



IAEA

International Atomic Energy Agency

Atoms for Peace and Development

Technical Meeting on Innovations in Data Analysis and Retrieval for Nuclear Decommissioning

IAEA Headquarters, Vienna, Austria
and virtual participation via Microsoft Teams

18 August - 22 August 2025

Ref. No: EVT2404267

Information Sheet

Introduction

The extensive knowledge from decommissioning projects is essential for implementing effective decommissioning activities. Lessons learned, good practices, innovative technologies, and various methodologies are recorded in multiple formats. Continuous improvement to enhance the safety and efficiency of decommissioning efforts is crucial. Several national and international organisations, including the International Atomic Energy Agency (IAEA) and the European Commission's Joint Research Centre (EC-JRC), are developing processes for capturing this knowledge.

Over the past decades advancements of semantic technologies - facilitating machine understanding of data - have resulted in significant progress in data analysis and retrieval. These technologies organize knowledge systems by distinguishing between data and metadata (information about data, objects and concepts) and identifying the key concepts (objects or abstract ideas) that define a knowledge domain such as decommissioning. Semantic technologies establish and link data within a repository by creating languages to express complex, self-describing relationships among data in a format that machines can process. The core difference between semantic technology and other data technologies is their focus on meaning rather than structure.

The large volume of collected data relevant to nuclear decommissioning requires automated analysis methods, which semantic technologies provide. In particular, machine learning, as a subset of artificial intelligence, offers techniques for detecting patterns in data sets, which can then support decision-making process, or predict future actions, while reducing uncertainty.

During the Technical Meeting in July 2024, representatives from Member States agreed that the next step to enhance analysis, retrieval and sharing of decommissioning knowledge is to establish a joint initiative for developing a smart retrieval platform, that improves interconnectivity among existing databases and knowledge sources.

Objectives

The overall objective of this meeting is to facilitate exchange of experiences, lessons learned and various approaches and innovative technologies to improve access to, organization of, and use of data relevant to decommissioning. This aims to enhance knowledge preservation, collaboration and decision-making processes across national boundaries.

The purpose of this event is to discuss good practices in knowledge management and to share experiences of Member States with innovations in data processing, accessing and retrieval to support enhanced analysis and utilization in nuclear facility decommissioning. The smart retrieval platform for accessing and retrieving data on nuclear decommissioning and waste management, at an advanced development stage, will be demonstrated to participants, and its anticipated functionalities will be discussed.

Member States are encouraged to prepare papers to be presented at the event. Presentations should be related to following topics:

- Innovative knowledge management approaches in planning and implementing decommissioning projects.
- Innovations in data processing, including the use of AI technologies (large language models, semantic technologies, machine learning).

- Emerging approaches and methodologies for data analysis (e.g. understanding data relevance, processing large data logs, applying generative AI for data analysis, identifying gaps through generative AI, etc.)
- Aspects impacting the implementation of AI technologies (security constraints, hardware/software requirements, capability needs etc.).

Target Audience

Managers, specialists, and application designers in managing/developing emerging technologies for nuclear decommissioning, managers of the nuclear facilities operating organizations, and managers and planners from decommissioning organizations/project implementation may attend this meeting.

Working Language(s)

English.

Expected Outcomes

There are following expected outcomes from the meeting:

- An enhanced understanding of the state of the art in data processing, analysis, and retrieval using innovative technologies such as semantic technology, machine learning, generative AI etc.
- A comprehensive list of suggestions to be considered during the development of the smart retrieval platform, as well as an investigation of gaps in the technology that affect the organization, access and retrieval of knowledge.
- An indicative content for a publication focusing on the application of innovative technologies (e.g. semantic models, natural language processing, machine learning etc.) for organizing, managing and retrieving knowledge in nuclear decommissioning.
- A proposed action plan to outlining the next steps for the nuclear decommissioning data retrieval platform, incorporating participant feedback and suggestions.

Participation and Registration

All persons wishing to participate in the event have to be designated by an IAEA Member State or should be members of organizations that have been invited to attend.

In order to be designated by an IAEA Member State or invited organization, participants are requested to submit their application via the InTouch+ platform (<https://intouchplus.iaea.org>) to the competent national authority (Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or organization for onward transmission to the IAEA by **27 June 2025**, following the registration procedure in InTouch+:

1. Access the InTouch+ platform (<https://intouchplus.iaea.org>):
 - Persons with an existing NUCLEUS account can sign in to the platform with their username and password;
 - Persons without an existing NUCLEUS account can register [here](#).
2. Once signed in, prospective participants can use the InTouch+ platform to:
 - Complete or update their personal details under ‘Complete Profile’ and upload the relevant supporting documents;
 - Search for the relevant event under the ‘My Eligible Events’ tab;
 - Select the Member State or invited organization they want to represent from the drop-down menu entitled ‘Designating Authority’ (if an invited organization is not listed, please contact InTouchPlus.Contact-Point@iaea.org);
 - If applicable, indicate whether financial support is requested and complete the relevant information (this is not applicable to participants from invited organizations);
 - Based on the data input, the InTouch+ platform will automatically generate the Participation Form (Form A) and/or the Grant Application Form (Form C);
 - Submit their application.

