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
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