

Fusion Knowledge Management Workshop

Welcome to the Fusion Knowledge Management Workshop

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Background and introduction

- With constant changes on the human resources across Europe **knowledge loss is inevitable**
- Knowledge management aims to **reduce as much as possible the loss of knowledge**
- Strategies focus on the **capture, codification and transfer of tacit knowledge**



What is knowledge?

Knowledge is information in action. It is created, can be captured or shared, but must be accessible to reuse, adapt or adopt it to similar or new situations.

What is knowledge management?

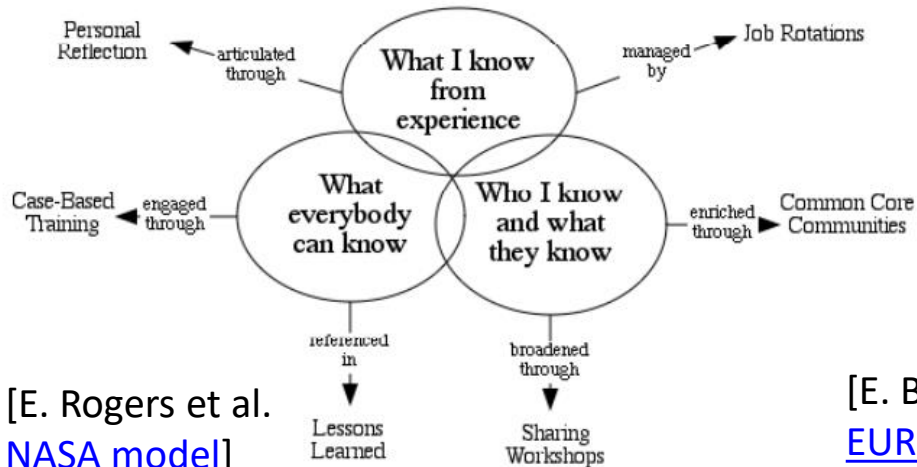
The knowledge management connects **people to people**, and **people to content** using systematic approaches to enable knowledge and information to grow, flow and create value.



Knowledge Management models

The knowledge management connects people to people, and people to content using **systematic approaches to enable knowledge and information to grow, flow and create value.**

Integrated Knowledge Reapplication Processes and Enhancing Knowledge Management Practices



[E. Belonohy, [EUROfusion model](#)]

THE EUROFUSION KNOWLEDGE MANAGEMENT MODEL



The four pillars of the EUROfusion Knowledge Management Model must not be seen as independent silos but as complementary that strengthen each other when combined



Knowledge Management (KM) Activities

New dedicated Knowledge Management (KM) activities in many organizations.

Collaborations:

- [IAEA Technical Conference on Nuclear Knowledge Management and Human Resource Development \(1-5 July 2024\)](#) - EUROfusion panel event attended by the IAEA deputy director general. Planning IAEA visit to Garching.
- **F4E** – Regular biweekly meeting to coordinate activities.

