



Nuclear Knowledge Management

The management of nuclear knowledge has emerged as a growing challenge in recent years. The need to preserve and transfer nuclear knowledge is compounded by recent trends such as ageing of the nuclear workforce, declining student numbers in nuclear-related fields, and the threat of losing accumulated nuclear knowledge. Addressing these challenges, the IAEA promotes a “knowledge management culture” through:

- Providing guidance for policy formulation and implementation of nuclear knowledge management;
- Strengthening the contribution of nuclear knowledge in solving development problems, based on needs and priorities of Member States;
- Pooling, analysing and sharing nuclear information to facilitate knowledge creation and its utilization;
- Implementing effective knowledge management systems;
- Preserving and maintaining nuclear knowledge;
- Securing sustainable human resources for the nuclear sector; and
- Enhancing nuclear education and training.

Facilitating Nuclear Education and Training

Objectives

- To support educational networks and initiatives to educate and train the present and future generation of nuclear scientists and engineers in Member States.

Activities

The IAEA assists Member States in strengthening existing and initiating new partnerships of operating organizations, educational institutions and universities to enhance nuclear education and training.

The IAEA supports several initiatives:

- **WNU** – the World Nuclear University and its annual five-weeks Summer Institute, an academy for future leaders in nuclear science and technology
- **ANENT** – the Asian Network for Education in Nuclear Technology which facilitates cooperation in education, related research and training in nuclear technology
- **ENEN** – the European Nuclear Education Network Association, which harmonizes nuclear education and training in Europe
- **ICTP** - the Abdus Salam International Centre for Theoretical Physics and its annual School of Knowledge Management.

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Examples of IAEA Activities related to Nuclear Knowledge Management (NKM)

1. The International Conference on **NKM Strategies, Information Management and Human Resource Development**, held on 7–10 September 2004 in Saclay, France, provided a forum for professionals and decision makers in the nuclear community, as well as professionals in the knowledge management and information technology sectors to discuss and share experience in NKM, information management and human resource development.

2. **Workshops on Managing Nuclear Knowledge** were organized with, and hosted by, the International Centre for Theoretical Physics (ICTP) in Trieste, Italy, in November 2004 and August 2005, in cooperation with the World Nuclear University (WNU). The workshops raised awareness of the importance of NKM, helped to share best practices, and provided a forum for the exchange of information among participating nuclear professionals.

3. **Knowledge management tools**, including the IAEA public website and IAEA databases, continue to be enhanced to support information exchange and knowledge distribution. New tools for supporting NKM have been developed or initiated, including an IAEA-wide document management system and a web-based Nuclear Knowledge Portal.

4. The Agency supported the **World Nuclear University (WNU)**, together with the OECD/Nuclear Energy Agency, the World Association of Nuclear Operators (WANO) and the World Nuclear Association (WNA). In 2004, 2005 and 2006 the IAEA convened Technical Meetings on Planning Support Activities to the World Nuclear University. The first deliverables of the WNU were successful WNU Summer Institutes at Idaho Falls, USA, in July 2005 and in Sweden/France in August 2006.

5. The **Asian Network for Education in Nuclear Technology (ANENT)** was established through an IAEA Technical Meeting in Malaysia in February 2004. ANENT is a new partnership for cooperation in human resource development and research in nuclear technology as a key strategy for capacity building, nuclear infrastructure development and better use of available information resources. The ANENT activities are under way in five distinct areas: exchange of information and materials for education and training; exchange of students, teachers and researchers; distance learning; establishment of reference curricula and facilitating mutual recognition of degrees; and liaising with other networks.

6. The Agency, through its Programmes, supports **training courses on nuclear applications in developing countries** by designing and preparing curricula and providing lecturers in the fields of human health, environmental monitoring and protection, new radiation-based manufacturing processes, use of nuclear methods in art and historical heritage studies, food and agriculture, and management of water resources. Distance-learning modules have been developed in the fields of nuclear medicine, food and agriculture and selected aspects of radiochemistry. A systematic approach was initiated to archive and make available on CD the training material related to all training courses supported by the IAEA held on various nuclear applications.