CONSULTATION · ELIXIR CZ → ELIXIR AUSTRIA

A decade+ of ELIXIR CZ

What a national life-science data node delivers – and why Austria should move from Observer to full Member

Karel Berka, Deputy Head of ELIXIR CZ · 10.11.2026, Vienna

WHY WE ARE HERE

Three questions for today

1

Why a national research infrastructure?

Life-science data outgrow single labs: shared services, stable funding for infrastructure, one national voice.

2

How ELIXIR CZ was built

Founding member since 2013, national funding since 2016, grade A in 2026.

3

What ELIXIR brings to Czechia

1.25 M users worldwide, ~1,300 citations a year, European funding and influence.

WHY A NATIONAL RESEARCH INFRASTRUCTURE?

Infrastructure must outlast grants

Scale

Omics, imaging and AI need compute, storage and expertise beyond any single lab.

Continuity

Tools and databases outlive 3-year projects – stable funding keeps them running.

Sensitive data

Human genomic and health data stay in the country, linked to Europe (FEGA, EHDS).

One national voice

One partner for ELIXIR, EOSC and EU calls; shared login, training and standards.

Projects come and go – infrastructure is what stays and what others can build on.

ELIXIR CZ — Czech National Infrastructure for Biological Data

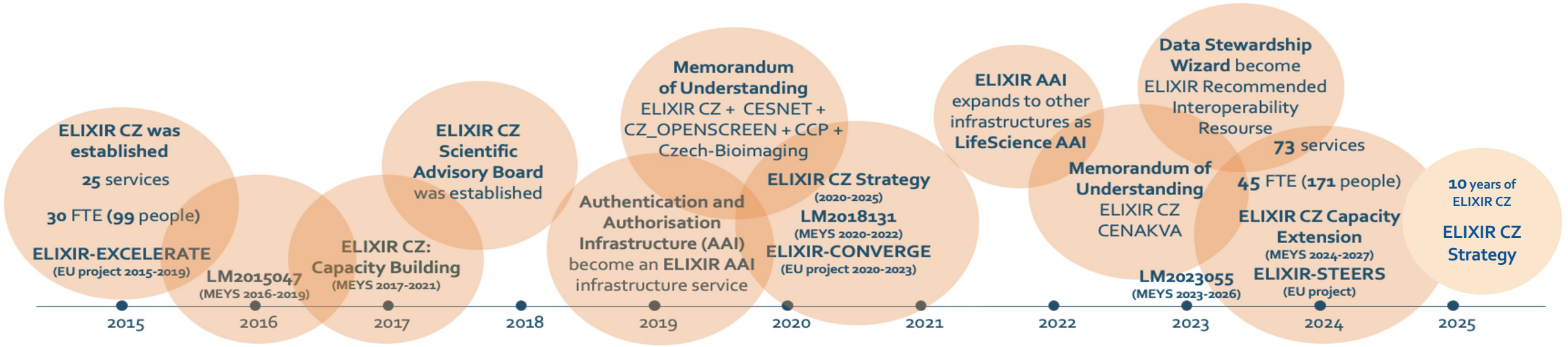
LM2015047+LM2018131+LM2023055 · Large Research Infrastructure timeline

