



Advanced Solutions for Used Fuel Management

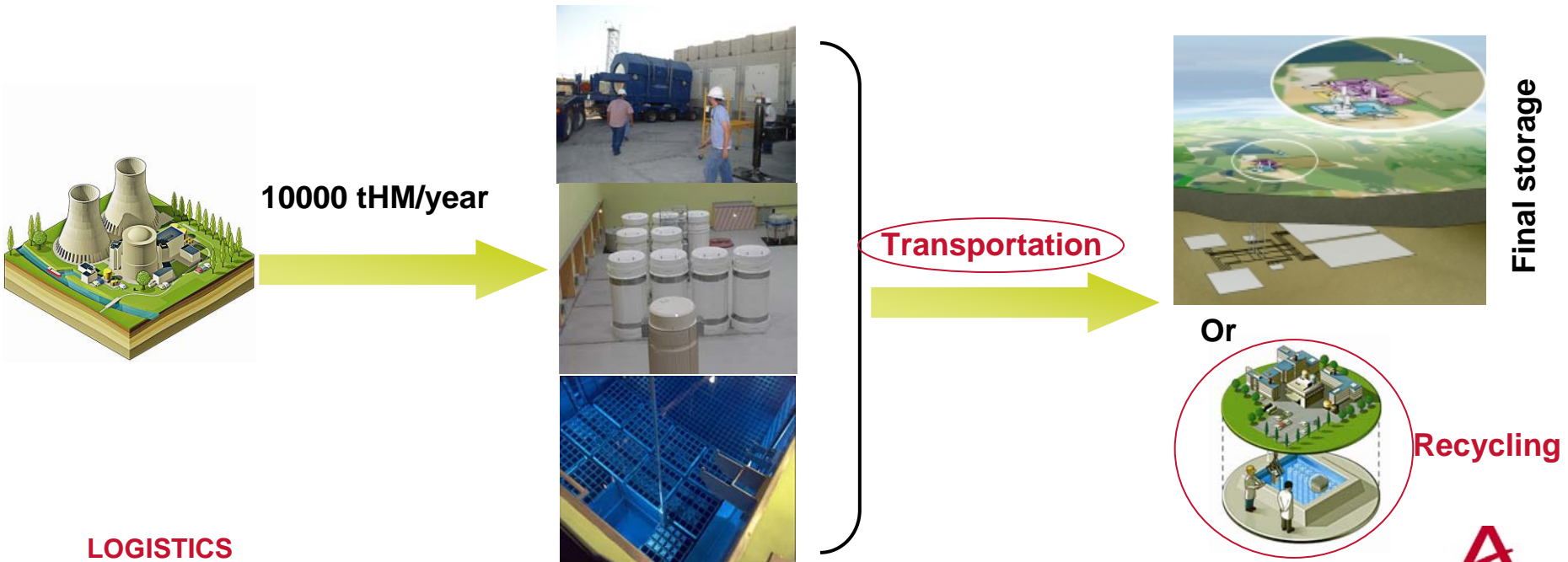
Camille OTTON

LOGISTICS



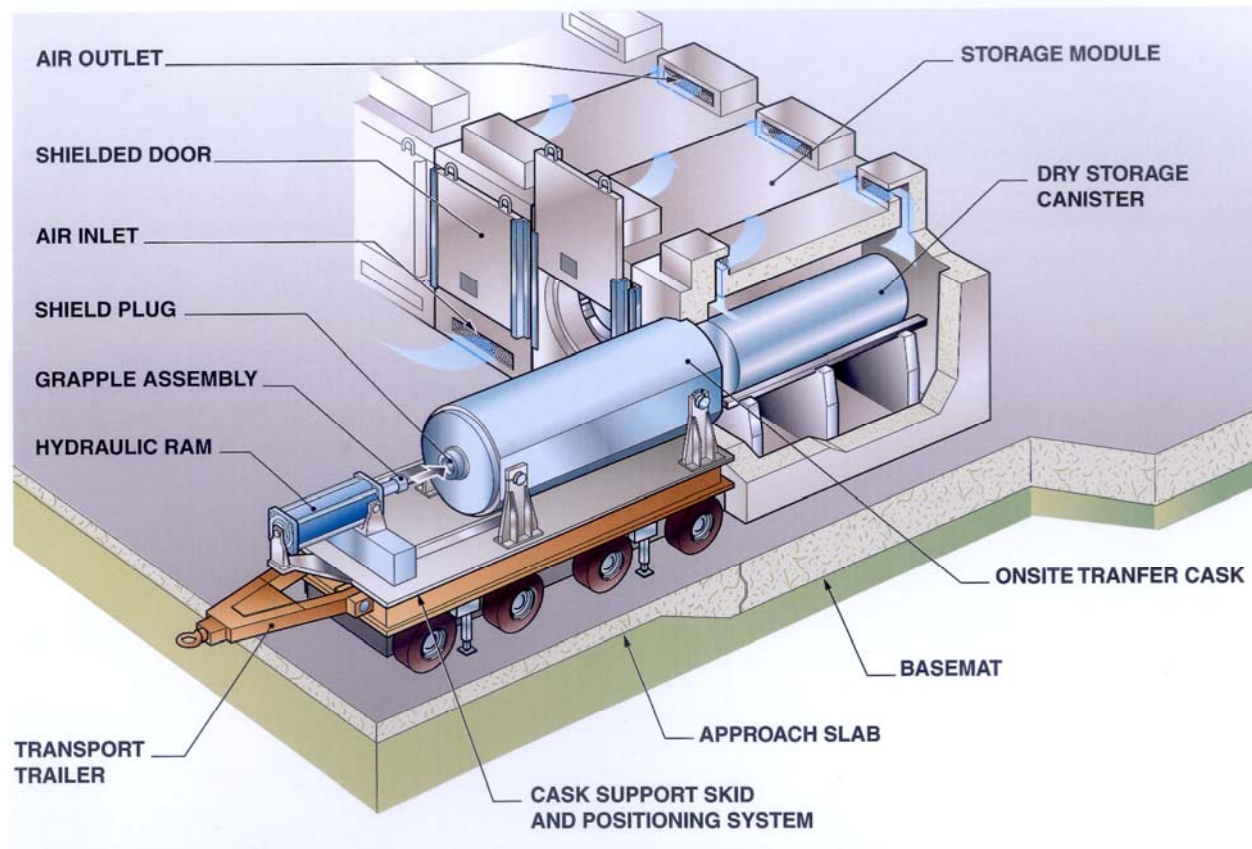
State of the Art

- ▶ Around 200,000 tHM are in interim storage all over the world
- ▶ The interim storage duration is limited due to the current know-how on long-term behaviour of used fuel elements (about 50 years maximum)
