



LEGISLATION FOR NEW NUCLEAR BUILDS

Czech Approach to Ensure 3S

NE•RS 2024

“ON THE WAY TO THE CZECH NUCLEAR PROGRAM SUCCESS”

27 November 2024



What And Why?

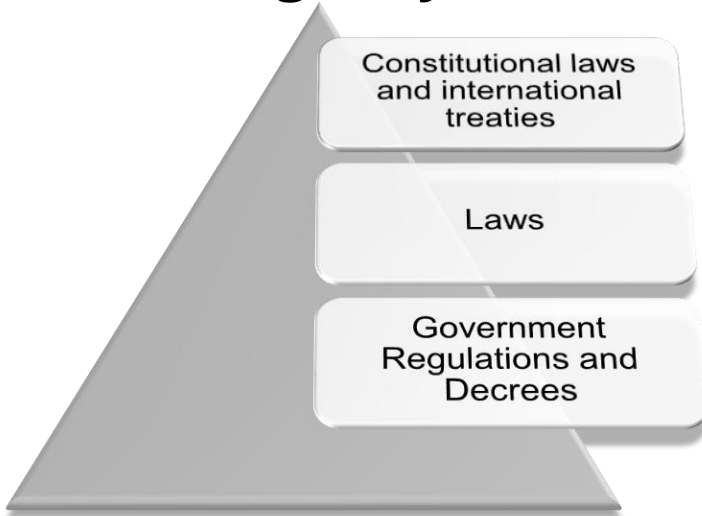
- **3S** concept
- **SAFETY FIRST**
 - Everyone who uses nuclear energy, deals with nuclear item or performs activities within exposure situation , is obliged **preferably to secure nuclear safety, safeguards and radiation protection**, respectfully to **existing levels of science and technology and good practice**
- **ALARA**
 - Proceed so that the risk threat physical person and life environment was **so low, what can be reasonably achievable** considering current levels of science and technology and all economic and social aspects
- Justification
- Primary responsibility of the operator
- Accident prevention and management
- Operational feedback
- **A graded approach**
 - **The requirements and the way they are implemented must correspond to the risk**
- Other – authorization, management system, exposure limitation, defence in depth, not burdening future generations, etc.





How Do We Regulate It?

Czech legal system



Act No. 263/2016
Coll.,
Atomic Act

Siting
Decree
Design
Decree
Nuclear
Safety
Decree
Etc.

