

# International Licensing Framework in Challenging Environments

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Licensing, Qualification and Authority Requirements  
Open Business Day 4.5.2022



**The Core Team  
of Nuclear Experts**

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**PLATOM**

02/05/2022

**20+ years**  
**40+ experts**  
**600+ projects**  
**in the Nuclear**  
**Industry.**

**P L A T O M**

1998-

Mikkeli (HQ), Helsinki,  
Rauma, Turku, Tampere,  
Eurajoki

Miika Puukko, CEO



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**Supporting Licensees and  
Suppliers.**

**Participating in Eco-Fusion  
and EcoSMR.**



## **Licensing, Qualification & Authority Requirements**

Management of Nuclear Specific Procedures

**Management of Project Specific Licensing**

Technical Support for Licensing & Qualification

Safety Analyses & Independent Reviews

Nuclear Specific Trainings



## **Plant Safety & Optimization**

Process Modelling

Plant Life Management

RadWaste Management

Radiation Safety



## **Equipment & System Deliveries**

Design & Engineering

Process Equipment & Systems

UF<sub>6</sub> Solutions

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# Background

- Part of ECO-Fusion co-innovation project 2021-2023, which is funded by Business Finland
- Aims to increase research / R&D resources in fusion industry
- Desire to promote Finnish fusion ecosystem
  - New opportunities to e.g. SMEs

Participants:

**VTT**

**COMATEC<sup>®</sup>**

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HELSINGIN YLIOPISTO

**LUVATA**

**eos**

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# Project goals in general

- To contact national and then international actors using the existing channels and new ones through ECO-Fusion
- To identify common key elements of licensing, managing authority requirements and implementing them in a timely order and following proper practices
- To implement the data and materials in Finland (that are well understood) to an IT environment in a way that will allow comparing them to another industry, technology, or country taking into account the organizational and interdisciplinary requirements
- To refine and better utilize the understanding of the needs of ecosystems that are currently working on fusion facilities

# Project motivation

In Finland:

- Nuclear Energy Act and Radiation Act
- Decrees by Ministry or Government
- Regulations by Finnish Nuclear Safety Authority (STUK) - hundreds of requirements
- YVL Guides by STUK - 6000 of requirements

	Finland	France	Spain	USA	Canada	...
NPP	∴					...
Fusion						...
SMR			∴			...
?					∴	...
∴	∴	∴	∴	∴	∴	∴