- ▶ Solutions have to be foreseen for the post-storage period



Different Kind of Storage Solutions (1/4)

► Concrete module and metallic canister: NUHOMS®



LOGISTICS

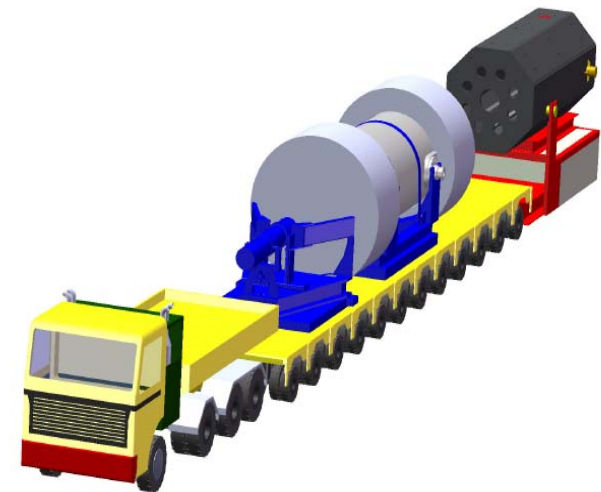
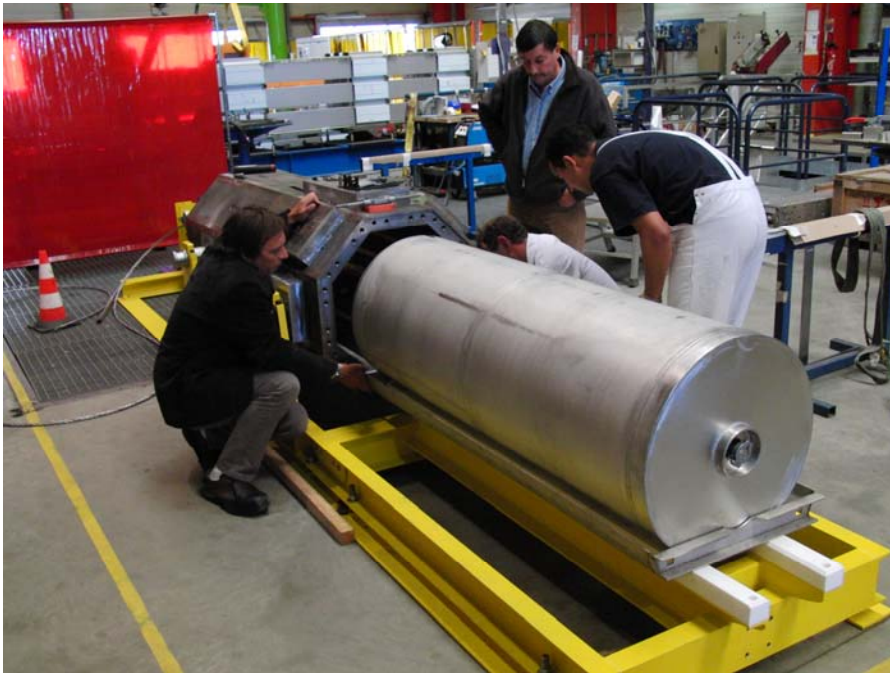
Different Kind of Storage Solutions (2/4)

