

# Деятельность МАГАТЭ по управлению знаниями и развитию кадрового потенциала

Департамент ядерной энергии

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ВЕБИНАР

УПРАВЛЕНИЕ ЗНАНИЯМИ И ТИПОВАЯ ДОРОЖНАЯ КАРТА РАЗВИТИЯ  
КАДРОВОГО ПОТЕНЦИАЛА В АТОМНОЙ ОТРАСЛИ

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# The International Atomic Energy Agency - IAEA



- **Established in 1957**
- **178 Member States**
- **~ 2,500 multidisciplinary staff from more than 100 countries**

## ATOMS FOR PEACE AND DEVELOPMENT



Safeguards and Verification

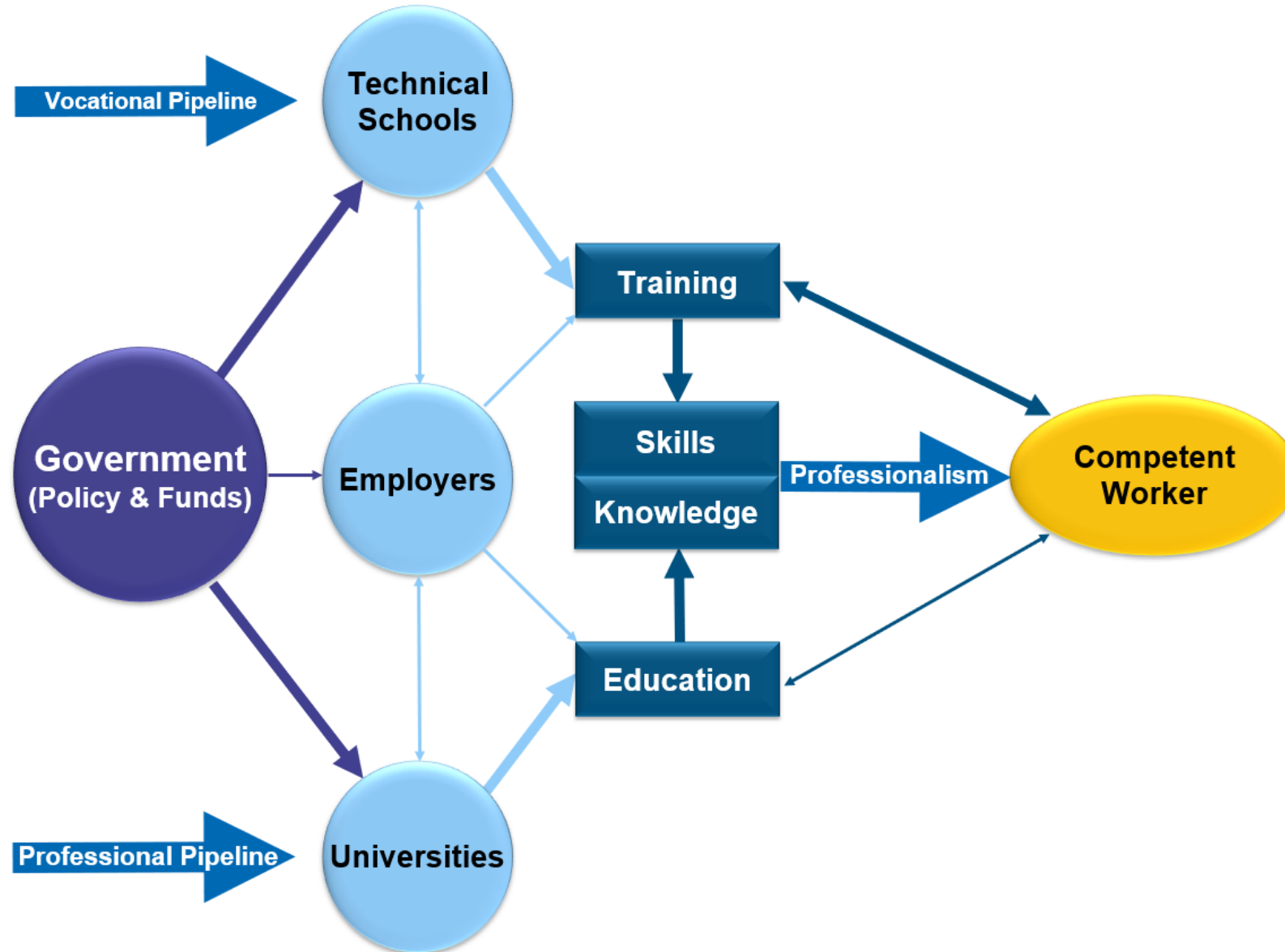


Safety, Security

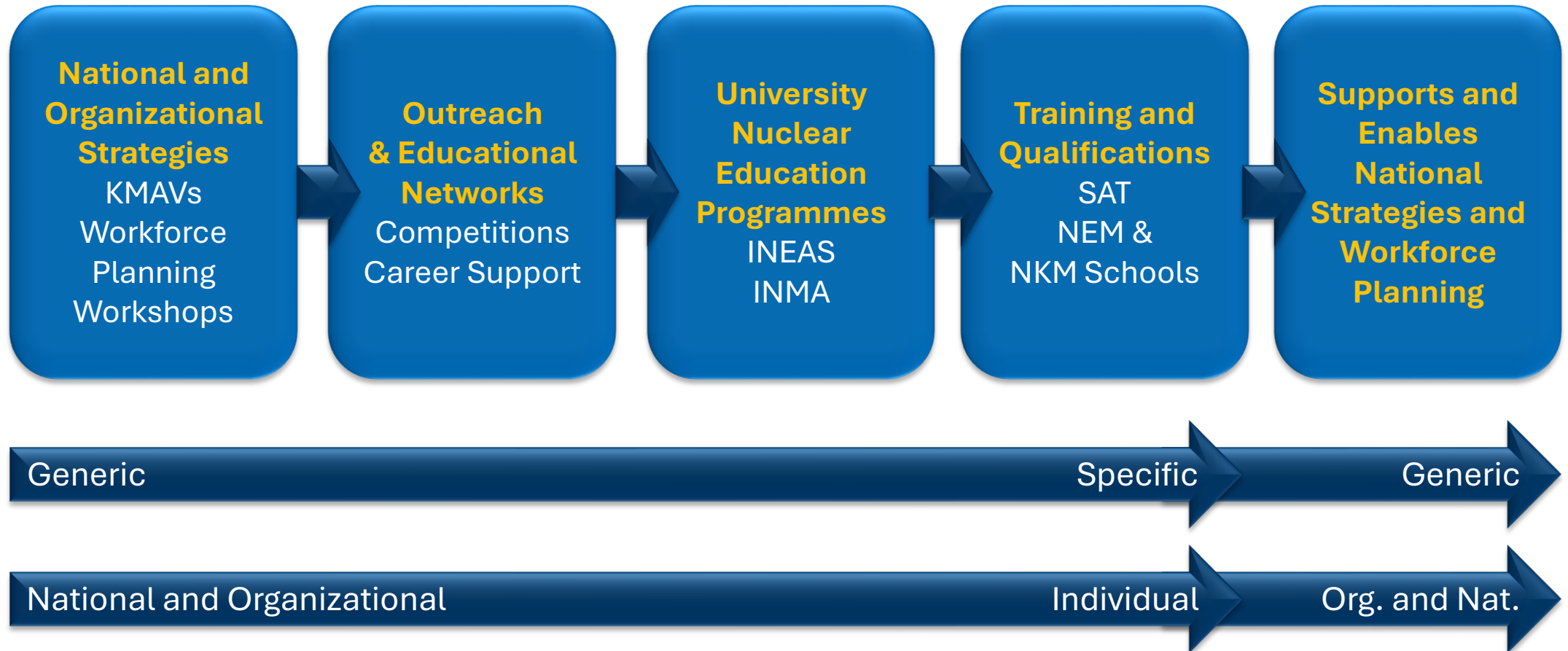


Science and Technology

# National ecosystem for Capacity Building



# Integrated Nuclear Knowledge Management and Human Resource Development



# Knowledge Management Assist Visit (KMAV)

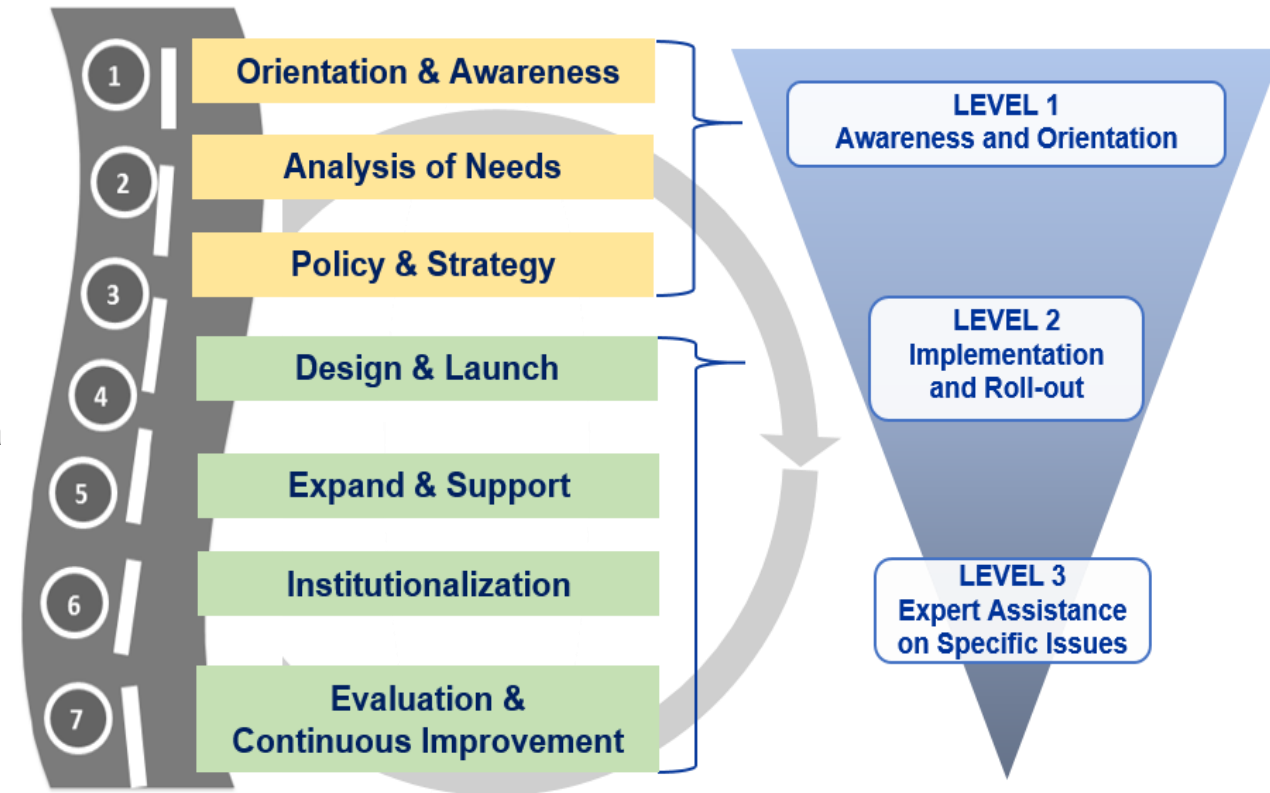
## Purpose:

- ❖ **Comprehensive Peer Review:** Provide expert advice to improve nuclear knowledge management programme and practices.
- ❖ **Tailored Support:** Offer three levels of support to meet organizational needs.

## Format:

- ❖ **Level 1:** Raises awareness about NKM benefits and risks associated with the loss of critical knowledge, enables a nuclear organization to initiate a strategic knowledge management programme.
- ❖ **Level 2:** Assesses an existing knowledge management programme in a nuclear organization and supports its further development and improvement
- ❖ **Level 3:** Provides focused expert assistance on specific technical or implementation issues, addressing the challenges faced by the nuclear organization.

