Belnet

Connecting communities

Lisa Van Loo

20/03/2025 – Workshop BTFS

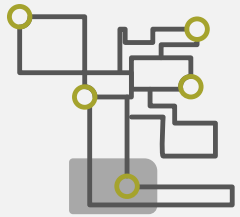
Belnet is the ideal network for research and education

Advanced technology for gigantic data flows

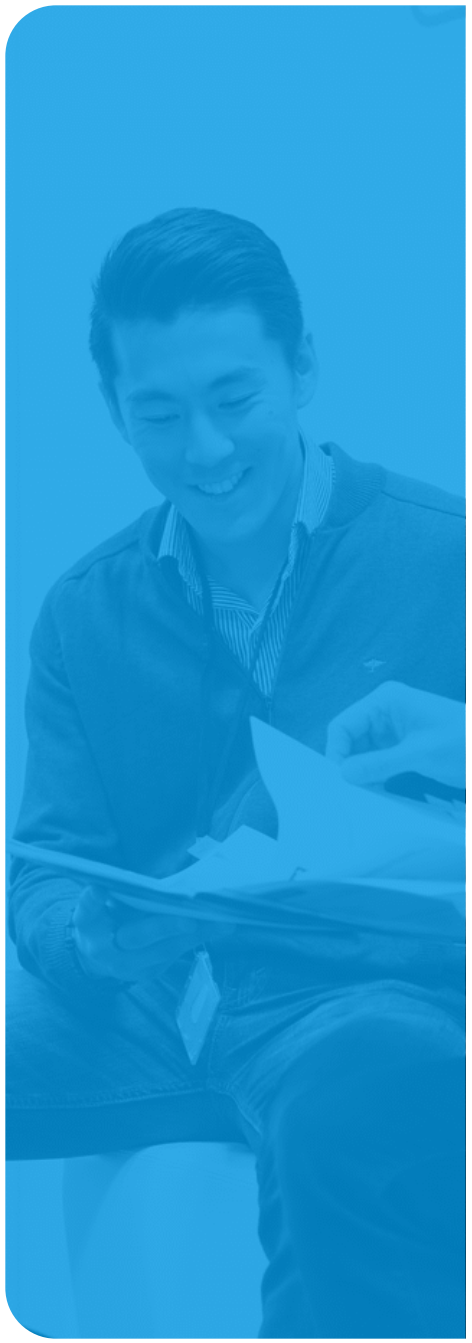
100 Gbit/s and multiples

Security by design

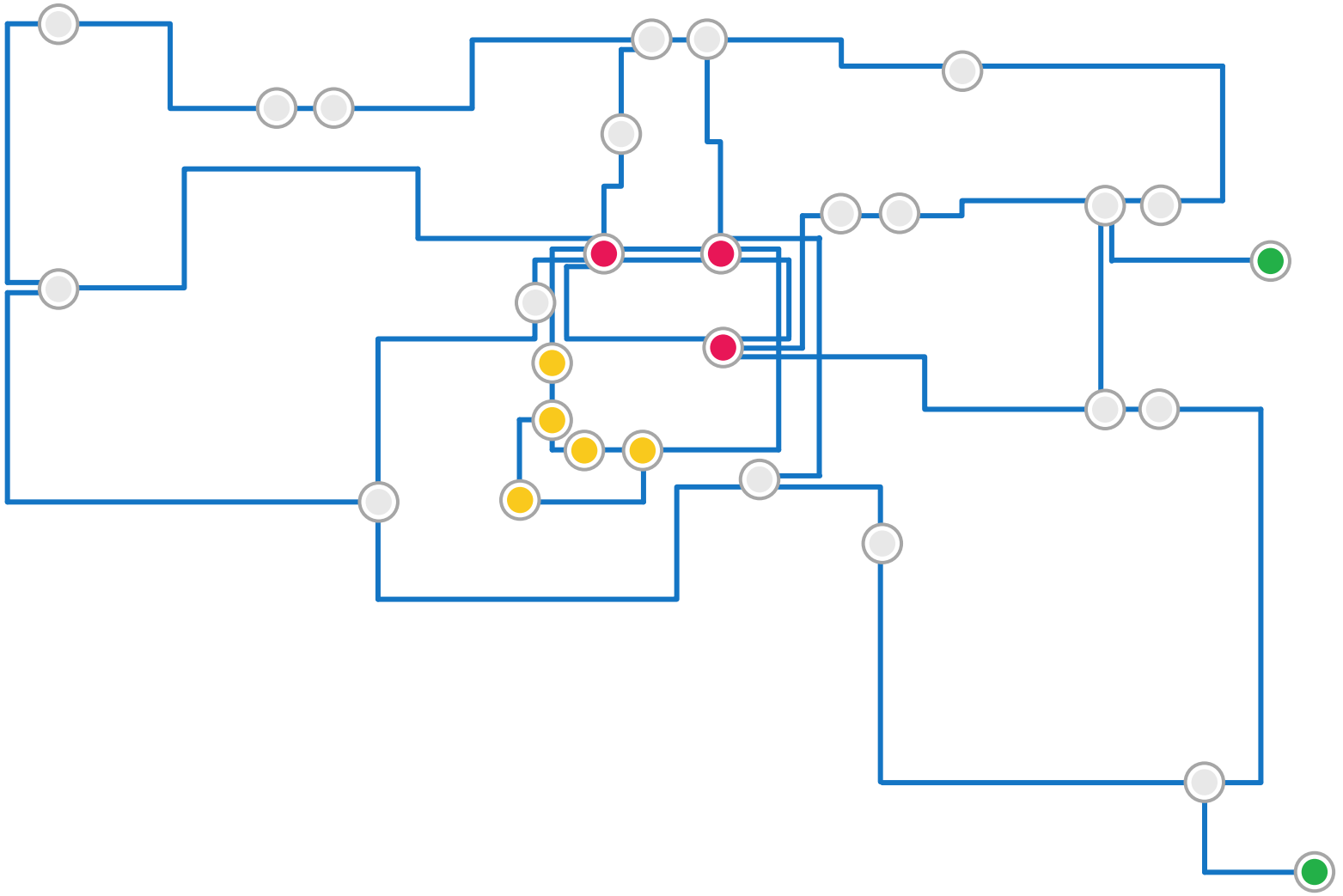
Unique added value services



Connected to GÉANT



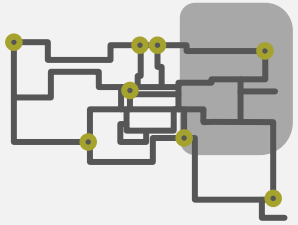
Connect via Points of Presence



Key figures

90%
Average customer satisfaction

+300
Connected organisations



28
Points of Presence

+60
BNIX participants

74
Employees

Communities

- Higher education
- Research
- Government
- Art & Culture
- Hospitals
- BNIX

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Project Boosted from a Belnet perspective

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Innovation

- Introducing new technologies into Belnet infrastructure
- Support our communities in innovation
- Participation in international innovation projects

Our expertise in internet networks

- Transporting data traffic over longer distances, (inter-)nationally
- Connecting different organisations to support cooperation

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Project planning

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Update March 2025:

- Testing succesfully completed: time signals compatible with normal data traffic

Next steps:

- Finalizing the topology
- Preparation of implementation

Attenuation
Packet loss
Compatibility with existing infrastructure

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Current plan for national network

