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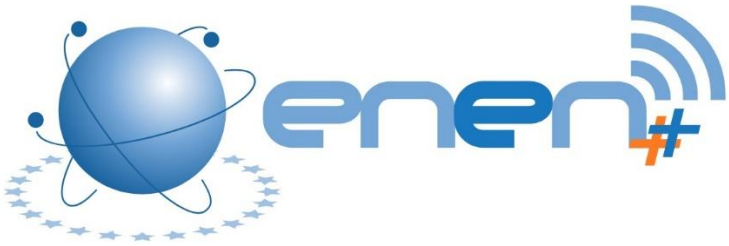

(Project Number: 101061677)

DELIVERABLE D2.6

Report on the organization of the 'Scientific Dating' workshops

Lead Beneficiary: SCK CEN

Due date: 30/09/2025 Released on: 19/06/2025

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Dissemination Level		
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RE	Restricted	
SEN	Sensitive	

Version control table

Version number	Date of issue	Author(s)	Brief description of changes made
0.1	03/04/2024	LJ	First draft: lay-out and information first workshop
0.2	20/05/2025	LJ & GR	Addition of information on second workshop
0.3	17/06/2025	CM	Review WP leader
1.0	19/06/2025	GP	Final first version after approval Coordinator

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EXECUTIVE SUMMARY

This deliverable presents the outcomes of two innovative workshops organized under the ENEN2plus project to promote transdisciplinary research and responsible research and innovation (RRI) in the nuclear field. The workshops aimed to foster collaboration across scientific disciplines, enhance awareness of societal dimensions in research, and equip students and early career professionals with the skills to address complex global challenges.

The first workshop was held in October 2023 at the Comics Art Center in Brussels and was organized by SCK CEN (a collaboration between the SCK CEN Academy and the unit 'Science, Technology and Society' which has internationally renowned expertise in social sciences and humanities (SSH), the integration of it in nuclear research and knowledge transfer, and as such is the key content contributor of the workshops). This workshop brought together 11 participants from 7 countries with diverse academic backgrounds, including nuclear engineering, natural sciences, medicine, business economics, and social sciences. The participants explored transdisciplinary approaches to nuclear-related topics such as Small Modular Reactors (SMRs), management of nuclear emergencies and post-accident recovery, and medical applications (mammography screening). In general, the event was very well received.
The second workshop, which was titled 'Spring School on Transdisciplinary Research Methods – Addressing the Energy Puzzle', was co-organized by SCK CEN and KU Leuven's Institute for the Future. The spring school took place on May 5-9, 2025, and focused on the energy trilemma and the possible role of SMRs in addressing this trilemma. 16 participants from 11 countries engaged in lectures, keynotes, stakeholder interactions, and groupwork centered on country case-based challenges. The program also included a visit to the science exhibition of Tabloo in Dessel, Belgium, and interactions with local nuclear stakeholders. The participants developed key transdisciplinary competencies, such as systems thinking, stakeholder engagement, and scenario planning. While the content was well-received, some participants commented on the demanding schedule and requested more breaks and preparatory guidance.

Both events successfully promoted transdisciplinary collaboration and RRI among students and early career researchers. The collaboration with KU Leuven during the second workshop enhanced outreach and enabled ECTS accreditation. Participant feedback highlighted the value of interactive, real-world learning and suggested improvements for future iterations. These workshops represent a step toward embedding transdisciplinary and responsible research practices in the nuclear sector and beyond.

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1. INTRODUCTION

Nowadays, society is faced with a range of global challenges and rapid technological advancements. To address these complex challenges, contributions of single scientific disciplines are often inadequate, and collaborations across and even beyond disciplinary boundaries are required. In line with such requirements, there has been a growing recognition for transdisciplinary approaches that transcend the individual disciplines to foster holistic understandings of these challenges and to get innovative solutions. Additionally, there has been a call for responsible research and innovation (RRI), emphasizing the ethical, social, and environmental dimensions of scientific and technological progress.

As shown by Figure 1 below, transdisciplinarity goes beyond interdisciplinary approaches by integrating diverse perspectives, methodologies, and stakeholders. It acknowledges that real-world problems often transcend disciplinary boundaries, requiring collaboration across academic, governmental, industry, and community sectors (integration and co-creation). By organizing dialogue and cooperation among stakeholders with varied expertise and experiences, transdisciplinary research results in comprehensive insights and innovative solutions that are sensitive to the diverse needs and contexts of society.

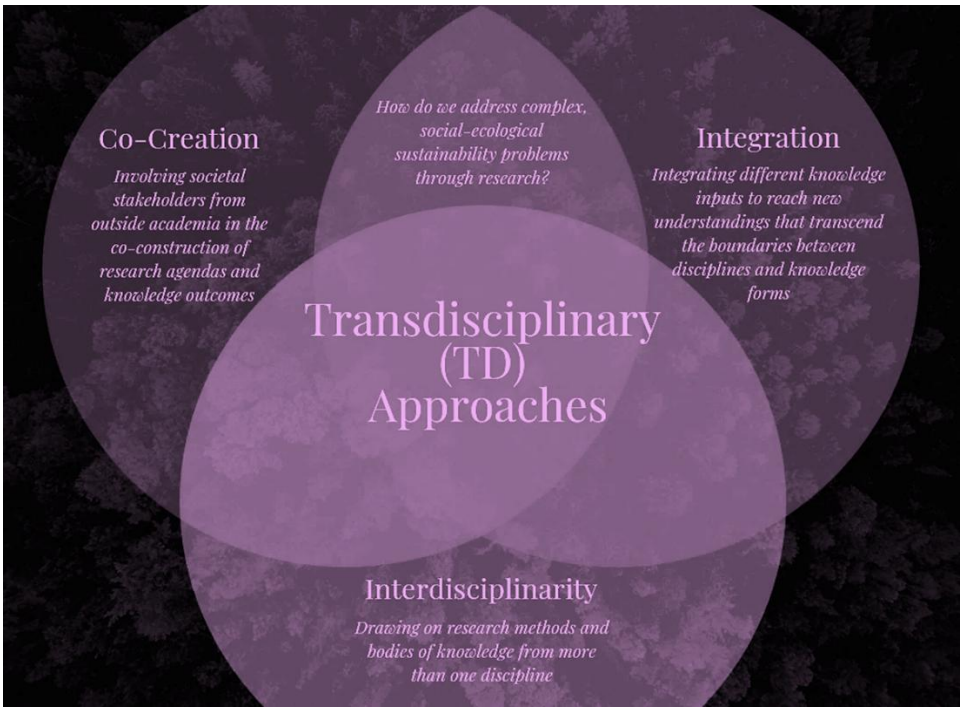


Figure 1 Transdisciplinary approach and its three components (1)