## Roadmap for KM Programme Development

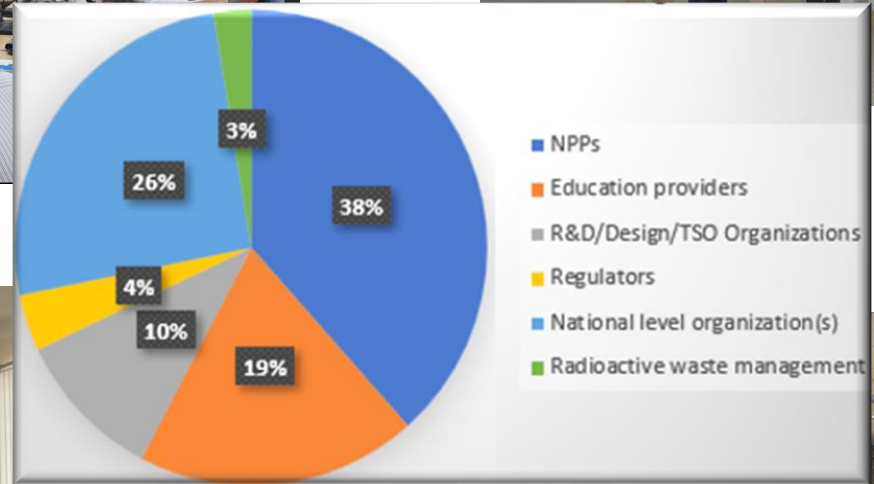


# 80+ KMAVs since 2005

KMAV to National Research Institute (BRIN), Indonesia, 2022



KMAV to Nuclear Power Corporation of India Limited India, 2023



KMAV to Armenian NPP for Long-term Operation, Armenia, 2023



KMAV to Laguna Verde NPP, Brazil, 2022

# Educational Networks



2015 STARNET

2013 First Collaboration Agreement

2013 AFRA-NEST



2010 LANENT



2004 ANENT



2022 INSTA

2021 Renewed Collaboration Agreement

2017 Renewed Collaboration Agreement

**Partners**

ENEN, NTEC, UNENE, BNEN

- Promote regional cooperation
- Share educational experience and resources
- Forum for discussion of policies and strategies
- Share best practices and lessons learned
- Share e-courses and training materials
- Outreach programmes



IAEA

**TM on Educational Networks 2025**

**8-12 December 2025**





# Networks activities

[t.me/nucednets](https://t.me/nucednets)

## ✓ Distance / online learning using LMS and network web-portals

- delivery of LMS-based training,
- virtual experiments
- Sharing and exchange of training materials
- online repositories and libraries
- webinars