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The BOOSTED network

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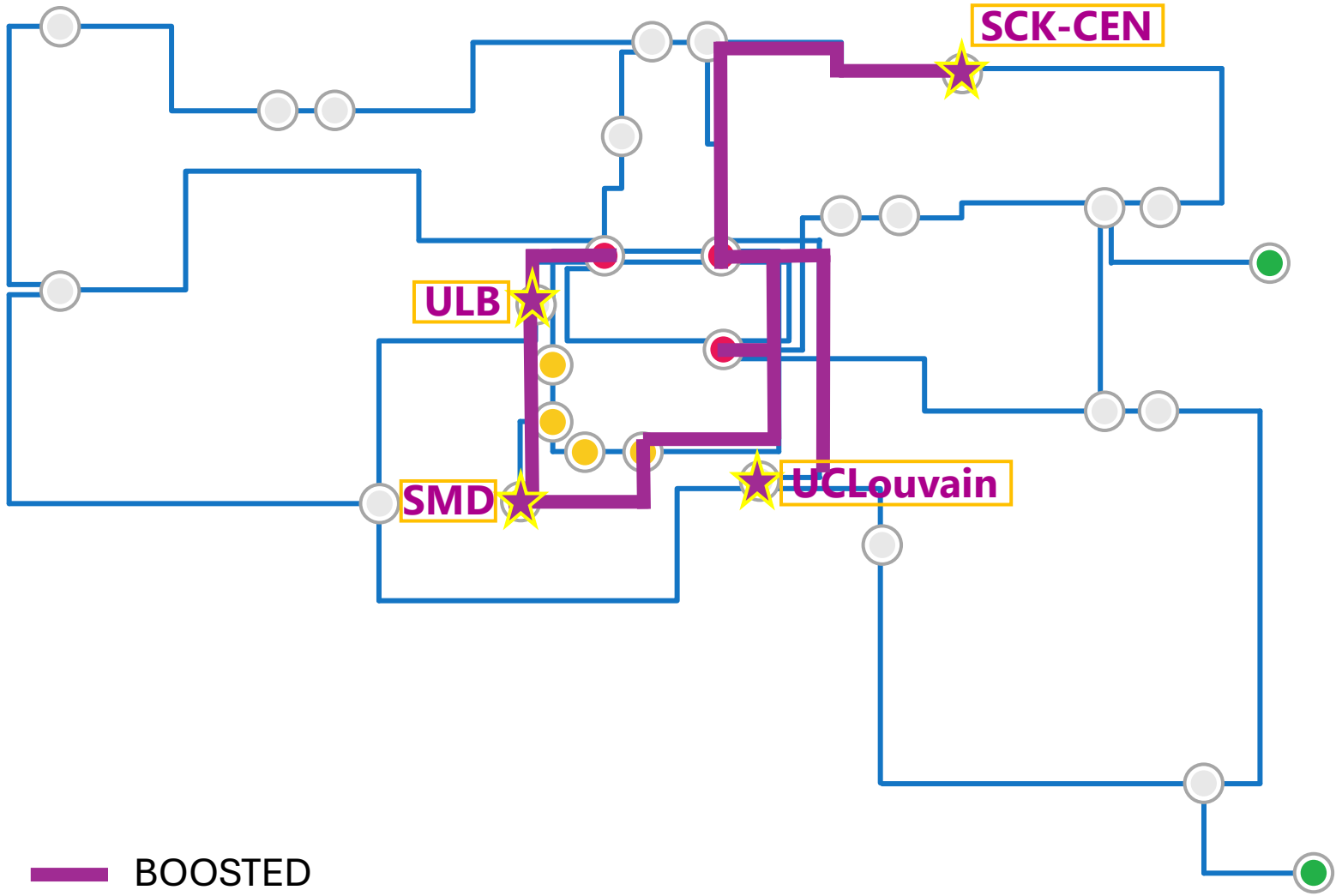

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Filtering mechanism

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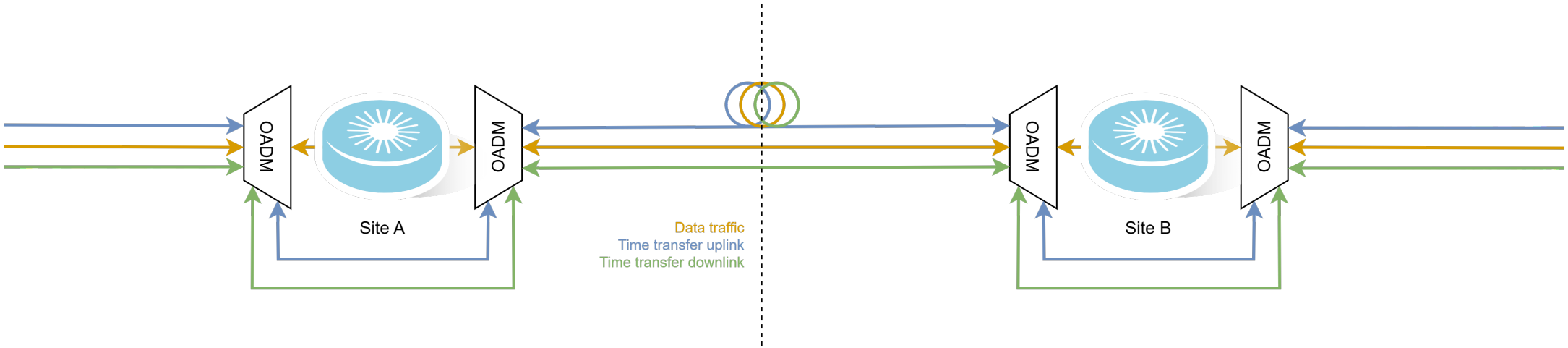