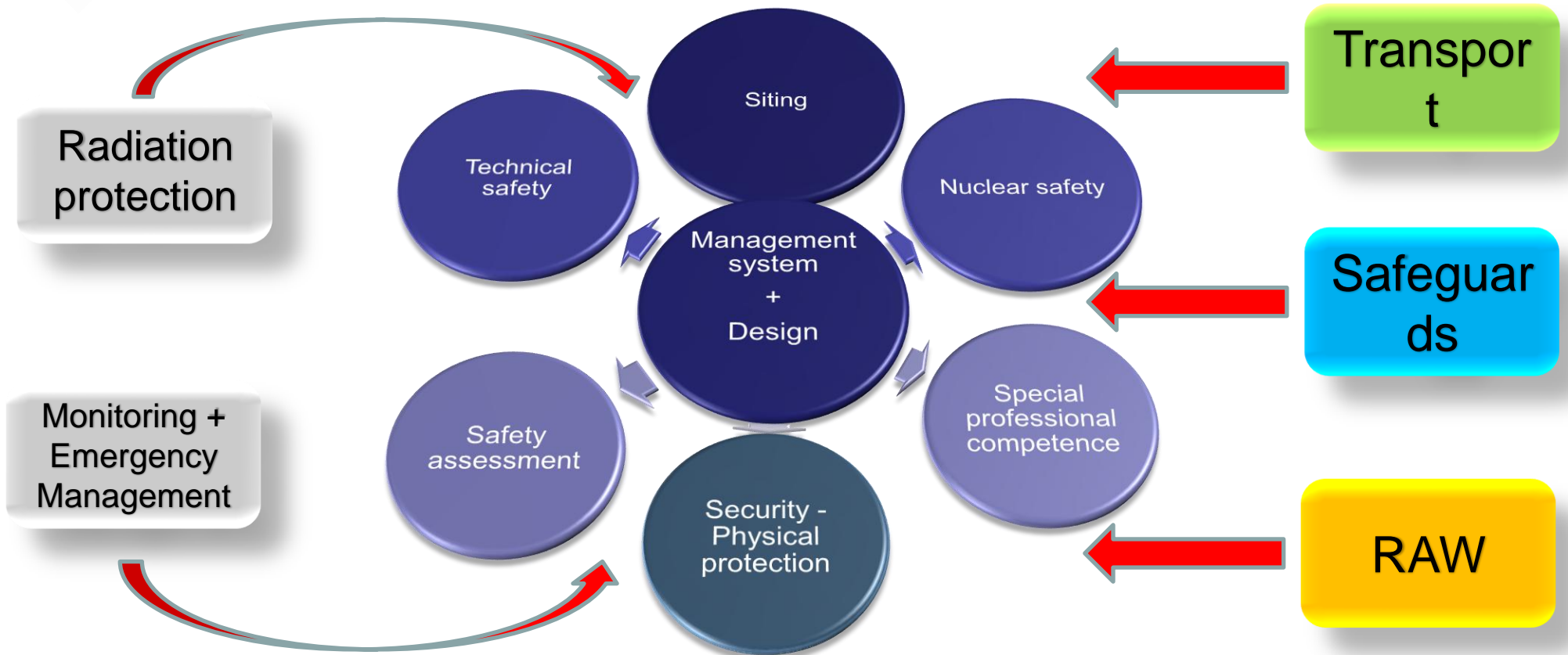


*recommendations/
guidelines*

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non-
binding

Devil In Detail – Secondary Legislation



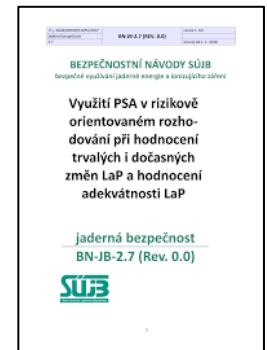


Legislation Is General, Are There Any Details?

- Safety instructions and standards (guides)
 - provide advice on how to proceed - **de lege artis = good practice**
 - enable to approach differently - it is necessary to **prove that safety is ensured!**
 - A possible path for NEW BUILDS – even if binding regulation is missing
- International × National



International
Organization for
Standardization





Nuclear Legal Framework

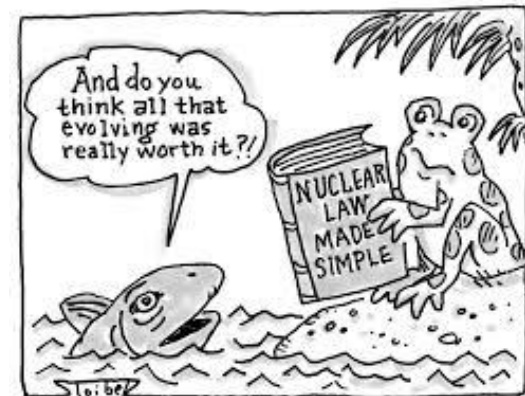
Prescriptive approach

- Legislation sets out the details
- It requires considerable scope
- Descriptive
- Limits the recipient's options
- Brings significant demands during drafting (expertise, reflection of practice)

"Performance" approach

- Legislation sets out the goals/objectives
- Smaller in scope
- General
- It leaves the addressee room for interpretation and application
- It puts considerable demands on the evaluation of the correct application

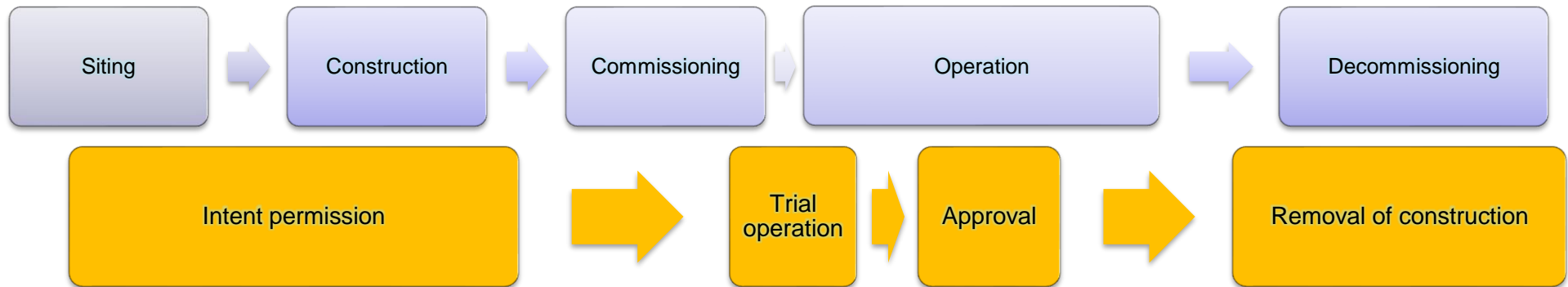
The Czech system combines both approaches – based on international recoms





„Life Cycle“ Of A Nuclear Facility

- Framework for the regulation of "activities related to the use of nuclear energy" in relation to a nuclear facility
- Stages
 - Given by the type of nuclear facility
 - **The activity cannot be carried out without the permission of the SÚJB!**



- Significance in terms of the application of a number of duties
 - "safety" as an essential feature of the project
 - assessing the properties of the area to be located
 - safety assessment
 - readiness to transition between stages



What Challenges Are We Facing?

- *Legislation/regulation is rather casuistic - with a strong bond to VVER technology*
- *Life cycle changes and multi-reactor solutions*
- *Emergency Management – Minimal or no EPZ and its Public Acceptance*
- *Unified/typed designs and their adaptation to local conditions*
- *Human resources and their insufficiency*
- *International harmonization/leveraging/mutual recognition efforts*
- *Fuel cycle and RAW*
- *" Advanced " designs + ATF*
- *Etc.*

How To Solve It?

Analytical Phase

Goal – to acquire relevant knowledge

Tools

- Gathering information
- Site visits
- WS and conferences
- Bilateral cooperation
- Deep analyses of existing Framework and internat. recoms

Regulatory Phase I

Amendment to the Atomic Act

- **Better implementation of the graded approach principle**
- **Simplification of the licensing steps**
- **New regulatory concepts**

Planned entry into force on the 1st July 2025

Regulatory Phase II

Amendments to the Decrees

- Design
- Technical Reqs. on SCC
- Safety Assessment
- Personnel
- Nuclear Safety

Planned entry into force on the 1st July 2025

Application and Evaluation Phase

2026+



Nuclear Law – New Regulatory Concepts

§ 228a

- (1) Upon request, SÚJB shall provide **preliminary information** on the criteria according to which it will assess the application for a decision or under what conditions the applications can be submitted.
- (2) SÚJB shall provide preliminary information within 180 days from the date of the request.
- (3) The provided preliminary information is valid for a maximum period of 2 years from the date of provision, unless otherwise limited by SÚJB.

Decreases

- Design requirements generalization + update
- Changes in safety functions classification
- Enabling supervision over quality of SCCs by an operator
- Commercial/industrial grade items
- Enabling less strict approach to staff qualification
- Enhancing mutual recognition principle

§ 228b

- (1) A person subject to a requirement set forth by this law regarding nuclear safety, radiation protection, technical safety, radiation monitoring, emergency management, security, or non-proliferation of nuclear weapons may request SÚJB to approve **an exemption** from such requirement.
- (2) SÚJB may approve an exemption under paragraph 1 if:
 - a) it is demonstrably impossible to fulfill the requirement set forth by this law under paragraph 1,
 - b) the procedure to be carried out based on the requested exemption is justified, and
 - c) the approval of the exemption will not lead to a reduction in the achieved and required levels of nuclear safety, radiation protection, technical safety, radiation monitoring, emergency management, security, and non-proliferation of nuclear weapons, and will be carried out in accordance with best practices.
- (3) SÚJB may revoke the approved exemption by decision if:
 - a) the person to whom the exemption was granted has seriously violated the obligations set forth by this law or has not rectified serious deficiencies in activities identified by SÚJB,
 - b) the conditions relevant to the approval of the exemption under paragraph 2 are no longer met, or
 - c) the person to whom the exemption was granted has requested in writing the revocation of the exemption.



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