



**IAEA**

International Atomic Energy Agency

*Atoms for Peace and Development*

# **Hybrid Event: Technical Meeting on Operating Experience on the Use of Digital Technologies for Instrumentation and Control Systems**

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

**2 – 4 September 2025**

**Ref. No.: EVT2402789**

## **Information Sheet**

### **Introduction**

In the rapidly evolving landscape of industrial automation, instrumentation and control (I&C), the integration of digital technologies into I&C systems has become increasingly pivotal.

Digital technologies have revolutionized the way processes are monitored, controlled and optimized. From enhanced data accuracy and real-time monitoring to improved safety and efficiency, the adoption of digital I&C (DI&C) systems offers numerous advantages, including improved diagnostic capabilities, enhanced human-machine interfaces, and greater flexibility in system design and operation. Additionally, digitalization plays a crucial role in the uprating, refurbishment and long-term operation (LTO) of existing plants, ensuring they meet modern standards and extend their operational life.

However, the transition to digital systems also presents unique challenges, including qualification, cybersecurity concerns, system interoperability and the need for specialized training.

Recognizing the relevance of the above-mentioned issues, the members of the TWG-NPPIC at their 2023 meeting recommended that the IAEA should initiate relevant activities to discuss operating experiences on the use of digital technologies in Nuclear Power Plants (NPP).

In response, the IAEA is developing new revision of the Nuclear Energy Series publication entitled *Operating Experience on the Use of Digital Technologies for Instrumentation and Control Systems* to discuss the recent developments, to share best practices and to provide guidance in this area.

The outcomes of this event will provide valuable insights into the needs of the Member States to strengthen the International Network on Innovation to Support Operating Nuclear Power Plants (ISOP) and to reinforce the Agency programme in this area.

## **Objectives**

The purpose of the event is to support Member States to acquire knowledge that will enhance the digital transformation journey in the nuclear power industry; to share best practices and valuable lessons learned; and to explore the challenges of implementing digital technologies in instrumentation and control systems, focusing on performance and reliability. The outcome of the event will be to identify the need for specific guidance.

By sharing operating experiences and effective practices, this event will provide valuable insights for professionals in the field. Attendees will have the opportunity to engage with experts, explore case studies and discuss strategies to effectively leverage digital technologies in their own operations.

Ultimately, this event seeks to foster a collaborative environment where knowledge and experiences can be exchanged to drive innovation and improve the reliability and performance of I&C systems paving the way for advanced reactors.

## **Target Audience**

In view of the subject of the event, participation is limited to IAEA Member States that currently operate NPPs or are constructing their first NPP units. Participation is solicited from representatives of nuclear facilities and regulatory bodies, utilities, technical support organizations, designers, developers, vendors, and research organizations engaged in the field of I&C in small, medium and large power plants. To ensure maximum effectiveness in the exchange of information, participants should be persons actively involved in the subject matter of the event.

The event is, in principle, open to all officially designated persons. The IAEA, however, reserves the right to limit participation due to limitations imposed by the available facilities. It is therefore recommended that interested persons take the necessary steps to secure their official designation as early as possible.

## **Working Language**

English.

## Structure

The event is to serve as an international forum for enhancing interaction and information exchange among international experts on their professional experience on DI&C.

## Topics

Presentations are invited on key challenges, best practices, lessons learned, overall strategy and perspective on DI&C. The following list provides examples of presentation topics that would be appropriate for the event:

- Digitalization during uprate, refurbishment or LTO;
- Benefits, challenges and lessons learned including (efficiency and reliability);
- Qualification (algorithm, verification and validation);
- DI&C obsolescence management and digital upgrades;
- Software/firmware deficiency, failure including common cause failure;
- Feedback on DI&C equipment (e.g., FPGA and other platforms);
- Maintenance;
- Predictive capabilities and integration in digital twins;
- Innovation in DI&C technologies;
- Cybersecurity ;
- Data communication, management (including sharing and storage);
- Future trends and DI&C for advanced reactors:
  - Advanced Sensors/ I&C and R&D components;
  - Remote and autonomous operation;
  - Maintenance by design;
  - Smart and innovative sensors.

## 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 **15 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](mailto: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 **15 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](mailto: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.

## **Presentations**

Presentations should be prepared as Microsoft PowerPoint (ppt) or Portable Document Format (pdf) files. Computer-based projection facilities will be provided. Authors are requested to provide the Scientific Secretary with electronic copies of their presentation files in advance of their scheduled presentation slot so that the files can be duly uploaded. Electronic versions of the presentations are also necessary to ensure timely issuance of the proceedings to be prepared and distributed in electronic form.

It is not mandatory for all participants to submit a presentation. However, the IAEA welcomes and encourages contributions in this format. Time for the presentations will be limited to 25 minutes followed by a 5-minute discussion period.

The abstract of the presentation should be submitted the Scientific Secretary by **15 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 **15 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](http://www.iaea.org/events).

Participants are advised to arrive at Checkpoint 1/Gate 1 of the VIC one hour before the start of the event on the first day in order to allow for timely registration. Participants will need to present an official photo identification document in order to be admitted 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.

## Additional Information

The event will start on Tuesday, 2 September 2025, at 9.30 a.m. and end on Thursday, 4 September 2025, at 4.00 p.m.

The event agenda, together with information on local arrangements, will be sent to the designated participants in due course.

General information on hotels offering a reduced rate for IAEA participants, are listed on the following IAEA web page: <https://www.iaea.org/events/hotel-list>.

Additionally, participants may elect to make their own bookings at hotels in the area of the event location.

## **IAEA Contacts**

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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.