, Multimedia, Collaboration,

AAI - Access control and user management

Grid and cloud computing

Data storages

Supercomputers

CESNET

CERIT-
SC

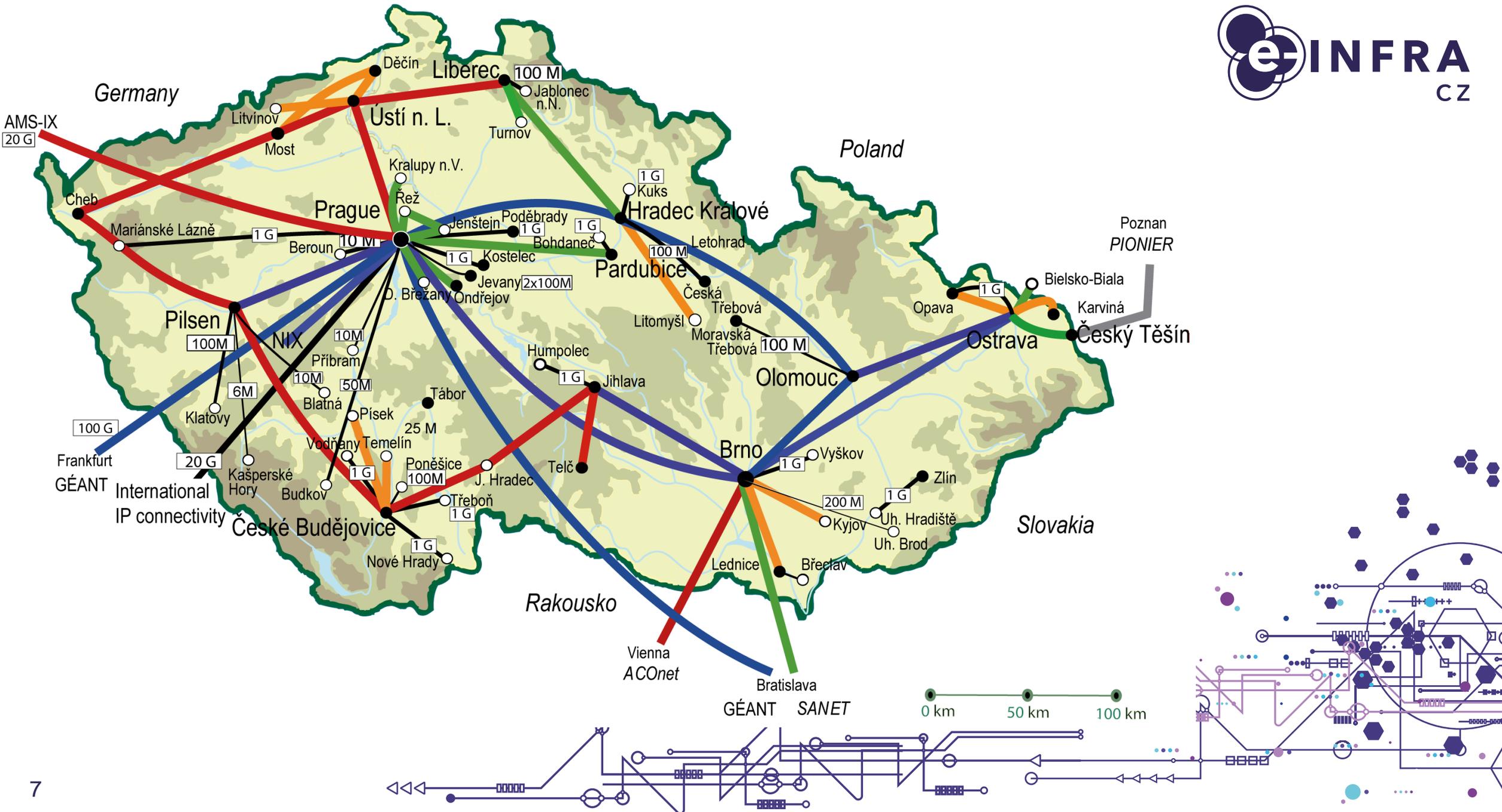
Community
resources

CESNET

Community
resources

IT4Innovations

Network infrastructure and Services



Above the network - services

OCRE, ZOOM webinar, Jupyter, Research Platform,

Object Storage, ZOOM, AI, AntiDDoS, IoT, ProxyIDP, GitLab

eIDAS, WebRTC, LTP

SIEM, SDN, IaaS, Hadoop, Sparc

ownCloud, Cloud computing

High performance
computing
Data storages

Filesender
Forensic laboratory
MetaCloud

Streaming,
