

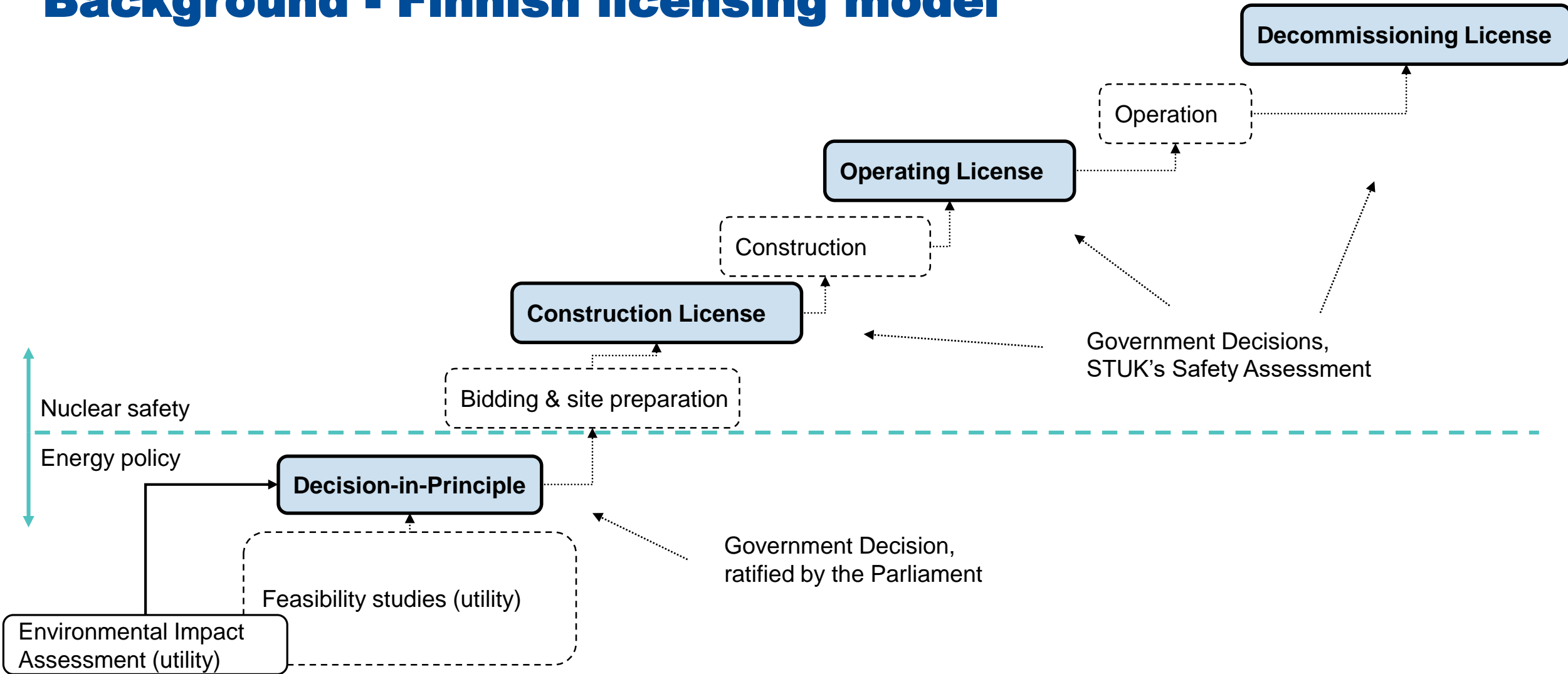


Licensing SMRs in Finland

Content

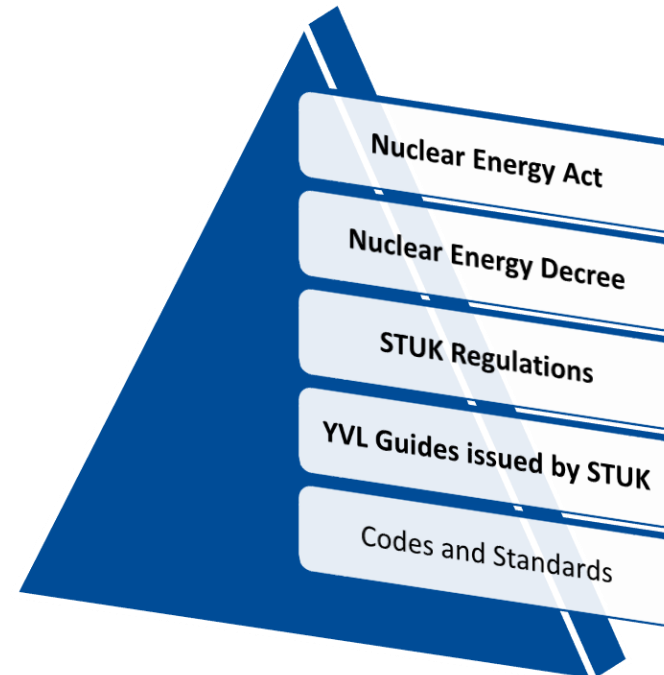
- Background
- Possible roads for SMR licensing
 - Prerequisites
 - Licensing models alternatives
 - Specific questions
- International cooperation

Background - Finnish licensing model



Background – current regulations

- The current licensing model and safety requirement are written considering large light water reactors.
- Although some provisions exist for licensing small research reactors, in general small modular reactors are not considered and applying the current legislation could make licensing SMRs cumbersome.