Additionally, with the increasing impact of science and technology, there is the need that research and innovation activities are conducted ethically, responsibly, and sustainably. Responsible research and innovation emphasize the integration of societal values and concerns into the research and innovation process, from start to finish. This entails reflecting on the role of research and innovation in society, engaging stakeholders - including the public- in the decision-making processes, anticipating, and addressing potential risks and unintended consequences, and promoting inclusive and equitable research processes.

The combination of transdisciplinarity and RRI will not only cause progress in science and technology but will also contribute to the overall well-being of present and future generations.

Research is becoming ever more collaborative and inclusive but experimenting with transdisciplinary approaches and reflection on research within a safe space are mostly absent in training of students and early career professionals. The goals of the workshops organised within the framework of this project are therefore to stimulate reflection on research topics and practices across disciplinary boundaries and to create awareness of transdisciplinarity and responsible research and innovation dimensions (e.g., ethics, gender equality, governance, open access, public engagement, and science education.), specifically in the nuclear field.

As such, integration of this matter in education and training activities, and competence building actions in general, is key. It creates awareness of the broader picture and allows people to master additional skills next to the technical skills that are evidently covered in any nuclear course programmes.

2. ENEN2PLUS SCIENTIFIC DATING WORKSHOPS

2.1 Scientific dating – an encounter across disciplines

A first workshop on transdisciplinarity and RRI was organised by SCK CEN on October 5 - 6, 2023 in the Comics Art Centre in Brussels. 11 people from 7 different countries, graphically presented in Figure 2, with different scientific backgrounds and at different professional stages, presented in Figure 3 on the next page, attended the workshop. Seven students used the ENEN2plus mobility fund.

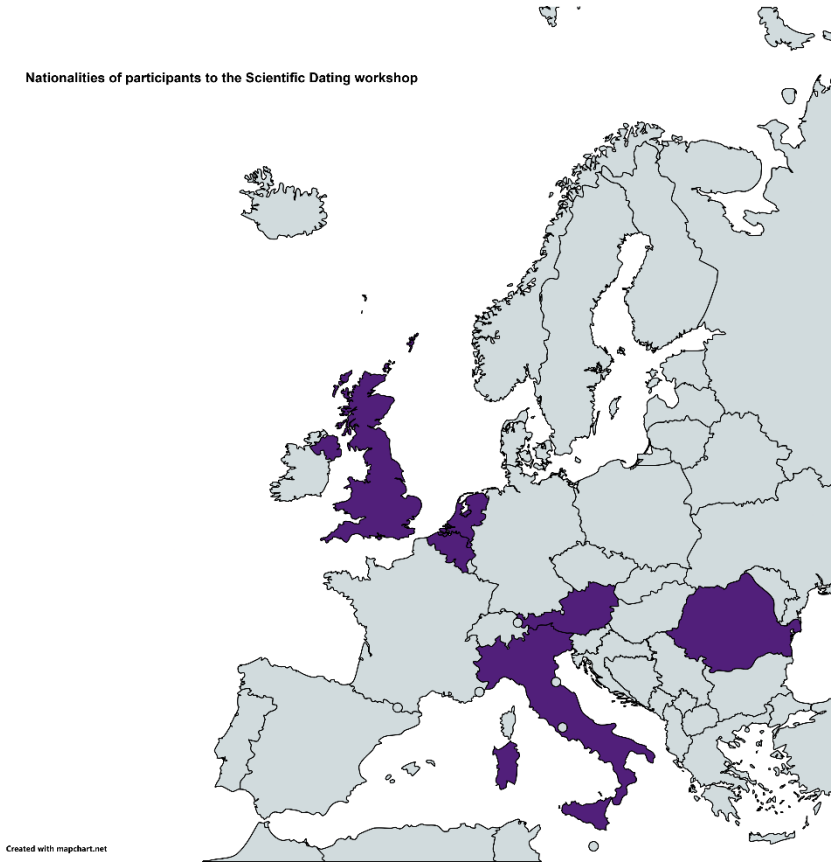


Figure 2 Countries of origin of the participants of the Scientific dating Workshop: UK (1), Austria (1), Italy (3), Romania (1), Belgium (3), The Netherlands (1) and Mexico (1, not shown on the map).

The educational and professional background of the participants are in nuclear engineering (4), natural sciences including chemistry (1) and physics (2), medicine (1), business economics (1) and social sciences including history of science (1) and anthropology/clinical psychology (1). Their respective career stages are PhD candidates (7), MSc students (3) and early career professional (1).

The distribution between gender is quite balanced at 45% male and 55% female.