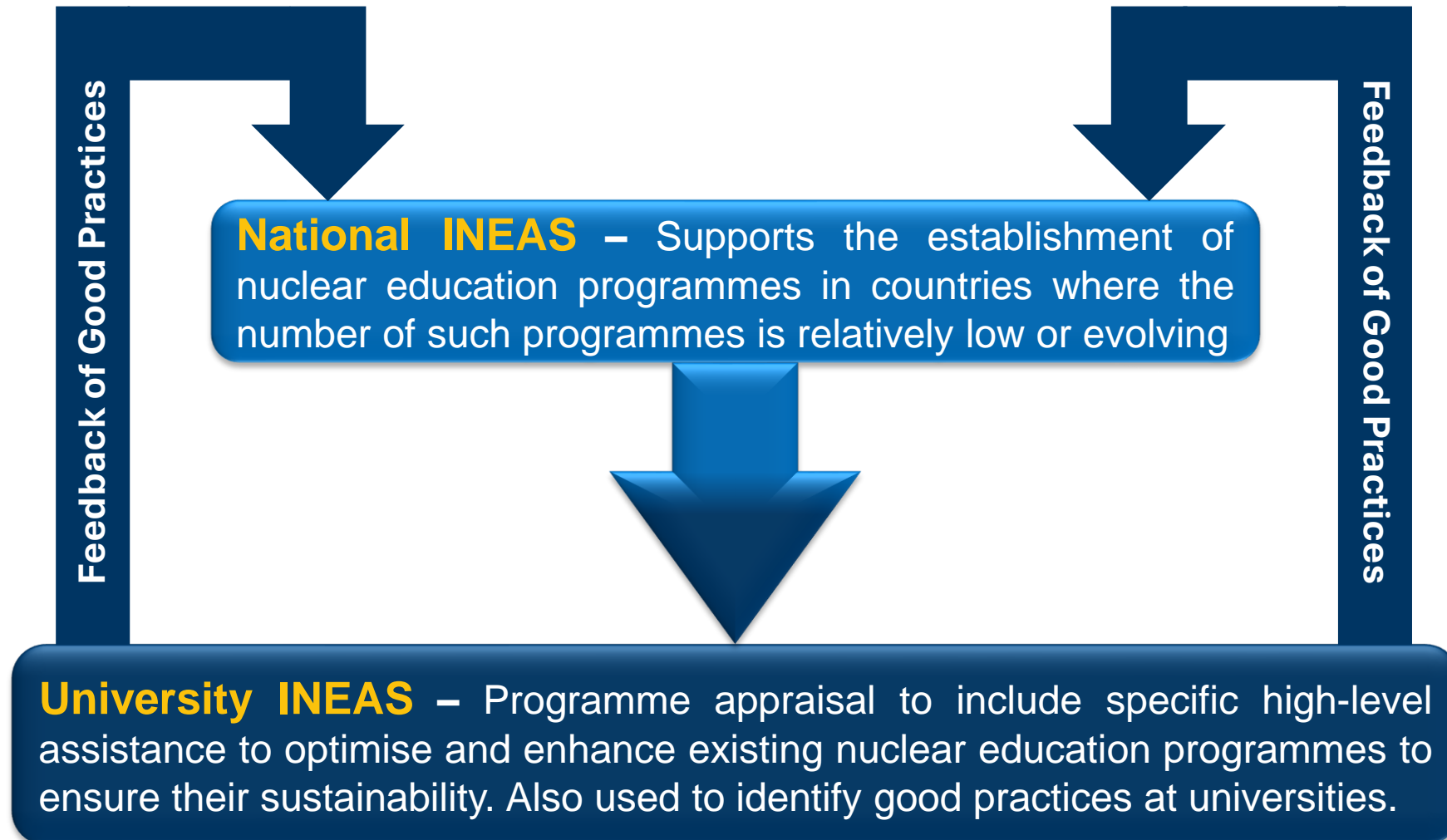


## ✓ NKM awareness-raising and organic capacity building



- NKM-related Conferences
- NKM and NEM Schools
- INEAS
- INMA
- KM Assist Visits

# Integrated Nuclear Education Advisory Services



# International Nuclear Management Academy

A collaboration between the IAEA and leading universities to develop and deliver  
**Master's programmes in Nuclear Technology Management**

## INMA Curriculum

### 1. External Environment

Political, legal, regulatory and societal aspects in which nuclear managers operate

### 2. Nuclear Technology

Basics of nuclear technology and its application that are involved directly or indirectly in the management of nuclear facilities for power and non-power applications

### 3. Management

Challenges and practices of management in the nuclear sector with due consideration of safety, security and economics

### 4. Leadership

Strong ethical behaviour, clear vision and goal setting, commitment to safety and security, good communication skills with all stakeholders and a professional attitude

# INMA Universities

## Members

**National Research Nuclear University MEPhI**, Russia  
**The University of Tokyo**, Japan  
**Texas A&M University**, United States of America  
**North-West University**, South Africa  
**University of the Witwatersrand**, South Africa  
**Budapest University of Technology and Economics**, Hungary  
**National Polytechnic University**, Armenia  
**University of West Bohemia**, Czech Republic  
**KEPCO International Nuclear Graduate School**, Korea  
**University of Idaho**, United States of America

## Candidates

**Sofia University St. Kliment Ohridski**, Bulgaria  
**Harbin Engineering University**, China  
**Ontario Tech University**, Canada  
**Yerevan State University**, Armenia  
**Tsinghua University**, China  
**Xi'an Jiaotong University**, China  
**University of Ghana**, Ghana



UNIVERSITY OF THE  
WITWATERSRAND  
JOHANNESBURG



University  
of Idaho

# NEM and NKM Schools

## Nuclear **Energy** Management School

### Target Audience Future Leaders and Managers in Nuclear Energy Sector

- IAEA-wide contributions from 13 sections/offices, plus external experts
- Curriculum based on 4 main topics
- 2-week residential course
- Schools include lectures, panel discussions, group projects, case studies, tests and technical visits
- 60+ NEM schools since 2010
- 2,100+ participants from 104 countries

