

# *Can we allay concerns over nuclear waste and fuel recycling?*

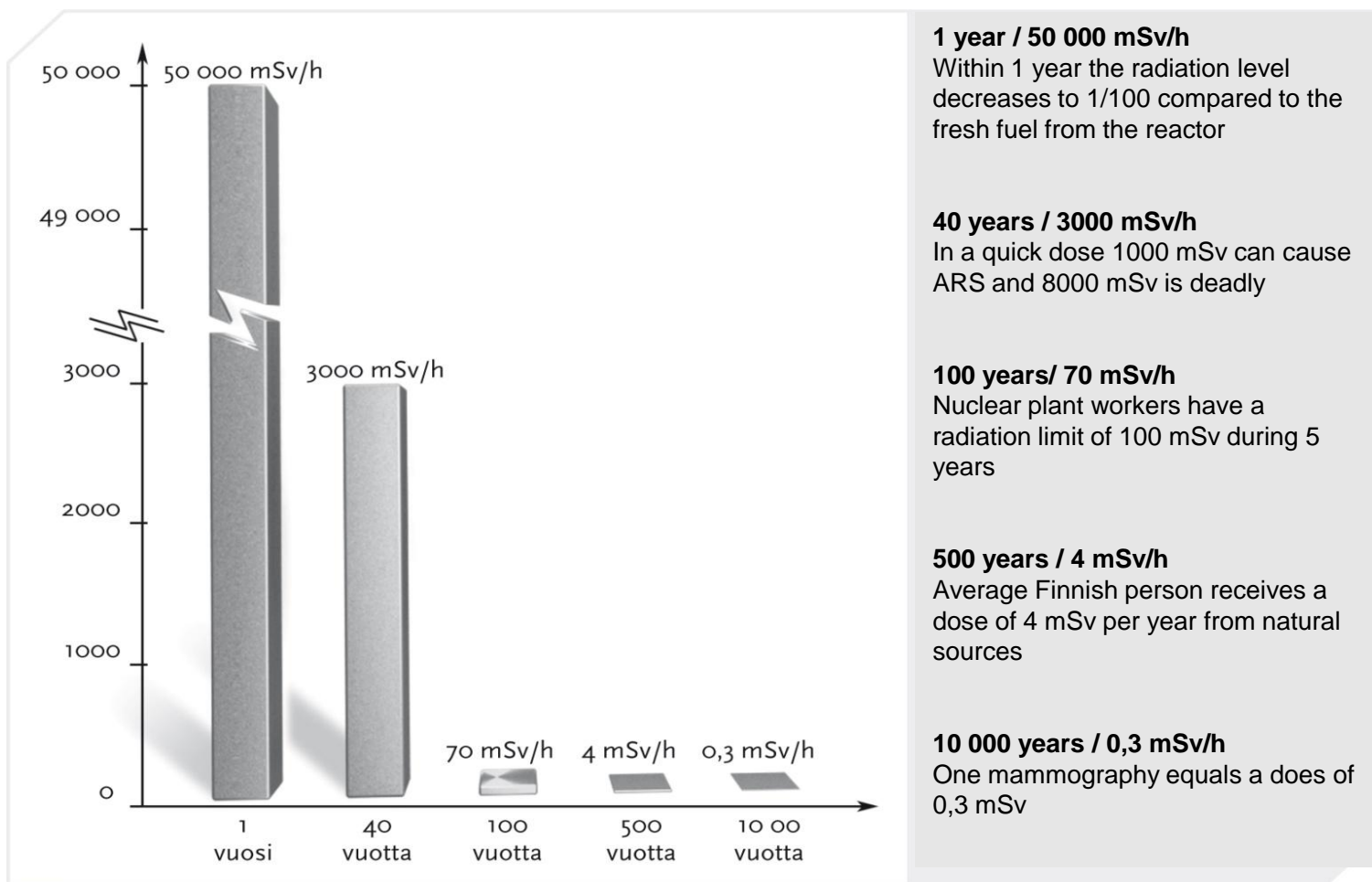
Lauri Muranen  
Finnish Energy Industries



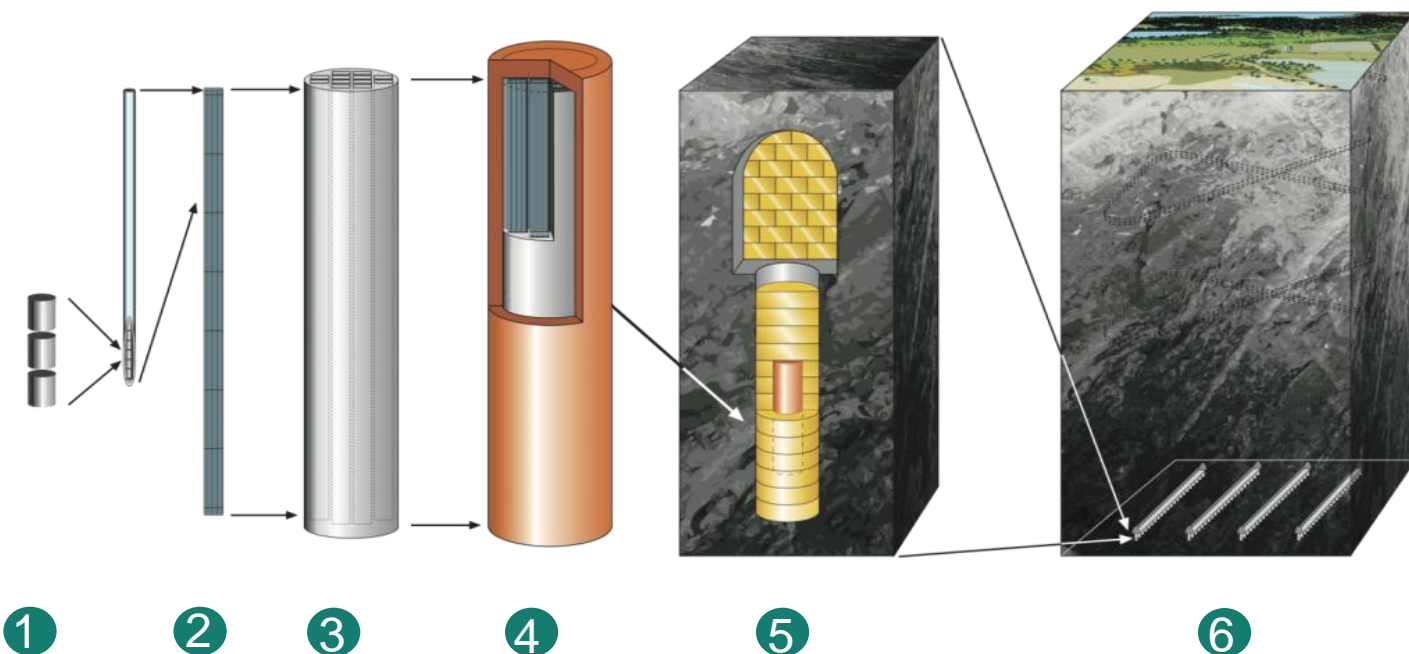
# Spent fuel management

- It is more a political rather than a technical problem
  - For example, there are vast amounts of similarly hazardous waste that we choose **not to** treat with such caution (and they do not have half lives!)
- There are viable technical solutions for the management of spent fuel – the Finnish approach is just one
- Approval of the inhabitants of the site of permanent waste storage facility is critical – previous experience of operating nuclear facilities helps