▶ TN[®]24 transport/storage cask



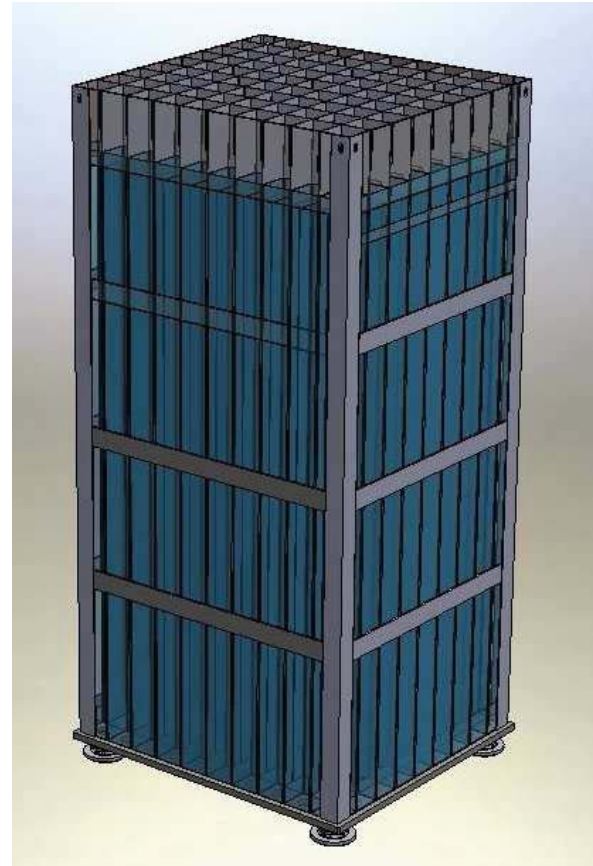
Different Kind of Storage Solutions (3/4)

