

IAEA Nuclear Harmonization and Standardization Initiative (NHSI)

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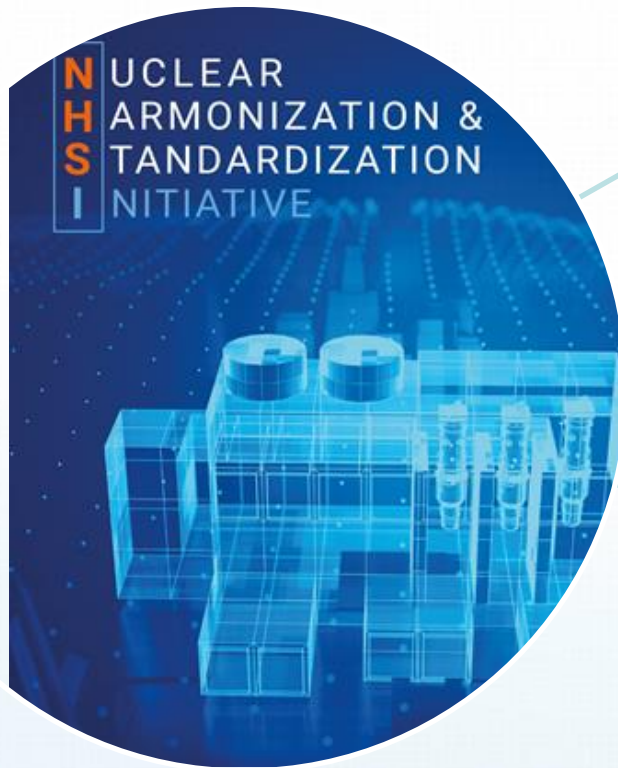
MDEP Conference, Antalya, Türkiye

24-25 April 2023

SMRs and NHSI

- More than 80 SMR designs under development in 18 countries
- Some SMRs are innovative reactors yet to be licensed
- Novel manufacturing methods new to the industry
- NHSI launched to facilitate deployment of safe and secure SMRs and advanced reactors
- NHSI seeks common regulatory and industrial approaches to SMRs
- SMRs can contribute to Agenda 2030 and Paris Agreement

Effective Global Deployment of
Safe and Secure Advanced
Nuclear Reactors



- **WG1:** Framework for information exchange
- **WG2:** International pre-licensing regulatory reviews
- **WG3:** Leveraging other regulatory reviews

- **TG1:** Harmonization of high-level user requirements
- **TG2:** Common Approaches to Codes and Standards
- **TG3:** Experimental Testing and Validation for Design and Safety Analysis Computer Codes
- **TG4:** Acceleration of nuclear infrastructure implementation for SMR

