

Safety Culture Oversight – Finnish experience

International Experts' Meeting on Human and Organizational Factors in Nuclear Safety in the Light of the Accident at the Fukushima Daiichi Nuclear Power Plant

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Technical Session IV-B :

Influence of Culture on the Management for Safety

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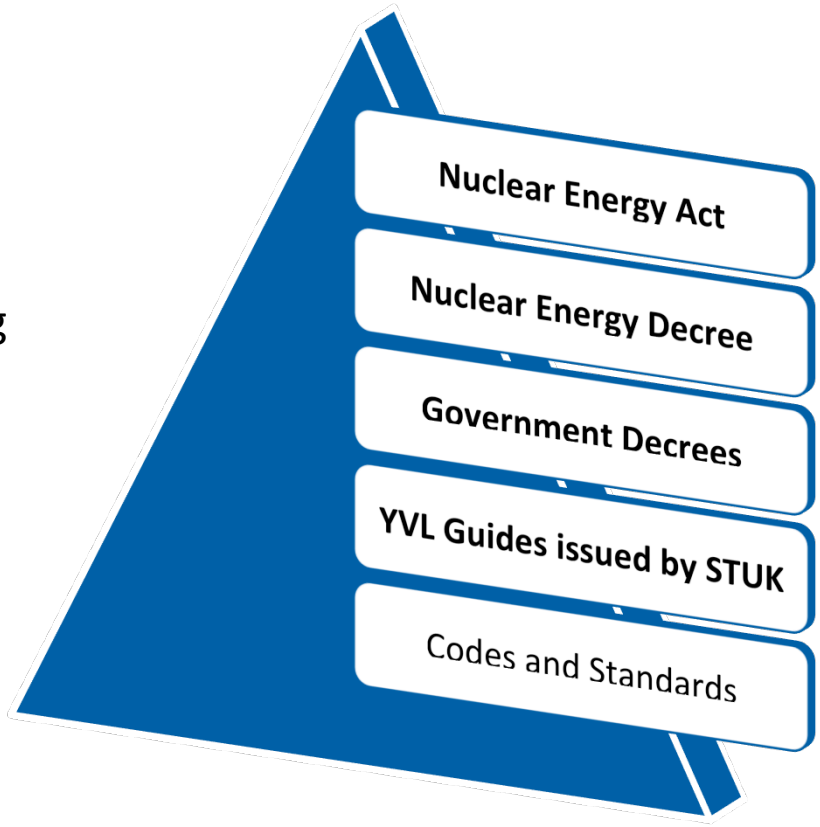
Content

- Finnish legislation
- Finnish framework for Safety, Security and Safeguards
- Finnish Regulatory Body (STUK) oversight practices
- Development of oversight
  - SAFIR – The Finnish Research Program on Nuclear Power Plant Safety
- Conclusions

Safety culture in the Legislation: Government Decree 733/2008, 28§

- When designing, constructing, operating and decommissioning a nuclear power plant, a good safety culture shall be maintained.
- The decisions and activities of the management of all organizations participating in the abovementioned activities shall reflect its commitment to safety-promoting operating methods and solutions.
- Personnel shall be motivated to perform responsible work and an open working atmosphere shall be promoted in the working community to encourage the identification, reporting and elimination of factors endangering safety.
- Personnel shall be given the opportunity to contribute to the continuous enhancement of safety.



Regulatory requirements for safety culture – Guide YVL 1.4 (A.3) 1/3

- The management system shall support positive characteristics of the organizational culture that promote safety
  - motivate the achievement of safety and quality objectives by the personnel
  - topmost management and personnel committed to safety
  - Open atmosphere, foster questioning attitude
  - safety is considered comprehensively and is continuously improved in a target-oriented and systematic way
  - actions prioritized based on their safety significance

Regulatory requirements for safety culture – Guide YVL 1.4 (A.3) 2/3

- The concept of safety culture shall be made concrete
  - communicated so that all employees share a common understanding of safety culture and its most important attributes
  - everyone has capability to identify, in general and in own work, factors that strengthen and weaken safety and safety culture
  - The importance of safety culture shall be continuously discussed and strengthened with regular communication

