

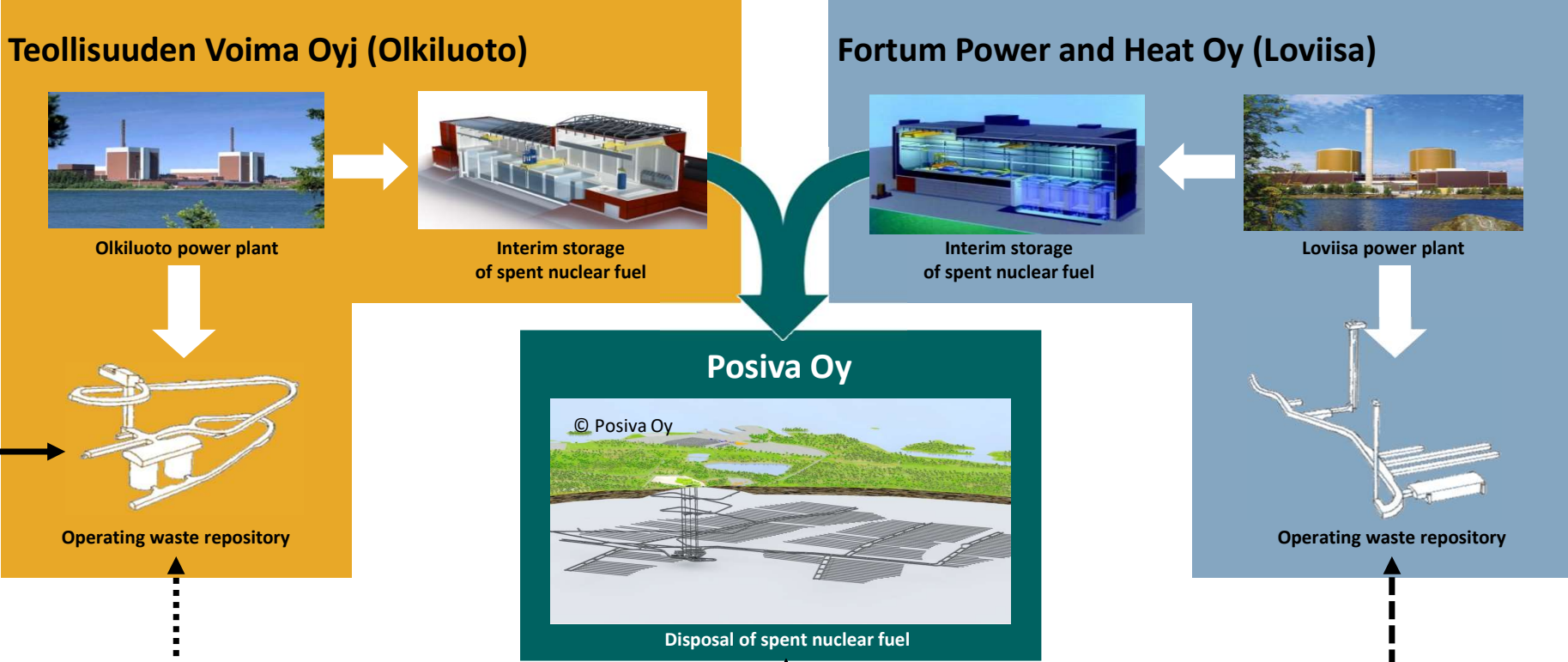


The Finnish approach for maintaining adequate sectorial skills and resources

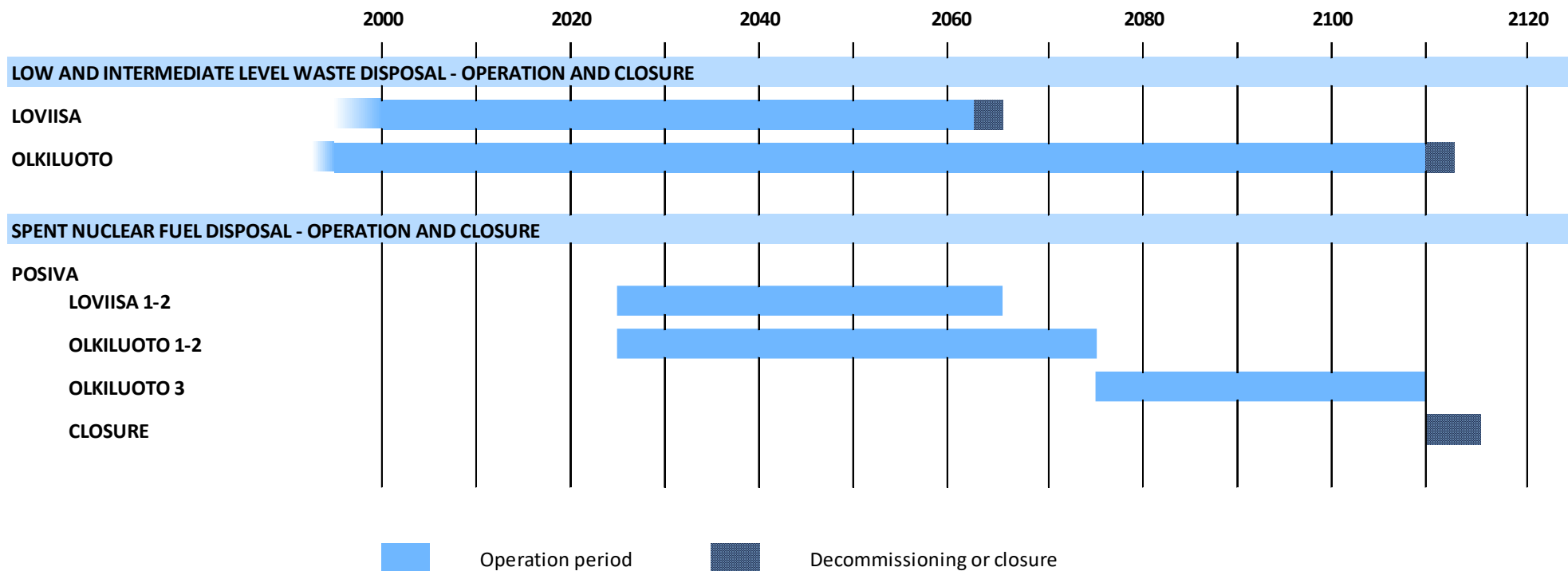
Director Jussi Heinonen

Twitter @jheinonen

Radioactive waste management and disposal in Finland



Development and operation of disposal facilities



Disposal facility lifetime and competence needs (example spent fuel repository)



Late 1970' → 2000 Decision-in-Principle 2000 → 2015 Construction license 2015 → 2024 Operating license 2024 → 21..

