



## DigiDecom2022

18<sup>th</sup> October 2022-20<sup>th</sup> October 2022

**Registration On-site starts on the 17<sup>th</sup> of October 2022 (Monday) from 18:00 to 20:00 at Thon Hotel, Halden.**



### **DAY 1 – Tuesday (October 18<sup>th</sup>)**

#### **9:00 CET – Thon Hotel Halden**

1. Opening speech by Linn Laupsa, the Mayor of Halden and Tomas Eric Nordlander, Vice President at Institute for Energy Technology
2. Welcome & Practicalities talk

#### **Session 1: starts at 9:20am**

##### **Introductory presentations, including**

- International *needs & trends*
- *Innovations* with high expected impact
- *Synergies* across industries
- Important international *initiatives*

**Chairs:** Patrick O’Sullivan (IAEA) and Bjørn Axel Gran (IFE)

**9:20am** Introduction by session chairs

**9:30am** Presentation by Morten Irgens, Vice President of the AI, data and Robotics Association

**9:50am** EURATOM Research and Training Programme by Ben Hadj Hassine Seifallah, Policy officer at the European Commission

**10:05am** IAEA: Overview by IAEA, incl. introduction of the e-learning and advanced tech. working groups by Patrick Joseph O’Sullivan (IAEA)

**10:25am** Overview by NEA with focus on Session 7 by Martin Brandauer (NEA)

**10:45am** History of DigiDecom and Decommissioning research at IFE by Andreas Bye and István Szőke (IFE)

#### **11:00am-11:30am Break**

**11:30am** NND: Status and needs in the Norwegian decom program by Nils Bøhmer (NND) and Saanio Timo (AINS)

**11:50am** DECOM Cluster for decommissioning and repurposing by Nicholas Richards (SIN) and István Szőke (IFE)

**12:10am** The Art of Statistics by Craig Nicol (Net Zero Centre)

**12:25am** Digital Twins are part of the data driven toolbox at Aker BP by Pedro Nunes (Aker BP)

**12:45am** EURATOM SHARE Project by Anthony Banford (NNL)

#### **13:00pm-14:00pm Lunch break and Concert by the Det Norske Blåseensemble**

##### **Performance by the Det Norske Blåseensemble**

*One of the oldest orchestras in Norway dating back to 1734 with an unbroken history. An important part of Norwegian cultural history consisting of 24 musicians playing within different music styles.*

**Pre-recorded** presentations via the Atomondo hub: virtual venue for the nuclear community

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## DigiDecom2022

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### Joint Session 2: starts at 14:00pm

#### Competence development, including

- Competence *mapping* and *roadmap* development
- *Training* with the use of XR, serious games, and other technologies
- *Education*

Cross disciplinary **case studies**, including best practices and benchmarking

**Chairs:** Martin Andreasson (NND) & Jan Otto Porsmyr (IFE)

**14:00pm** Introduction by session chairs

**14:05pm** 3-D Alara Simulation Tool in Nuclear Decommissioning: First Test in an Interim Storage Facility by Mahmoud Abdelrahman (SCK CEN)

**14:20pm** Bridge the gap – New ways to attract the young generation for the nuclear industry by John Kettler, actimondo

**14:40pm** Advanced training concepts and DigiDecom Training by Archita Rajkumari & István Szőke (IFE)

**Pre-recorded** presentations via the Atomondo hub: virtual venue for the nuclear community

### Coffee Break at 15:00pm + Walk till IFE

#### [IFE Halden \(Os Alle 5\)](#)

#### Discussions and summary (2h) start at 16:00pm

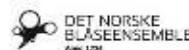
**Moderators:** Patrick O’Sullivan (IAEA), Martin Andreasson (NND), Timothy Schatz & Markus Airila (VTT), Anthony Banford (NND), István Szőke (IFE), Ole Jakob Ottestad (NND), Martin Brandauer (NEA)

- Group discussions (meeting rooms at IFE)
  1. Innovation needs and opportunities in decom., synergy across industry domains.
  2. Competence development in decom, synergy across industry domains and needs, examples for cross industrial initiatives
- Summaries in plenary from **17.30pm-18:00pm** (IFE Auditorium)

[Opening night with Champagne and Performance by the Det Norske Blåseensemble at 19:00pm](#)

[DigiDecom 2022 dinner at 20:00pm](#)





**DigiDecom2022**  
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**DAY 2 – Wednesday (October 19<sup>th</sup>)**

**9:00 CET – Thon Hotel Halden**

**Joint Session 3: starts at 9:20am**

**Sustainability and circular economy**, including decommissioning and WM for new builds and future energy solutions

**Project/decision support**, including

- *Project management*
- *Costing and Contracting*
- *Expert / smart decision support systems*

**Chairs:** Federica Pancotti (Sogin), Markus Airila (VTT), Anthony Banford (NNL), Ernst Niederleithinger (BAM)

**9:20am** Introduction by session chairs

**9:30am** Presentation on sustainability and circular economy in the nuclear by Federica Pancotti (Sogin)-

**9:45am** Dismantling the BNCT facility at FiR 1 research reactor from Fióan O'Carroll (SWECO) and FiR 1 research reactor decommissioning project – utilization of digital tools for sustainable dismantling and waste management by Antti Ketolainen (Fortum)

**10:05am** EURATOM PLEIADES by Marie-Benedicte Jacques (CEA), Markus Airila (VTT), John Einar Hulsund (IFE) and István Szőke (IFE)

**10:25am** EURATOM MICADO Project - Cost-effective solution for non-destructing characterization of nuclear waste by Ferdinando Giordano (CAEN)

