



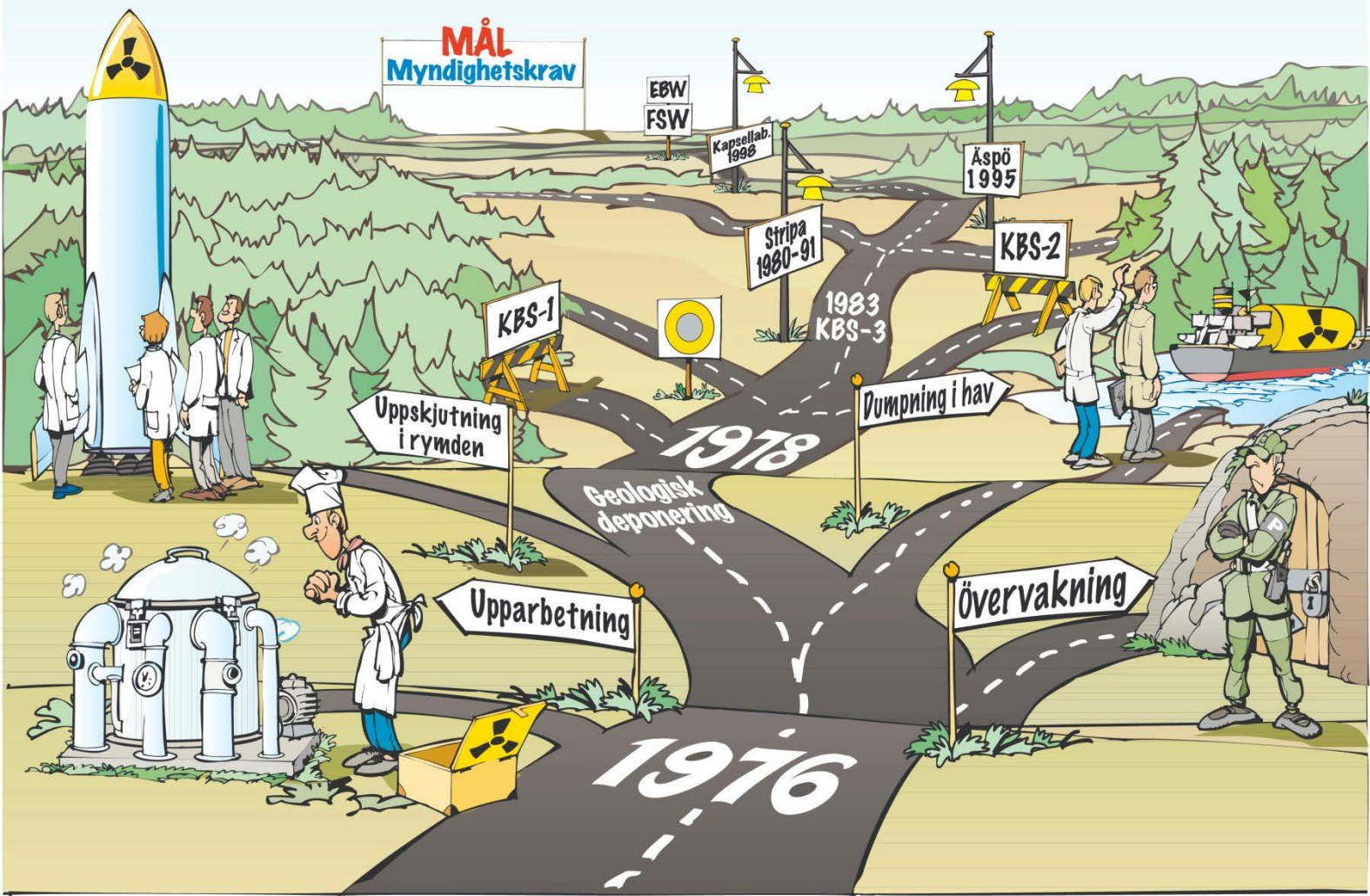
Production of bentonite components and operational issues

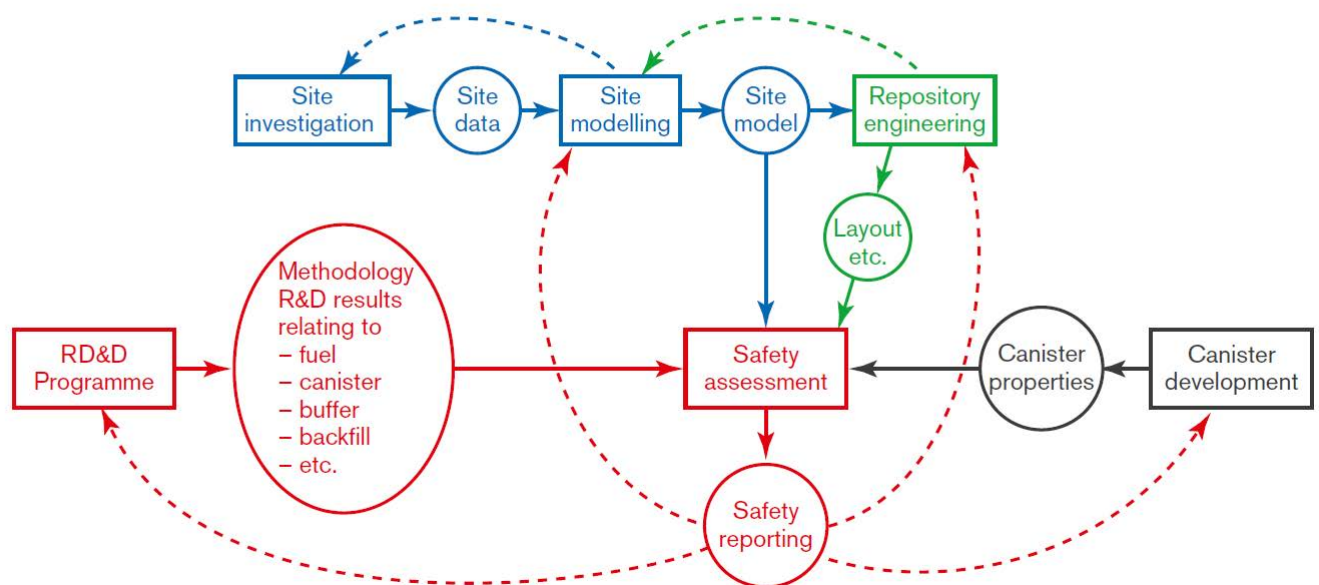
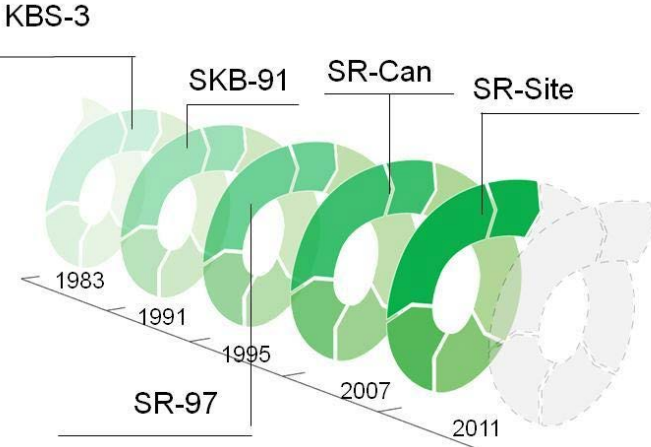
David Luterkort

