

Consejo de Seguridad Nuclear

The importance of Organizational Learning for Safety. A regulatory Perspective.

LEARNSAFE Final Seminar.

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Content.

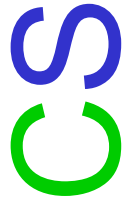
1. Overall opinion about LEARNSAFE.
2. Organizational learning and safety.
A regulatory perspective.
3. After LEARNSAFE.
4. Conclusions.



My background.

- Nuclear Engineer by training (1974).
- + Executive MBA (interest for management and organizational learning).
- Presently Technical Director for Nuclear Safety at the Nuclear Safety Council (spanish regulatory body).
- Supporting r&D work regarding *Safety Management* in Spain for almost ten years.
- One of the many advocating the incorporation of *Safety Management* in the EU R&D&T Framework programs.
- Proud of Spanish utilities advanced vision, since they had and still have the commitment to jointly work with CSN in such a sensitive topic.





Safety Management: A very old topic.

"The one theme that runs through the conclusions we have reached is that the principal deficiencies in commercial reactor safety today are not hardware problems, they are management problems."

Rogovin, Mitchell. "Three Mile Island. A Report to the Commissioners and the Public". January 1980

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OVERALL
OPINION ABOUT
LEARNSAFE





Overall opinion about LEARNSAFE

The funds used by the EU's 5th FWP, supporting LEARNSAFE, are among the most productive in terms of impact on the safety and reliability of the Nuclear Sector in Europe.

- stimulated a discussion of challenges faced.
- created a relation among Utilities and Research Centers / Universities.
- identified hindrances to organizational learning.
- provided models and tools for use by utilities.
- setup the basis for future work.

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ORGANIZATIONAL
LEARNING AND
SAFETY. A
REGULATORY
PERSPECTIVE



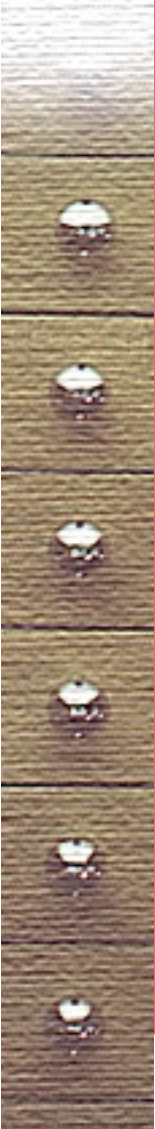
Organizational Learning and Safety.

- The increasing demands of citizens for even higher levels of safety.
- Together with the demands for efficiency of a deregulated environment.
- Create the need for continuous improvement that can only be achieved with very effective learning processes.
- The regulator plays a significant role in fostering or disturbing the utilities learning processes.





Systems thinking.



Level of Perspective	Current Reality.	Desired Future Reality.
Vision	What is the current vision in use?.	What is the espoused-vision of the future?.
Mental Models	What are the prevailing assumptions, beliefs, and values that sustain the systemic structures?.	What assumptions, beliefs, and values are needed to realize the vision?.
Systemic Structures	What systemic structures are producing the most dominant pattern of behavior in the current system?.	What kind of systemic structures (invented or redesigned) are required to operationalize the new mental models and achieve the vision?.
Patterns	What is the behavior over time of key indicators in the current system?.	What are some key indicators whose pattern of behavior shows that the desired vision is a reality?.
Events	What are some specific events that characterize the current reality?.	What are some specific events that illustrate how the vision is operating on a day-to-day basis?.

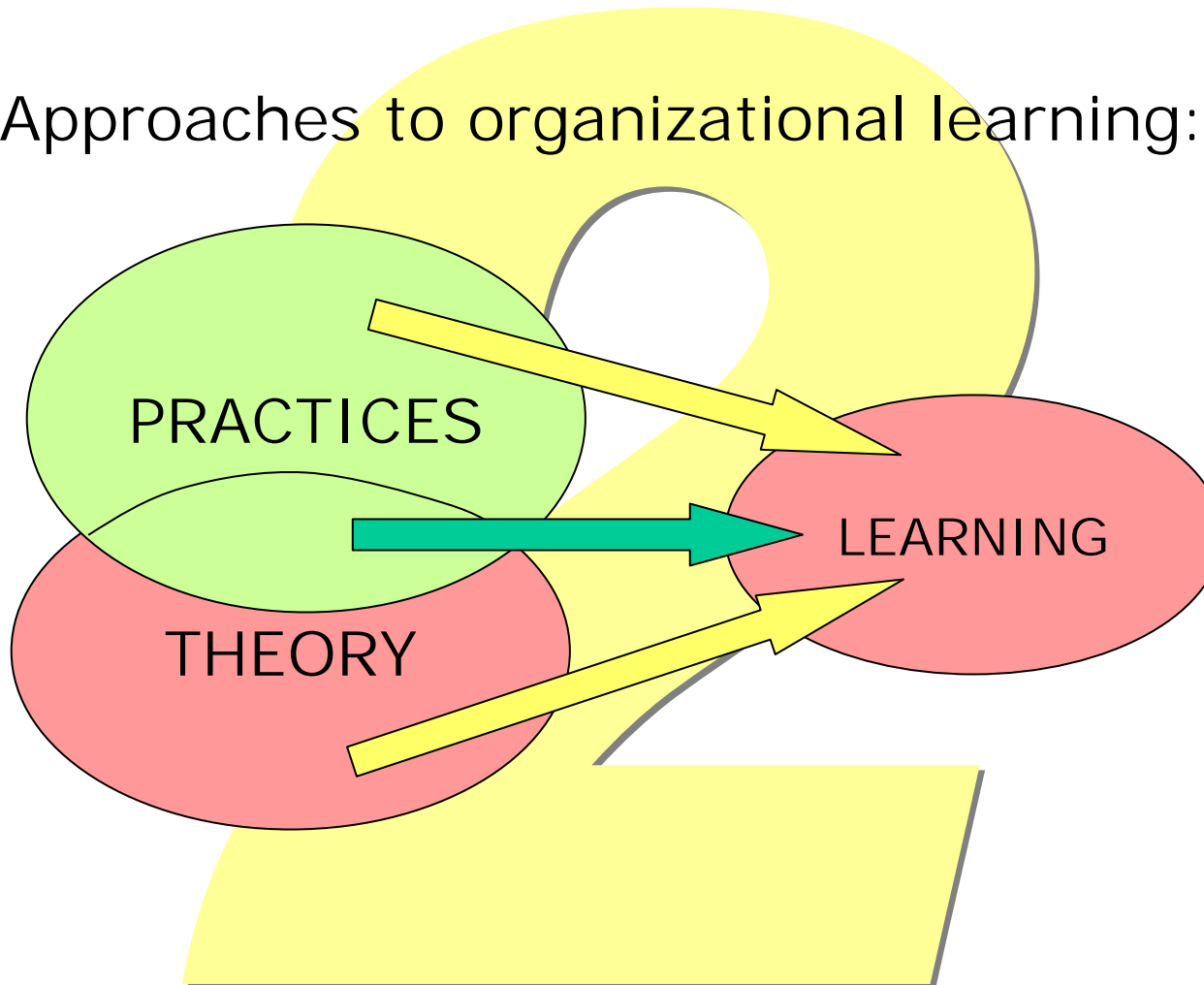
From Event Thinking to Systems Thinking. Daniel H. Kim (MIT COL)

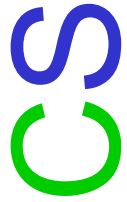


Organizational Learning and Safety.

- To increase the leverage of its actions the regulator needs to ensure utilities' attention to the "high level perspectives" of safety management.
- The regulator needs to support implementation of existent knowledge and development and application of new knowledge.
- Practices not well supported by sound theories may produce negative effects.

Approaches to organizational learning:





Organizational Learning and Safety.

THE NEED FOR MODELS.

“Regretably, the corporate world has little appreciation for the importance and power of theory. Many managers associate theory with universities and research institutions, which they view as too insulated from the real world. Hence, managers often dismiss theory as too academic and irrelevant to the programmatic conduct of business..... we can say that creating a long-lived successful organization means managers must develop systematically organized knowledge that represents the systems of assumptions, accepted principles, and procedural rules they use to make sense of their past experience and to predict the future. In this sense theory building is about developing a better understanding of our organizations and improving our capacity to predict the future. In other words, theory-building has everything to do with running a successful business”.

Daniel H. King “What Is Your Organization’s Core Theory of Success?”

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AFTER LEARNSAFE





After LEARNSAFE

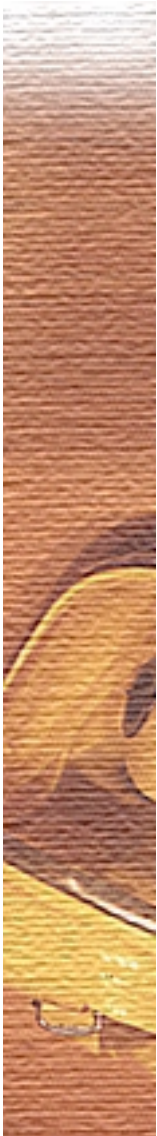
There is a role for every multinational organization:

- EC DG research has a significant role to play funding proposals and activities aiming to the start of work on this topic.
- NEA could establish multinational projects following the approach that is working successfully in all joint projects.
- IAEA should employ the knowledge derived from the previous activities and continue transferring that knowledge in documents providing guidance or advise on how to have a good safety management system.



After LEARNSAFE

It is essential to enhance and extend the excellent collaboration that has been nurtured by LEARNSAFE.

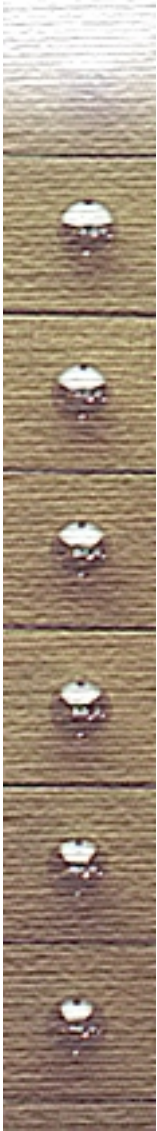


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CONCLUSIONS

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Conclusions.

- LEARNSAFE is an excellent 5th FW Program Project.
- From the point of view of regulators the work involved has a high priority.
- A lot remains to be done, citizens and market demands require the use of best available knowledge and development of new knowledge.
- Proper attention should be maintained to the use of sound theories underpinning effective practices.

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