Videoconference
CSIRT, eduroam

PKI, eduID.cz

DWDM

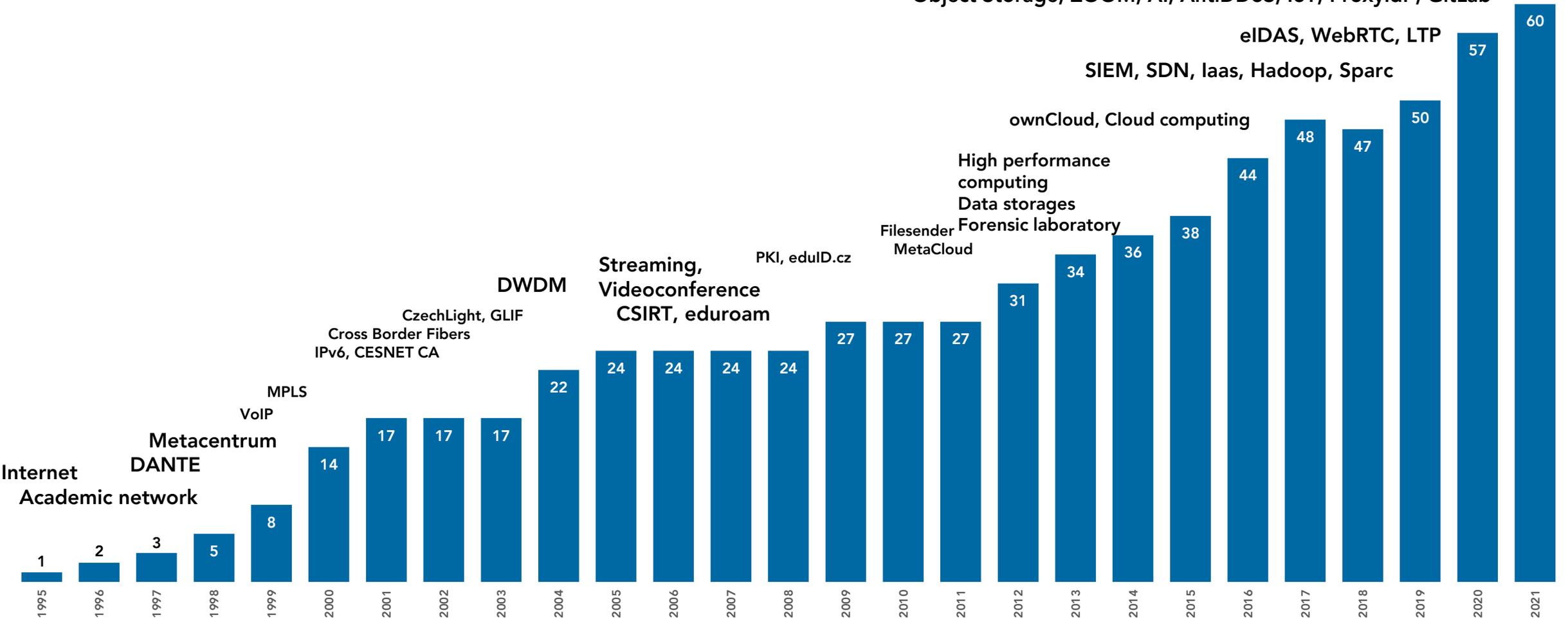
CzechLight, GLIF

Cross Border Fibers
IPv6, CESNET CA

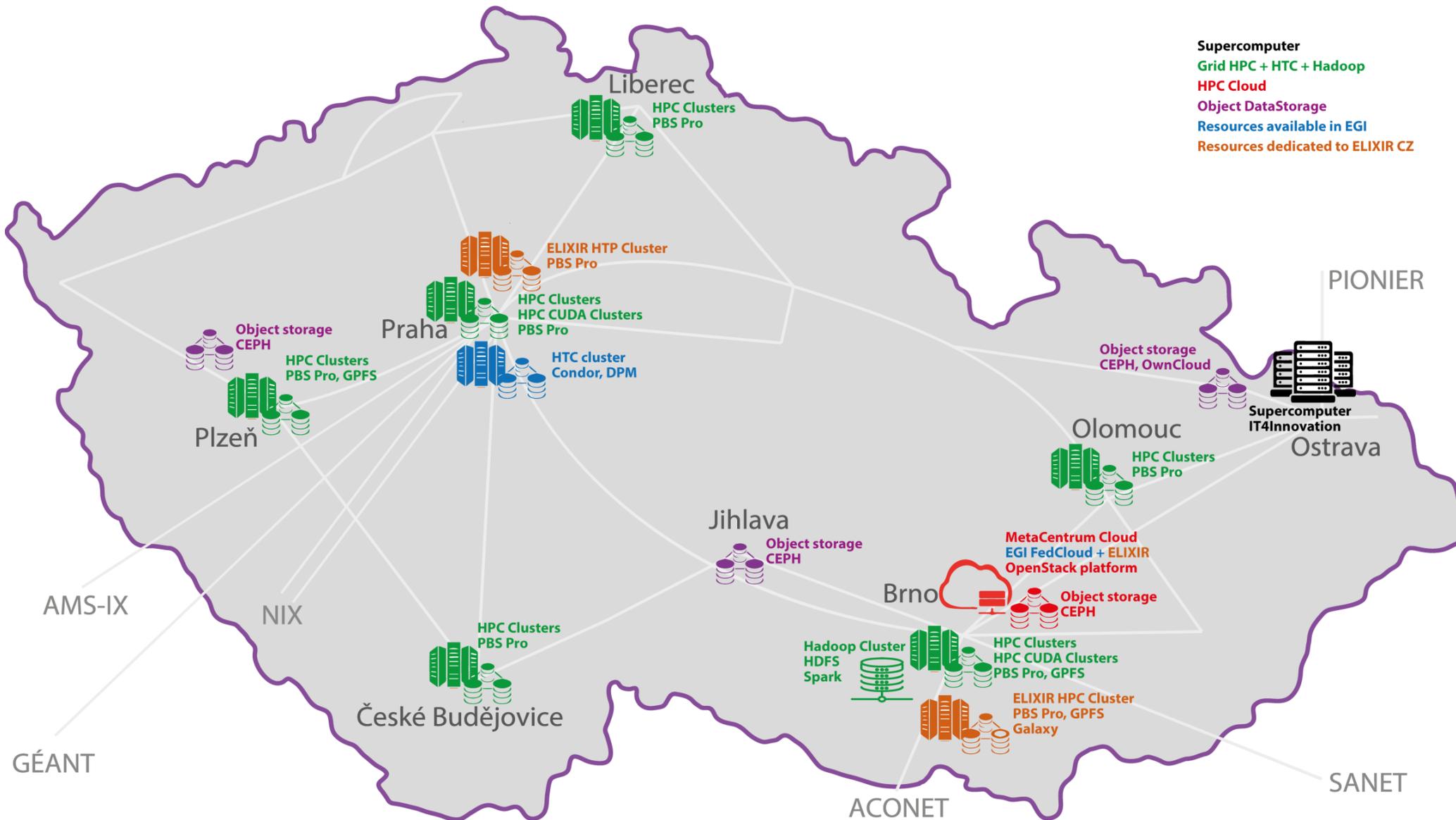
MPLS
VoIP

Metacentrum
DANTE

Internet
Academic network

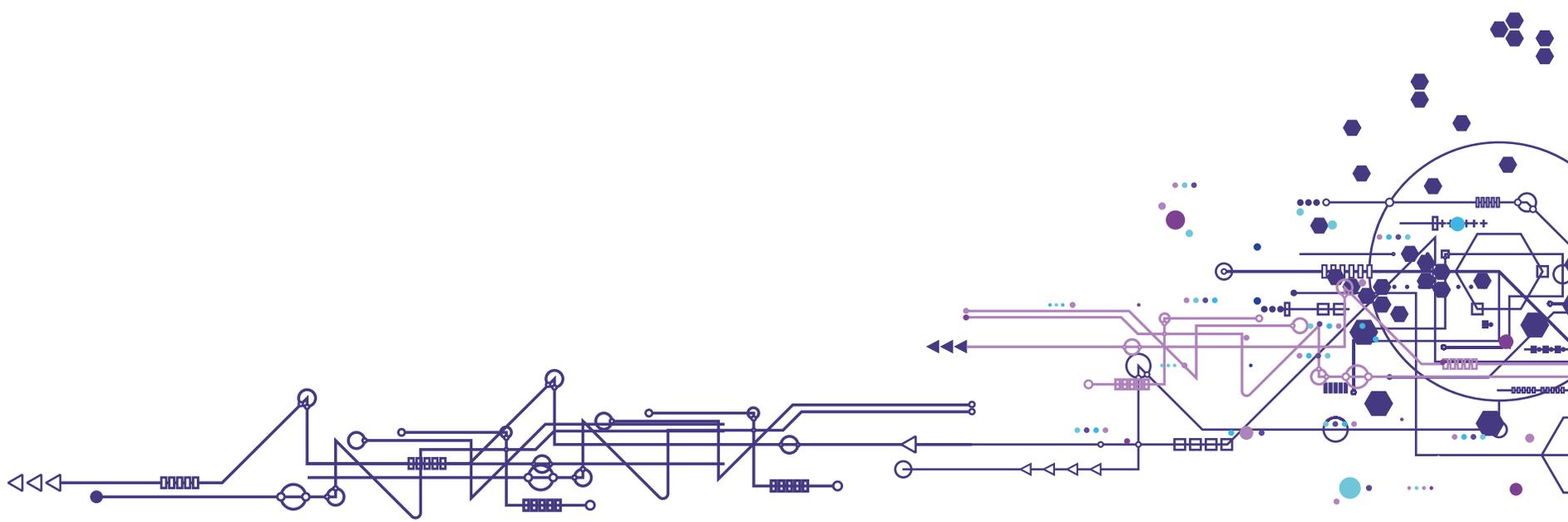


Integrating the resources





RESEARCH AND DEVELOPMENT



Research and Development



Research towards improving the quality of infrastructure and services

- Cybersecurity and monitoring ~ 55+ ongoing projects
- Optical transmission systems
- Network applications, low-latency and high-quality network transmissions
- Scientific computing, data management
- Middleware, AAI, user and resource management

- Laboratories
- Scholarships
- CESNET's Research and innovation fund

- CESNET: 24 prototypes, 24 registered patterns, 22 patents (11 CZ, 7 USA, 4 EU), 4 spin-offs



Research and Development

Supporting specific user needs and communities - finding partnerships

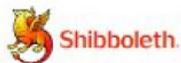
International memberships and cooperation

Future key projects

- Géant (GN5 – Horizon Europe)
- Euro HPC (PRACE)
- Quantum Networking and Computing
- European open science cloud (EOSC)



EuroHPC
Joint Undertaking



e-infrastructure



- Enable open and data driven science
- State-of-the art infrastructure
 - continuous innovation of all services in line with global trends
- Community approach
 - continuous interaction with users on different platforms
 - partnerships and synergies
- Research
 - National and international research projects
- Expertise, consultation and user support





Contact us

info@e-infra.cz

A large, dark blue circle with a thick border, containing the text 'e-infra.cz' in a dark blue font. The circle is surrounded by several curved lines of varying lengths, suggesting motion or a signal path.

e-infra.cz