Outline

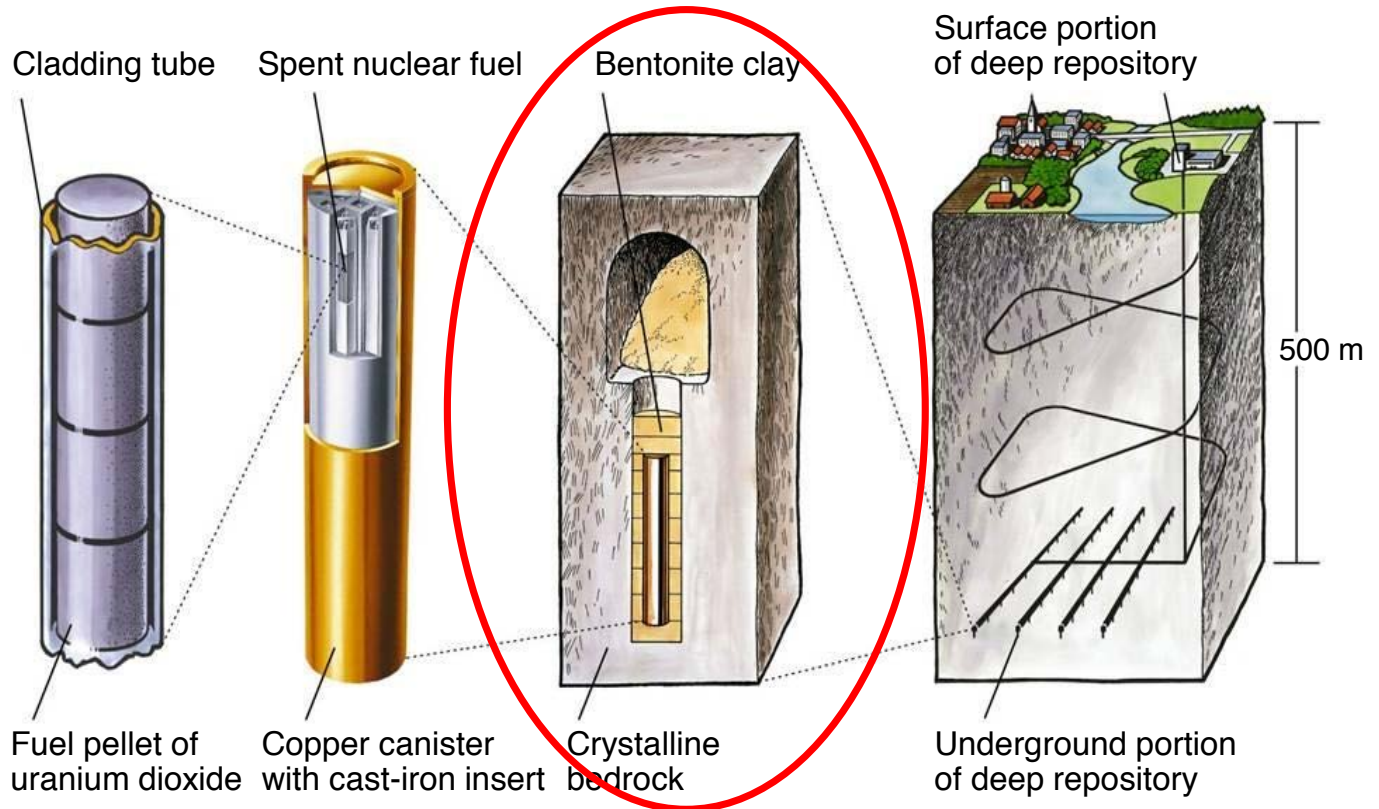
- Background
- The production lines revisited
- Focus areas for technical development
 - Production of buffer and backfill components
 - Buffer installation
 - Backfill installation
 - Plug installation
- Rock characterization
- The road ahead