2015
Founded

14
Partner Institutions

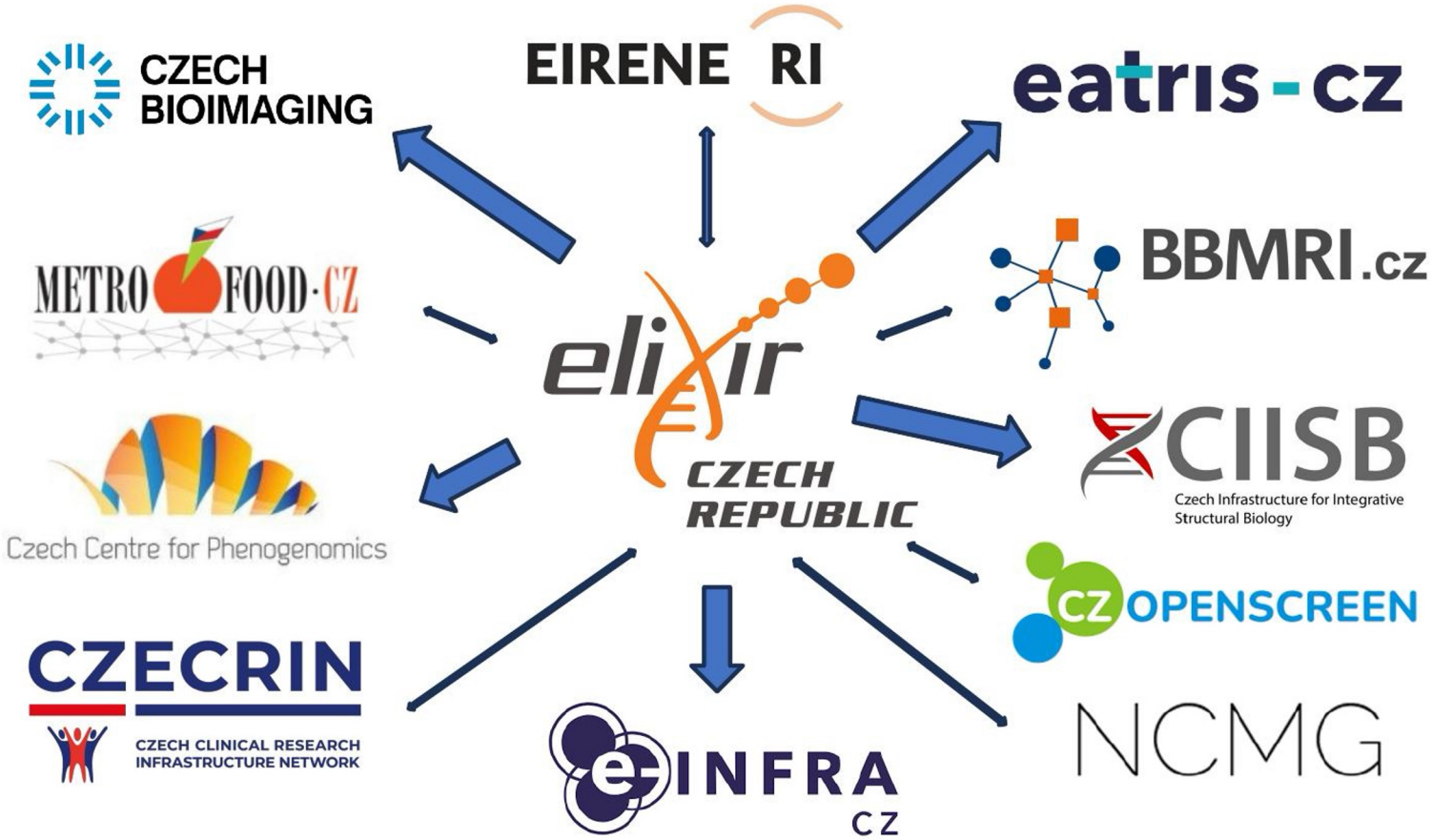
248M CZK
Budget 2023–26

70+
Open-Access Services



Synergies & Complementarities with Czech LRIs

ELIXIR CZ as the data infrastructure backbone for the Czech life science ecosystem with large research infrastructures



EATRIS CZ	FEGA consortium · federated access · joint DMPs
BBMRI CZ	AAI · genomic data (OmiCZ) · OSII sensitive data
Czech-Bioimaging	OS II repository · FAIR metadata standards
CZECRIN / NCMG	Human data management · FEGA partners
CIISB / CZ Openscreen	ERBIOM project · chemical biology · OS II
CPP - Infrafrontier	Phenotype data · OS II
EIRENE RI	SIRENE project · chemical biology (MS)
CENAKVA	Full data management service
e-INFRA	Computational resources · Czech AI Factory · life science expertise