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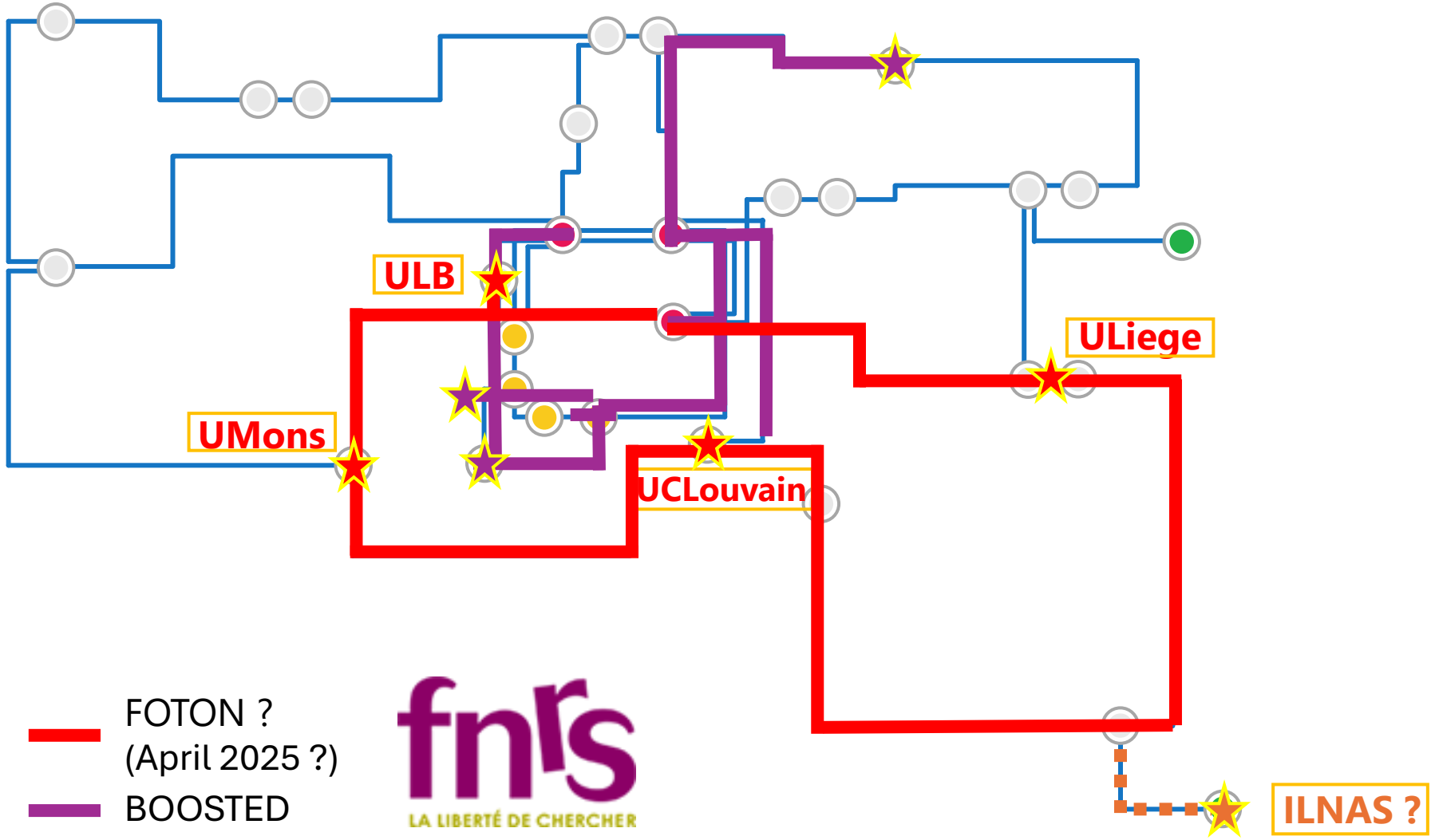
Expected extensions for national network