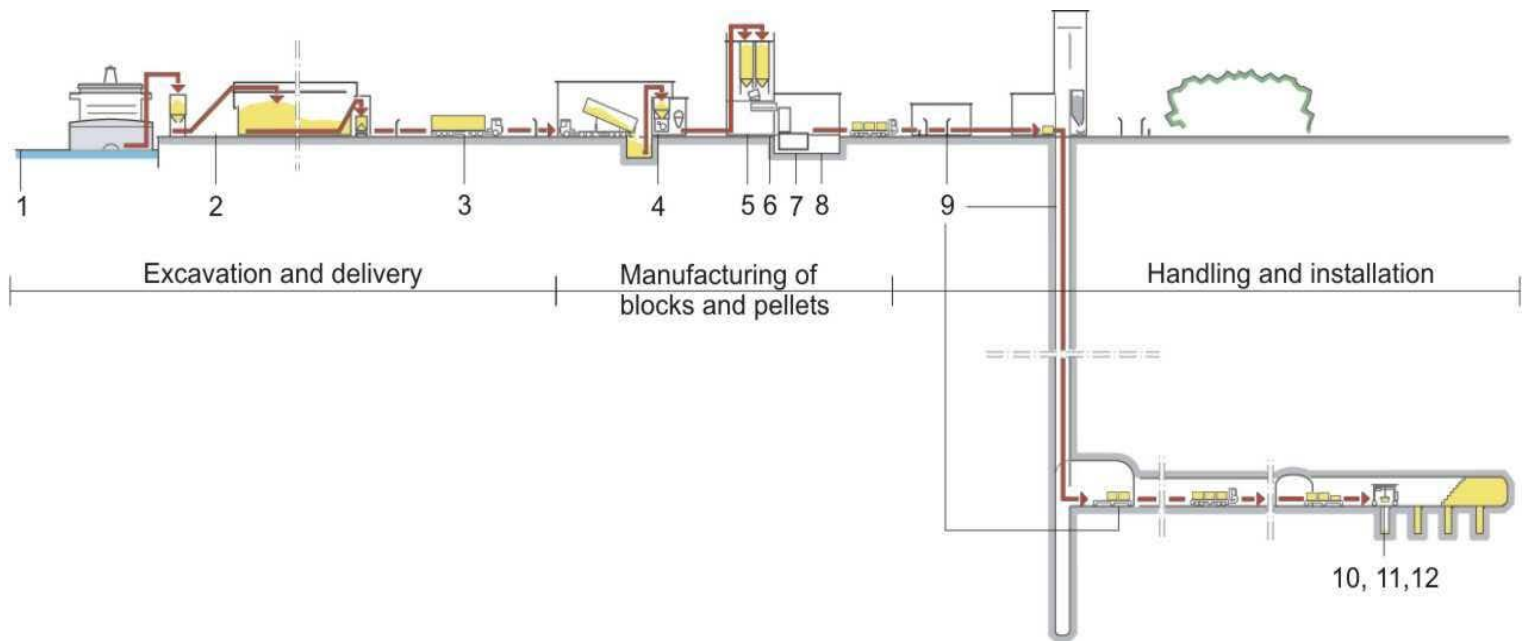




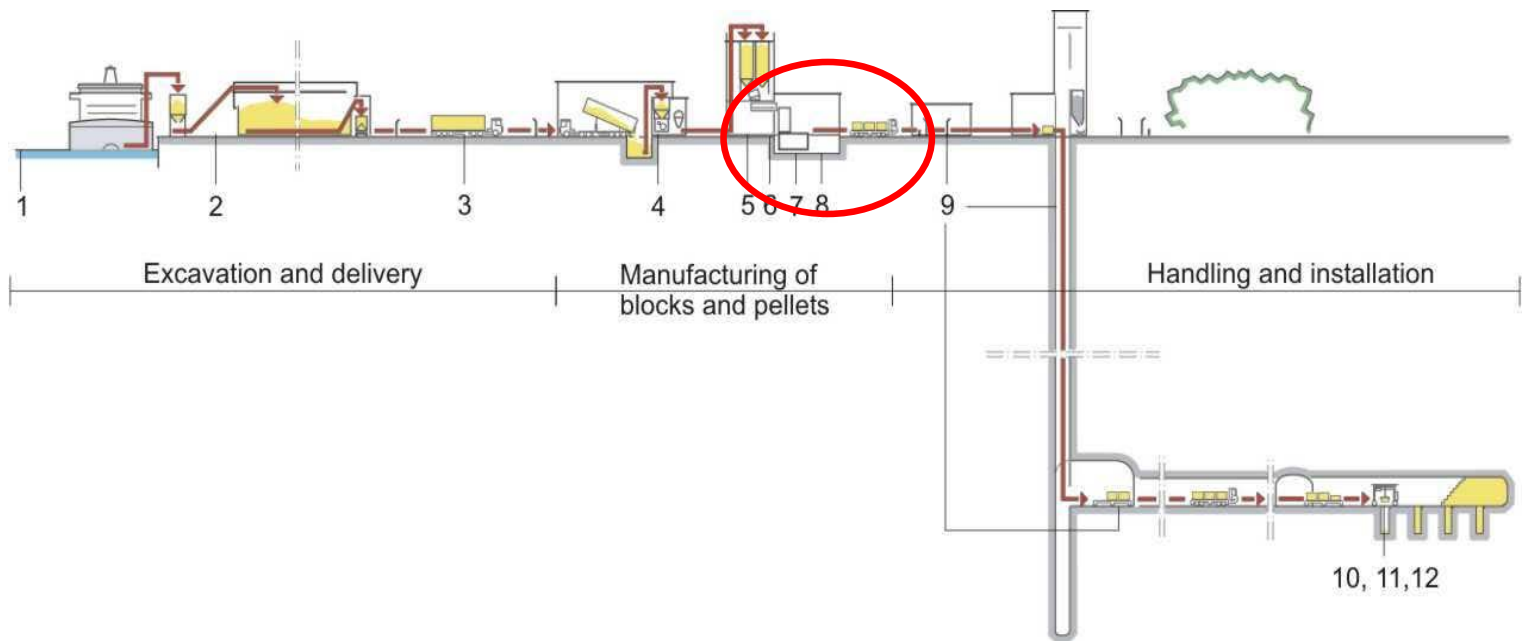
KBS-3V safety barriers

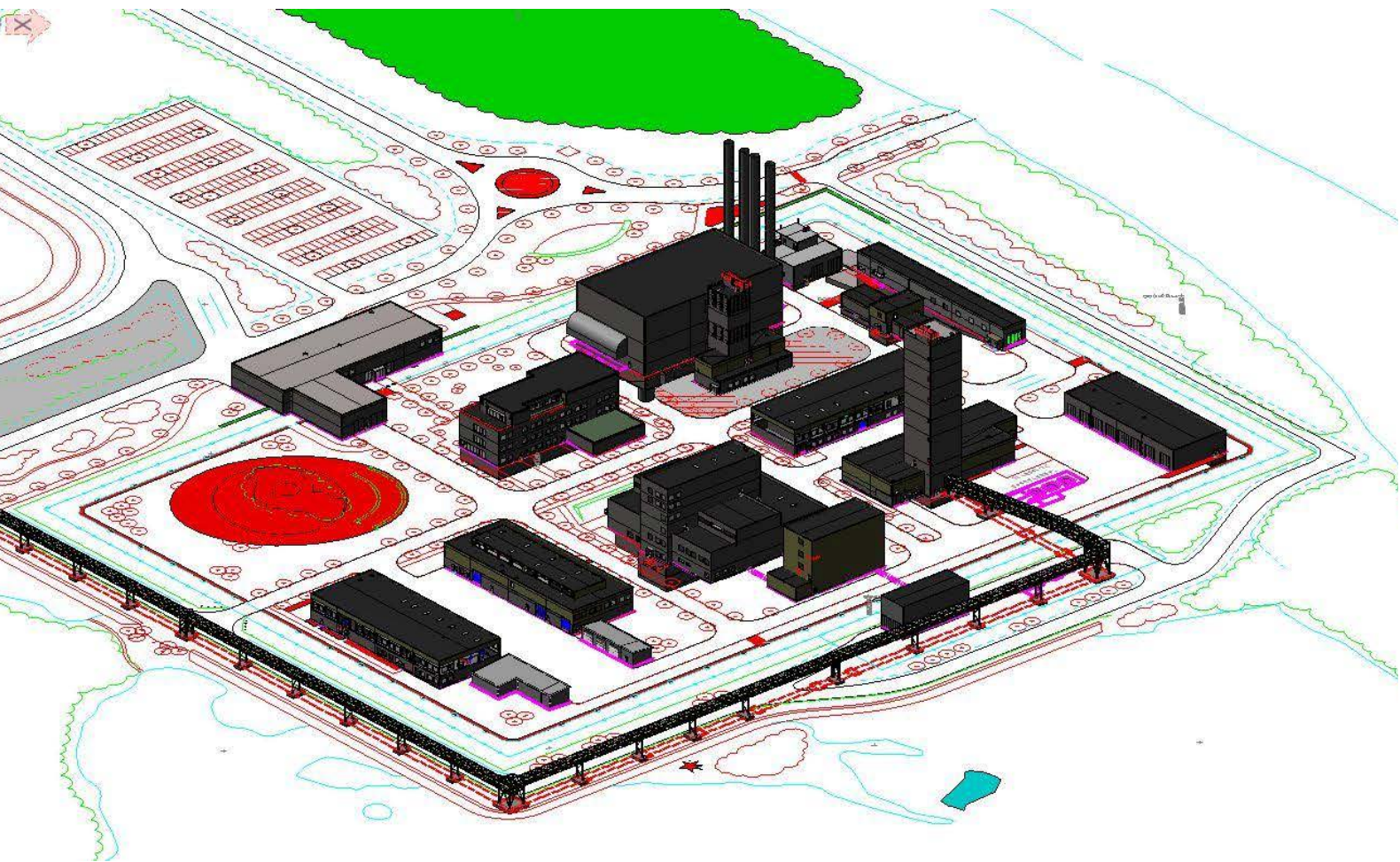