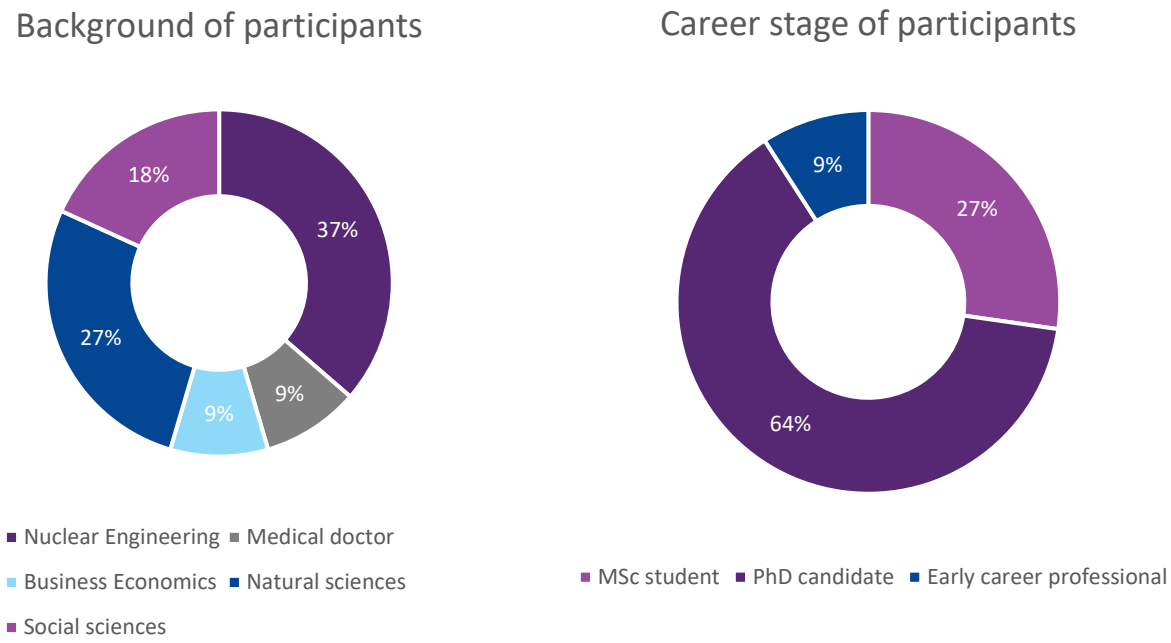


Figure 3 Educational background (left) and the distribution of the career stages of the participants (right)

The idea of this workshop is based on previous actions from the EC project NewHoRRizon (2; 3), organized by SCK CEN. The original concept was improved based on the provided feedback and experience. Also, an explicit focus on transdisciplinarity and specific nuclear research and development domains was introduced.

The event was promoted with a flyer (ANNEX I Flyer Scientific dating – an encounter across disciplines) that was distributed via social media, direct email and via different networks such as the ENEN network and the SHARE platform (https://www.ssh-share.eu/). Additionally, a webpage was created to inform participants and allow registration for the event (https://www.sckcen.be/en/scientificdating2023). The event was also announced in the ENEN2plus bulletins (issue 1 and 2).
As it appeared rather difficult to motivate social science students and early career professionals to participate, social science departments of most Belgian universities were directly contacted to disseminate the event among their staff and students.

The learning outcomes of the workshop were:
Participants can …

- describe their research in a limited time and for a diverse audience;
- identify different angles from which a problem could be approached;
- define transdisciplinarity and explain its opportunities and challenges;
- formulate a research problem in a transdisciplinary perspective;
- identify actors relevant to a transdisciplinary research problem and their potential role in the research process;
- identify ways to collaborate with researchers outside their own discipline;
- compile a poster that explains the project's objective, approach, and methods;
- present a transdisciplinary project and explains its objective, approach, and methods;
- provide feedback to other research projects in a respectful manner;

To achieve these learning outcomes, interactive methods and activities were implemented in the workshop's programme (ANNEX II Programme of the Scientific dating – an encounter across disciplines workshop).

After the official welcome, all participants presented themselves and their research or thesis work with a Pecha Kucha presentation. Using this format, named after the Japanese word for chit-chat, presenters show twenty slides in a time of 20 seconds per slide. This usually results in short and concise talks. To finalize the introduction, the participants introduced their research approaches to each other during 5-minute speed dates.

The next part of the workshop was focused on introducing transdisciplinarity with room for discussion and reflection on the challenges and opportunities. Afterwards, the focus shifted to the design of transdisciplinary projects, focused on some predefined topics. These topics were introduced shortly, and subgroups were formed in which the participants could collaborate on project design. Prior to the event, the participants were sent information sheets on five possible topics namely Small Modular Reactors (SMRs), reuse of NORM (Naturally Occurring Radioactive Materials) residues resulting from industrial processes, management of nuclear emergencies and post-accident recovery, management of high-level radioactive waste, and medical applications (mammography screening) and asked to provide a top three. Based on this input the subgroups were formed.

After some brief time used for getting to know each other better, the separate groups started to work on their research questions, the disciplines needed for their project, the identification of stakeholders and their potential role or involvement in the transdisciplinary projects. This concluded the first day of the workshop.

To start the second day, the work performed by each of the groups was presented with a poster presentation. Participants from the non-presenting group were given specific stakeholder roles so the presentations were judged from different points of view. With this feedback, the groups went back to the drawing table to reflect and adjust their research projects. Finally, the projects were presented again in their final stage.

Figure 4, presented on the next page, is showing some impressions from the workshop in progress.

Figure 4 Scientific dating - an encounter across disciplines: group photo (top left and bottom right), Comics Art Museum (top right) and workshop in progress (bottom left)

After the event, two articles were written describing the event. The first article is published on the SCK CEN website (https://www.sckcen.be/en/academy-news/scientific-dating-encounter-across-disciplines) and the second article is available in the ENEN2plus bulletin (issue 3)

The participants of this workshop were surveyed and 10 out of 11 participants replied. As shown in Figure 5, all participants were happy with the event, judging it 'excellent' or 'good'.

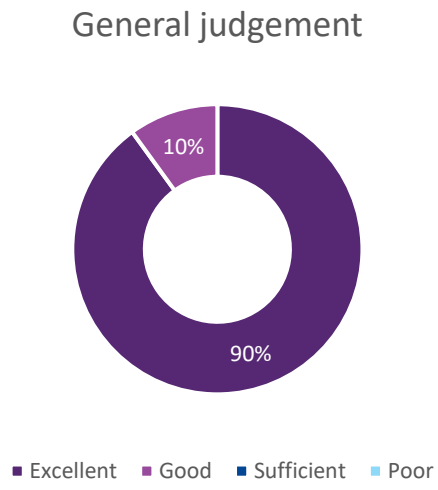


Figure 5 General judgement of the Scientific dating workshop by the participants

Furthermore, all participants indicated that the workshop met their expectations and 9 out of 10 rated the duration of the event 'just right'. One participant rated the duration 'too long' without further comment. The content of the event was evaluated up-to-date and in line with the target audience as presented in Figure 6.