STRUCTURE

One national node, 14 partner institutions

5 CAS institutes · **7** universities · **1** clinical research centre · **1** e-infrastructure

ÚOCHB AV ČR IOCB PRAGUE · IMG · MBÚ · ibt · BIOLOGY CENTRE CAS · CHARLES UNIVERSITY · MUNI · Palacký University Olomouc · FACULTY OF INFORMATION TECHNOLOGY CTU IN PRAGUE · UNIVERSITY OF CHEMISTRY AND TECHNOLOGY PRAGUE · Jihočeská univerzita v Českých Budějovicích University of South Bohemia in České Budějovice · UNIVERSITY OF WEST BOHEMIA · FNUSA ICRC ST. ANNE'S UNIVERSITY HOSPITAL BRNO INTERNATIONAL CLINICAL RESEARCH CENTER · cesnet

Governance

Coordinator: IOCB CAS, Prague

Board: all partners, 3× a year

Node Committee: every two weeks

International Scientific Advisory Board

Head of Node in ELIXIR HoN



elixir CZECH REPUBLIC

Human Resources — Current Structure

Distributed team across 14 consortium partners — no single point of failure

~45 FTE

169 People

14 Partner Institutions

Structural Bioinformatics	*IBT, MUNI, IOCB, ICRC, UP, CU*
Chemical Biology	*IOCB, CU, UP, MUNI, ICRC, UWB*
Genomics	*IMIC, CESNET, IMG, BC, MUNI*
Human Data	*MUNI, CU, IOCB, UP, UWB, IMG*
Data Management & FAIR	*CTU, MUNI, IOCB, CU*
AI/ML & Emerging Methods	*MUNI, CU, UWB, IOCB, UCT*
Tools & Training	*USB, IMG, UCT, UP*

4 Strengthening Scientific Focus Areas

3 Cross-field Capacities Supporting All Domains

FUNDING

Stable national core, leveraged with EU funds

≈ €20 M

CZK 491 M from MEYS, 2016–2026

2016–19: CZK 118 M · 12 partners
2020–22: CZK 147 M · 14 partners
2023–26: CZK 226 M · 14 partners

Large research infrastructure on the national Roadmap

Additional sources it unlocked: ≈ €24 M

Infrastructure grants

≈ €15.2 M

ERDF 2017–21: ≈ €2.7 M · 6 partners
OP JAK 2024–27: ≈ €3.8 M · 3 partners
EOSC CZ (NRP + OS II BHF): ≈ €8.7 M est.

Bilateral grants

≈ €4.1 M

Interreg CZ–AT 2016–19: ≈ €1.3 M
IMPACT 2026–28: ≈ €2.8 M · 9 partners

Horizon & Digital Europe

≈ €2.2 M · partners CZ/all

EXCELERATE 2015–19: ≈ €0.8 M · 3/53
EOSC-Life 2019–23: ≈ €0.2 M · 1/69
CONVERGE 2020–23: ≈ €0.2 M · 4/58
STEERS 2024–27: ≈ €0.1 M · 1/35
REWIRE 2026–29: ≈ €0.2 M · 2/12
1+MG (3 projects): ≈ €0.6 M est.

ELIXIR consortium support

≈ €2.1 M (estimate)

€0.7 M in 2025
Commision services
- LS Login (MU with CSC),
- Data Stewardship Wizard,
ELIXIR Staff Exchange
ELIXIR Programme support calls (INTOXICOM)

ELIXIR CZ for ELIXIR Austria · 6 · Sources: STARFOS (LM, EF16, EH23 projects); CORDIS; elixir-czech.cz; uochb.cz; elixir-europe.org.
EUR at ≈ 25 CZK.

elixir CZECH REPUBLIC

SERVICES

~75 open services, built on national strengths

Structural bioinformatics

MoIA

CAVER WEB

P2RANK

ChannelsDB 2.0

MOLEonline

Protein engineering

FIREPROT

HOTSPOT WIZARD

PREDICTSNP

ENZYME MINER

Genomics & biodiversity





GlobalFungi

mt AmtDB

Chemistry & data

DSW

MolMeDB

HDSM



elixir CZECH REPUBLIC

CONTRIBUTIONS TO EUROPE

Czech services used across ELIXIR and beyond

LS LOGIN

Single sign-on for hundreds of services; built with ELIXIR Finland on Perun (CESNET). ELIXIR infrastructure service since 2025.