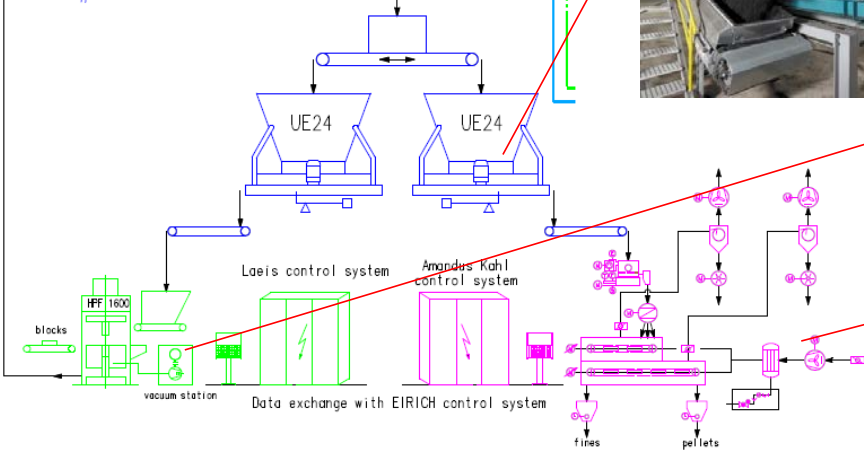
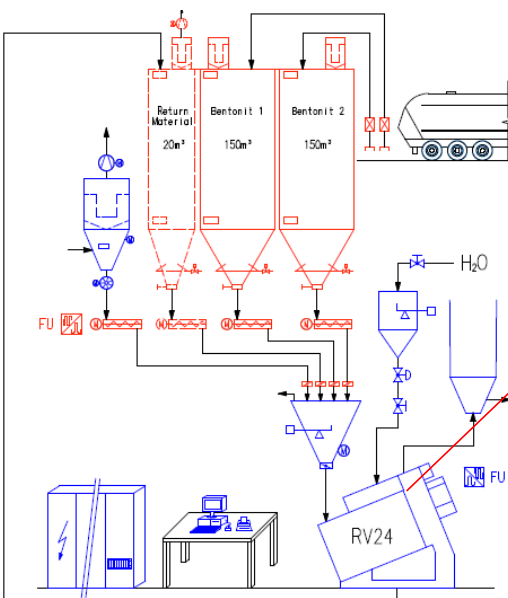
Production and installation of buffer and backfill



