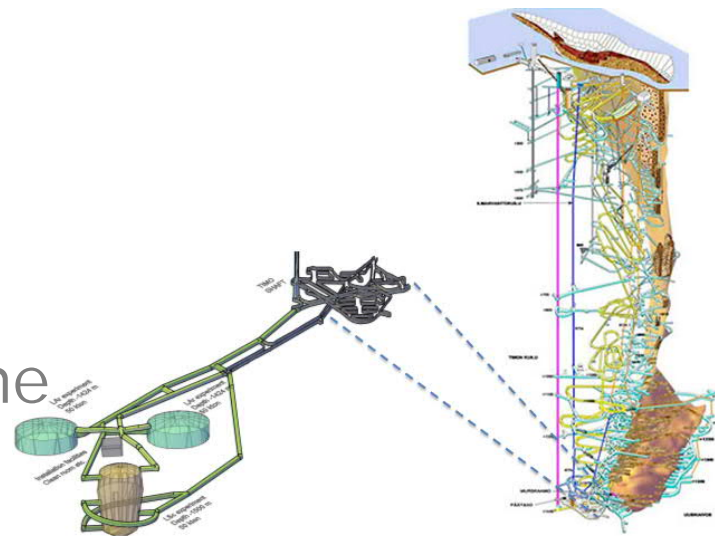


LAGUNA

The status of Pyhäsalmi Mine

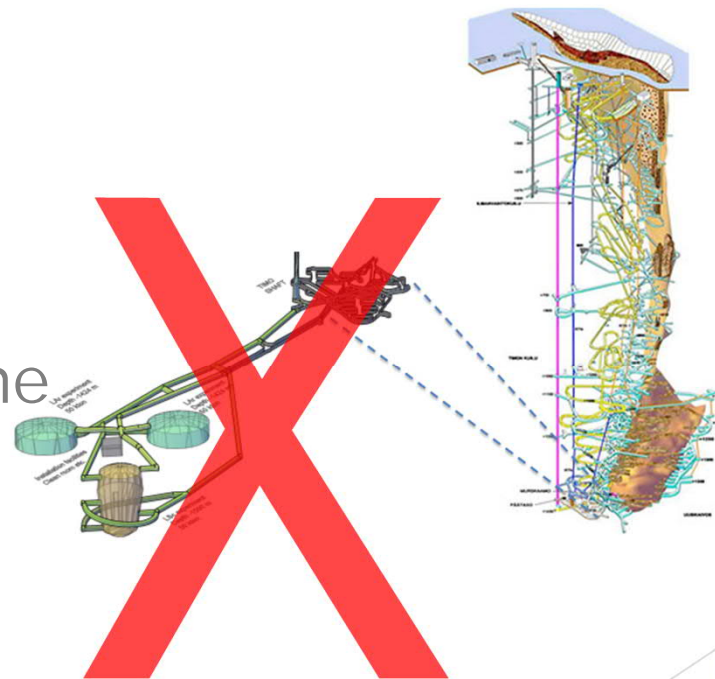
Jari Joutsenvaara,

Particle Physics Days 7/11/2019



Life after LAGUNA

The status of Pyhäsalmi Mine





Unique Underground Research Infrastructure
in Pyhäsalmi, Finland

CALLIO LAB

From single science to multidisciplinary

CALLIO LAB

Callio Lab is a unique underground research environment in Pyhäsalmi, Finland.

It is one of the corner stones of CALLIO – mine for business. The aim of CALLIO Business Concept is to be economically feasible environment for all activities.

Some facts about Callio Lab (former CUPP)

- Callio Lab is steered by the University of Oulu
- Good understanding of overall geological structures & characteristics of measuring halls
- Growing network
- New research initiatives

Jari Joutsenvaara, University of Oulu, Callio Lab, Particle Physics Days 7.11.2019