DSW

FAIR data management plans, built with ELIXIR Netherlands; recommended in the Horizon Europe Programme Guide.

MoI*

3D structure viewer co-developed with PDBe and RCSB PDB; the standard viewer of the Protein Data Bank and AlphaFold DB.

Compute and storage

e-INFRA CZ (CESNET, CERIT-SC, MetaCentrum) CPU/GPU for life sciences, local AI agents for research; Bioconda/BioContainers mirror.

elixir CZECH REPUBLIC

USAGE

Impact in numbers

36k

Czech users in 2024 – 3× more than in 2020 (12.1k)

1.25 M

worldwide users of ELIXIR CZ services in 2024 (54.7k in 2016)

~75

open tools, databases and interoperability services

~1,300

citations of ELIXIR CZ services per year and growing

28

training workshops per year

Most users are international – national investment buys European visibility. A shared, standardised user-counting method makes impact reportable.

Next: trusted human data and AI adoption

Four scientific domains

Structural bioinformatics – AI prediction

Chemical biology – linked data, ligands

Genomics – FAIR databases, multi-omics

Human data – sensitive-data services

Three cross-cutting pillars

Data management – FAIR, AAI, smart DMPs

AI/ML – national AI Factory and GPUs

Tools & training – training for every service

Priority: Czech Omics Node (OmiCZ), a national Federated EGA node and trusted research environments for federated analysis of sensitive data.

THE RETURN ON MEMBERSHIP

What membership in ELIXIR gave the Czech Republic

A seat at the table

A vote on the ELIXIR Board; a voice in European standards and priorities.

European funding

Commissioned services, internal calls (€705 k in 2025) and Horizon Europe consortia.

Visibility

National tools become European services, used far beyond Czech users.

Regulatory readiness

FAIR mandates, EOSC and the European Health Data Space need national data nodes.

National coordination

One portal, one login, one training offer – less duplication and more cooperation between institutions.

Skills and talent

Access to ELIXIR training (TeSS, Train-the-Trainer) and staff exchanges.

AUSTRIA TODAY

Foundations in place – what could ELIXIR AT offer?

Austria today

- Observer since April 2023
- Lead: Uni Vienna (T. Rattei)
- 7 more partners incl. MedUni, BOKU
- ELIXIR-STEERS beneficiary
- Interreg link with Czechia

Already in place

- LiSC: 3,500+ cores, ~1.5 PB
- Data stewards, RDM training
- Focus: services, training, data

Natural first services

- Open compute via LS Login
- Data-stewardship helpdesk (DSW)
- Training listed in TeSS
- Human data with MedUni & GÖG

Observer status is a **preparation stage** – votes, node status and ELIXIR funding come with membership.
For discussion: which 3–4 services first?

LESSONS LEARNED

Six lessons from ten years of ELIXIR CZ

1 **Secure multi-year national funding** via the research-infrastructure roadmap – it unlocks everything else.

2 **Sign a consortium agreement early:** clear governance and one voice towards ELIXIR.

3 **Build on existing e-infrastructure** (in Austria: VSC, ACOnet) instead of new hardware.

4 **Focus on national strengths;** let services grow from excellent research groups.

5 **Count users and impact from day one** – it is what evaluations ask for.

6 **Invest in data stewardship and human data** – demand grows fastest there.

THANK YOU

Let’s build ELIXIR Austria together

We can help: twinning, governance and user-counting templates, joint projects and shared training.

Questions and discussion

Karel Berka, karel.berka@upol.cz