



NEW FEASIBILITY STUDY FOR MO-99 PRODUCTION THE SMART PROJECT

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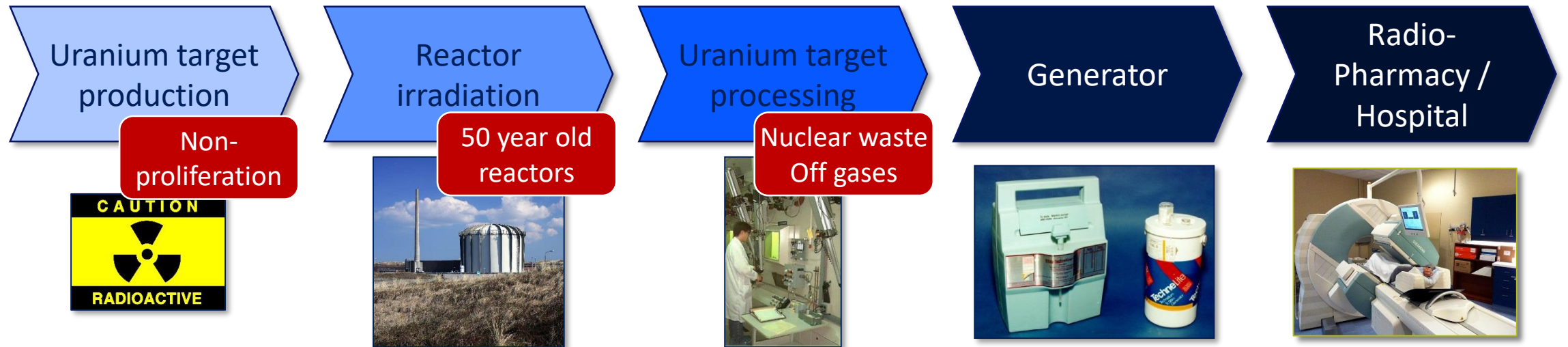


Why the SMART project?

- IRE in need of renewing its installation
- Opportunity to improve or change technology
- Feasibility study to use non fission technology