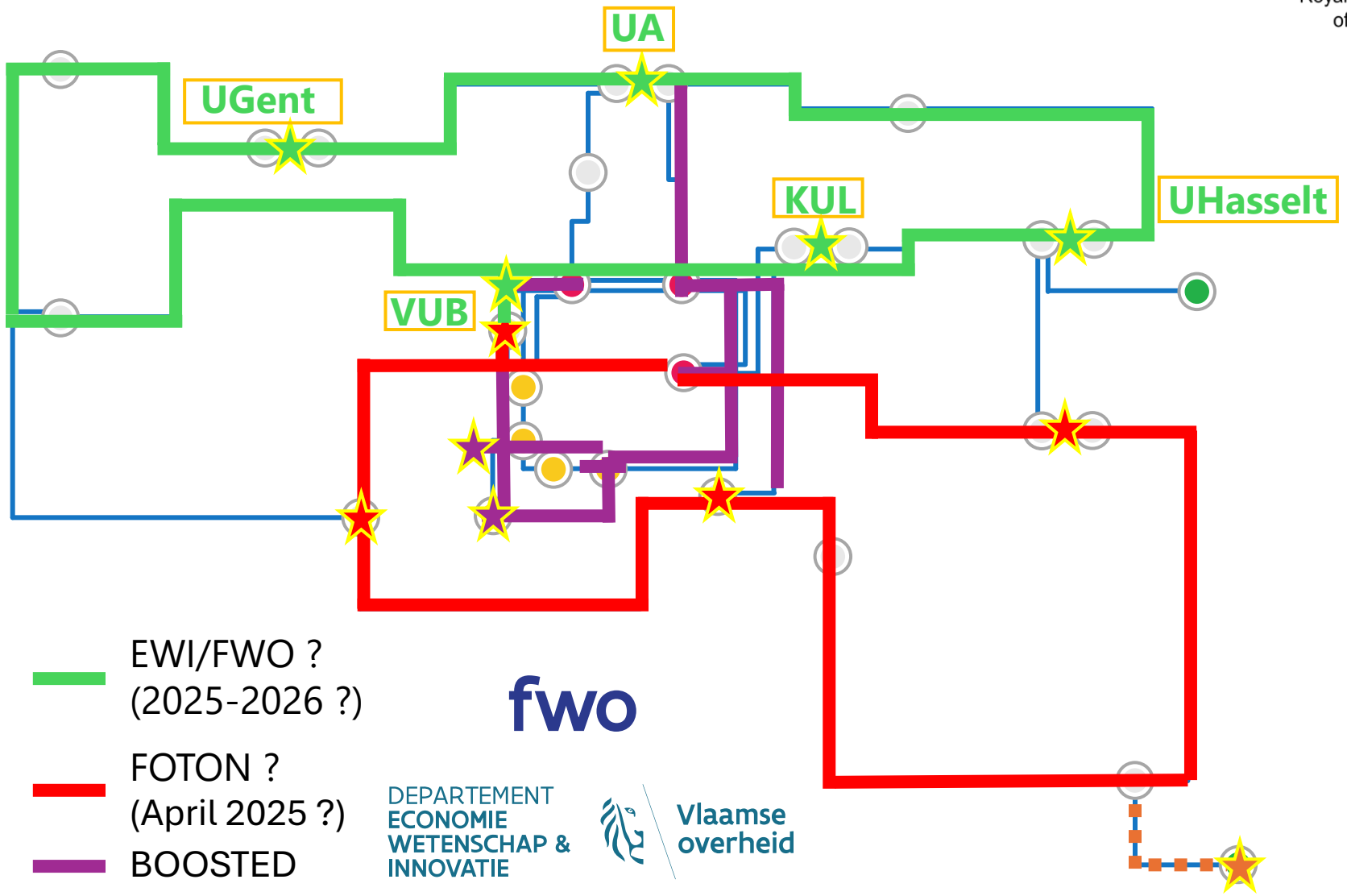
R&E side

The (FOTON) network (*)



(*) shown topology is work in progress

The EWI/FWO network (*)



(*) shown topology is work in progress

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Expected national network

Commercial side

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Road towards sustainability

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- Project financing ends in **2026**
- Current status: feasibility check
- Main current activity: gathering requirements
- Goals:
    1. Developing a sustainable product
    2. Partnership ROB & Belnet
    3. Expandable in the future
    4. Compatibility with future technologies
    5. Looking for alternative funding