Production and installation of buffer and backfill



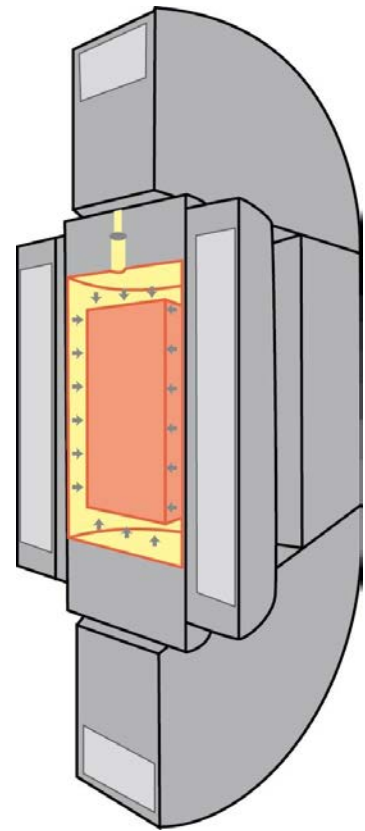


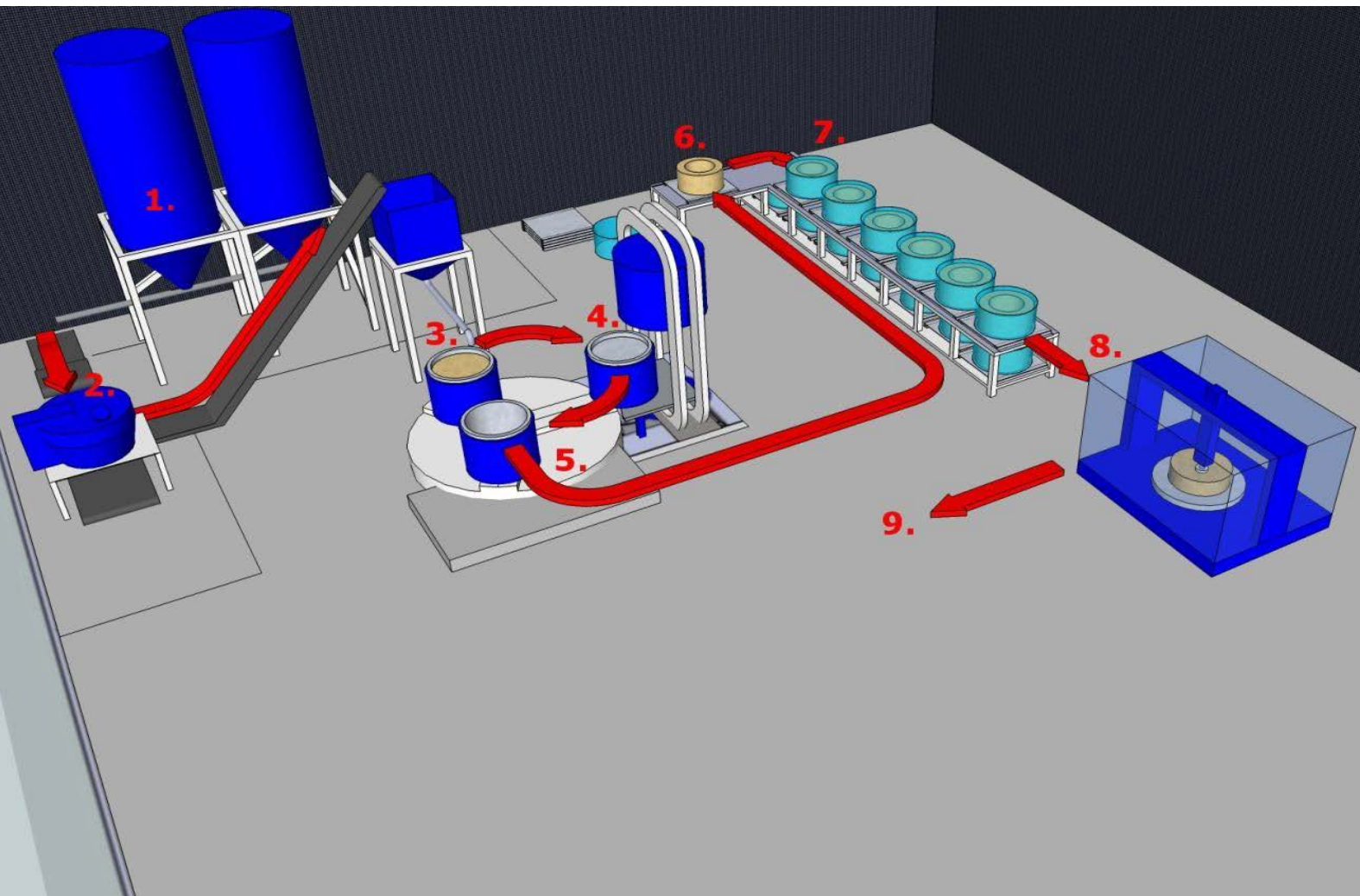




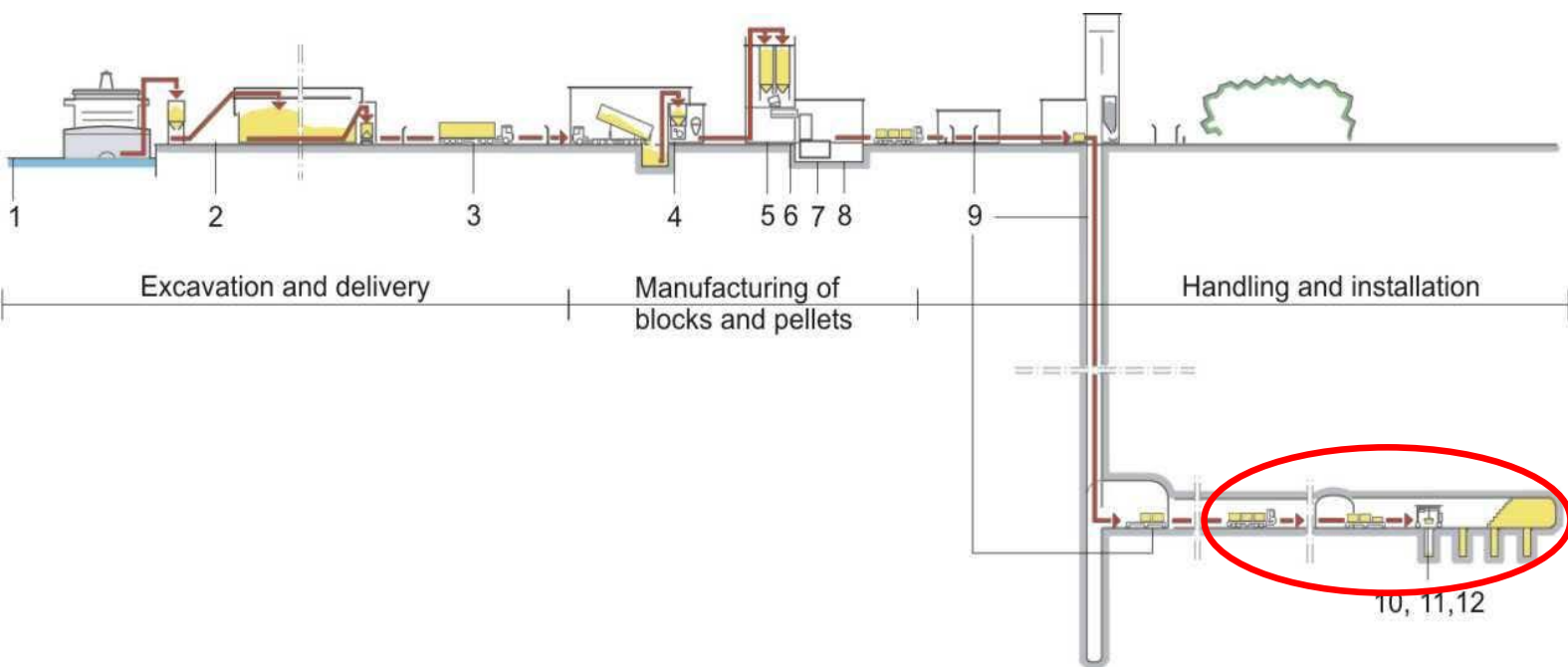


Manufacturing of buffer blocks- isostatic compaction

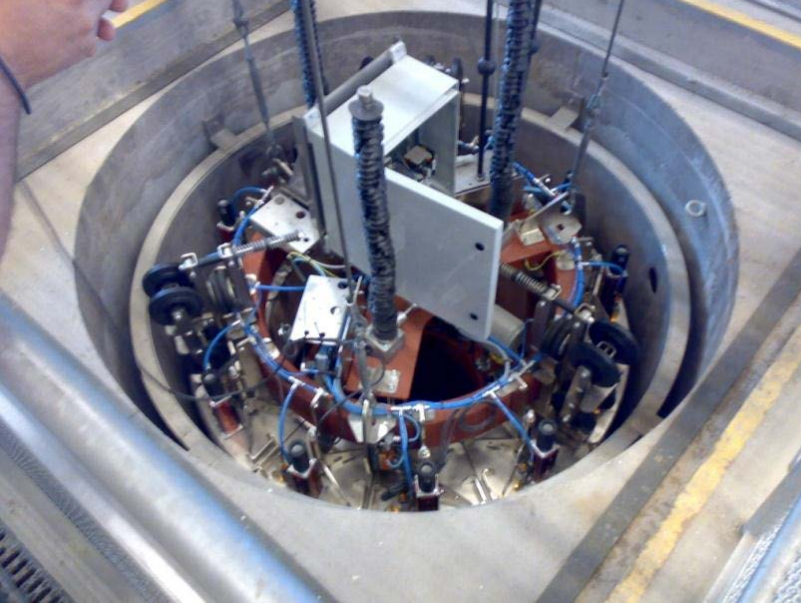




Installation of buffer and backfill













Buffer design and installation

SKB is currently looking into different installation options with the objective to:

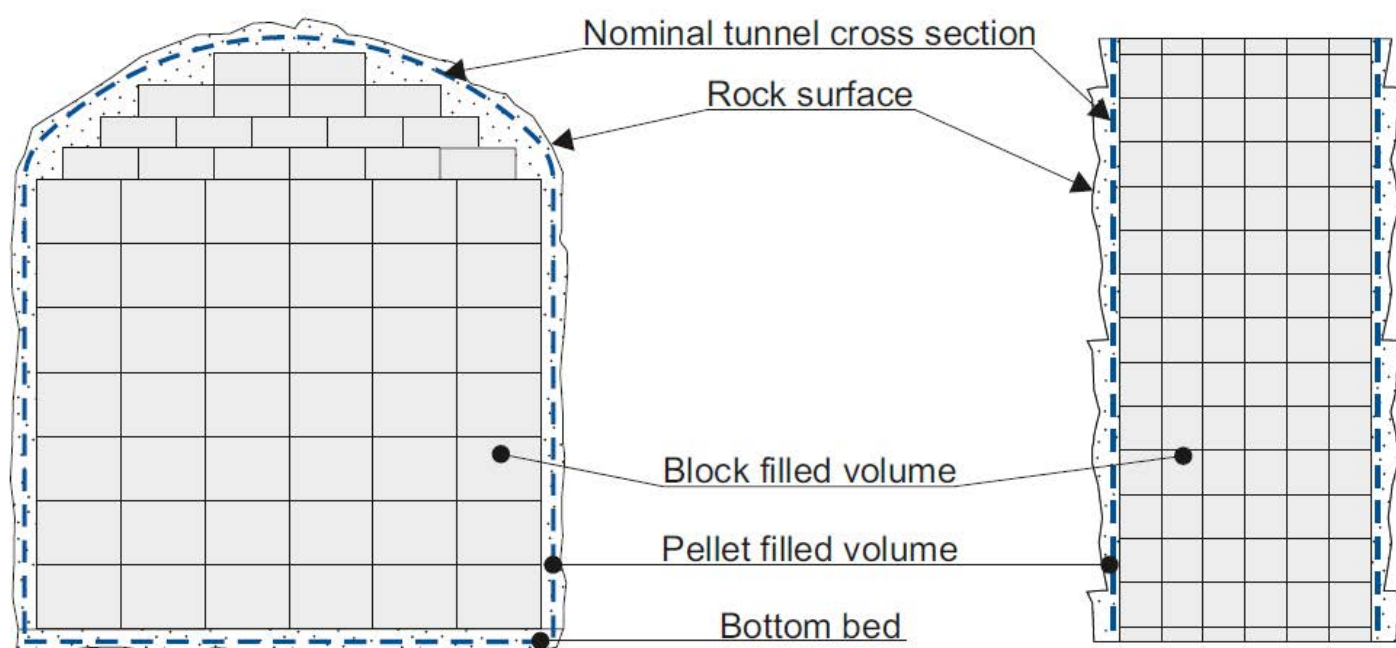
- Achieve an efficient and robust installation taking the expected water inflow and early evolution of the buffer into consideration.
- Provide requirements for the logistics in the repository, i.e time for installation

Except for the current installation method with buffer protection the following options are being investigated and evaluated:

- Controlled atmosphere
- Simultaneous Installation of blocks and pellets / changed deposition sequence
- Changing the water ratio, outer diameter and density of buffer blocks
- Artificial saturation
- Simplified bottom plate