# Radiation levels outside the fuel rods drop rapidly



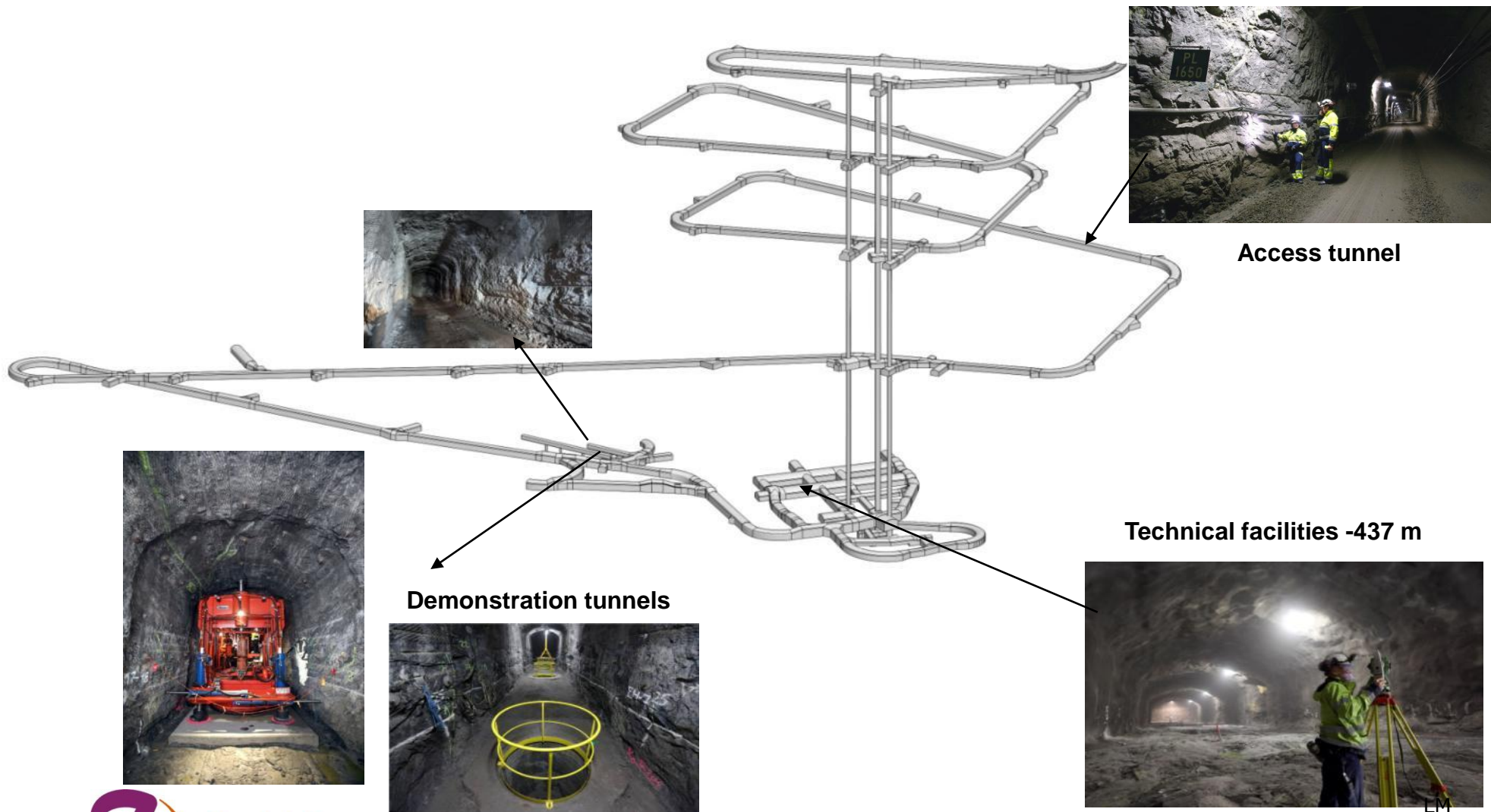
# The principle of final disposal



- ① Fuel pellet
- ② Fuel assembly
- ③ Canister insert
- ④ Canister overpack
- ⑤ Bentonite and tunnel backfill
- ⑥ 400–700 metres of bedrock

Several release barriers back up each other and ensure long-term safety.

