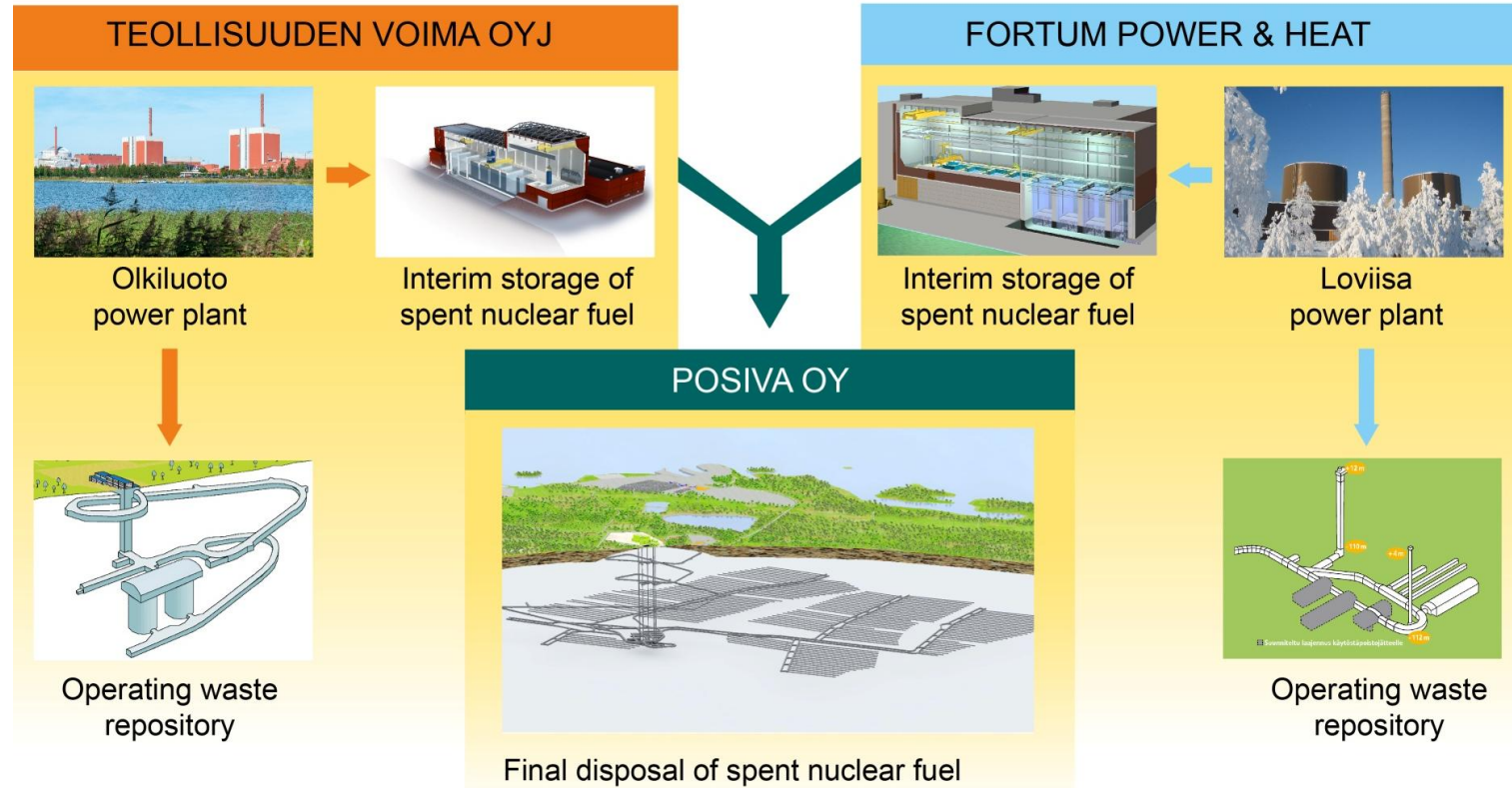


Financing the Finnish Final Disposal

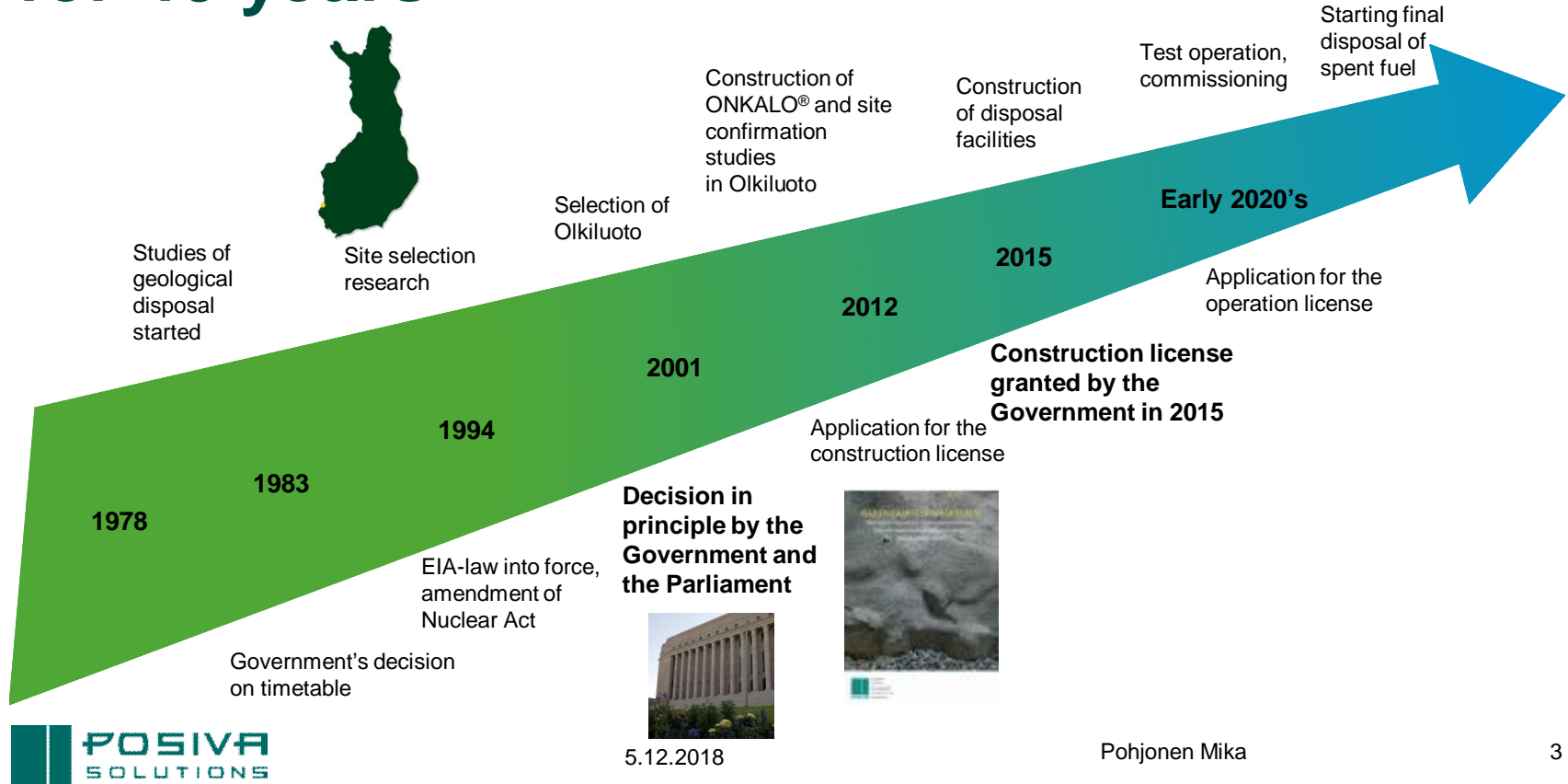
Mika Pohjonen
5.12.2018



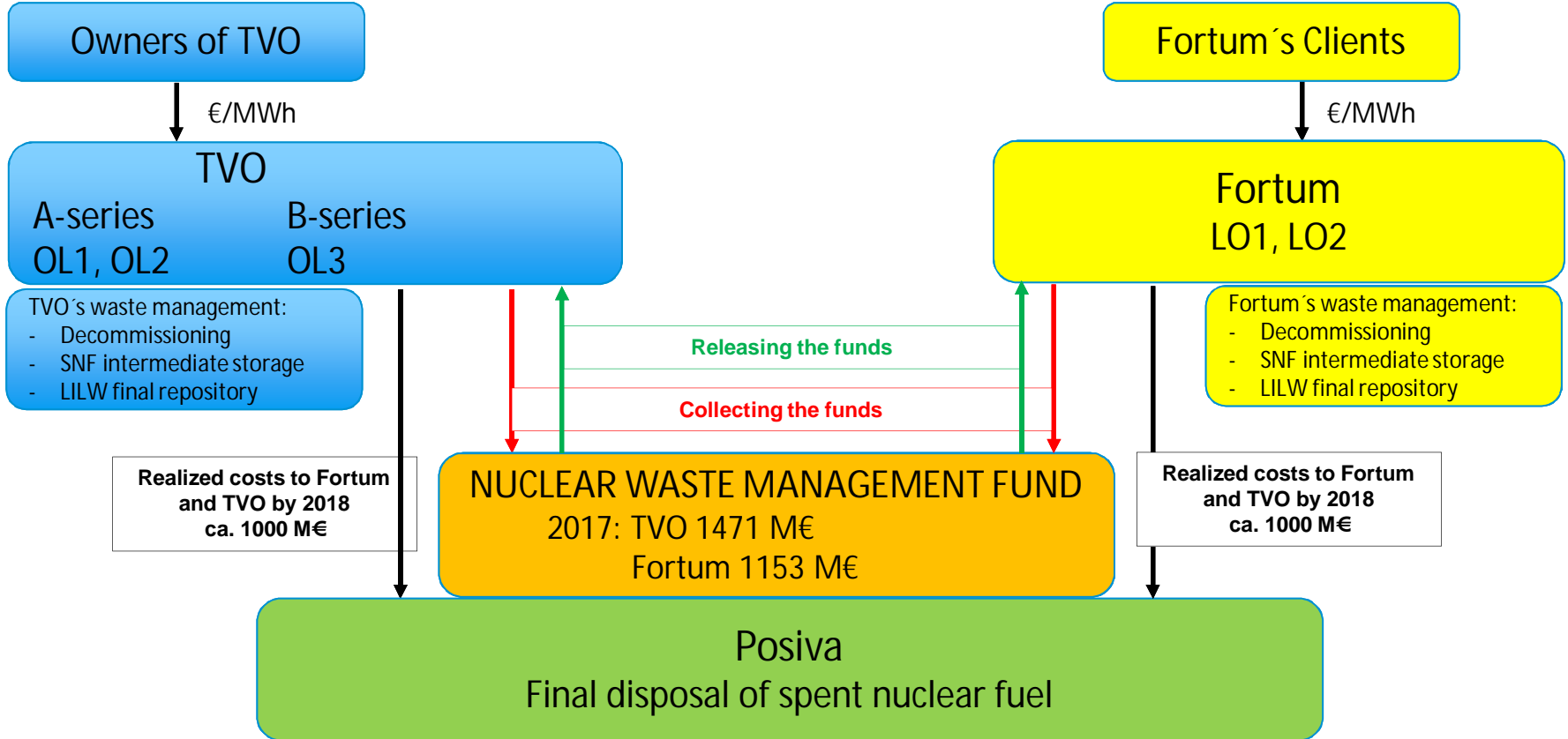
Final Disposal of Spent Nuclear Fuel in Finland



Posiva's program has progressed already for 40 years



FINANCING MODEL OF NUCLEAR WASTE MANAGEMENT



Cost (=fund size) updates

- § Costs are reviewed every third year by the utilities for the next five years (*to end of each year*)
- § The utilities deliver the estimate to the Ministry and it is reviewed by the Ministry, STUK (*regulator*) and VTT (*Technical Research Centre of Finland Ltd*) and sometimes the Ministry uses other specialists as well
- § Based on the approved estimate, the fund target sum is then revised and utilities' payments changed, if needed
- § During the time between the reviews the target sum is updated based on inflation and if needed, other factors

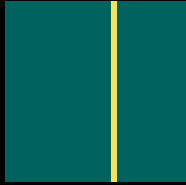