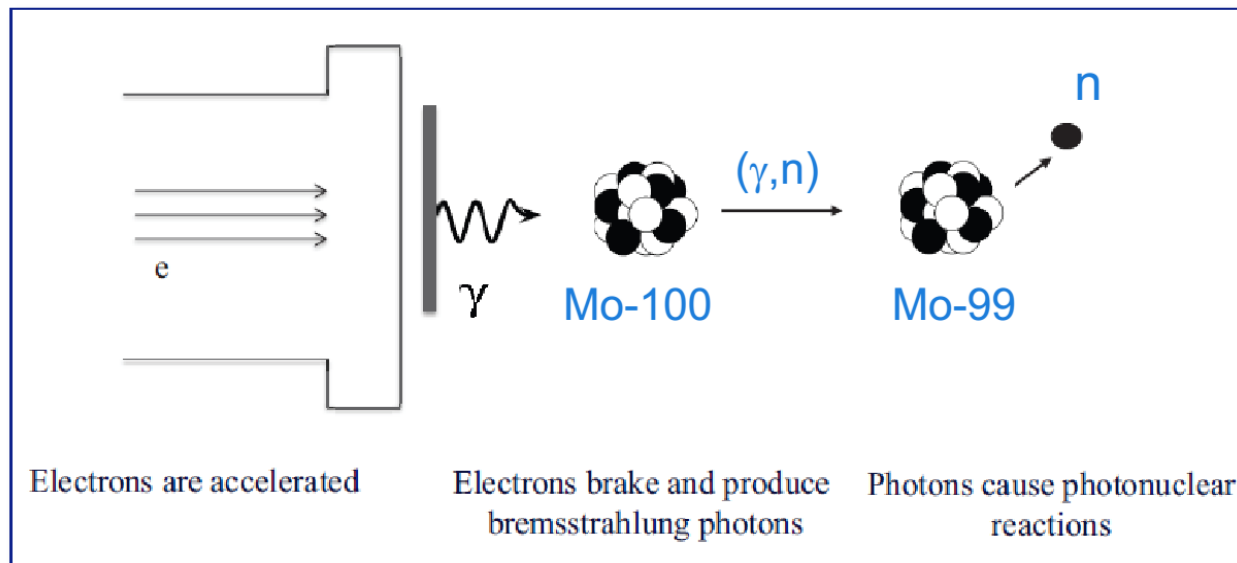
Why leaving fission process

Reactor Mo-99/Tc-99m production



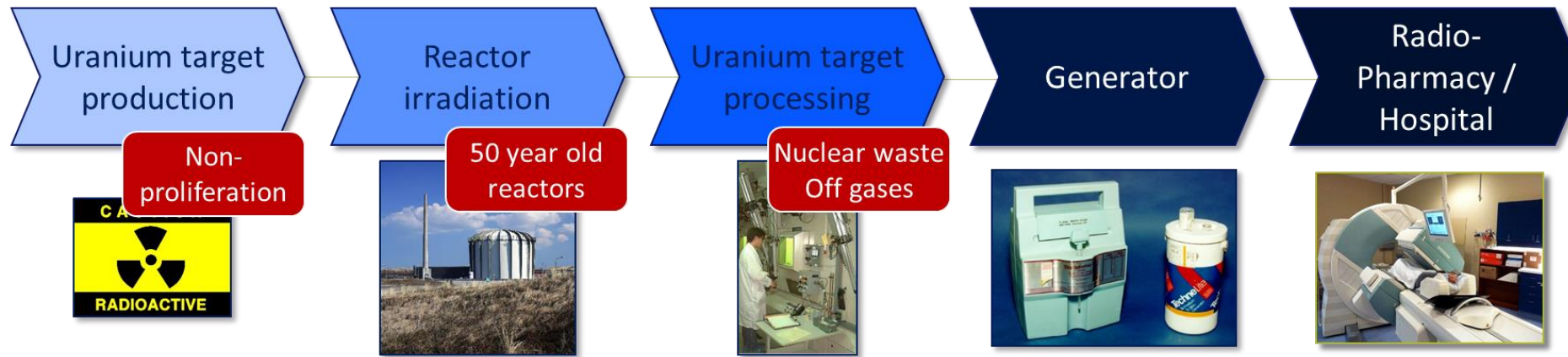
Mo-99 production based on activation process

- Use of a γ, n reaction
- Already exist but low specific activity – not suitable for IRE customers
- Use of a very high power accelerator to reach a suitable SA allowing to use existing generators