# Underground Rock Characterisation Facility ONKALO



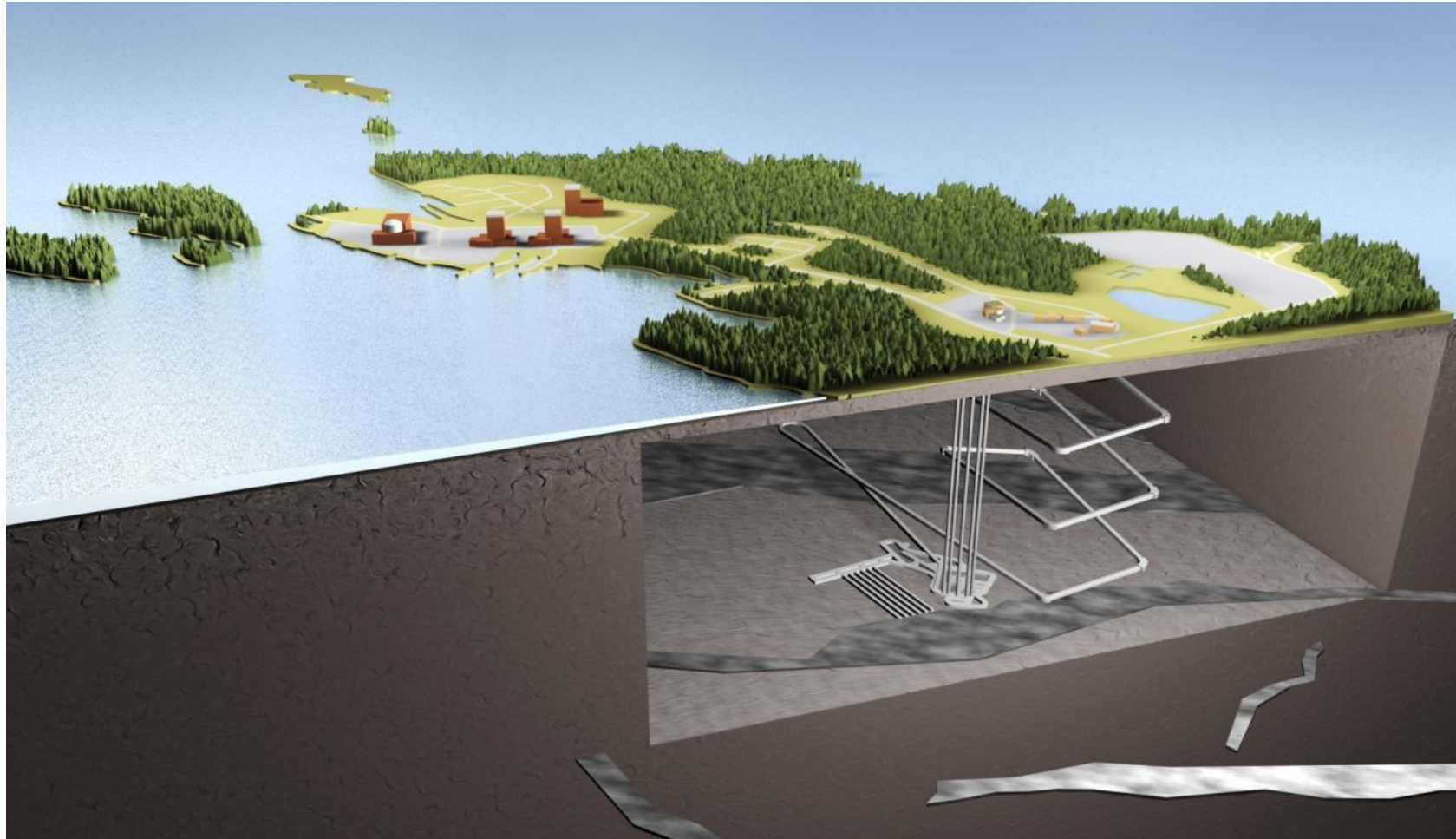
Access tunnel

Technical facilities -437 m

Demonstration tunnels



# Final disposal facility in 2020's



# Thank You!

# ありがとうございます

Lauri Muranen

[Lauri.muranen@energia.fi](mailto:Lauri.muranen@energia.fi)

Twitter: @laurimuranen

+358407076637