► TN NOVA™ storage solution

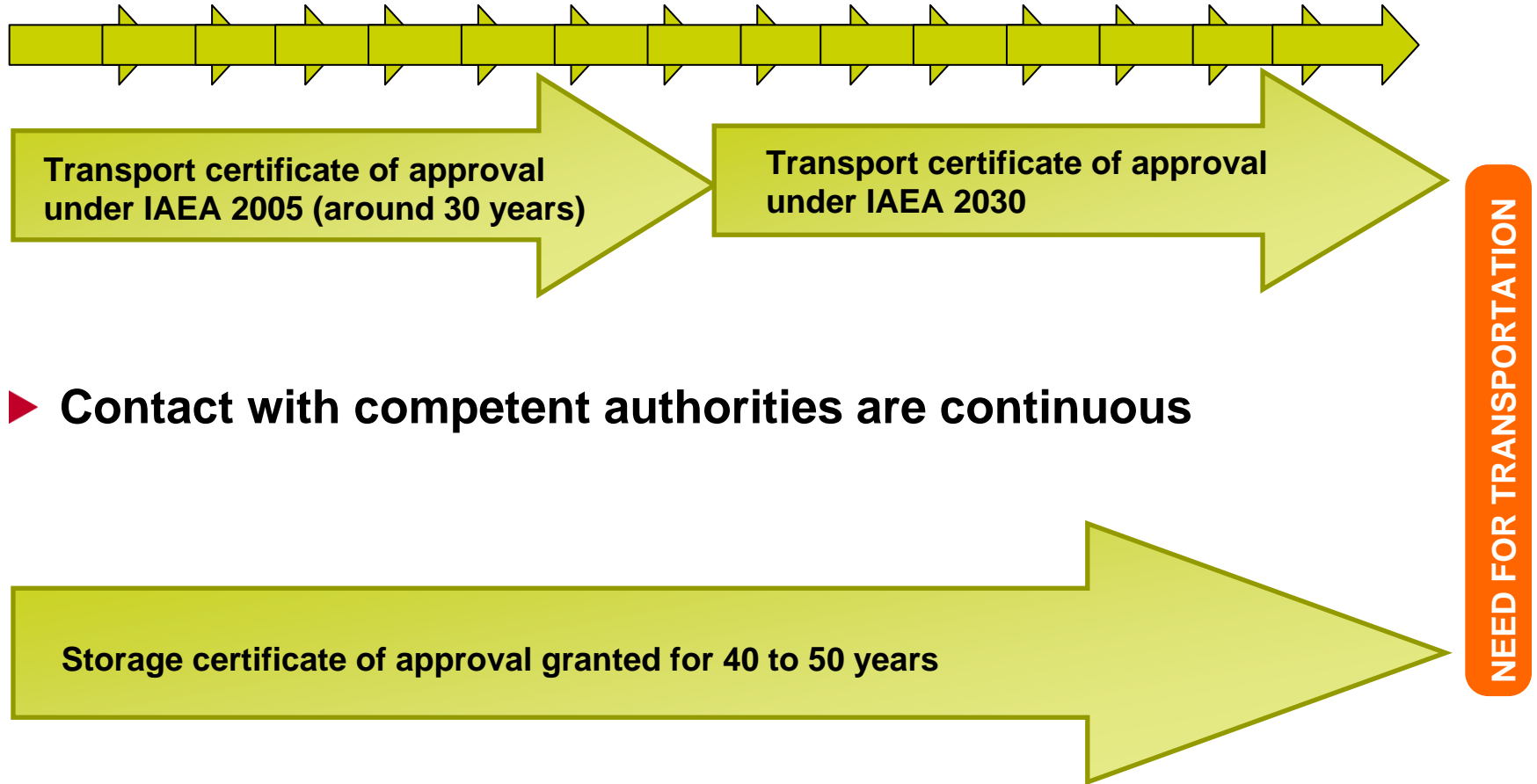


Different Kind of Storage Solutions (4/4)

► Racks



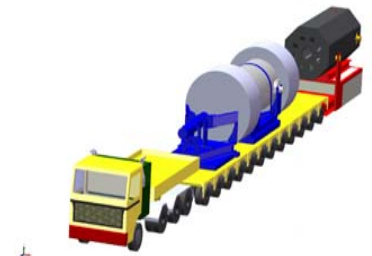
How to cope with a complex licensing process?



LOGISTICS

AREVA Products

- ▶ For a NUHOMS[®] type solution, the need will be for a transport shuttle able to load the canister which is inside the concrete module. The shuttle will develop in line with changes in the transport regulations.
- ▶ For a TN NOVA[™] solution decoupling the storage and transport functionalities, the solution will also consist of a shuttle.
- ▶ For a wet storage solution with high performance racks, the solution will consist of a transport cask.
- ▶ For a TN[®]24 solution, transport certificate of approval is maintained during the entire storage period.



LOGISTICS

Conclusion

- ▶ **To fulfil all the needs of the utilities for their used fuel interim storage, the solutions proposed must be varied and flexible**
- ▶ **Solutions have to be adapted to specific requirements of the national Competent Authorities, customers or from technical interfaces**
- ▶ **relations with the Competent Authorities must be constant during the whole storage period**
- ▶ **To have several customers in several countries and to provide transport solutions is also a plus to maintain the transportability of the used fuel throughout the whole storage period.**