Improving Online Collaboration for FR Knowledge Preservation – Repositories, E-learning and Sharing

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TM on Status of IAEA Fast Reactor Knowledge Preservation Initiative, Dec 3-6 2013 at Vienna
Main NKM Programme areas:

- Methodology (documents, methods & tools)
- Services and support (assist visits, missions)
- Nuclear Education (schools, networks)
- Technology & Resources (platforms, content)
Assisting Organizations in NKM

- Measuring KM maturity in nuclear organizations
- Knowledge Asset Management
- Identify Critical Knowledge, Reduce Loss
- Improving Innovation: tools and Techniques
- Effective Collaboration and Partnership
- Maintenance & Development of Competence
- Improve K-utilization, K re-use and K-transfer
- Explicit and Tacit Knowledge Capture
- Links with the Integrated Management System
- Specific challenges for each organization
17 NKM publications, more on the way....
The Impact of Knowledge Management Practices on NPP Organizational Performance - Results of a Global Survey (2013)


Knowledge Management for Nuclear Research and Development Organizations (2012)

Comparative Analysis of Methods and Tools for Nuclear Knowledge Preservation (2011)

Workforce Planning for New Nuclear Power Programmes (2011)

Status and Trends in Nuclear Education (2011)
New Publications – Coming in 2014

- Risk Management of Knowledge Loss in Nuclear Organizations
- Process Oriented Knowledge Management in Nuclear Organizations
- Guide on Nuclear Knowledge Management
- Mapping organizational competency in nuclear organizations
- KM in Integrated Management Systems of Nuclear Organizations
- NKM for Radioactive Waste Management Organizations
- National Approaches and Strategies for Nuclear Knowledge Management
- Nuclear Accidents Knowledge Organization System
- VVER Knowledge Organization System

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The 8th IAEA NEM School at the Abdus Salam International Centre for Theoretical Physics (ICTP) in Trieste, Italy - July 2013

The 2nd IAEA NEM School at University of Tokyo in Tokyo, Japan – May 2013

The 1st IAEA NEM School at Nuclear Power Institute, Texas A&M University in Texas, USA - April 2013
Networking in Nuclear Education

NKM facilitates collaboration with/between:

- European Nuclear Education Network (ENEN)
- the Asian Network for Education in Nuclear Technology (ANENT)
- the Latin American Network for Education in Nuclear Technology (LANENT), and
- the African Network for Education in Nuclear Science and Technology (AFRA-NEST)

- Proposed: “CIS-Region” Network (new!)

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Nuclear Knowledge Management School

9th Annual IAEA/ICTP NKM School
Trieste – July 2013

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Other NKM Programme Activities

- Development of new e-learning resources:
  - Enhanced NKM learning management system (LMS)
  - Nuclear Engineering Courses from U of Tokyo
- New Technical Working Group on NKM formed
- New initiatives
  - Communities of Practice (COP) Initiatives
  - Capability and Planning (CAP) Framework
  - Life Cycle Design Basis Knowledge Management
  - NKM’s wiki-based document production environment
  - Virtual Nuclear Management University (VNMU)
  - Nuclear Knowledge Portals and Repositories…

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Repositories are for long-term storage and access

Portals with repositories in development:
- VVER Knowledge Repository
- Major Accidents Knowledge Repository
- Fast Reactor Knowledge Repository
Nuclear Knowledge Portals

1. Focus on common theme (e.g. technology)
2. Central homepage for multiple services or resources related to theme
3. Focus on “community with shared interest”

Possible service bundle examples:
- knowledge repository or archive access
- related news and/or events
- e-learning (learning management system)
- “social media” for organizational collaboration
Knowledge Repository Approaches

Two taxonomy-based search approaches:
1. Tovek-based knowledge organization system and search (system available online now)

and

2. New widget to access IAEA internal Google-Appliance server into INIS repository (new way to access to existing system) (pilot for demonstration only)
E-learning for FR Community

- CLP4NET functionality:
  - Content management system (CMS)
  - Learning management system (LMS)
- Training material and courses
- Self-directed learning
- Instructor led courses
- Open LMS and protected LMS
- Encourage sharing of resources, knowledge
- Contributions invited (we can assist if needed)
“Social Media” functions for FR R&D Organizations or Projects

- User-maintained web-presence
- Can support fully public or closed community
- Means of highlighting research interests, capabilities, projects, collaborations
- Means of establishing contact points
- Encourage sharing and awareness of FR initiatives.
- Full text searchable (resource locator)
Member State Contributions

- Use of existing National INIS Centres (encouraged)
- Direct archival contributions from MS organizations possible (special circumstances, needs, arrangements possible. E.g. limited access, translation etc.)
- NKM important to safety, economics & innovation
- K-retention & storage is a key part
- To learn from past we must preserve knowledge (repository concept)
- We all have a role in making it work!
- We need your help!
- Please work with us…
Thank You!