## Nuclear **Knowledge** Management School

### Target Audience Managers and NKM/HRD/T&Q experts involved in implementing NKM activities

- Teaching staff drawn from specialists in the field
- Principal topics on human resources development, competence and knowledge management
- Well defined curriculum to provide an understanding of approaches, tools and mechanisms
- 1-week residential course
- 30+ schools since 2004
- 1,200+ participants from 82 Countries

# NEM School Curriculum

1	IAEA and Nuclear Technology	1.1 IAEA and its Services 1.2 Overview of Nuclear Applications 1.3 Introduction to Nuclear Power 1.4 The Concept of Risk
2	Key Issues and Challenges	2.1 Climate Change and Nuclear Energy 2.2 An Integrated Approach to HRD and NKM 2.3 Management and Leadership in a Nuclear Organisation 2.4 Stakeholder Involvement and Public Communication
3	IAEA 3S Requirements	3.1 Nuclear Law 3.2 Nuclear Safety 3.3 Nuclear Security 3.4 Nuclear Safeguards 3.5 National Nuclear Legislation
4	Nuclear Technology Lifecycles	4.1 Advanced Nuclear Power Technologies 4.2 New Nuclear Builds 4.3 Basic Principle of Nuclear Power Plant Operation 4.4 Radioactive Waste Management 4.5 Nuclear Fuel Cycle

Core Topics

Elective Topics

# NKM School Curriculum

1	<b>Orientation and Awareness</b>	1.1 NKM as a Business Management Tool 1.2 Introduction of the Main Steps of NKM Implementation 1.3 National and Organizational Workforce Planning 1.4 Definitions and Main Principles of Knowledge Sharing Culture
2	<b>Analysis of Safety Requirements and Business Needs</b>	2.1 Critical Knowledge 2.2 NKM Risk Assessment
3	<b>Policy and Strategy</b>	3.1 Implementation and the Assignment and Description of NKM Roles and Responsibilities 3.2 Importance of Motivation and Communication in NKM
4	<b>Design and Launch</b>	4.1 Knowledge Capture Methods 4.2 Competency Mapping
5	<b>Expand and Support</b>	5.1 Succession Management 5.2 Coaching and Mentoring for NKM
6	<b>Institutionalization</b>	6.1 Introduction to Information Management 6.2 Indicators for a Comprehensive NKM System
7	<b>Evaluation and Continuous Improvement</b>	7.1 Use and Importance of Lessons Learned and Corrective Action Programmes 7.2 NKM Self-Assessment

# 中国—国际原子能机构核能管理学校2023年核能管理短训班开班式

Opening Ceremony of the China-IAEA Nuclear Energy Management School 2023

中国·北京 Beijing, China, 23 Oct. 2023





# Human Resource Development (HRD)

**Focus:** Acquiring, maintaining, and developing competent personnel

- ❖ HRD is critical for ensuring that the nuclear workforce has the necessary skills and competencies to perform their roles effectively.

**Support:** Guidance documents, workshops, review services, workforce planning tools

- ❖ Provide a range of support services to help Member States develop their human resources, including guidance documents, workshops, and tools for workforce planning.



# Publication

TECDOC-2078 Lessons Learned Programmes for Effective Knowledge Management in Nuclear Organizations

TECDOC - 2080 Key Performance Indicators to Support NKM Programmes

TECDOC – 2082 Use of a Graded Approach in the Application of SAT for Facilities and Activities



# IAEA Marie Sklodowska-Curie Fellowship Programme

- Encourage women to pursue a nuclear career in and help build a future diverse workforce
- Provide students with scholarships for nuclear master's programmes and internships facilitated by the IAEA
- Annually increasing the number of students receiving support

**Strengthening education pipeline and increasing workforce diversity**

# IAEA Lise Meitner Programme

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- Launched by the IAEA Director General, Mr. Grossi, on March 8, 2023

## Aim

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- To support career development and retention of women in the nuclear sector. Provides women professionals with opportunity to advance technical and soft skills in the nuclear field





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# Thank you!

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