Project specific needs

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# Project goals in practice

Unified methods in requirements management between projects

Readiness to handle various sets of requirements and licensing practices

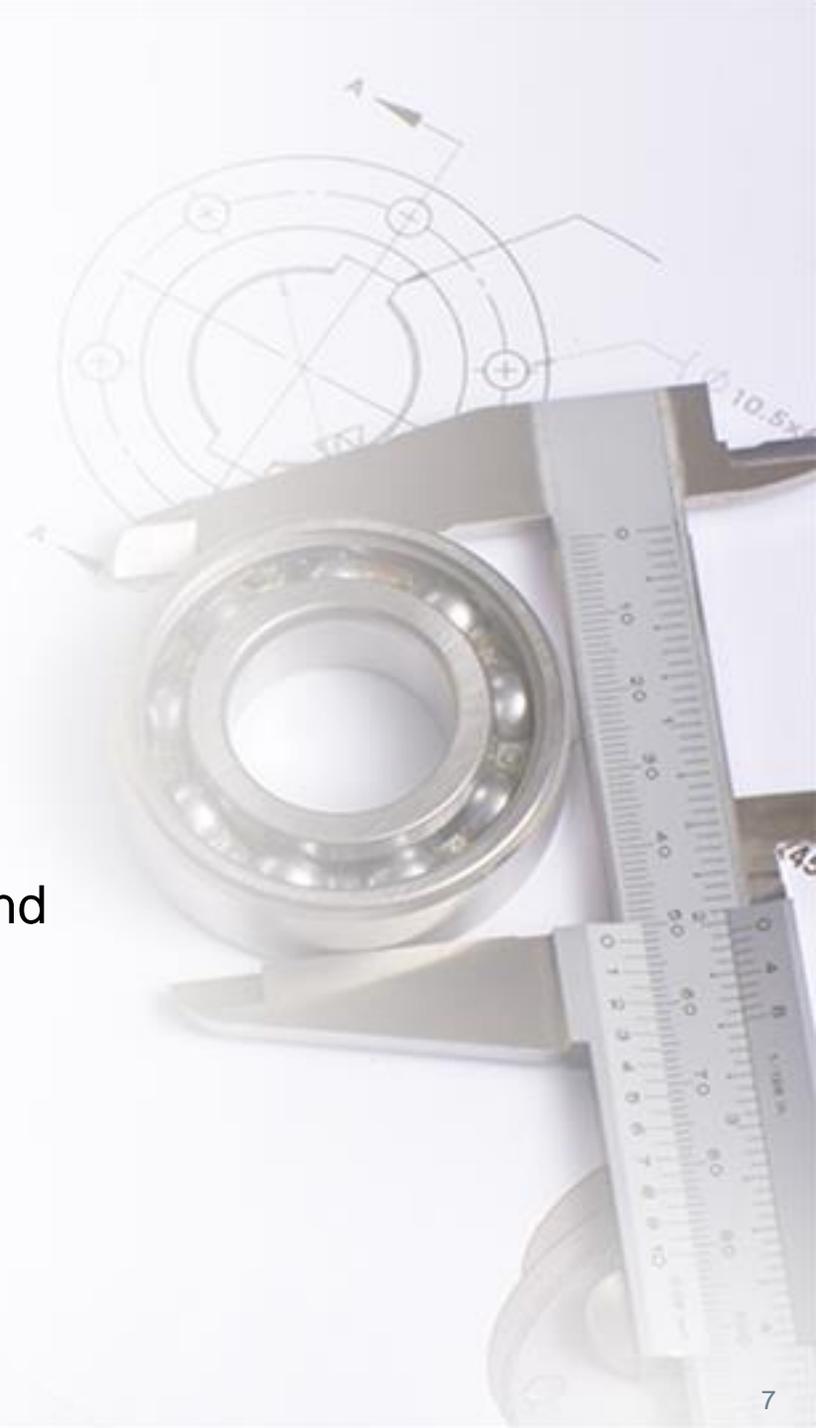
- Master's thesis finished: "Developing of requirements management procedures in an expert organisation for nuclear industry"
  - Requirements management system deployed
- Technical solution that can cater for different projects

Expertise in Regulatory Guides on radiation safety (ST Guides) and related activity

Competence management

- To avoid bottlenecks in know-how and resources
- Efficient development of the framework and planning in the projects

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# Technical solution for the framework