Backfilling of deposition tunnels

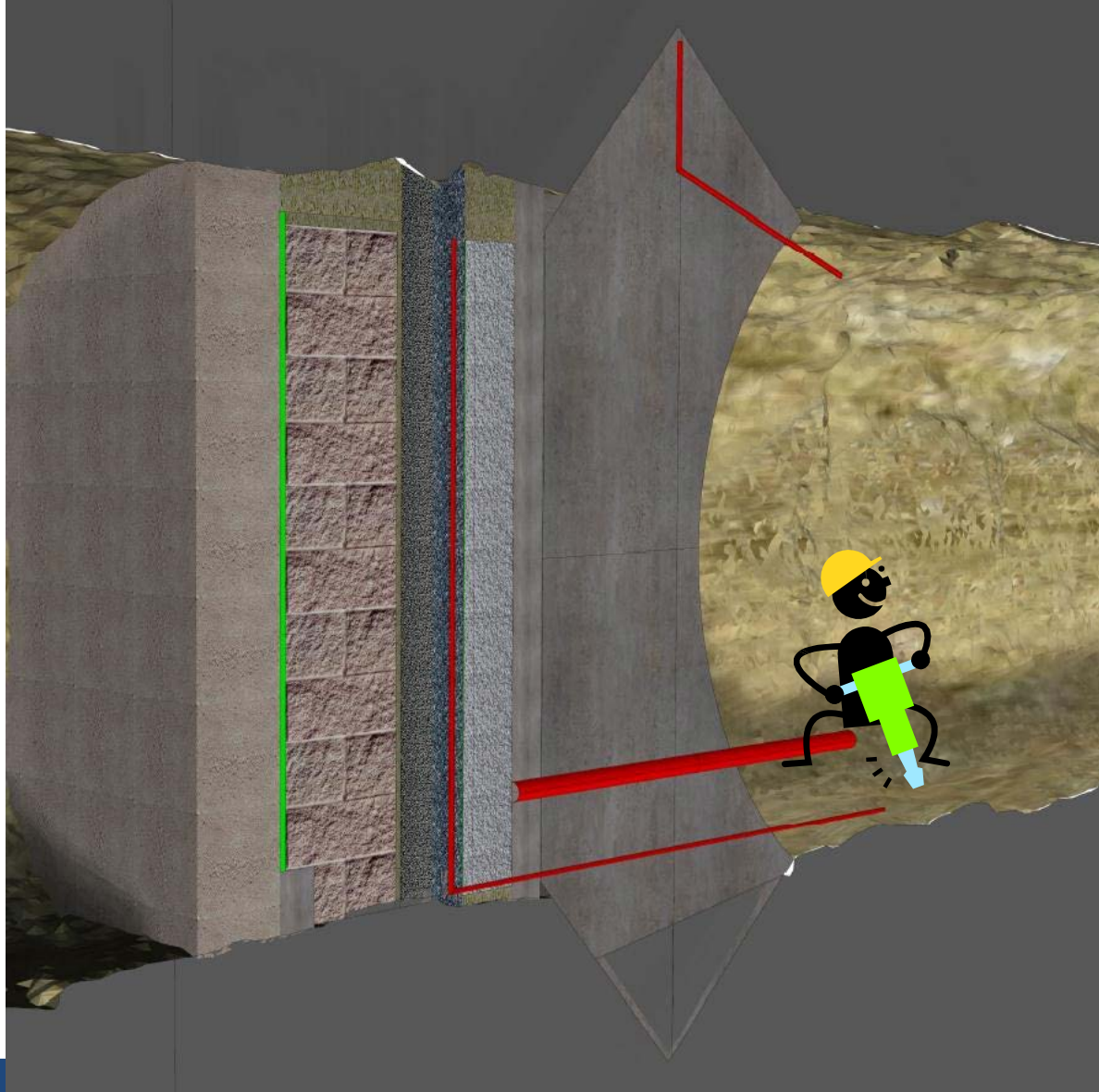














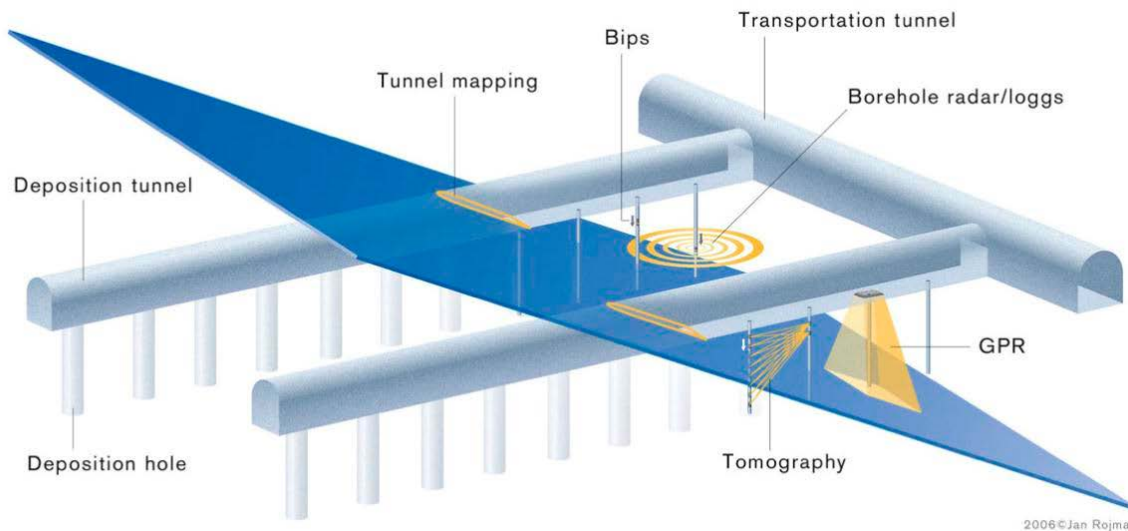




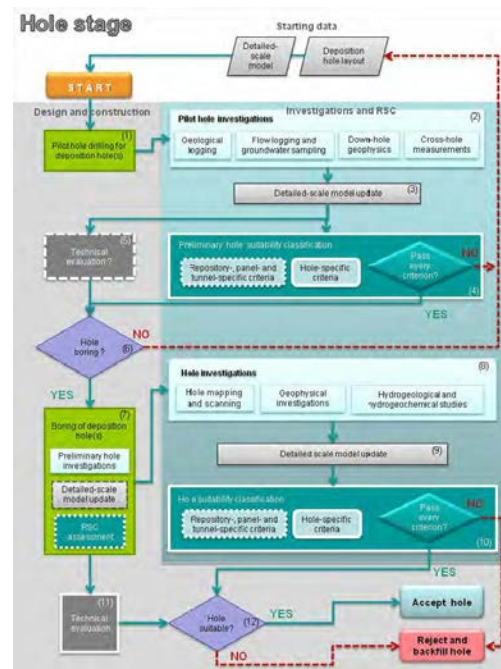
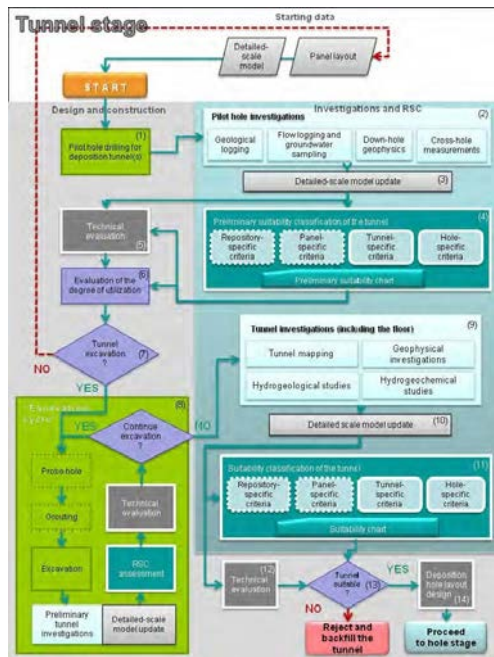
Rock characterization during operation

Choice and acceptance of locations for deposition holes is a process that includes characterization, i.e. investigations and modeling, of the bedrock in a number of steps and scales. In this process the following decisions are foreseen:

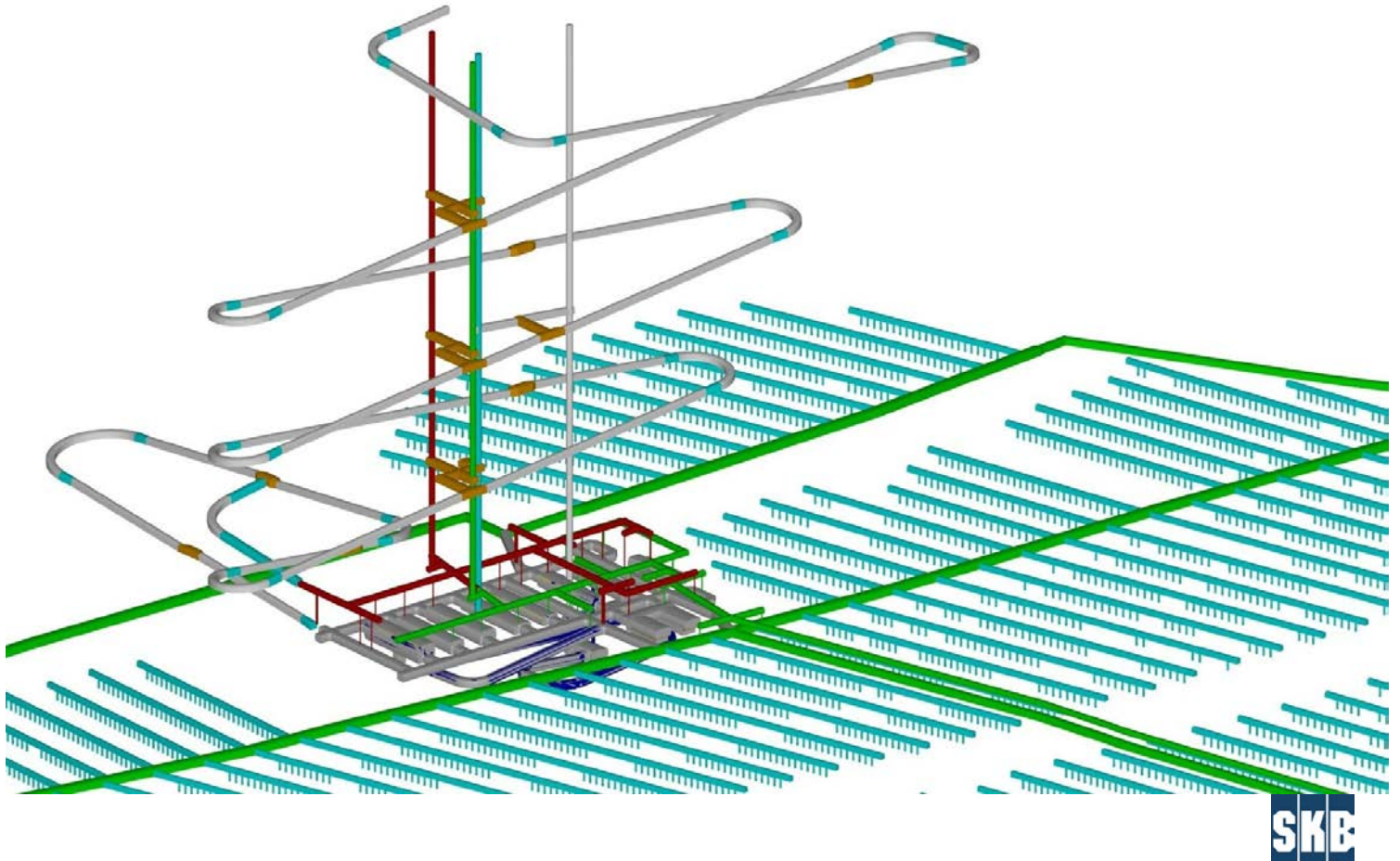
- Delimitation of the deposition area preceding excavation
- Localization and excavation of deposition tunnels
- Localization of deposition holes
- Excavation of deposition holes
- Acceptance of deposition hole