Regulators

Governments

Technology Holders

Operators and other end-users

International Organisations and Associations

Framework for information exchange

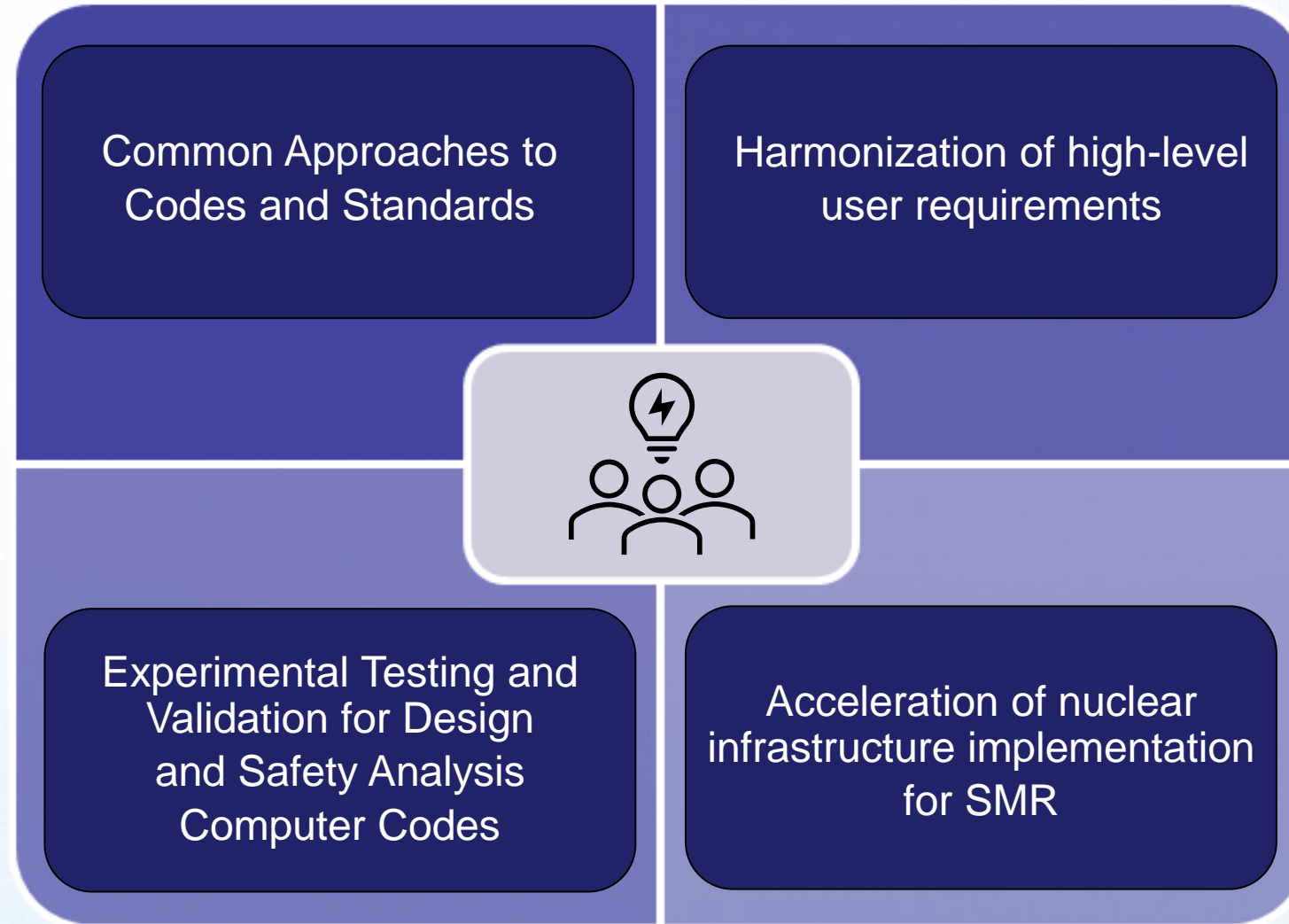
To identify
regulators'
information
sharing
needs,
obstacles and
potential
solutions

International pre- licensing regulatory reviews

To develop a
process and
criteria for an
international
pre-licensing
design review

Leveraging other regulatory reviews

To develop
approaches
and best
practices for
leveraging
other
regulators'
reviews



- **Regulatory Working Groups:** Kick-off meetings held in October 2022
- Working Groups include 26 Member States + NEA/OECD
- The IAEA internal team and management structure are in place
- Overall scope and timeline have been developed
- Interface meetings scheduled with Industry Track

- **Industry Topical Groups:** Many companies taking part + NEA, NEI and WNA
- Each Topical Group has a different work schedule, all four have held meetings so far
- Engagement with Regulatory Track is ongoing, for example on vendor deployment models and capacity building for regulatory bodies
- What we have ahead of us is work, contact us to join the effort!

Next NHSI Plenary Meeting

27 June 2023, Vienna

IAEA Support to MS on SMRs



The screenshot shows the website interface for the IAEA Platform on Small Modular Reactors and their Applications. The header includes the IAEA logo and navigation links for Services, Resources, News, Events, Working Groups, and Contact Us. The main heading reads "Welcome to the Portal of the IAEA Platform on Small Modular Reactors and their Applications".

