Posiva RD&D perspective

Posiva Programme stage

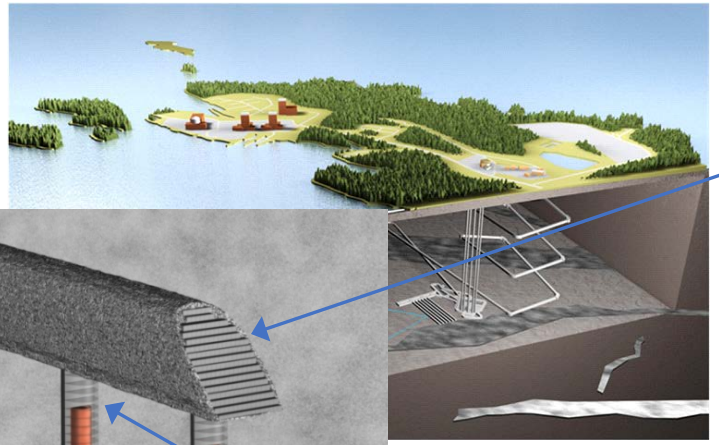
- Posiva has received the **construction license November 2015** (for spent nuclear fuel repository)
- Currently Posiva is **testing the full scale EBS emplacement** with early evolution and constructing the canister shaft
- Posiva is preparing to **start** the **construction of the encapsulation plant and final disposal facility** (central and deposition tunnels)
- **FSAR** is currently being compiled
- The next phase is to submit the **operating license application**
- The prototype vehicles and installation machines will be updated to the final ones

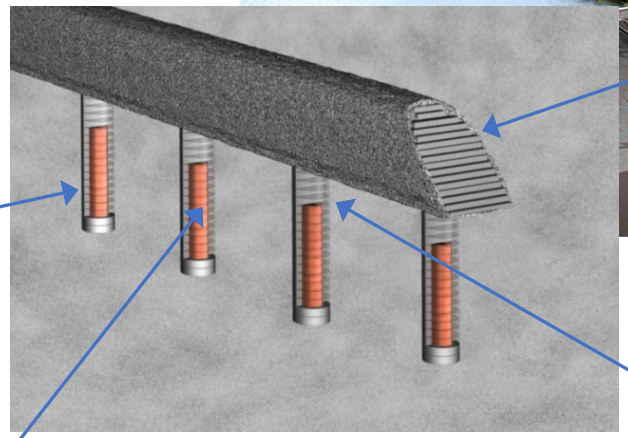
POSIVA

Highest RD&D priorities/topics

- Optimisation work for copper/cast iron canister in 2022-2030
- Mechanical excavation of repository in the crystalline host rock in 2020-2026
- Design and construction of the first generation of operational phase installation machinery in 2019-2024
- Verifying with tests and models the granular backfill and updates in performance assessment 2019-2024
- Detailed site confirmation scenarios and model development: ex earthquakes

Prototype machinery developed (FISST)





EBS installation with canister, buffer and backfill

Drivers of the RD&D priorities/topics

- Main part of the R&D topics require **update of some requirements** and design and some relevant background analysis for updating the specifications
- **Optimisation** (industrialisation and practical work implementation) is the main driver, while the operating phase is long (over 80 years) and the efficiency and robustness of the system are needed
- The **operating license needs updates** approximately every 15 years, and this requires the safety case update

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