✓ On-going

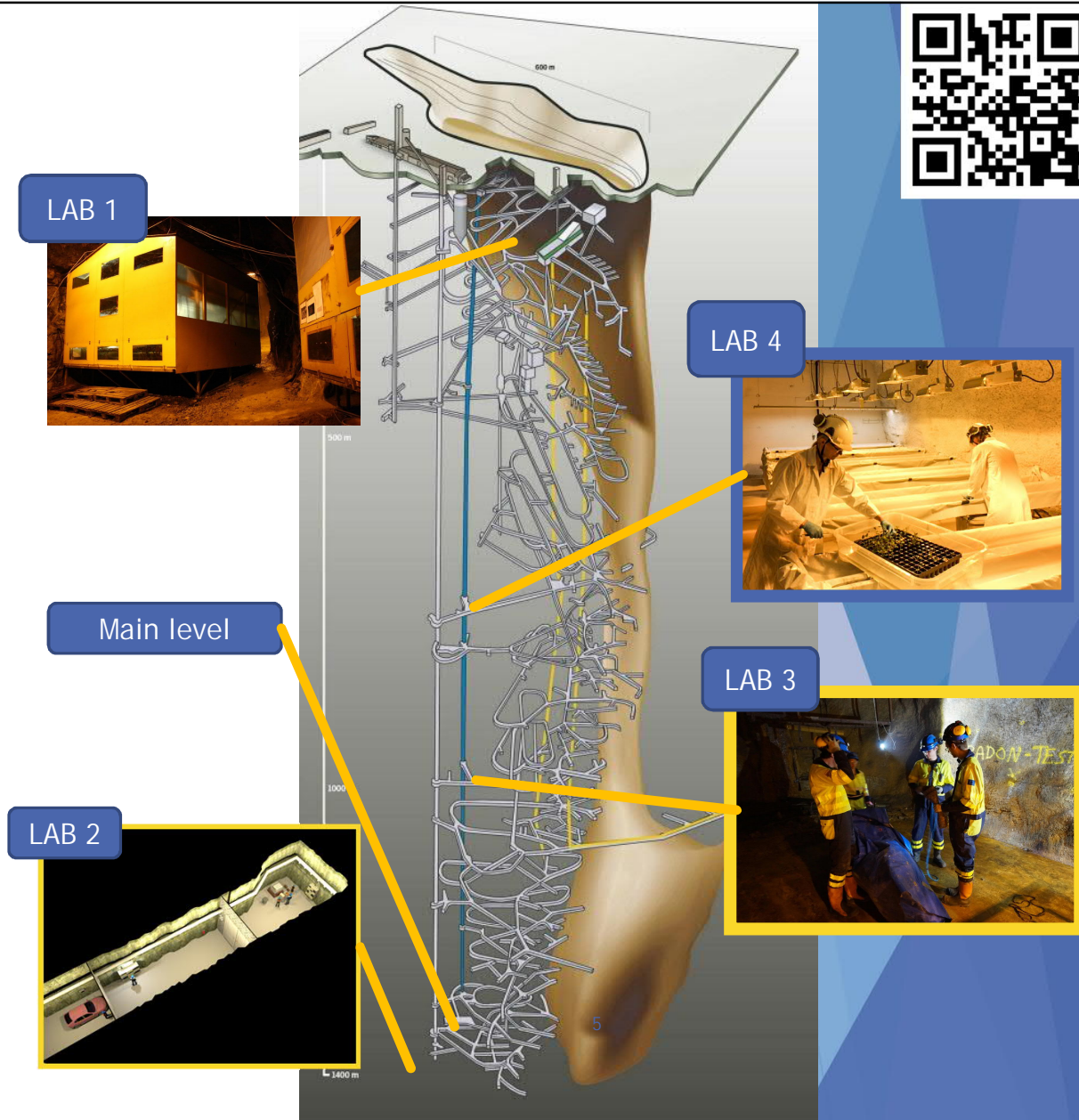
✓ Feasibility study

✓ Design study

CALLIO LAB

Existing underground multidisciplinary research environments

- Physics: LAB 1, Main level
- Biology and food production: LAB 2, LAB 4
- Underground information modelling: LAB 3
- Occupational health (iLighting): Main Level
- Geology and hydrogeology studies: LAB 2
- MINETRAIN: all over the mine
- Microseismic network: all over the mine

