Enabling safety improvements at the operating NPPs

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Can too conservative/outdated regulatory requirements prevent some safety improvements?

- Ageing management – maintaining safety
- Plant modernisations are also opportunities to improve safety
- Licensees’ have also other processes to identify safety improvement opportunities (e.g. periodic safety review, probabilistic risk assessment)
  - Finnish licensees argue that sometimes documentation and qualification requirements are unreasonable increasing the costs or even preventing the modification because there are no willing suppliers
Updated Finnish regulatory requirements for commercial-grade components

• **Serially manufactured component** - has not been designed particularly based on the customer’s specification but is procured from an existing product line of the manufacturer.
  – Typically manufactured in large quantities and can be used for other applications too
• Manufacturing process needs not to be changed, uniform quality ensured

• Updated Finnish requirements for mechanical, electrical and I&C components will enable the use of serially produced components also in higher safety classes

• Location-specific requirements remain: integrity and functionality in accordance to the design basis shall be demonstrated subject to possible stressors such as radiation and seismic hazards

• Software qualification requirements exist also in conventional standards for safety critical use
The way forward?

- Development of STUK’s oversight practices according to new strategy
  - Further use of risk informed methods and graded approach
  - Oversight is adjusted according to the ability of utilities/suppliers
  - Development of nuclear safety regulations to be more goal-oriented, risk-informed, enabling

- Further development of equipment level oversight includes benchmarks, participation of utilities initiative (KELPO), developing risk-informed methods, analysing previous oversight findings
  - In addition to regulatory activities, co-operation of licensees is needed
  - Feasibility of industrial design standards (in addition to nuclear ones) needs to be considered to wider extent
  - Harmonisation of standards needs also more active involvement of industry