Regulatory requirements for safety culture – Guide YVL 1.4 (A.3) 3/3

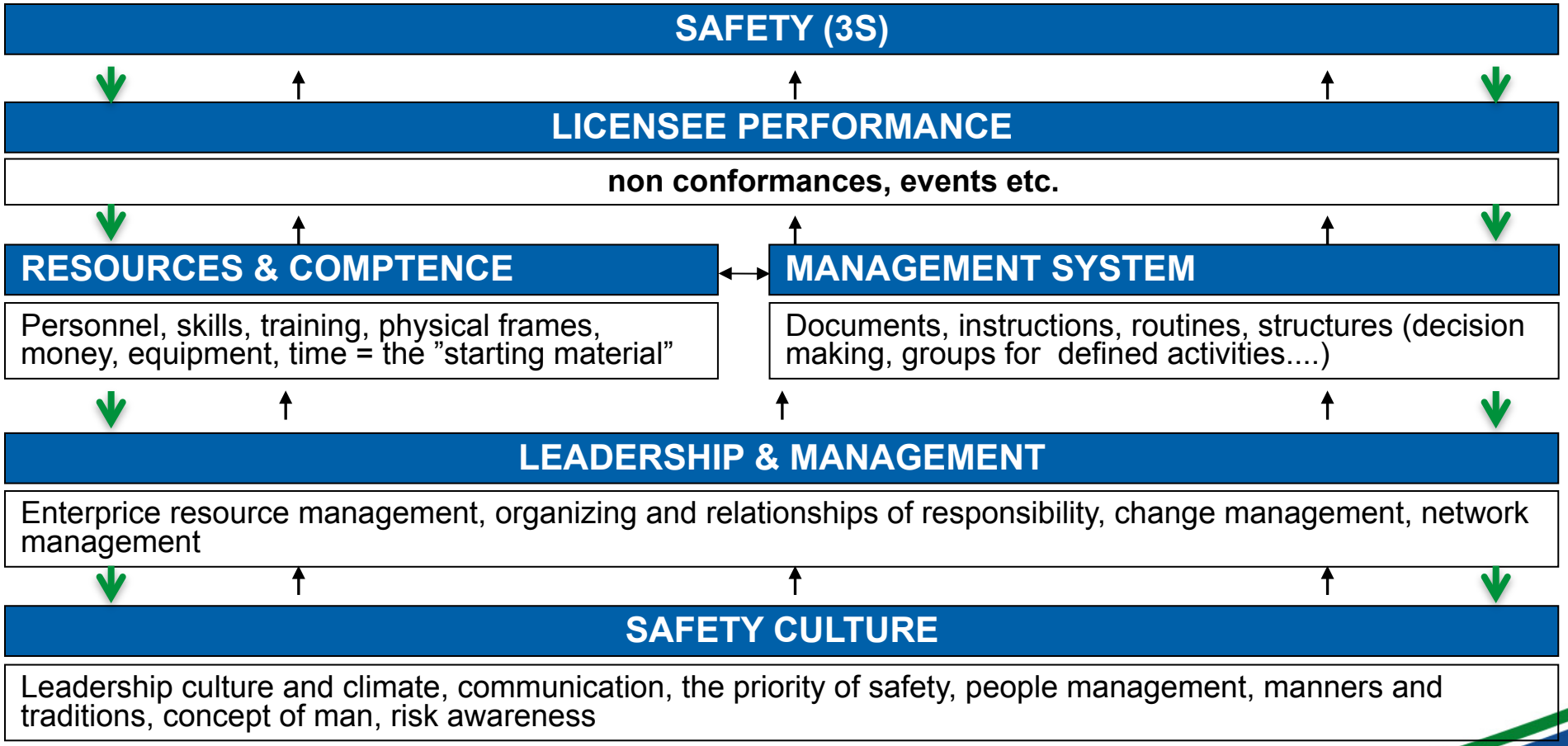
- The management system shall have procedures by means of which the management is aware of the state of safety culture and any changes therein
  - Safety culture, its strengths, weaknesses and development needs shall be identified
- The organization's management shall have available safety-culture related expertise