*Partnership BIPT: As a **neutral** party, provide time to telecom operators & other critical infrastructures*

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Georedundant Network set-up (*)

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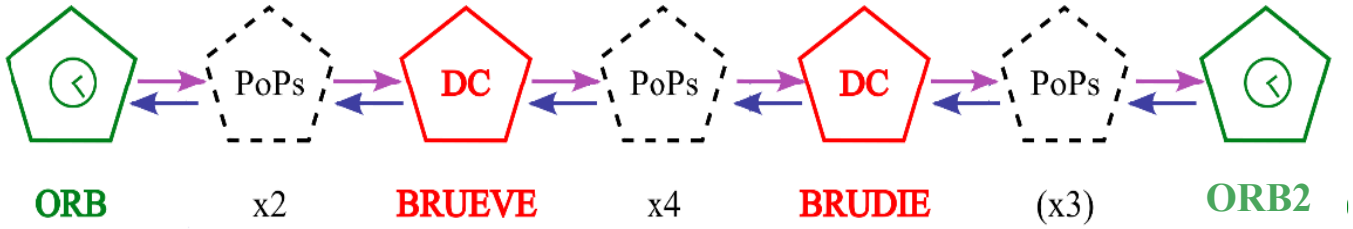

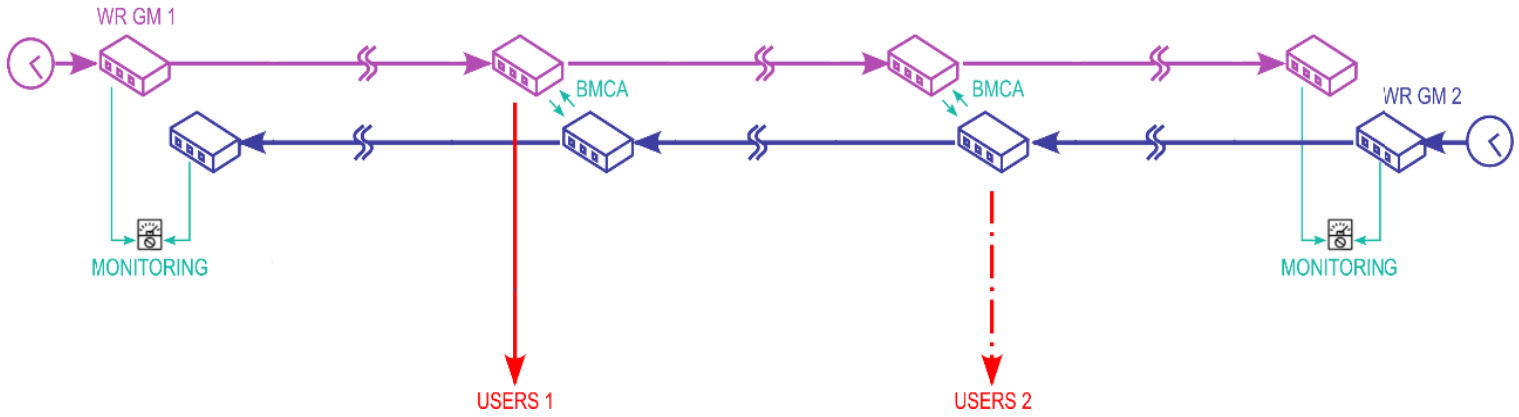

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Example use cases

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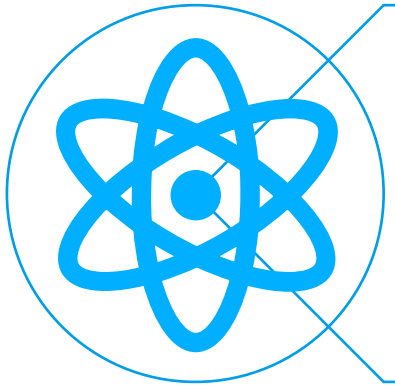

Research & Education

- Seismology
- Photonics
- Quantum (QKD) & cryptography
- Detection of dark matter
- Effects linked to climate change
- …

Non-scientific

- Trading (banks)
- Telecommunications (5G)
- Energy (SmartGrid)
- Transport (PNT, autonomous vehicles)
- …

ROB & BELNET: an ideal partnership

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ROB

- Supplier of Belgian UTC
- R&E community
- European NMI's

Belnet

- Neutral service provider
- NREN
- Geant