Possible roads for SMR licensing

Prerequisite for licensing is political decision

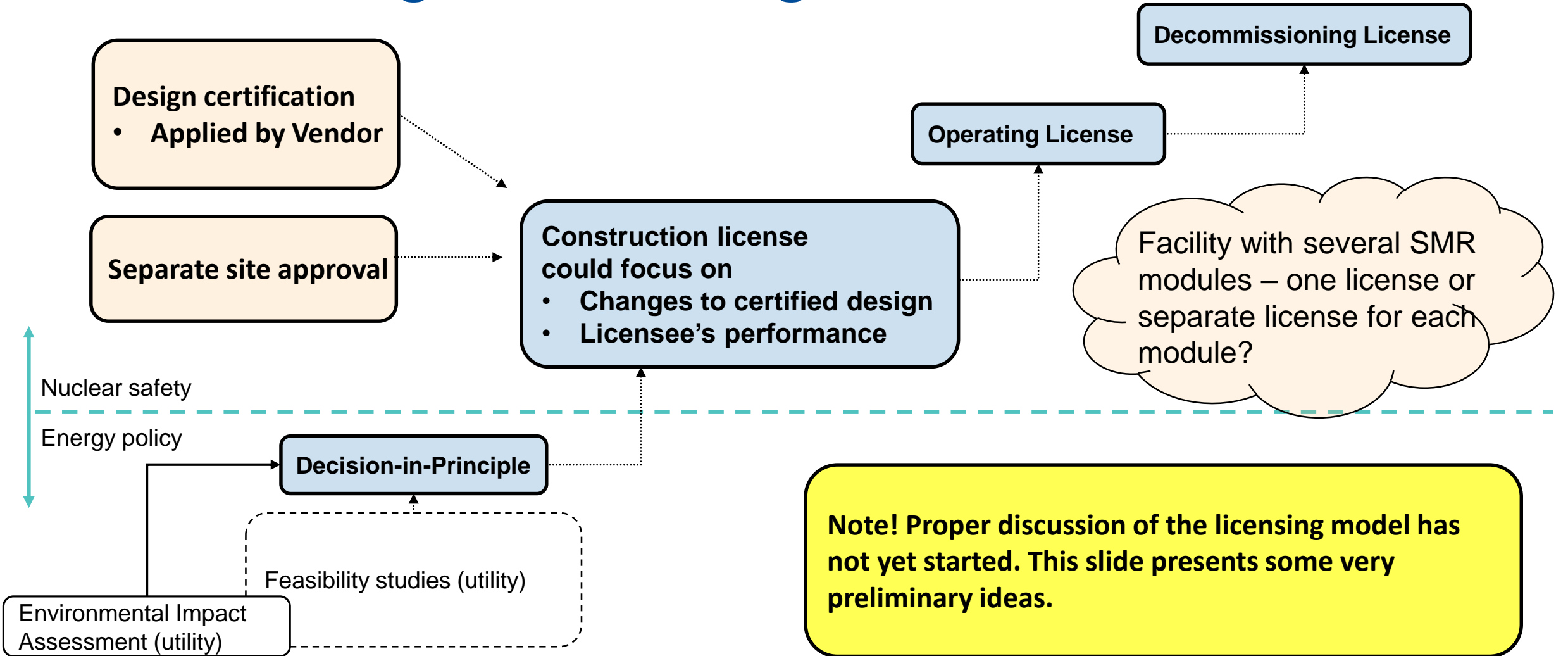
- Clear (political) decision whether to invest in SMRs in energy production should be made, considering the overall good of society
 - The decision should then be reflected in the resources for e.g. competence building and renewal of legislation. At the moment, STUK has only very limited resources for SMR activities.
 - MEAE should have a leading role in the discussion and decision making.

MEAE = Ministry of Economic Affairs and Employment

Same level of safety expected

- The same level of safety (consequences to people or environment) is expected from SMRs as from other facilities.
- However, this does not mean that SMRs should fulfill all the same detailed requirements as large reactors
- The level of safety has to be demonstrated.

Possible changes to licensing model



Possible roads for SMR licensing – examples of specific questions

- Some aspects of SMRs differ from of large reactors, e.g.
 - In the legislation, obligations and requirements are laid down that concern the licensee. These may be a challenge for new operators without competence or experience in nuclear energy.
 - Waste management should be pondered on national level. One actor who would take care of the waste management in a centralised way may be preferable to having several small actors.
 - The operating concept may include for example remote operation and unmanned stations – novel approaches for security, cybersecurity and safeguards may be needed.



International Cooperation

International cooperation

- International licensing has not been discussed with any concrete ideas or proposals.
- Alternative for licensing could be joint safety assessment of a chosen design.
 - For the assessment to be successful, the safety goals and requirements used in the evaluation should be agreed on. This can be a challenge due to the different requirements in different countries.
- On European level, harmonization of safety approaches is done within WENRA. Discussion has started to include SMRs in scope of WENRA.
- STUK participates in SMR Regulators' Forum (supported by IAEA). The objective of the forum is to identify and address key regulatory challenges that may emerge in licensing SMRs.

WENRA - Western European Nuclear Regulators Association