STUK Mission and the 3S'
Safety, Security, Safeguards

"Protecting people, society, the environment and future generations from the harmful effects of ionizing radiation"

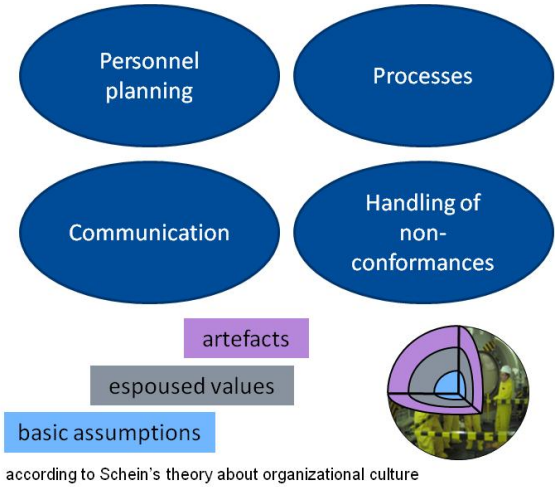
→ The purpose cannot be served fully by any one S without the other two.

Framework for Organizational issues

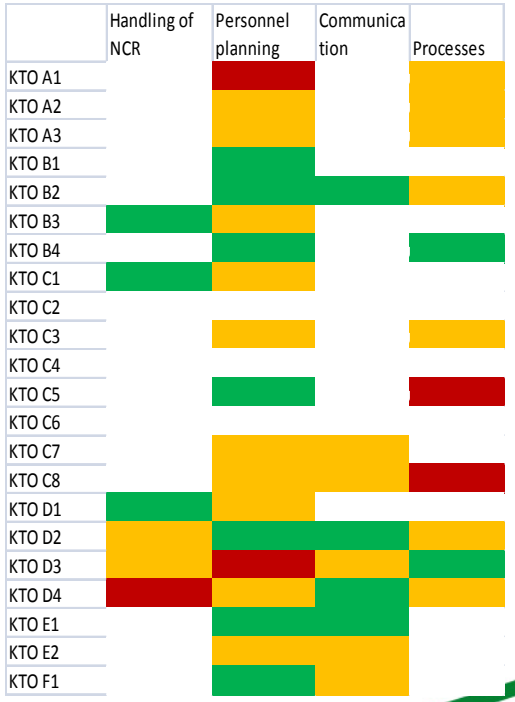


STUK´s oversight of licensees' safety culture

- Oversight activities in general
  - Inspection activities on site and off-site
  - Observation and surveillance of licensee performance at the site
  - Review and assessment work
  - Operating experience, reporting
  - Interactions with the licensee (meetings, audits, training..)
  - Oversight of the implementation of projects, modifications, outages
- Periodic inspection programme
  - Inspection specifically focusing on Leadership and Safety Culture
  - Tool (KOTKA) to collect and analyse findings on selected areas in all inspections



according to Schein's theory about organizational culture



Development of HOF oversight - SAFIR

The Finnish Research Program on Nuclear Power Plant Safety

From 2013 there are three research projects concentrating specifically on Human and Organizational issues.

- MANSCU: Managing Safety Culture throughout the lifecycle of nuclear plants
- SAFEX: Sustainable and Future Oriented Expertise
- SISIANS: Signaled and Silenced Aspects of Nuclear Safety

- *One outcome e.g. the DISC- model (Design for Integrated Safety Culture) that describes the criteria for a good safety culture and the organizational functions necessary to develop a good safety culture in the organization. (VTT: Oedewald, Reiman, Pietikäinen))*

Conclusion
Lessons learned from Fukushima

- *"It was a profoundly man-made disaster — that could and should have been foreseen and prevented"*
- "*<u>fundamental causes are to be found in the ingrained conventions of Japanese culture:</u> our reflexive obedience; our reluctance to question authority; our devotion to 'sticking with the program'; our groupism; and our insularity.*" (Diet report 2012)

- Safety Culture is not only an organizational issue
- The organization is only one part of the bigger system influenced by national culture and tradition
- What factors might we have in our own national culture and traditions that may impact on safety?