Once submitted through the InTouch+ platform, the application, together with the auto-generated form(s), will be transmitted automatically to the required authority for approval. If approved, the application, together with the applicable form(s), will automatically be sent to the IAEA through the online platform.

NOTE: The application for financial support should be made, together with the submission of the application, by **27 June 2025**.

For additional information on how to apply for an event, please refer to the [InTouch+ Help](#) page. Any other issues or queries related to InTouch+ can be sent to InTouchPlus.Contact-Point@iaea.org.

Selected participants will be informed in due course on the procedures to be followed with regard to administrative and financial matters.

Participants are hereby informed that the personal data they submit will be processed in line with the [Agency's Personal Data and Privacy Policy](#) and is collected solely for the purpose(s) of reviewing and assessing the application and to complete logistical arrangements where required. The IAEA may also use the contact details of Applicants to inform them of the IAEA's scientific and technical publications, or the latest employment opportunities and current open vacancies at the IAEA. These secondary purposes are consistent with the IAEA's mandate. Further information can be found in the [Data Processing Notice](#) concerning IAEA InTouch+ platform.

Papers and Presentations

The IAEA encourages participants to give presentations on the work of their respective institutions that falls under the topics listed above.

Participants who wish to give presentations are requested to submit an abstract of their work. The abstract will be reviewed as part of the selection process for presentations. The abstract should be in A4 page format, should extend to no more than 2 pages (including figures and tables) and should not exceed 900 words. It should be sent electronically to Ms Helena Mrázová, the Scientific Secretary of the event (see contact details below), not later than **27 June 2025**. Authors will be notified of the acceptance of their proposed presentations by **18 July 2025**.

In addition to the registration already submitted through the InTouch+ platform, participants have to submit the abstract, together with the Form for Submission of a Paper (Form B), to the competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA or National Atomic Energy Authority) or organization for onward transmission to the IAEA not later than **27 June 2025**.

Expenditures and Grants

No registration fee is charged to participants.

The IAEA is generally not in a position to bear the travel and other costs of participants in the event. The IAEA has, however, limited funds at its disposal to help meet the cost of attendance of certain participants. Upon specific request, such assistance may be offered to normally one participant per country, provided that, in the IAEA's view, the participant will make an important contribution to the event.

The application for financial support should be made, together with the submission of the application, by **27 June 2025**.

Venue

The event will be held at the Vienna International Centre (VIC), where the IAEA's Headquarters are located. Participants must make their own travel and accommodation arrangements.

General information on the VIC and other practical details, such as a list of hotels offering a reduced rate for IAEA participants, are listed on the following IAEA web page:

www.iaea.org/events.

Meeting participants are requested to arrive at Checkpoint 1 / Gate 1 of the VIC one hour before the start of the meeting on the first day, in order to allow sufficient time for issuing grounds passes, which are necessary for official visitors to the VIC premises.

Visas

Participants who require a visa to enter Austria should submit the necessary application to the nearest diplomatic or consular representative of Austria at least four weeks before they travel to Austria. Since Austria is a Schengen State, persons requiring a visa will have to apply for a Schengen visa. In States where Austria has no diplomatic mission, visas can be obtained from the consular authority of a Schengen Partner State representing Austria in the country in question.

IAEA Contacts

Scientific Secretary:

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Subsequent correspondence on scientific matters should be sent to the Scientific Secretary and correspondence on other matters related to the event to the Administrative Secretary.

Form for Submission of a Paper

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To be completed by the participant and sent to the competent national authority (e.g. Ministry of Foreign Affairs, Permanent Mission to the IAEA, or National Atomic Energy Authority) of his/her country for subsequent transmission to the International Atomic Energy Agency (IAEA) either by email to: Official.Mail@iaea.org or by fax to: +43 1 26007 (no hard copies needed). Please also send a copy by email to the Scientific Secretary H.Mrazova@iaea.org and to the Administrative Secretary I.Kridtner@iaea.org.

Participants who are members of an invited organization can submit this form to their organization for subsequent transmission to the IAEA.

Deadline for receipt by IAEA through official channels: 27 June 2025

Title of the paper:		
If applicable: Abstract ID in IAEA-INDICO:		
Family name(s) and first name(s) of all author(s) (same as in passport(s):	Scientific establishment(s) in which the work has been carried out	City/Country
1.		
2.		
3.		
Family name(s) and first name(s) of author presenting the paper (same as in passport):	Mr/Ms:	
Mailing address:		
Tel. (Fax):		
Email:		

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Date:

Signature of main author: