

European Nuclear Education Network Association



STARTING POINT

“Although the number of nuclear scientists and technologists may appear to be sufficient today in some countries, there are indicators that future expertise is at risk.

In most countries, there are now fewer comprehensive, high quality nuclear technology programmes at universities than before.

The ability of universities to attract top quality students, meet future staffing requirements of the nuclear industry, and conduct leading-edge research is becoming seriously compromised”.

Taken from

- “Reflection Paper” prepared in 2000 by the CCE-FISSION Working Group on Nuclear Education, Training and Competence.
- “Nuclear Education and Training: Cause for Concern?” OECD / Nuclear Energy Agency, ISBN 92-64-18521-6.

Concerns of Universities

- How can they attract young and brilliant students ?
 - Through challenging subjects?
 - Establishing links with research centres?
- How can universities be convinced to recruit new academic members for key areas in nuclear disciplines?
 - What is the impact of life long learning ?

What can be the role of the EU?

- Promote international co-operation, mobility of students and researchers, including central and eastern Europe
- Provide a new architecture for a nuclear “European Research Area” in search for EU excellence !
- Set the conditions to create added value through university-industry collaboration

Concerns of the Nuclear Industry

- Conserve the nuclear knowledge and improve the expertise
- Define the goals and set up the criteria for professional recognition and recruitment throughout the EU
- Find resources and lecturers for advanced training courses, professional upgrades and continual training programmes
- Identify interesting project works and support for internships

What can be the role of the EU?

- Ensure quality assurance of the courses (accreditation, ranking, etc)
- Construct the nuclear “European Education and Training Area” under competitive conditions of quality and cost

OBJECTIVES



The Universities

- To develop a more harmonised approach for education in the nuclear sciences and engineering in Europe.
- To integrate European education and training in nuclear safety and radiation protection
- To achieve a better integration and sharing of resources and capabilities at the national and international level

The End-users (industries, regulatory bodies, applications)

- To create a secure skills and knowledge base of value to the EU
- To maintain the adequate supply of qualified human resources for design, constructions, operations and maintenance of nuclear infrastructures and plants
- To maintain the necessary competence and expertise for the continued safe use of nuclear energy and other applications of radiation in industry and medicine.

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NEPTUNO Expectations



- Sustainability
 - Europe's excellence in nuclear technology
 - European nuclear knowledge management

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NEPTUNO Expectations

➤ Preservation

of competence and expertise

- for continued safe use of nuclear energy
- for development of radiation uses in industry and medicine

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NEPTUNO Expectations

➤ Harmonisation

within and across the EU Member States

- safety approaches
- operational practices
- regulatory practices

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NEPTUNO Expectations

➤ Harmonisation

- education in nuclear engineering
- key function qualification in NPPs
- professional training

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NEPTUNO Expectations

➤ Facilitation

- to obtain nuclear education
- to exchange visiting lecturers in nuclear disciplines
- to access international training courses
- of trans-national access to research infrastructure in governmental organisations and private companies

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NEPTUNO Expectations

➤ Standardization

- nuclear know-how data bases
- criteria for training programme certification
- associated quality monitoring mechanisms

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NEPTUNO WP2

➤ Objective of Work Package N°2

- fill a database on the European nuclear know-how

➤ Completion delay

- 17 months
- Gathering information completed after 12 months

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NEPTUNO WP2

➤ Description of the content (at least)

- Training Centres and Universities
- Facilities
- Teaching modules (with ECTS)
- Material from selected ECTS modules...
- Faculties
- Teaching and training tools
- Software (codes)
- Nuclear Data Bases (cross sections)



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NEPTUNO WP2

➤ Other Features

- SINTER technology, allowing for
- Internet access
- Security and control
- Integration of external material
- Web-platform to present teaching material
- Common exercises using web based technologies



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THANK YOU FOR YOUR ATTENTION

AND

WELCOME TO JOIN AND SUPPORT THE

**EUROPEAN NUCLEAR EDUCATION
NETWORK**

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