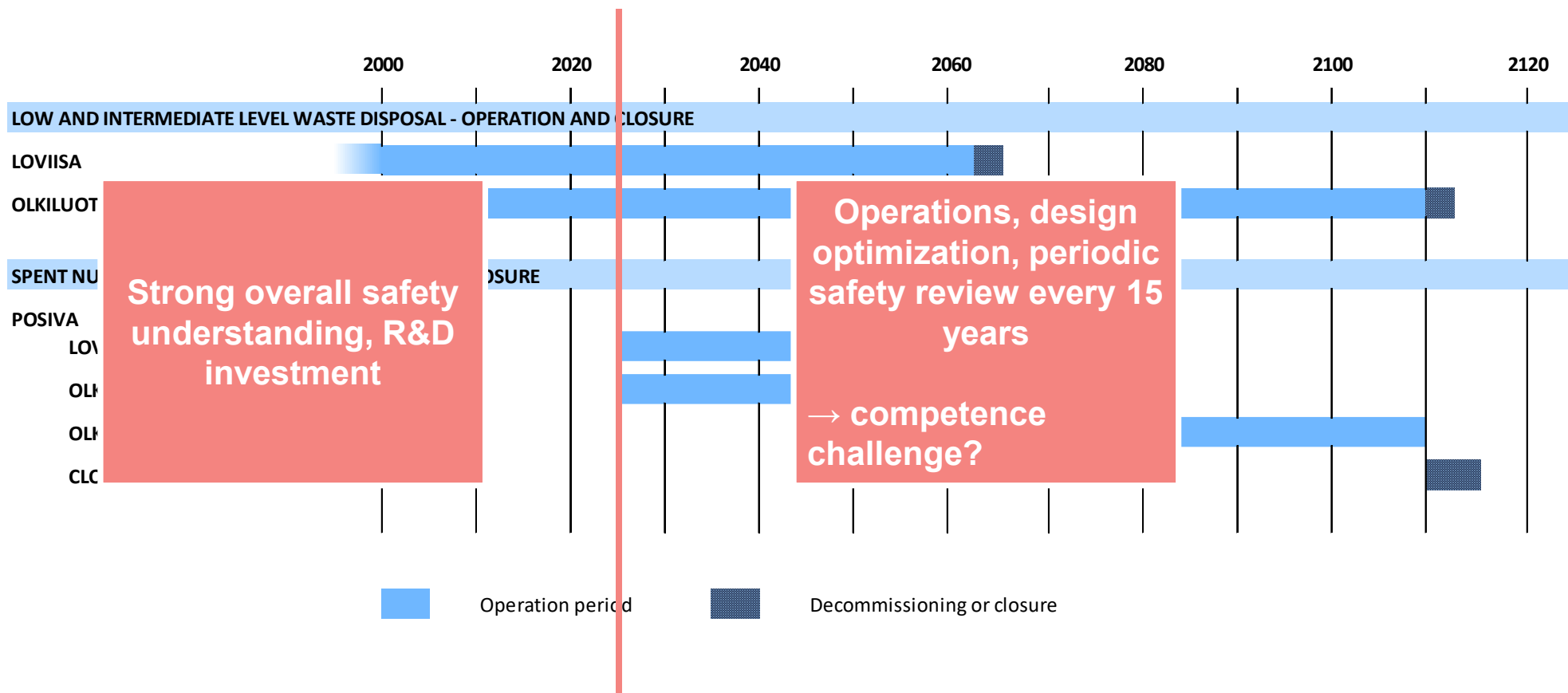
- Waste management strategy
- Concept understanding
- Site characterisation
- Overall safety performance

- ...
- Facility design
- Rock engineering
- Barrier performance
- Site monitoring
- Comprehensive safety assessment
- ...

- ...
- operational safety aspects
- Facility construction
- Component fabrication
- Supply chain management
-

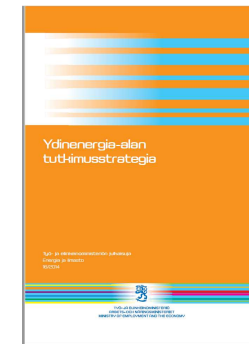
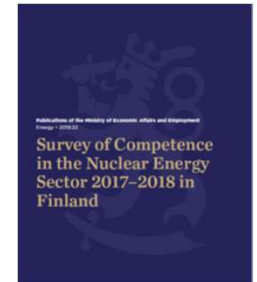
- ...
- Operations
- Transport
- Radiation safety
- ...