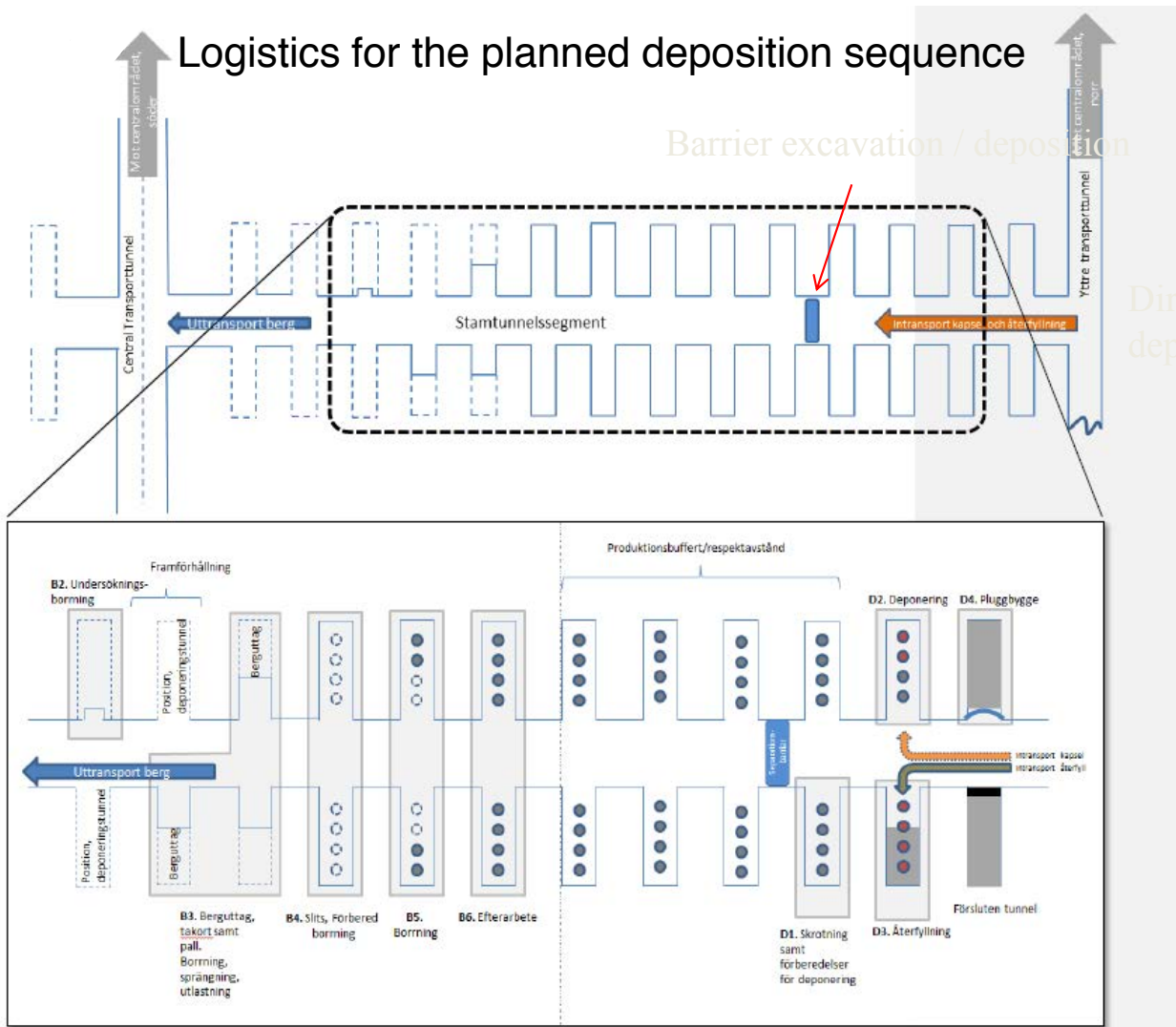
Posivas RCS system



Repository Design

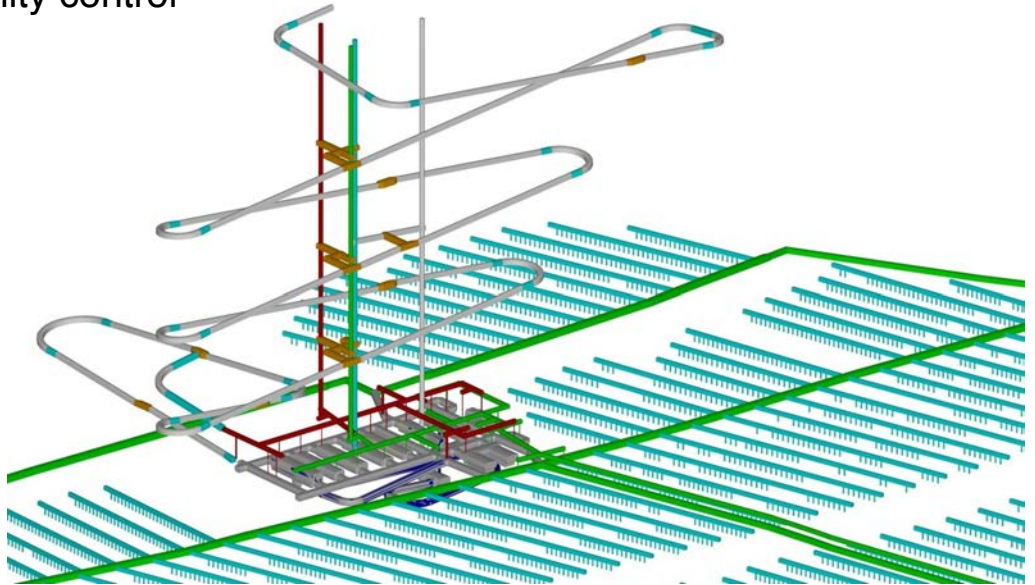


Logistics for the planned deposition sequence



The road ahead – Building a repository for spent nuclear fuel.

- Detailed design of buffer, backfill and plugs
- Detailed design of installation process and quality control
- Development of installation equipment
- Integrated testing of excavation of deposition tunnels and holes, installation and quality control





Thank you for your attention