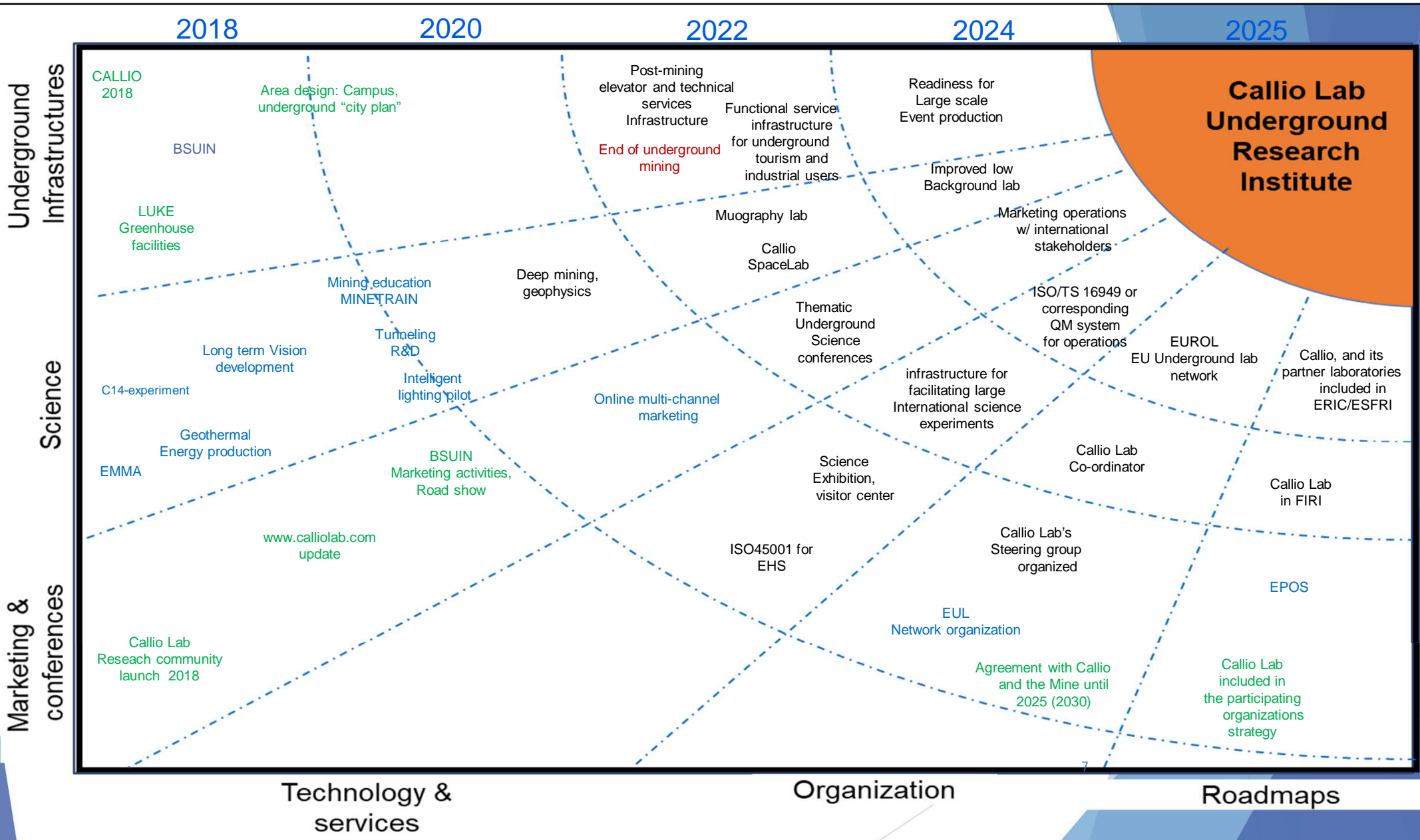


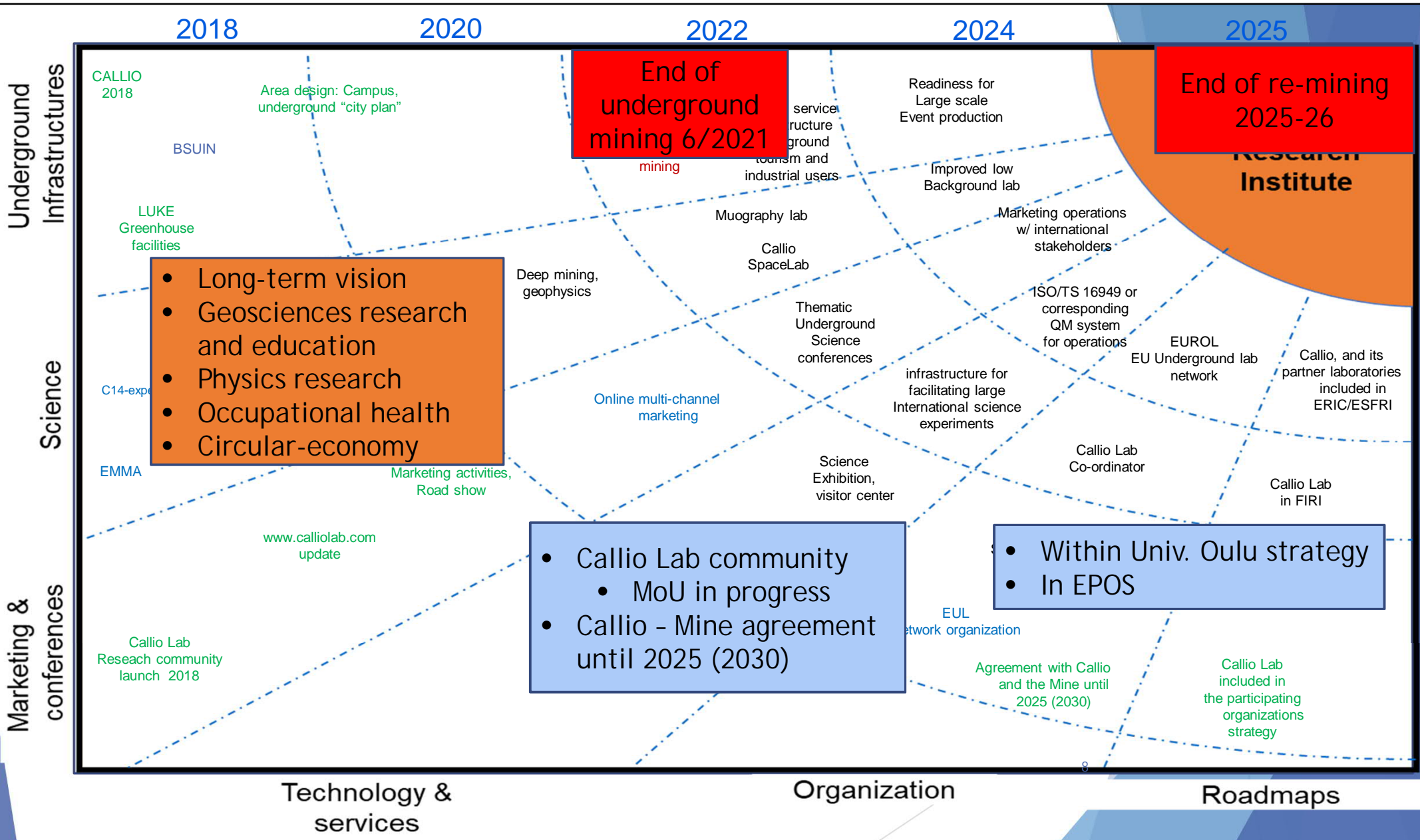
CALLIO LAB Vision for 2025

Callio Lab 2025 =

Organisation dedicated to underground science and facilitating research, which requires underground conditions

- ▶ Multidisciplinary knowledge center for conducting research in underground facilities
- ▶ Callio in the Pyhäsalmi mine is the unique research tool in Finland for underground science
- ▶ Callio Lab is included in Finnish research infrastructure roadmaps
- ▶ Callio Lab participates in several networks of research infrastructure and is in the European roadmaps
 - ▶ DULIA
 - ▶ EPOS
 - ▶ BSUIN → EUL
 - ▶ EUROL





Conclusions

- ▶ Underground research is one of the corner stones of Callio
- ▶ Callio Lab underground research community getting bigger
- ▶ Callio agreement ensures the projects at least until 2025 (2030)
- ▶ Activities of Callio in transition from project-based to more permanent → more security also for research
- ▶ Researcher can benefit from the existing mine sensor networks and data

Underground science has a future at Pyhäsalmi Mine!

Thank you
for listening!





CALLIO

SPACE LAB

Initiative