Development and operation of disposal facilities

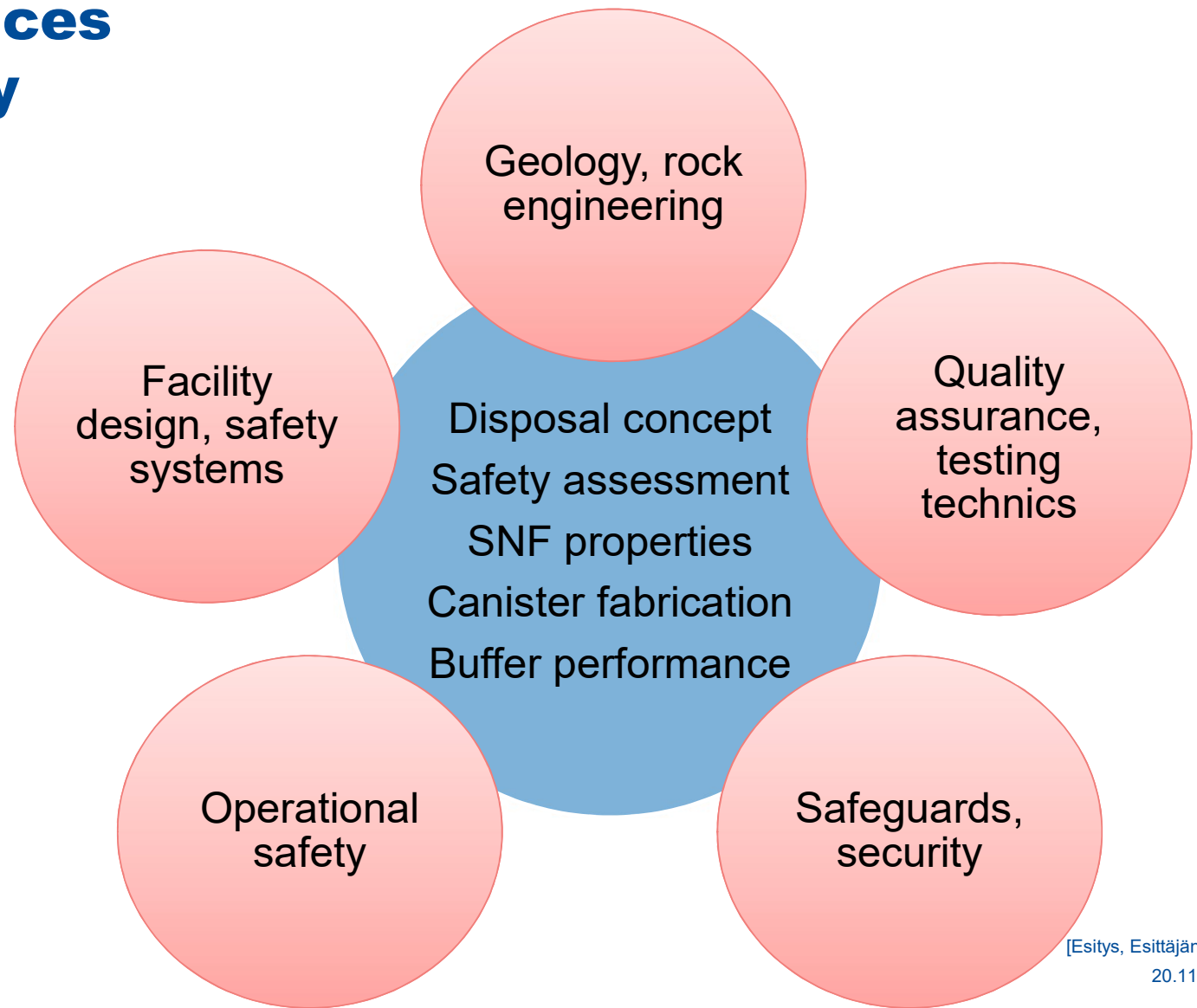


Evaluation of national competences

- Nuclear energy sector competence survey (2010 and 2019)
 - Estimation of sector personnel needs 2020, 2025 and 2030
- Nuclear sector research strategy (2014)
 - Evaluation of radioactive waste disposal competence needs
 - Identification of critical competences
- National Cooperation Group on Nuclear Waste Management (2019)
 - National and international aspects for maintaining competences



Critical competences for disposal safety (example)



Maintaining competences

- Organisational responsibilities:
 - Licensees have their responsibility to have adequate resources and competences
 - Regulator is responsible to maintain its own competences and ability to regulate
 - Government has responsibility to ensure education
- R&D for maintaining skilled resources
 - Licensee's R&D efforts
 - National waste management research (KYT)
 - STUK's radiation safety research
 - EU framework research activities
- National and international co-operation needed for maintaining critical resources