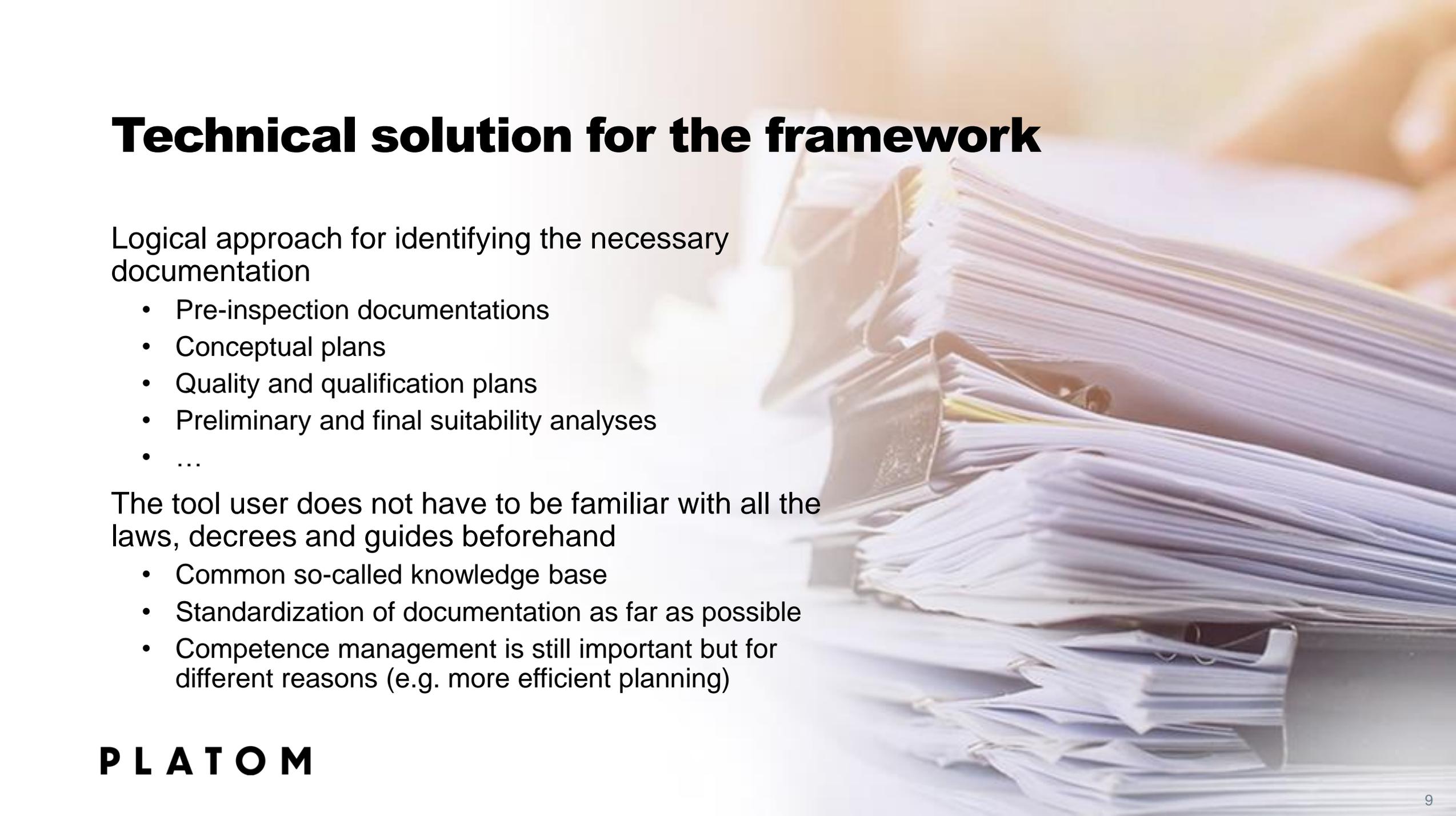
A technical solution (“tool”) is being developed to consider

- What kind of change is in question (plant, system and equipment level)
- Disciplines: Mechanical engineering, construction engineering, electrical and I&C
- Safety classes
- ...
- Management systems etc.

Regulatory Guides on nuclear safety (YVL)

- A: Safety management of a nuclear facility
- B. Plant and system design
- C: Radiation safety of a nuclear facility and environment
- D: Nuclear materials and waste
- E: Structures and equipment of a nuclear facility

# Technical solution for the framework

The background of the slide features a soft-focus image of several stacks of white papers and folders, some held together by metal clips. The lighting is warm and diffused, creating a professional and organized atmosphere.

Logical approach for identifying the necessary documentation

- Pre-inspection documentations
- Conceptual plans
- Quality and qualification plans
- Preliminary and final suitability analyses
- ...

The tool user does not have to be familiar with all the laws, decrees and guides beforehand

- Common so-called knowledge base
- Standardization of documentation as far as possible
- Competence management is still important but for different reasons (e.g. more efficient planning)

# The Finnish ecosystem

Tighter collaboration of research institutes, universities and companies to have a larger visibility together

- Synergies from different areas of expertise
- Better chances of getting projects together as opposed to individually
- Increasing the fusion activities in Finland by concrete studies and R&D

Access to ecosystems abroad

- Opportunities from wider participation
- VTT-lead efforts already ongoing



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# Next steps

Generally developing standardized models

- Includes wider utilization of requirements management system
- Radiation safety services

Technical solution

- Populating it according to YVL Guides (at first) continues
- Testing the tool in a practice to find areas for improvements
- Developing new features

Considerations for the next licensing environment

- Technological considerations
- Regional considerations
- Commercial considerations

Overall improvement of practices that are needed for developing the framework further

**Thank you!**



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#thecoreteam #viabletomorrow