

Technical Meeting
to
Develop Guidance Documents for Nuclear Knowledge Management
in Government, Industry and Academia
9 – 13 October 2006, Vienna, Austria
L2-TM-28936
Terms of Reference

Background

Knowledge is the key resource of most organizations in today's world. Managing knowledge effectively requires understanding of and attention to the concept of organizational knowledge rather than just the traditional notion of individual-centered knowledge. This shift can be addressed through the utilization of organizational core competencies that have proven themselves to be of value within many Member State (MS) organizations. The knowledge management process normally includes knowledge identification; knowledge acquisition and development; knowledge dissemination and use; and, knowledge preservation.

With increasing frequency, experts around the world are retiring and taking with them vast amounts of knowledge and corporate memory. Such individuals are often those who can answer specialty and organizational questions easily and who possess tacit knowledge not previously extracted from them. Regardless of the reason that causes an employee to leave a given nuclear facility, the loss of knowledge that is either critical to safety or operations poses an internal threat to the safety and operation of that facility. The primary challenge of preserving knowledge is to find ways through which tacit knowledge might be captured and – as appropriate – transferred to successors. Tacit knowledge represents a huge investment of an organization's resources and – from a purely business standpoint – that investment should be protected. Knowledge management practices offer organizations opportunities to do just that.

Knowledge-loss problems are also being exacerbated by the deregulation of energy markets around the world. The nuclear industry is now required to reduce its costs dramatically in order to compete with generators with different technology life-cycle profiles. In many countries, government funding has been dramatically reduced or has disappeared altogether, while the profit margins of generators have been severely squeezed. In some cases, lower electricity prices have been achieved at the expense of losses of expertise resulting from downsizing to reduce salary costs; a loss of research facilities to reduce operating costs; and, a decline in support to universities to reduce overheads. Factors such as these have often led to reductions in technological innovation and losses of technical competencies. Fortunately, such conditions have begun to draw concerned attention to the need for effective strategies and policies for nuclear knowledge management (NKM).

The IAEA is developing guidance documents on NKM including knowledge preservation and knowledge transfer in the nuclear sector. This activity will assist nuclear organizations in MS to effectively apply this guidance and to assist them in benchmarking their practices against those of other organizations. The following documents on Nuclear Knowledge Management have already been developed by the IAEA:

- *Managing Nuclear Knowledge: Strategies and Human Resource Development*, STI/PUB/1235, 2006, ISBN 92-0-110005-1
- *Working Material on Preservation of knowledge: general principals, methodology and application in nuclear industry* (IAEA-C.3-2005/2) – issued in June 2005

- *Nuclear Knowledge Management: Glossary* – issued in November 2005
- Technical report on *Risk Management of Knowledge Loss in Nuclear Organizations* – developed and approved for publication in mid-2006
- Technical report on *Knowledge management for nuclear industry operating organizations* – developed with publication planned in second-half of 2006

Still another IAEA guidance document is being developed to serve the needs of government, research, academic, and non-generation organization managers in their endeavours outside the power generation sector. Certainly, the NKM publications listed above should be of use to nuclear professionals outside the power generation sector. However, *Nuclear Knowledge Management in Government, Industry and Academe* will seek to accomplish the following in the context of non-power generating facilities:

- Identify the fundamental elements needed for an effective NKM system;
- Share relevant lessons-learned regarding NKM – including selected examples from organizations outside the nuclear field ;
- Providing guidance concerning methods for NKM implementation.

This document will also provide information that can be used to supplement the IAEA NKM publications listed above, thereby enhancing NKM practices in nuclear power organizations.

Technical Meeting

To facilitate the development of the new document described above, an IAEA Technical Meeting will be held 09-13 October 2006 at the Agency's headquarters in Vienna, Austria. During that meeting, experts from representative Member States will review KNM lessons-to-be-learned from experience in nuclear enterprises other than power generation; identify basic trends in relevant subject areas; and, catalogue potential NKM practices that could improve safety and performance in government, research, academic, and non-generation organizations. (This Technical Meeting is being organized within the framework of the Programmes: C.3. Nuclear Knowledge Management.)

Objectives of the Technical Meeting

The following objectives have been set for the meeting:

- To provide a forum for presentations and discussions regarding practical NKM methods in current use or being developed within government, research, academic, and non-generation organizations
- To identify the basic trends in the subject area and knowledge management needs to be addressed in order to improve organizational performance
- To obtain overall comments on the structure and organization of the new document
- To draft an extended outline of the new document
- To develop useful tools, examples, and case studies to be included in the document

Participant presentations and discussions should allow accomplishment of these objectives.

Outcomes of the Technical Meeting

At the conclusion of the Technical Meeting, the participants and Agency representatives will be expected to have generated the following work-products:

- Approved structure and organization of the document
- Agreed-upon examples of current practical methods being used or developed for NKM
- Action plan to develop the guidance document
- CD-ROM of the meeting materials, presentations, and work products

Solicitation of Interest

Individuals interested in participating in the Agency activity described herein are invited to contact Mr. Andrey Kossilov at their earliest convenience.

[Mr. Andrey Kossilov](#)
International Atomic Energy Agency
INIS & NKM Section
Nuclear Knowledge Management Unit
E-mail: A.Kossilov@iaea.org
Tel.: +43 1 2600 22811
Fax: +43 1 2600 29882

Please share this notice with others whom you think might be interested in participating based on their expertise in NKM. This Technical Meeting will be conducted in English. Urgency is encouraged as determinations of participants, eligibility for expense assistance, required organizational approvals and travel authorizations typically require more time than is often thought necessary. Attendance is limited and will be selective to assure a balance of expertise in the various fields being addressed by the document.