



Licensing Process for International Projects

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International Projects

- Almost all NPP projects are international.....
 - vendor from another country
 - suppliers from other countries
 - investors from other countries

How does the licensing system take this into account?

Existing regulatory/legal situation

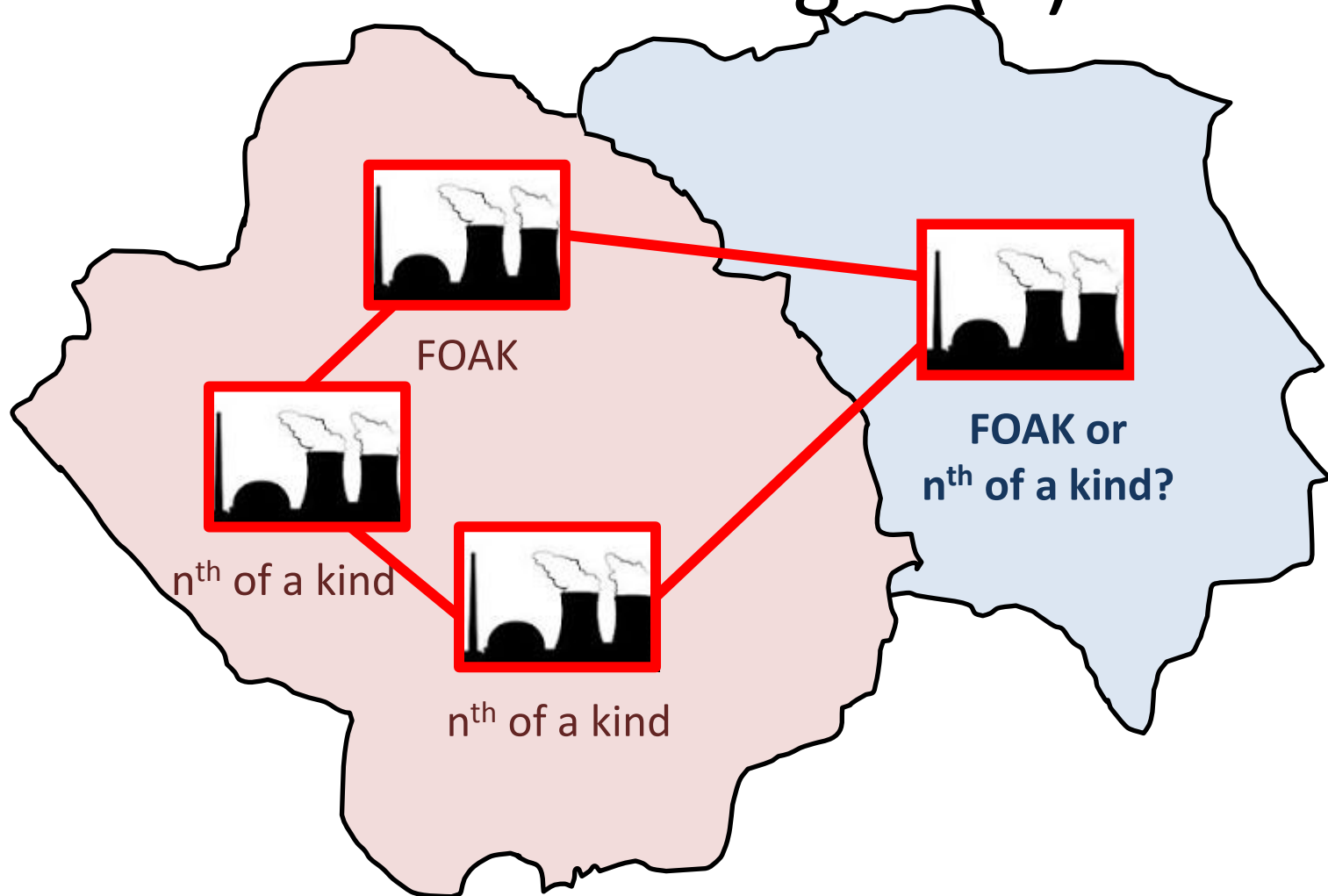
- Licensing and regulation is a national activity
- Each NPP is licensed by a national regulatory body within
 - specific national licensing processes
 - specific national safety requirements
- A design approval in one country is irrelevant for others
- This is an obstacle to deployment of standardized designs across a range of countries