**10:40am-11:10am Break**

11:10am EURATOM PREDIS by Ernst Niederleithinger (BAM)

11:25am EURATOM PREDIS predisposal waste management digital decision platform by Tom Robert Bryntesen (IFE) and Réka Szőke (IFE)

11:35am Innovative IT system for nuclear decom and WM, by Javier Alonso (Ingecid)

11:50am On the advanced tech IAEA initiative (Sogin & IFE)

**12:00pm-13:00pm Lunch Break and Concert by the Det Norske Blåseensemble**

**Performance by the Det Norske Blåseensemble**

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**Session 4: Roadshow** for sponsors of DigiDecom 2022 **starts at 13:00pm ends at 14:20pm** (1h 20m)

*Platinum, Gold and Silver*

**Chair:** John Kettler (actimondo)





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13:00pm Intro by session chair

13:25pm Company Pitches

### Session 5 (1h): (Online Streaming and Projecting)

Young generation session starts at 14:20pm ends at 15:20pm

Chairs: PhD-Student Nancy Bellingan (FH Aachen) and John Kettler (actimondo)

14:20pm Introduction by session chairs

14:30pm Development of advanced technologies to meet the challenge of dismantling graphite reactors by Delphine Delvalle (EDF)

14:45pm Students present their projects (Poster / online poster award)

**Coffee Break at 15:20pm + Walk till IFE**

### [IFE Halden \(Os Alle 5\)](#)

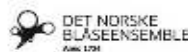
#### Discussions and summary (2h) start at 16:00pm

**Moderators:** Patrick Joseph O'Sullivan (IAEA), Markus Airila (VTT), Federica Pancotti (Sogin), John Kettler (actimondo), Timothy Schatz (VTT), István Szőke (IFE), Ernst Niederleithinger (BAM), Anthony Banford (NNL), Richard Reid (EPRI)

- Group discussions (meeting rooms at IFE)
  1. Role of digitalization on strategic level, for improving on lifecycle and project level and sustainability and circular economy – synergy in needs across industries, application of general concepts to nuclear (focus on role of digitalization).
  2. EURATOM PREDIS related discussion session – to be agreed with PREDIS e.g., user needs for a digitalized waste management approach WP7.
- Summaries in plenary at 17:30pm-18:00pm (IFE Auditorium)

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**DAY 3 – Thursday (October 20<sup>th</sup>)**

9:00 CET – Thon Hotel Halden

**Joint Session 6:**

**Risks, safety and security management**

- Risk management
- Hazard management and safety considerations
- Security (including cyber security) aspects

**Risk communication including**

- Public communication and acceptance
- Regulatory communication and compliance
- Regulatory aspects/expectations for the use of AI, data and robotics technologies

**Chairs:** Katarzyna Siegien (DSA) and Bjørn Axel Gran (IFE)

9:00am Introduction by session chairs

9:10am Regulator- Operator cooperation for effective regulatory process when introducing new technologies for nuclear safety and security. Case study of Andreeva Bay by Katarzyna Siegien (DSA)

9:30am Use of digitalization in the regulatory process by Mia Ylä-Mella (STUK)

9:50am Holistic process for decision making on decommissioning and management of complex sites – Status of NEA HDCS Expert Group by Patrice Francois (IRSN)

10:10am Progress in multiple applications of autonomous radiation characterisation by Rosie Lester (Createc)

**10:25am-10:55am Break**

10:55am Information security in decommissioning projects by Adrian Kotelba (VTT)

11:15am EURATOM HARPERS by Réka Szőke (IFE)

**12:00pm-13:00pm Lunch break and Concert by the Det Norske Blåseensemble**

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**Session 7: starts at 13:00pm**

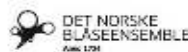
Special session on **robotics** (with cost benefit in focus), in collaboration with EGRRS

**Chairs:** Martin Brandauer (NEA) and Petter Leira (IFE)

13:00pm Introduction by session chairs

13:05pm General speech based on the report to be published EGRRS by Martin Brandauer (NEA)





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13:20pm HADRON and the RoboDecom project by the RoboDecom consortium

13:40pm Modular Robotics for Solutions for Decommissioning and Waste Processing by Matt Mellor (Createc)

13:55pm Specific presentation by EGRRS by Richard Reid (EPRI)

14:10pm Presentation by Maxim Saveliev (ISP NPP Ukraine)

14:25pm Steam Generator dismantling using RRS by Kamil Kravarik (VUJE)

14:40pm Example of methodology for cost-benefit-analysis in using RRS – Mustafa Ali Hadi Jarallah & Petter Leira (with support from Norbert)

**Pre-recorded** presentations via the Atomondo hub: virtual venue for the nuclear community

**Coffee break at 15:00pm + Walk till IFE**

[IFE Halden \(Os Alle 5\)](#)

**Discussions and summary (2h) start at 16:00pm**

**Moderators:** Martin Brandauer (NEA), Norbert Molitor (PLEJA), Richard Reid (EPRI), Réka Szőke (IFE), Petter Leira (IFE), Patrice Francois (IRSN), Timothy Schatz (VTT), Mia Ylä-Mella (STUK)

- Group discussions (meeting rooms at IFE)
  1. EURATOM HARPERS related discussion session – to be agreed with HARPERS e.g., regulatory requirements/standards for application of digitalization and robotics.
  2. EGRRS related discussion sessions – to be agreed with EGRRS e.g., cost-benefits for application of robotics in nuclear – comparison with other industries.
- Summaries in plenary **at 17:30pm-18:00** (IFE Auditorium)

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