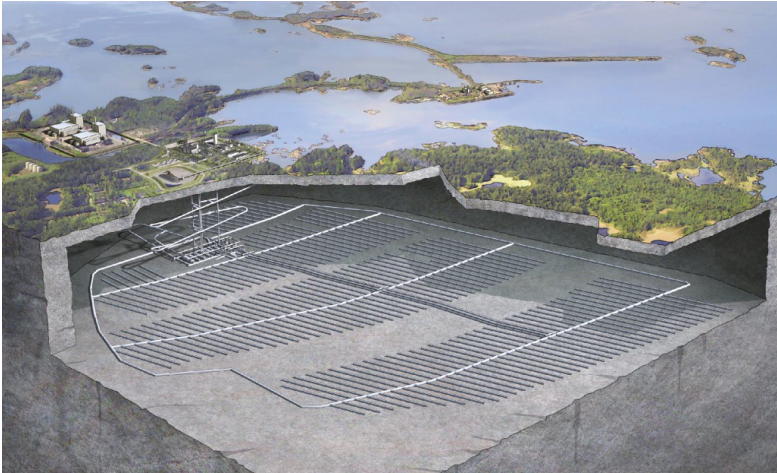


Simulating futures of nuclear waste repositories

*<http://linnaeus.academia.edu/GiangiacomoBravo>
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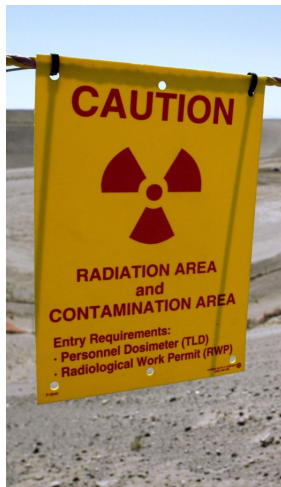
The problem



Swedish nuclear waste repository project. Source skb.com

The problem (2)

- ▶ Legacy management of long-term-impact facilities means setting up solutions that will still work in the distant future
- ▶ Records of today's decisions need to be preserved and remain intelligible for millennia
- ▶ Need to better understand the mutability of human behaviour and knowledge and its impact on human practices
- ▶ Objective: to develop related concepts and methods and to test them using *serious game environments*



Project group

- ▶ Aris Alissandrakis, FTK + DISA@LNU
- ▶ Giangiacomo Bravo, FSV + DISA@LNU
- ▶ Annelie Ekelin, FKH + DISA@LNU
- ▶ Cornelius Holtorf, FKH
- ▶ Anders Högberg, FKH
- ▶ Marcelo Milrad, FTK + DISA@LNU
- ▶ Claudio Pescatore, nuclear waste consultant



Work plan

- ▶ (2017) **LNU *Fakultetsöverskridande projekt***
 - ▶ definition of the basic concepts
 - ▶ definition of the basic design elements
 - ▶ preliminary test (proof of the concept)
 - ▶ identification of external partners (SKB, Oskarshamn kommun, ...)
 - ▶ application for longer term funding (SSM, VR, ...)

- ▶ (2018 – ...) **Larger, externally-funded project**
 - ▶ further concept development
 - ▶ building and testing of the full environment
 - ▶ real-world deployment
 - ▶ data analysis and reporting

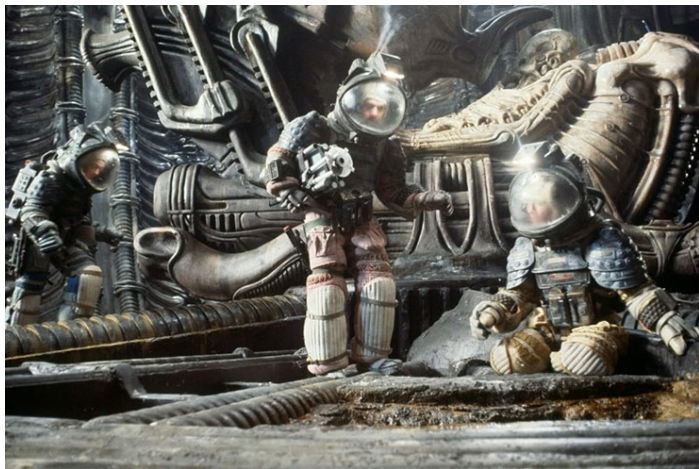


Main challenges

- ▶ **Identification of external partners:** within and especially outside the academia
- ▶ **Concept development:** processual futures, information transmission, evolution of institutions, . . .
- ▶ **Research tool development:** task, gaming environment, . . .
- ▶ **Real world deployment:** finding players, managing the platform, . . .
- ▶ **Data gathering and analysis:** data stream management, analysis of large amounts of weakly-structured data, . . .
- ▶ **From data to practical advice:** what can be done in practice to help the deployment of safer futures?



Next time, they'll get the message right!



Scene from *Alien* (Ridely Scott)