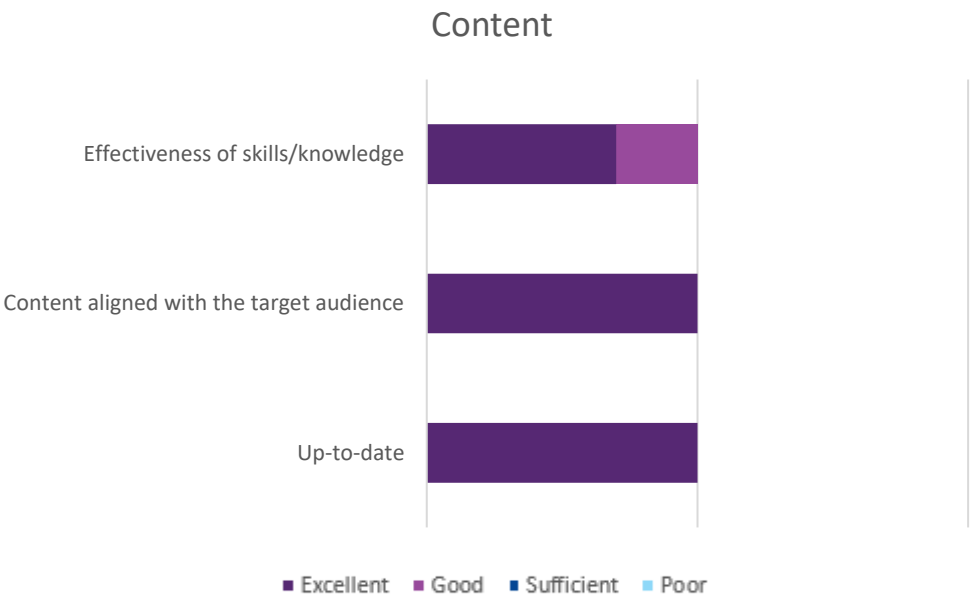


Figure 6 Evaluation of the content of the Scientific dating workshop by the participants

Both the venue, the Comics Art Museum in Brussels, and the catering were evaluated positively. Based on the comments the 'sufficient' score on 'Catering' is most probably due to the low number of breaks and the short length of the breaks (Figure 7).

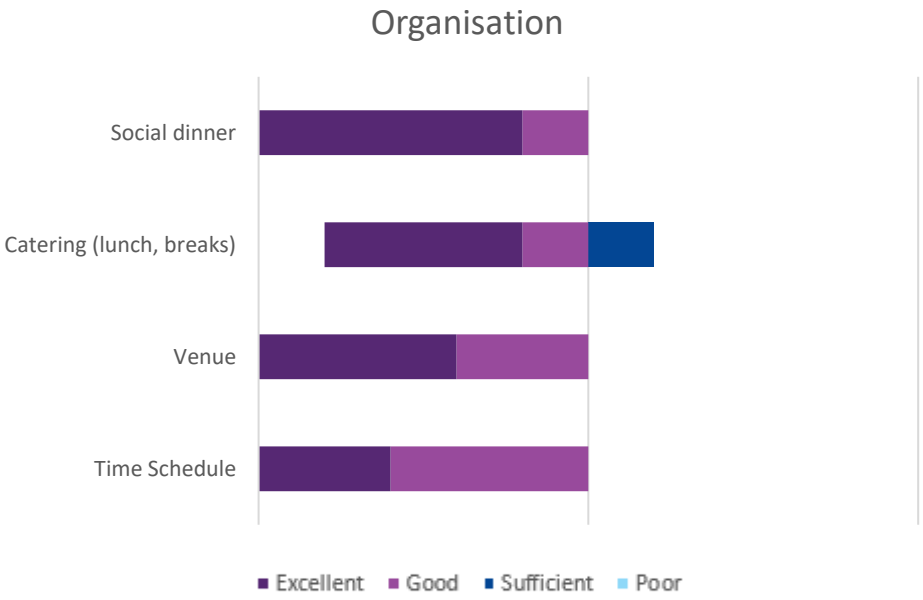


Figure 7 Evaluation of the organisational aspects of the Scientific dating workshop by the participants

Figure 8, below, shows that most attendees found the event either through social media and their own network, through word of mouth advertising. In the 'other' category were 'email from my professor' and 'email from the SCK CEN BNEN secretariat'.

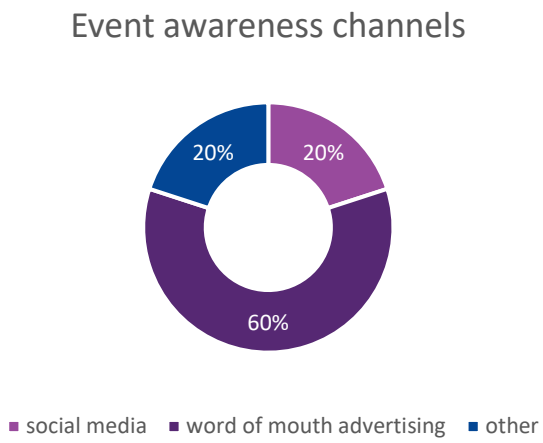


Figure 8 Channels through which participants learned about the Scientific dating workshop

Besides comments on logistics (need for more breaks), two suggestions can be considered in future events. A first comment was to provide more suggested reading about transdisciplinarity to allow a better preparation of the participants. A second comment was to invite speakers to talk about their experience and practice with transdisciplinarity research.

2.2 Spring School on Transdisciplinary Research Methods: Addressing the Energy Puzzle

The second workshop was titled 'Spring School on Transdisciplinary Research Methods: Addressing the Energy Puzzle'. This spring school was organised by SCK CEN (unit 'Science, Technology and Society and SCK CEN Academy) and the KU Leuven Institute for the Future. The event had its online kick-off on March 31, 2025 and an in-person week-long course with key notes, lectures and group work from May 5 until 9, 2025.