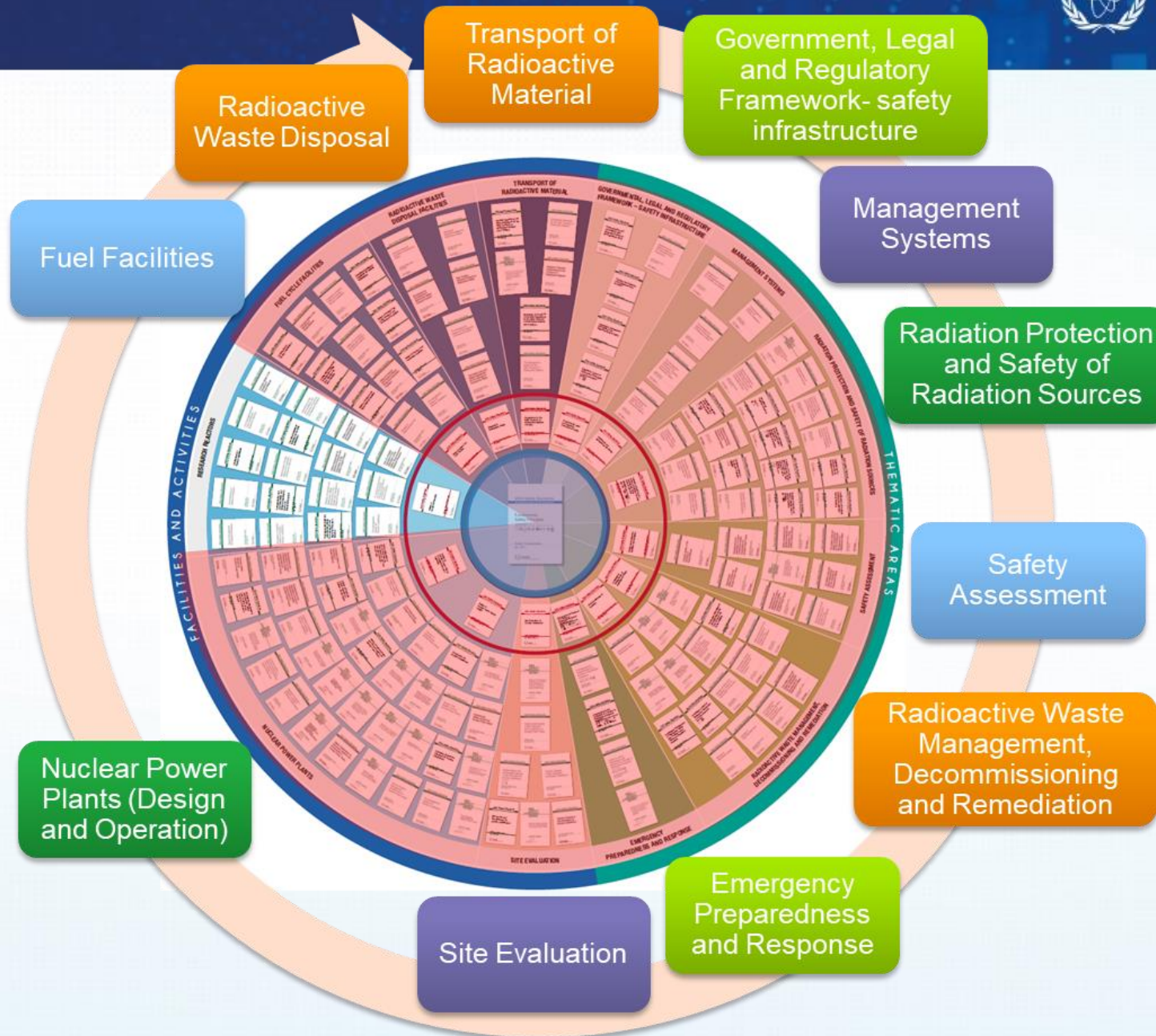
The content area features several sections:

- Introduction:** A paragraph stating that the IAEA Platform coordinates the Agency's activities in this field and provides a 'one-stop shop' for Member States and other stakeholders. It mentions that the SMR Platform offers expertise from the entire Agency, encompassing all aspects relevant to the development, early deployment, and oversight of SMRs and their applications.
- SCORPION:** A section titled "SCORPION Events, Information, and News" with a corresponding graphic.
- Staff Portal:** A section titled "STAFF PORTAL Steering, Harmonization, Implementation" with the IAEA logo.
- Publications:** A list of publications including "ARIS Booklet 2022", "Booklet on Small Modular...", "SMR Platform Annual...", and "Medium Term Strategy o...".
- Latest SMR News:** A section with a "SEE ALL" link and several news items represented by small images.

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SMR PLATFORM

More than 85 IAEA Safety Standards Reviewed



Save the date: 28-31 Oct 2024

First IAEA International Conference on Small Modular Reactors and their Applications

- Expected to address major topics in relation to development, deployment, safety, security, economics, market readiness, fuel cycle, waste management, etc. of SMR and their applications, as well to present and discuss the first outcomes of NHSI



“SMRs and other advanced nuclear technologies hold immense promise to help address the climate crisis. But if countries are to fully benefit from their potential to significantly reduce emissions and provide reliable energy, then some challenges to global deployment must be addressed. That’s what this new initiative is all about.”

Rafael Mariano Grossi
IAEA Director General

Thank you!

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