International standardisation of reactor designs (1)

International standardization

- would mean that each vendor's design can be built by a vendor, and ordered by a utility, in every country without obligatory adaptation to specific national regulations
- would bring benefits to safety
- would increase certainty and predictability and would therefore ease investment
- will be absolutely essential for SMRs

International standardisation of reactor designs (2)



International initiatives

- Regulators and international institutions
 - MDEP Multinational Design Evaluation Programme
- Industry/stakeholders
 - WNA CORDEL Cooperation in Reactor Design Evaluation and Licensing
 - ERDA European Reactor Design Acceptance

MDEP (1)

- 12 regulators who are/will be undertaking review of new NPP designs
- Secretariat: OECD Nuclear Energy Agency
- Aims of MDEP
 - Enhance cooperation between regulators
 - Establish reference regulatory practices
 - Achieve convergence of codes, standards, and safety goals in the long-term
- Working Groups
 - Design-specific: 5 designs
 - Issue-specific: 3 issues

MDEP (2)

- Scope and mission of MDEP is limited
 - No legal basis (treaty), “club” of regulators
 - No harmonization of safety requirements
 - No common or mutually accepted design acceptance
 - Emphasis on sovereign authority of each regulator in licensing and regulation
- Nevertheless, important practical progress
 - Benefits of sharing experience
 - Common Positions contribute to aligning regulatory practices

WNA CORDEL Group

World Nuclear Association's Cooperation in Reactor Design Evaluation and Licensing (CORDEL) Group

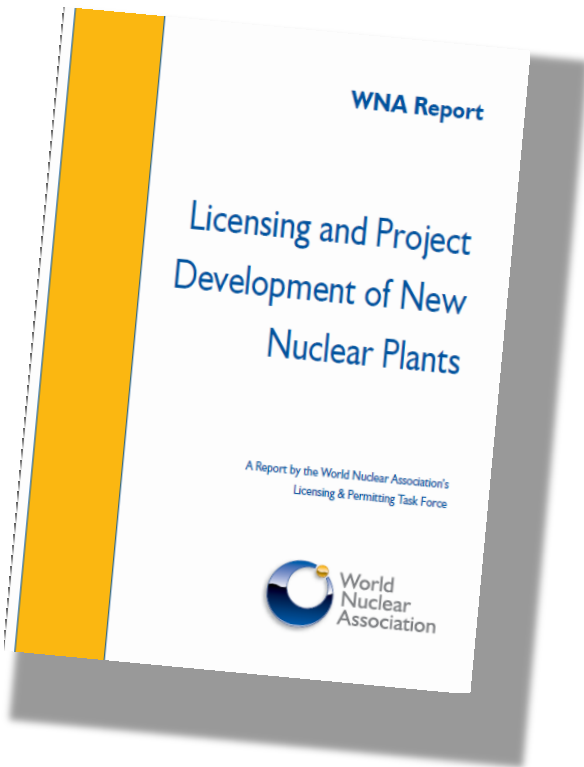
- Membership: almost all major vendors and many utilities interested in new build, service companies, etc.
- Aims
 - Promote international standardisation of reactor designs
 - Promote harmonisation of licensing procedures
 - Promote mutual acceptance of design reviews

WNA CORDEL Publications

- 2008: “Benefits” paper: International standardisation will
 - help deliver large-scale worldwide new build
 - bring benefits for safety
- 2010 “Roadmap”: Steps towards international standardisation of reactor designs

WNA Report on Licensing

- Published in January 2013
- Based on a survey among WNA members
- Analyses the relationship between licensing and commercial project development
- Stresses the importance of harmonisation
- Will be followed up by a WNA conference in Prague in May 2015



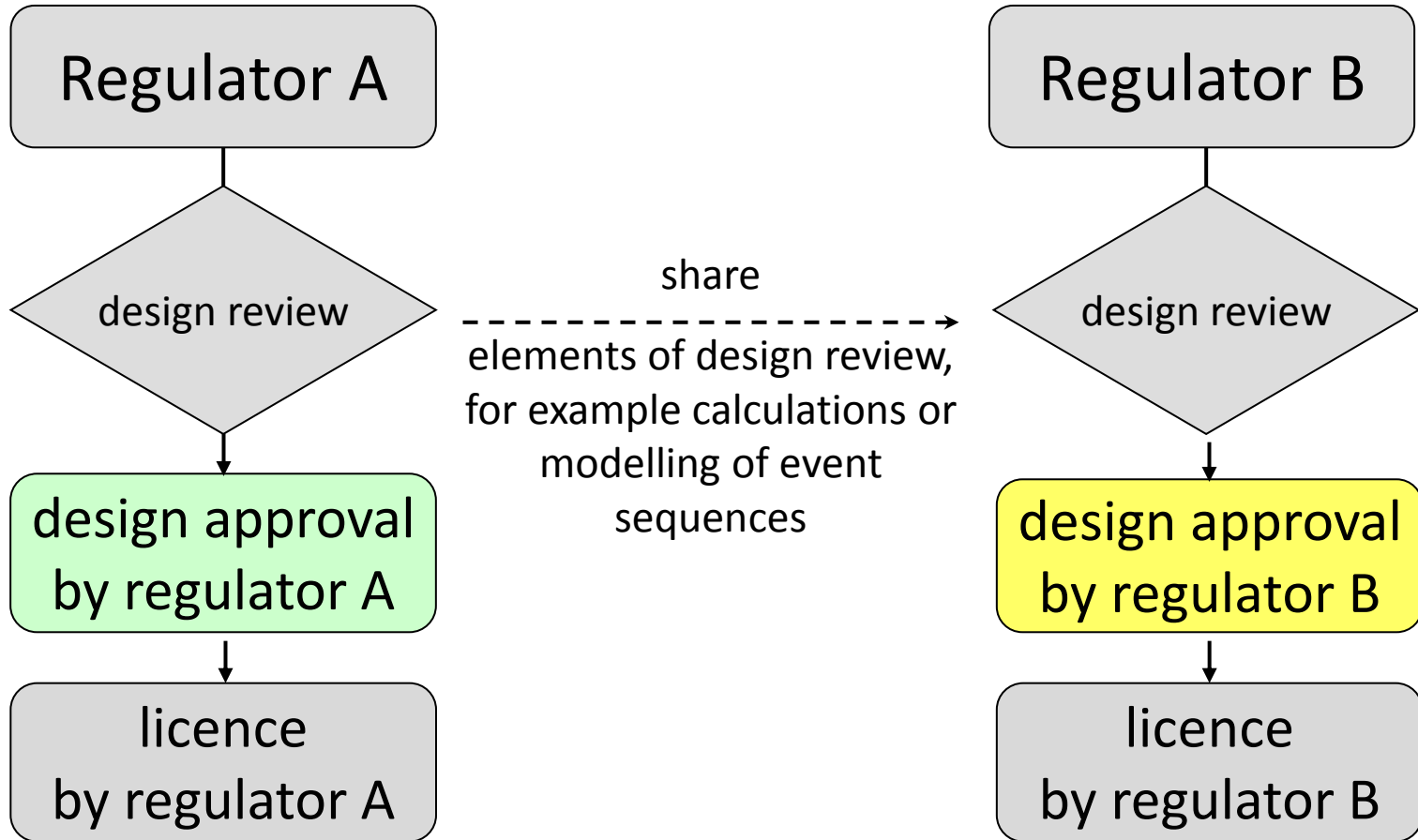
ERDA European Reactor Design Acceptance

- Expert Group within the European Nuclear Energy Forum (ENEF) active 2011-2012
- ERDA report issued in July 2012
- Concept based on the idea that a nuclear reactor design should not be reviewed and approved independently by each national regulator in each EU member state („don't reinvent the wheel every time“)
- ERDA report has not yet led to concrete steps forward

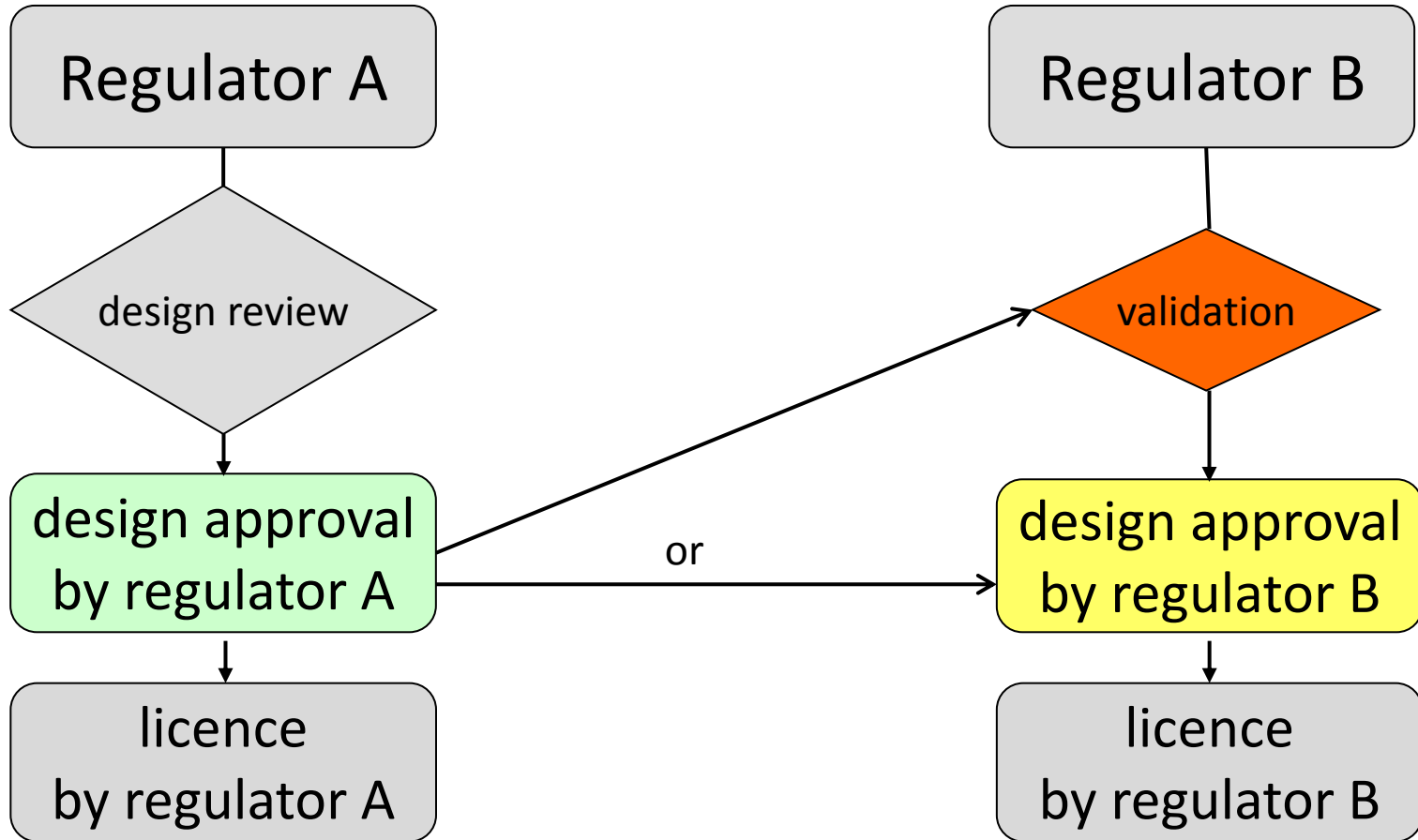
ERDA report available at http://ec.europa.eu/energy/nuclear/forum/meetings/doc/2013_05_30/related_docs/roadmap_towards_european_reactor_design_acceptance.pdf



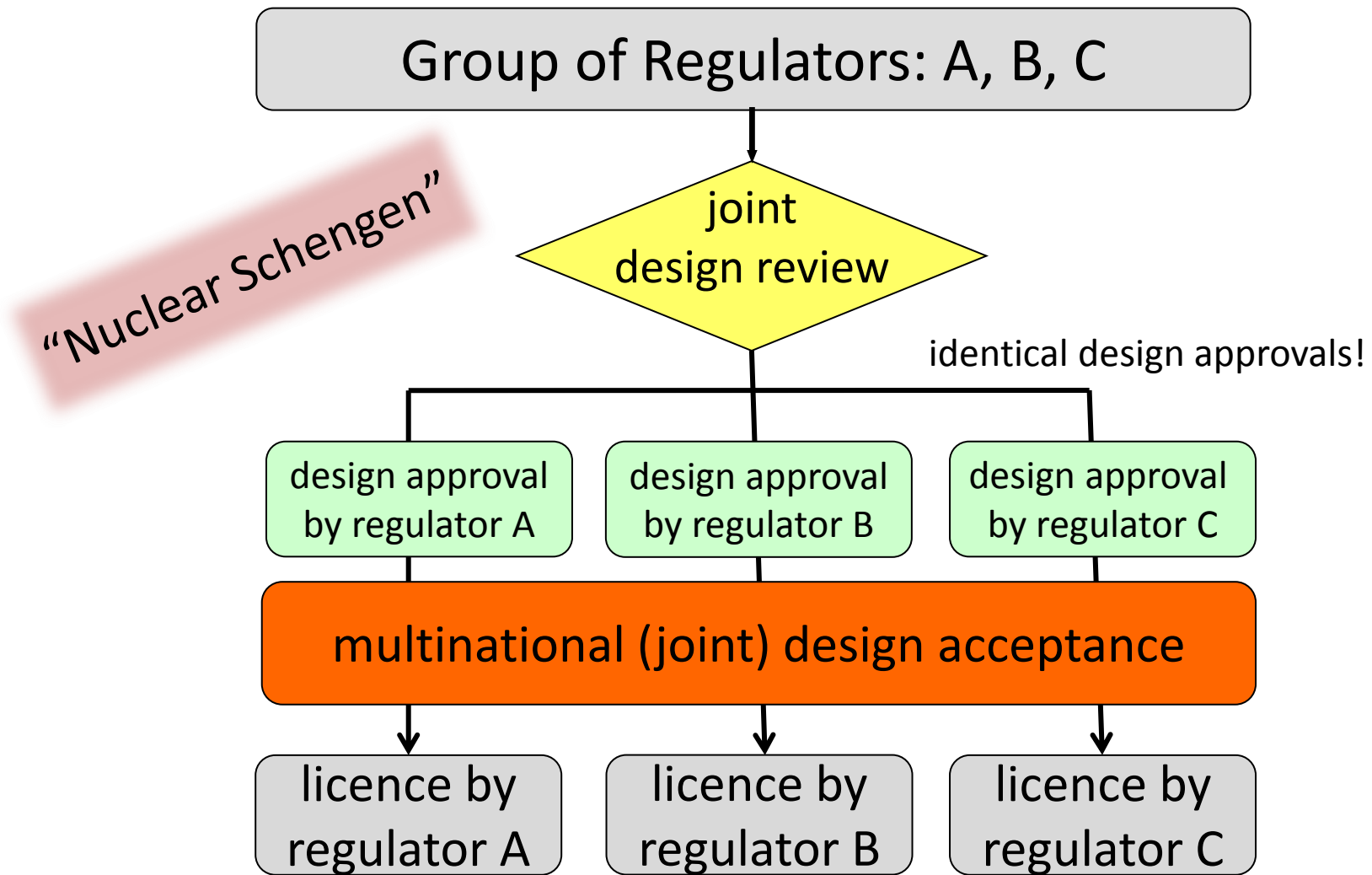
Option 1: Share design assessment



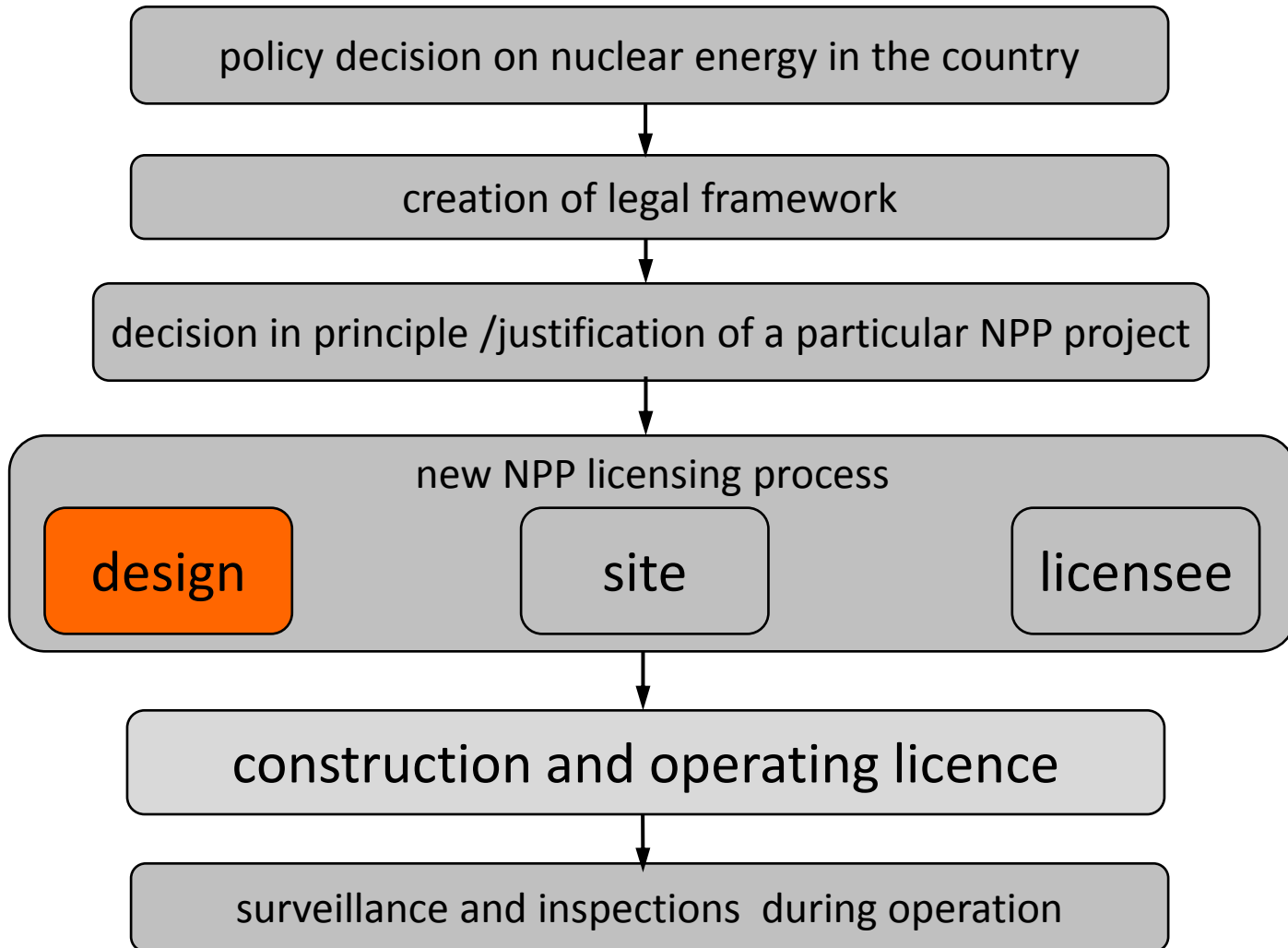
Option 2: Validation / Mutual Acceptance



Option 3: Joint Design Acceptance



Design approval as part of the overall regulatory process



Issues and challenges

- National sovereignty and public acceptance
 - Standardisation vs. continuous improvement
 - Keeping the market open for vendors
 - Risk of piling up an inconsistent “envelope” of different national requirements
- ▶ The ERDA report concludes that perceived weaknesses of the concept either can be avoided or they are far outweighed by the benefits

Conclusions and outlook

- Licensing is a national process done in an international context
- Greater cooperation and harmonisation in licensing enables greater standardisation of reactor designs
- Mutual acceptance or jointly issued design approvals should be contemplated
- This would make licensing more effective, efficient and predictable
- This is absolutely essential for SMRs!!