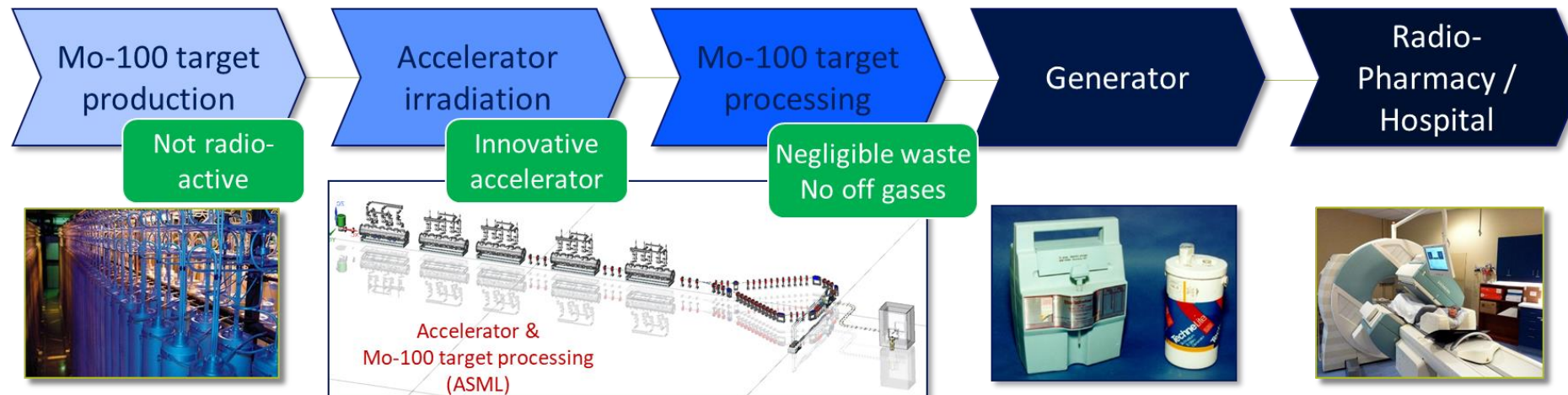


Production process with high power accelerator

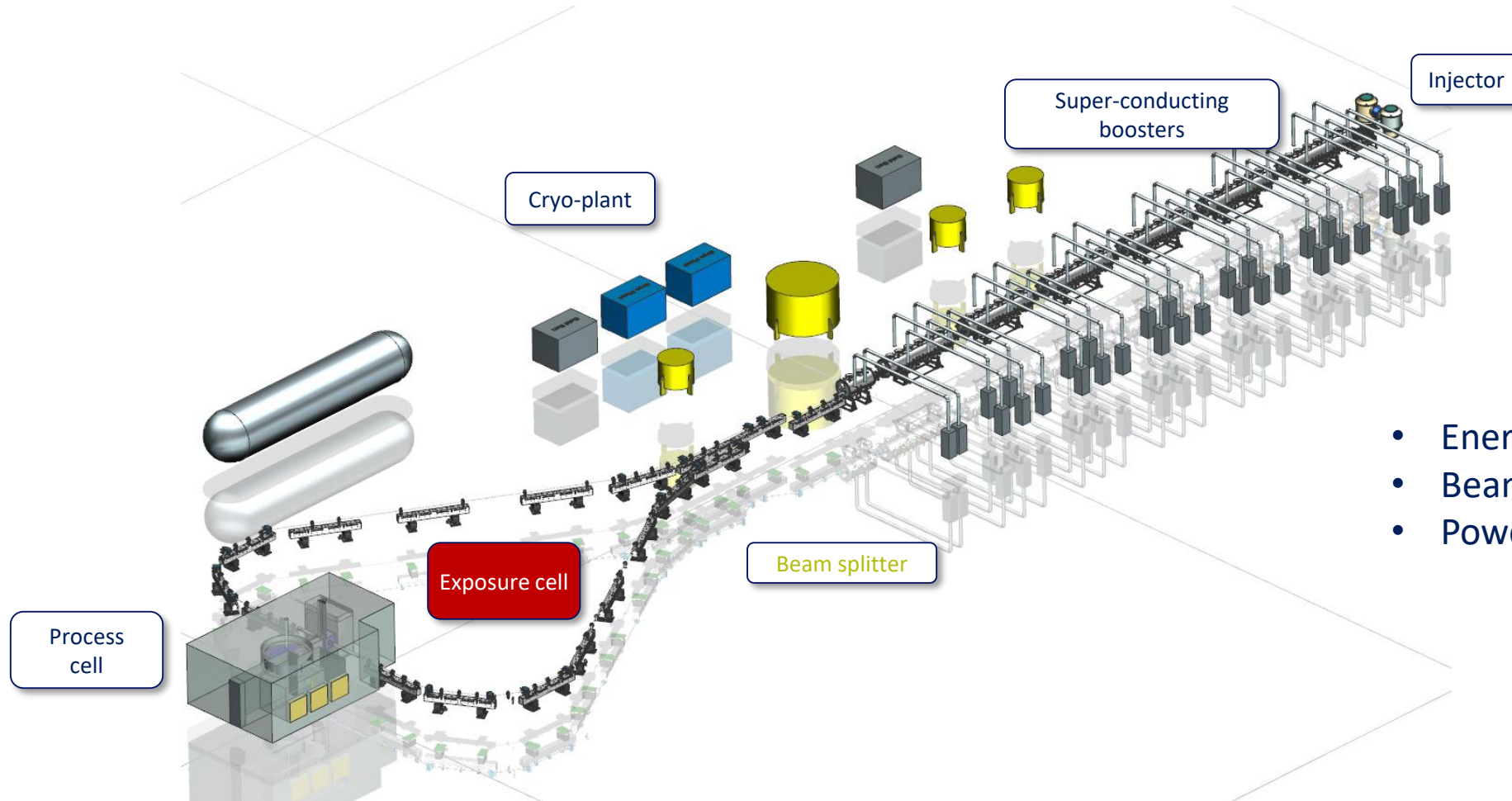
Reactor Mo-99/Tc-99m production



Accelerator Mo-99/Tc-99m production

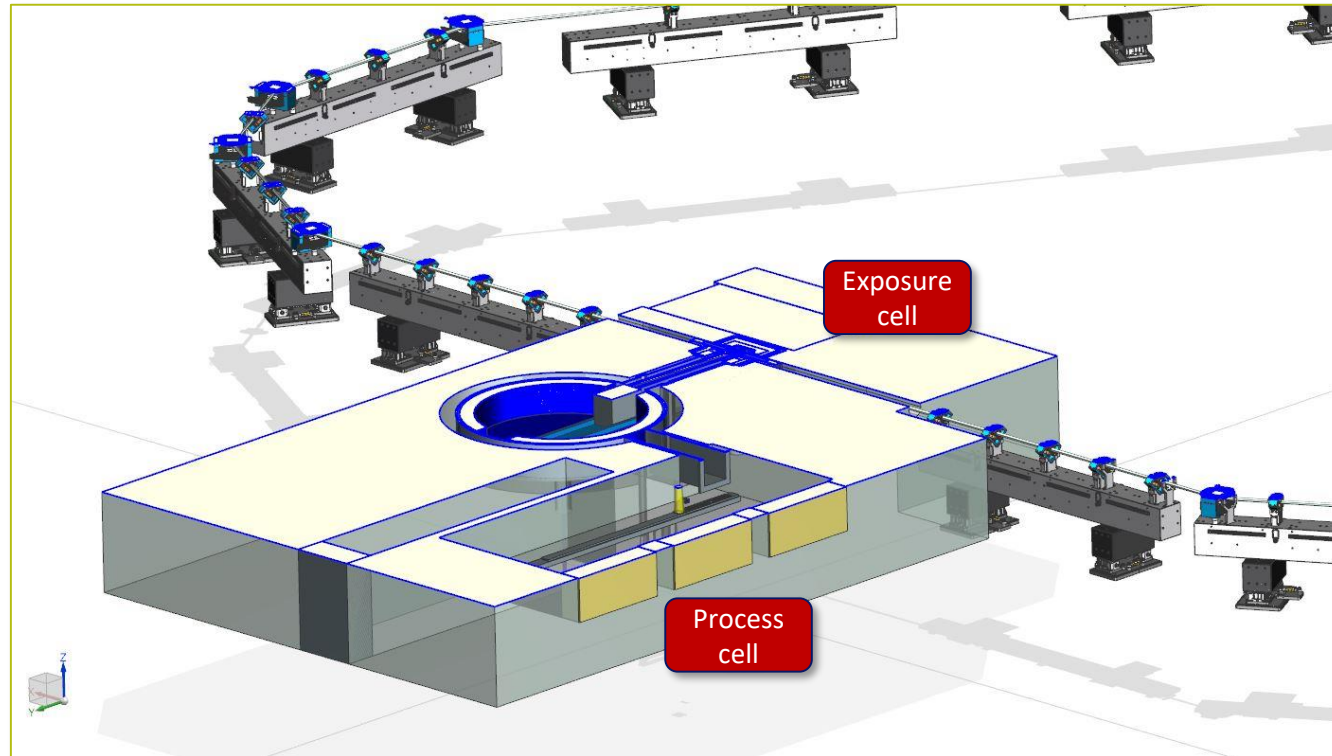


New installation

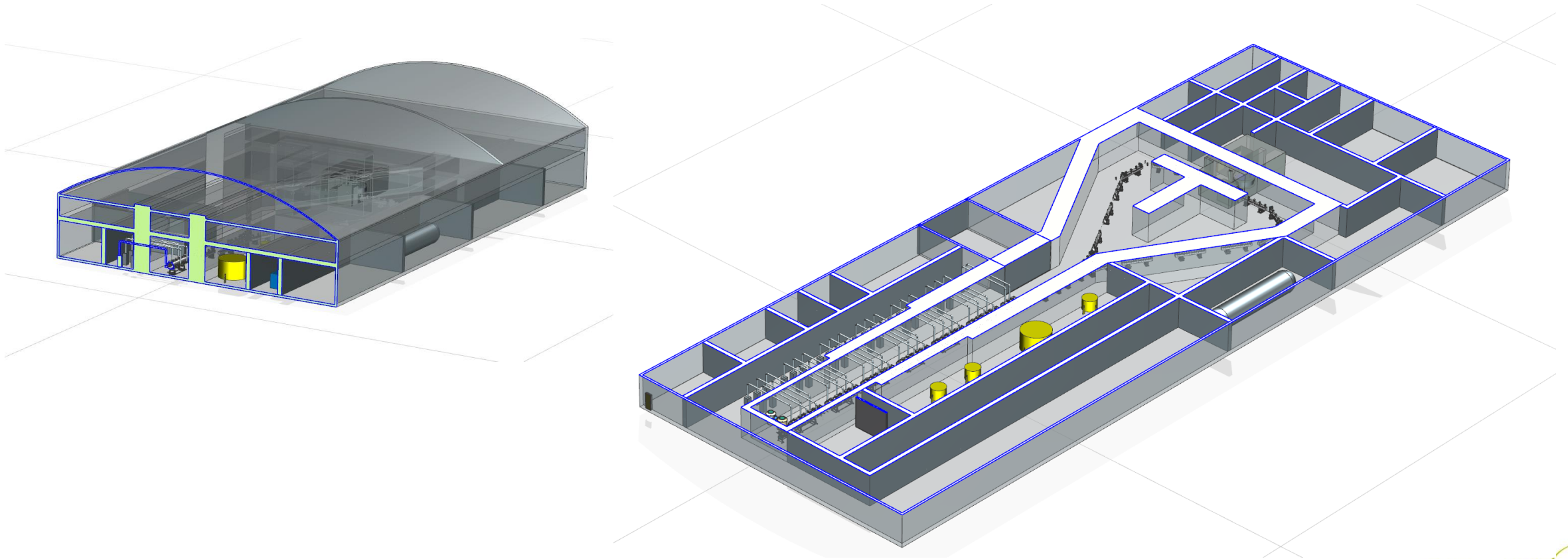


- Energy: 75 MeV
- Beam current: 40 mA
- Power: 3 MW

New installation



New installation



Conclusion

- Very challenging project
- Basic design of accelerator-exposure cell-building
- Concept verification
- Test plan in progress to mitigate the risks
 - Will determine the follow-up of the project