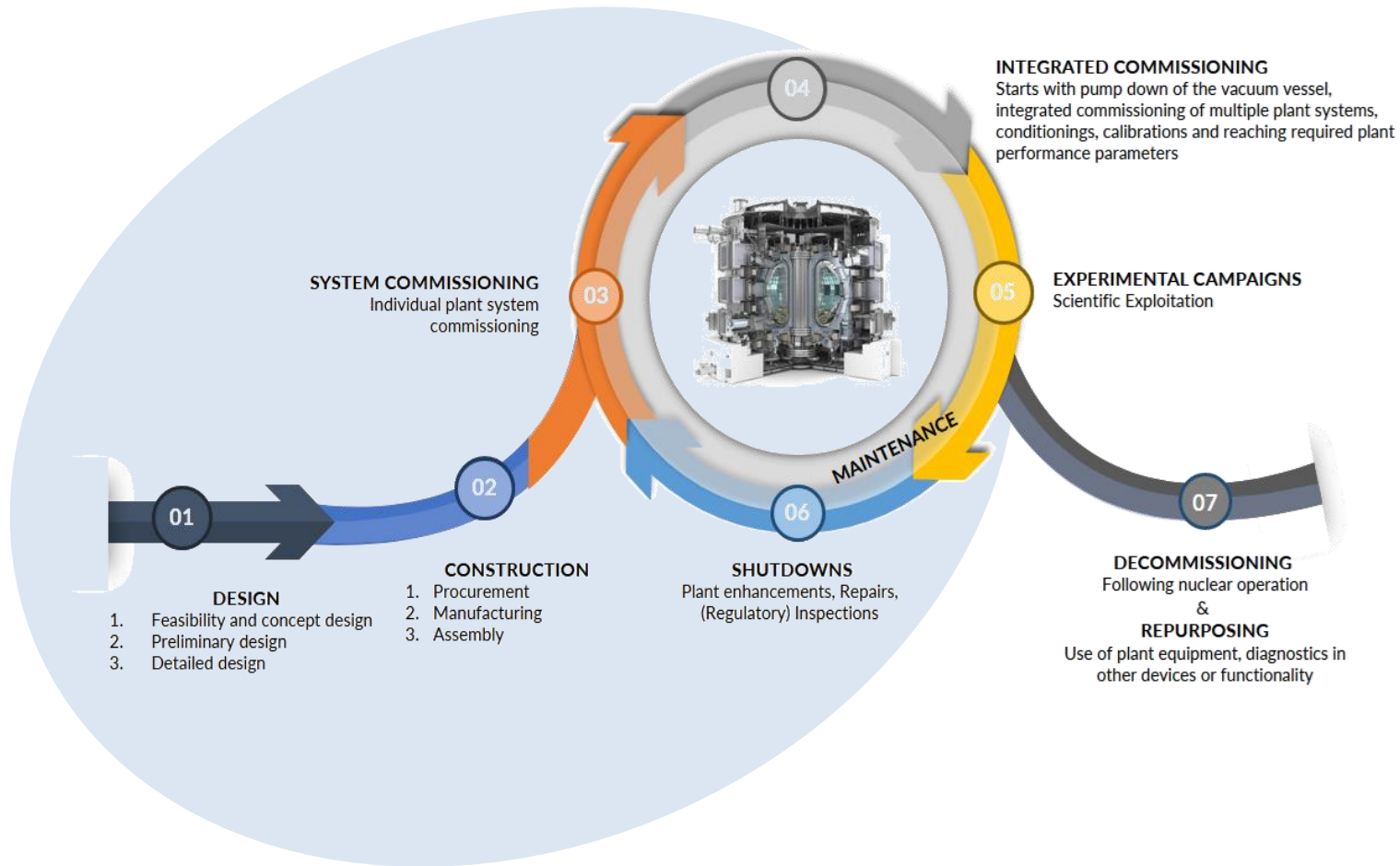
Workshops: Sharing experience, best practices and lessons learned on effective knowledge capture and transfer focusing on engineering and operations

1. [EIROforum workshop on Knowledge Management \(4-7 June 2024, online\)](#)
EUROfusion, CERN, ESA, ESO, EMBL + invited guests: NASA, IAEA, F4E and ITER
2. [EUROfusion-F4E workshop on knowledge management in nuclear fusion \(12-14 November 2024, online\)](#) EUROfusion, F4E, ITER, QST
3. **EIROforum workshop on development of online training (Spring 2025)**





Need more focus on engineering and operations



Engineering design decisions of major builds (ITER, enhancements, new devices, DEMO)

Delays due to commissioning and operations can take weeks, months to years to recover.

- Sharing experience & lessons learned, training can reduce operational delays and training times.

Operational complexity of devices increases with their size.

- JET: ~50 roles with ~500 staff.
- Training: few months to a year, some roles take 4-10 years.
- Training is often on the job, shadowing an experienced operator.



Fusion Knowledge Management Workshop

Goal of the workshop is to focus on the **capture and transferring of key decisions, lessons learned, best practices in engineering and operations** within the Fusion Energy Community.

- Effective strategies to ensure the retention of both tacit and explicit knowledge.
- The integration of Lessons Learned into new projects.
- Effective capture and use of operational logs.
- How to foster and maintain supportive communities.
- How to map and deliver strategy value to stakeholders.
- Collaboration and knowledge sharing across fusion organizations.

Workshop strategy:

- Open to all staff at F4E, EUROfusion, QST (through the Broader Approach Agreement) and ITER.
- 50+% discussion time.
- All sessions are recorded, and the recording will be shared with registered participants.
- Identify topics for follow-up discussions and events.



Fusion Knowledge Management Workshop

Tuesday

Wednesday

Thursday

Morning session

- Welcome by the EUROfusion Programme Manager
- JET
- MAST-Upgrade

- Welcome by the F4E Director
- EUROfusion KM strategy and Operations Network
- ECRH network
- Announcements of new communities
- HCD and DIAG knowledge sharing

- F4E lessons learned database
- Lessons learned from the vacuum vessel

Afternoon session

- CERN to fusion
- ITER
- ITER Engineering Design Handbook

- Sharing experience on Qualifications
- Risk management