18 candidates were accepted to participate but only 16 participants were present in Leuven. One candidate had to leave on the first day due to family circumstances. The 16 participants originated from 11 different countries which is presented in Figure 9 on the next page. However, most of the participants were residing in Belgium for their studies or PhD project. Five students used the ENEN2plus mobility fund.

The group consisted of 9 PhD candidates, 2 postdocs, and 5 early career professionals from different disciplinary areas. The distribution between disciplinary areas and career stage are presented in Figure 10 Educational background of the participants (left) and the distribution of the career stages of the participants on the next page.

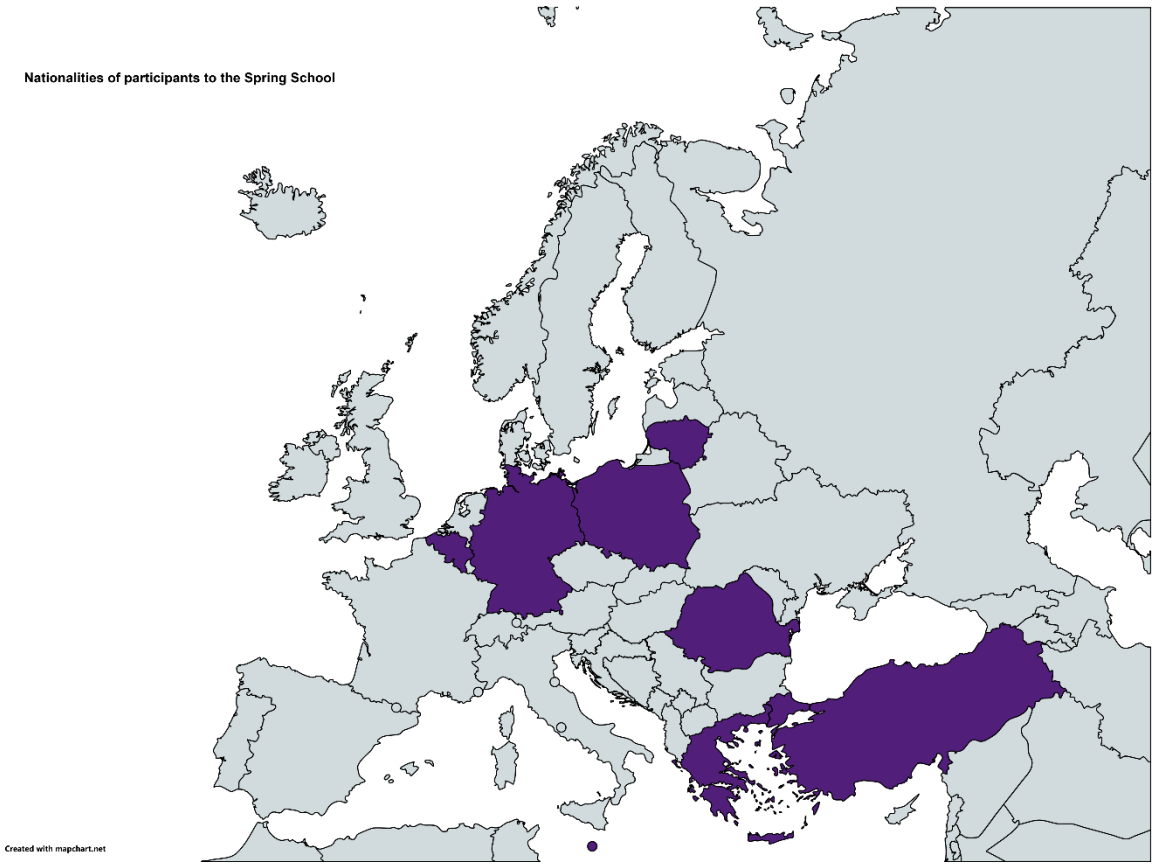


Figure 9 Countries of origin of the participants of the spring school: Belgium (4), Germany (1), Greece (1), Malta (1), Turkey (2), Romania (1), Lithuania (1), Poland (1), and not shown on the map Singapore (1), Rwanda (1), Kenya (1) and unknown (1)

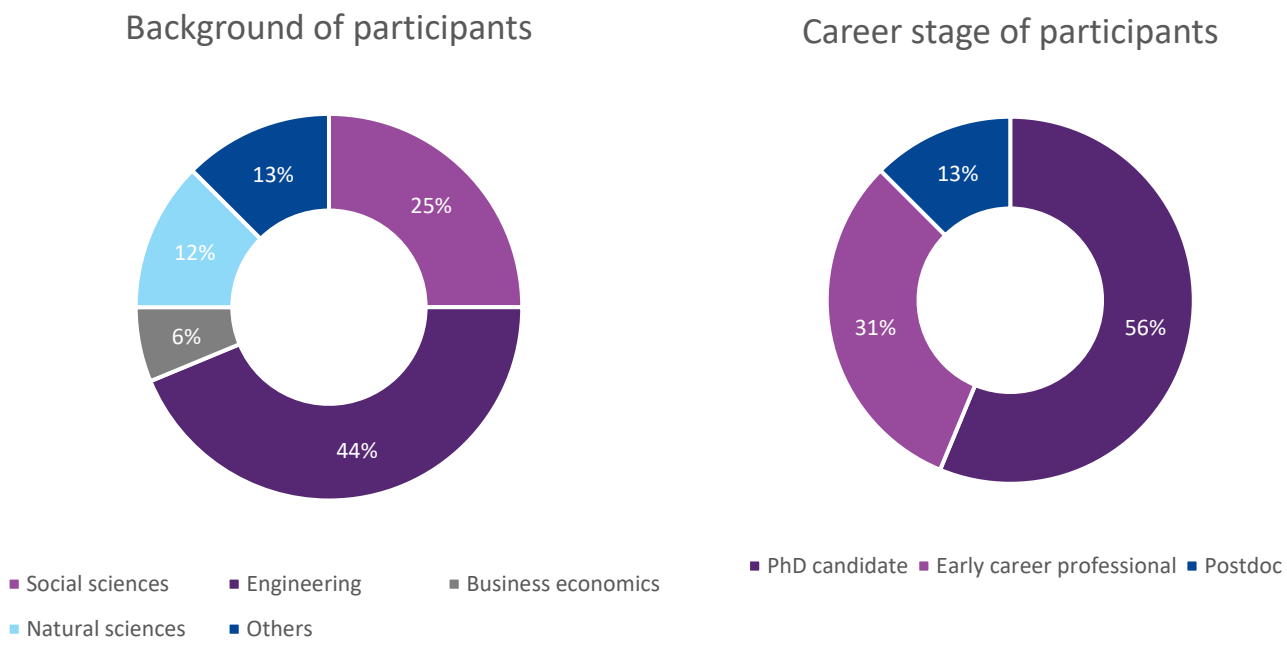


Figure 10 Educational background of the participants (left) and the distribution of the career stages of the participants (right)

The distribution between genders was a bit skewed towards male participation with 63% male and 37% female participants.

The event was promoted with a flyer (ANNEX III Flyer and communication materials International Spring School on Transdisciplinary Methods: Addressing the Energy Puzzle) that was distributed via social media, direct email, KU Leuven internal communication channels and via different networks such as the ENEN network and the SHARE platform (https://www.ssh-share.eu/). Additionally, a webpage was created to inform participants and allow registration for the event (https://rega.kuleuven.be/if/education-training/international-spring-school-on-transdisciplinary-methods/copy_of_addressing-the-energy-puzzle).

The defined learning objectives were:

Participants will grow towards developing key transdisciplinary competences:

- Understand how to frame a transdisciplinary research question that focuses on a societal (wicked) problem, integrates different types of knowledge and actors, and whose results are relevant both to the scientific community and societal practice;
- Understand how a system works by looking at it in terms of wholes, dynamic relationships, and consequences of actions;
- Know methods to envision multiple future scenarios and how different actions might play out in the future if implemented;
- Be able to identify, negotiate and apply shared norms, values and goals to assess the current state of a complex challenge and to construct a shared vision for addressing it;
- Know how to integrate the plurality of (extra) scientific knowledge into research and action by engaging in interdisciplinary collaborations with peers and stakeholders.

Participants were challenged to reach these competences focussing on a complex real-world problem namely the energy trilemma (balance between energy security, energy equity and environmental sustainability) and the potential role of SMR technology in this energy puzzle.

Several activities were undertaken to help participants reach the learning goals. The complete programme is available in ANNEX IV programme of the International Spring School on Transdisciplinary Methods: Addressing the Energy Puzzle.

The programme started with an online kick-off on March 31, 2025. After the introduction on the spring school, the participants directly dived into the background of transdisciplinary research with a lecture on wicked problems and transdisciplinary research (by Prof. Dr. Anne-Mieke Vandamme of KU Leuven), and a keynote on addressing the energy puzzle and the role of advanced nuclear technology therein (by Dr. Robbe Geysmans of SCK CEN). Afterwards, the group was divided in three groups which were then provided some time to get to know each other. To conclude the kick-off event, the theory of change was introduced with a lecture (by Prof. Dr. Anne-Mieke Vandamme of KU Leuven).

On the first day of the in-person week, all participants were welcomed again and after some introductory presentation two technical lectures were provided. The first was a scientific presentation on nuclear technologies (by Prof. Dr. Nathal Severijns of KU Leuven) and the second presentation (by Dr. Catrinel Turcanu of SCK CEN) introduced the different country cases (Belgium, Spain and the Czech Republic) on which the three groups would be

working. The rest of the day was used for group work focused on creating a safe space and joint problem framing.
On the second day, spread over the day, there were two lectures. One on multilevel stakeholder engagement (by Dr. Simona Pesaresi of KU Leuven) and a second one on systems mapping and leverage points (by Dr. Catherine Decouttere of KU Leuven). During the rest of the day, the three groups worked on their project with focus on actor constellation, developing a PESTEL analysis and preparing their causal loop diagram.

On Wednesday, the group travelled to the Tabloo visitor and communication centre in Dessel. In the first part of the day, the participants interacted with members of MONA and STORA, which are local stakeholder groups from the municipalities of Mol and Dessel, focused on deciding, discussing and following-up on a planned disposal facility for low and medium-level short-lived radioactive waste. More information on these stakeholder groups is available on their respective websites https://www.monavzw.be/ and https://www.stora.org/. These stakeholders provided feedback on the project of the different groups. In the afternoon, the participants enjoyed a guided tour to the permanent exhibitions in Tabloo, which focus on radioactivity, radioactive waste, disposal of radioactive waste and the research and activities of SCK CEN. Figure 11 presents some pictures taken during the spring school.

Figure 11 Spring School on Transdisciplinary Research Methods: group photo (top left), interaction with MONA and STORA stakeholders (bottom left), and guided visit to Expoo at Tabloo (right)

A lecture on futures methods (by Prof. Dr. Anne-Mieke Vandamme of KU Leuven) and a keynote on experiences on transdisciplinary case studies (by Prof. Dr. Michael Stauffacher of ETH Zürich) supplemented by group work focused on identifying leverage points, applying tools for building future scenarios were the main activities of the fourth day. To close this day, KU Leuven students from the extra-curricular honours programme transdisciplinary insights presented their challenges and actions.

On the last day, the groups finalised their country case projects and presented their theory of change in front of a jury. The jury consisted of three members (Jakob Luyten, SCK CEN Academy project collaborator and ENEN2plus work package leader; Nathal Severijns, professor in nuclear physics at KU Leuven, member of the KU Leuven sustainability council and academic board member of the institute for the future; and Ingrid Molderez, professor in sustainable management and economics and coordinator of the Centre for Economics, and Corporate Sustainability). The team working on the Belgian case won the award for best project.

To get to know each other, each participant was provided a timeslot during the duration of the week, to introduce themselves and their research during a pitch session. The spring school was concluded with an award ceremony, closing words and collecting feedback from the participants.

The first part of the evaluation was the self-assessment of the participants on the learning objectives. 18 questions were asked to evaluate their knowledge about the subject. The results are presented in Figure 12 on the next page. It shows that most student consider that they have reached the learning objectives of the spring school. Apart from one student, the responses 'disagree' on the different questions are coming from different students. The one student that responded three times 'disagree' disagreed on the objectives 'I am able to co-create a joint framing of a wicked problem with diverse perspectives. ', 'I can synthesize information from diverse disciplines and non-academic viewpoints.' and 'I feel more open to adapt my assumptions and language to reach a shared understanding of the problem.'. This could indicate that for this student the lecture and keynote on interaction with stakeholders, the interaction with the MONA/STORA stakeholders and their own group dynamic was not very well received. The latter is less likely as this student answered, 'strongly agree' on the following statements 'I am able to provide constructive feedback and communicate effectively within a team.' and 'I am able to engage in discussions to reach consensus on shared values.'.

Figure 12 Results of the self assessment of the participants on the learning objectives of the spring school

Additionally, the participants were asked to indicate their future interest for training on transdisciplinary research methods. While two students provided no answer, all other students responded with one or ,in most cases, more than one option. It is clear form Figure 13 that online initiatives are most requested, followed by an equal interest in transdisciplinary facilitator training and another workshop on a different challenge.

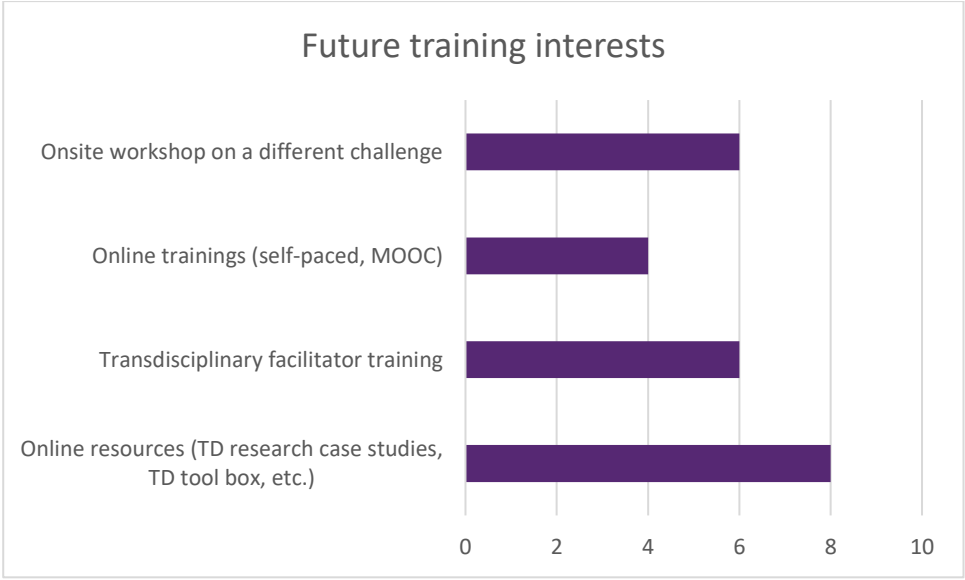


Figure 13 Future training interests on transdisciplinary research methods of the spring school participants

The content of the course, presented in Figure 14, was evaluated positively by all of the participants regarding the safe space and collaboration. The relevance to the current and future research of the participants was indicated positively by most of the participants. Two participants indicated that the content of the spring school is not relevant for their current work but these participants '(strongly) agree' that the content is relevant for their future work. Four participants don't know if the content of the spring school will be relevant for their future projects. However, these four all agree that is it relevant for their current work. These two statements indicate that the content of this spring school was evaluated usefull by all participants either for their current or future work. Two candidates answered that the workshop didn't meet their expectations. Based on the provided comments from these candidates in the survey, no real explanation can be given other than that both candidates indicated 'disagree' on the statement 'The material provided during the workshop sessions was helpful to conduct the work' from the organisation part of the survey of which the results are presented in Figure 15 on the next page.

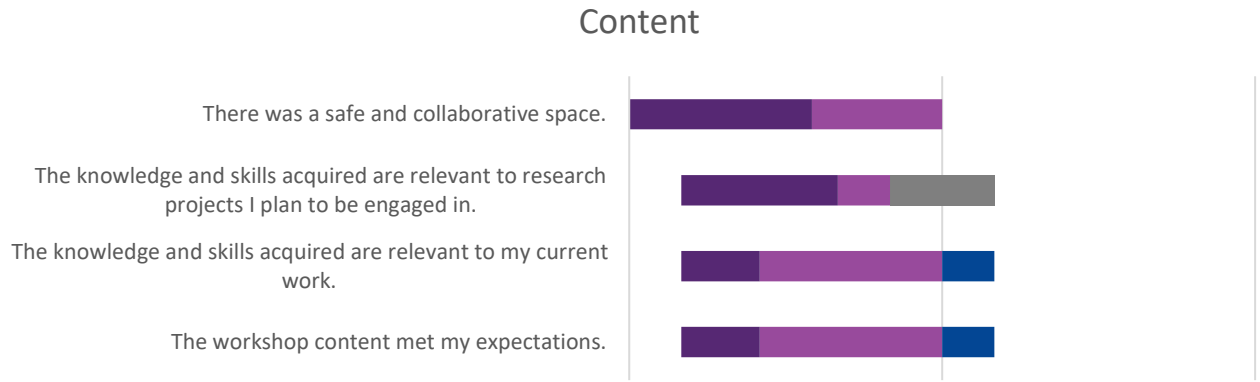


Figure 14 Participants feedback on the content of the spring school

The evaluation of the organisation looks less positive as shown in Figure 15. About half of the participants are not pleased by the catering but more detailed comments, other than a request for fruits, are not provided. Two students answered 'disagree' respectively three and four times on the four questions of this category. Their combined comments indicate that more instructions before the start of the workshop could have been better ,and that the schedule was too demanding. The latter comment was also provided twice by other students indicating that the request for less time-stressed activities and a maximum of 1.5 hours of work without a break should be the maximum.