Estimate of total costs of the Finnish final disposal

§ Scope:

- § Olkiluoto 1 & 2 spent fuel from 60 years operation
- § Olkiluoto 3 spent fuel from 60 years operation
- § Loviisa 1 & 2 spent fuel from 35 years operation
- § 6500tU / 3250 canisters

§ Cost estimate:

- § Used so far 1000 M€
- § Constructing the final disposal facility 1000 M€
- § Operation costs for 100 years: 3000 – 4000 M€
- § Closure 250 M€
- § **TOTAL 5250 – 6250 M€**



POSIVA SOLUTIONS

Posiva Solutions can offer a wide range of expert services for organizations engaged in nuclear waste management operations. With our experience you can save time and cost.



Posiva Solutions can help you in e.g. the following areas:

- 1) **Preparation of Deep Geological Repository development strategy and project management plan**
- 2) **Selection and characterization of the site for deep geological disposal**
 - § assessment and development of procedures and methods as well as investigations,
 - § preparation of site descriptive models of the selected sites,
 - § development of information database and interfaces, specific site characterisation methods, safety case and supporting safety assessments, procedures and methods for the development of engineered barriers.
- 3) **Design and engineering** of the final repository, disposal machinery and affiliated facilities like e.g. encapsulation plant
- 4) **Cost estimates and cost optimization** of the preparation and construction of the deep geological repository and funding of nuclear waste management cost
- 5) **Stakeholder management and acceptability;** roles and responsibilities, communication and interaction with stakeholders like general public, relevant authorities, NGOs etc.

Our Clients

- § SÚRAO, Czech Republic
- § Nagra, Switzerland
- § Fennovoima, Finland
- § CNPE, China
- § BRIUG, China
- § RWMC, Japan
- § NWMO, Canada
- § SKB International, Sweden
- § ANDRA, France
- § RWM, UK
- § Fortum, Finland
- § TVO, Finland



PL
4350

PL
4300

Thank you!