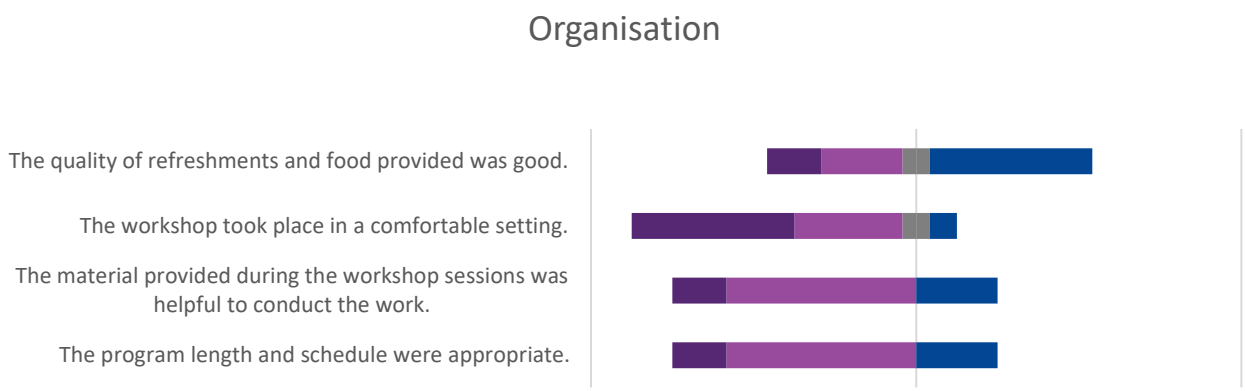


Figure 15 Participants feedback on the organisation of the spring school

Figure 16 indicates the various ways participants found the information on the event. Most of the candidates were informed via direct email (50%) and through their supervisor (25%). Other candidates found the information on social media (1), the ENEN website (1) and the website of the spring school itself (1).

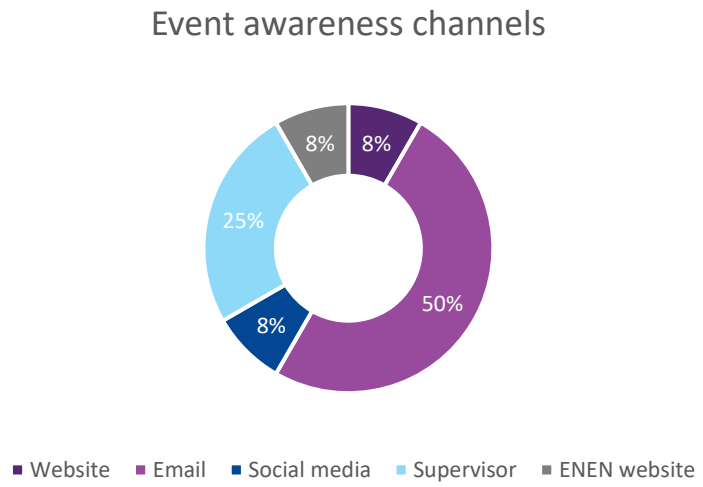


Figure 16 Channels through which participants learned about the spring school

3. CONCLUSIONS

Organizing an event that brings together both natural and social sciences within the nuclear sector is far from straightforward. SCK CEN is pioneering in this regard and has consistently demonstrated the importance of integrating social sciences and humanities (SSH) into nuclear research and education. This has been reflected both in research outcomes and in the development of dedicated education and training programs.

The first edition of the event organized in the frame of ENEN2plus confirmed the challenges in attracting and engaging the desired multidisciplinary target audience with the appropriate background and interest in both STEM (Science, Technology, Engineering and Mathematics) and SSH. This underlines the need for continued efforts in bridging disciplinary boundaries and communicating the relevance of SSH in a nuclear context.

It was suggested for possible next events to direclty cooperate with social science departments of universities and institutes. This not only broadens the network but allows for useful input from these actors. Therefore, the second event was co-organised with the KU Leuven Institute for the Future, a transdisciplinary research incubator. This indeed facilitated the attraction off participants. Although the participation percentage of natural sciences and engineering is almost equal for both events (64% and 66% of participants), the diversity within this category is bigger. In the second event, more social scientist, 4 instead of 2, were able to participate. Another advantage of organising such event with a university partner is the possibility of certifying the training course with ECTS credits. Partipants who completed the full programme were given 3 ECTS credits for this spring school. The full programme with an estimated workload of 75 hours, consisted out of active engagement to the online kick-off and the in-person week and completing all additional tasks being a preparatory assignment on their individual theory of change, a preparatory assignment to be able to pitch their research during the spring school, and a final reflective essay.

To address the feedback provided after the first event, the online kick-off event was organised to introduce wicked problems and transdisciplinary research, introduce the challenge, and form the groups. This action was taken to address the question for a better preparation of the participants. In addition, a speaker with more than 30 years of experience on transdisciplinary case studies was invited.

Overall, both events were evaluated positively. However, based on the performed evaluation and the comments provided by the participants, suggestions for possible next editions are noted.

4. ANNEXES

4.1 ANNEX I Flyer Scientific dating – an encounter across disciplines

4.2 ANNEX II Programme of the Scientific dating – an encounter across disciplines workshop

sck cen
Academy

Scientific dating – an encounter across disciplines

October 5 and 6, 2023 | Comics Art Museum, Brussels

Programme

Day 1 | October 5, 2023

09:30	**Registration**	
10:00	Welcome	**Jakob Luyten, Catrinel Turcanu & Robbe Geysmans**
10:15	Presentation of participants' own research	**All participants**
11:00	Speed dating: Participants explain more in detail their research approaches and can ask questions to each other: 5 minutes per date, 4 dates You can use an object that could explain your discipline	**All participants**
11:30	**Break**	
11:45	Introduction transdisciplinarity and discussion	**Catrinel Turcanu & Robbe Geysmans**
12:30	**Lunch**	
13:30	Reflection on transdisciplinarity: challenges and opportunities	**All participants**
14:15	Introduction main themes and group forming	**Catrinel Turcanu & Robbe Geysmans**
14:30	**Break**	
14:45	Get to know each other	**All participants**
15:00	Formulation of research question	**All participants**
15:30	Identification of knowledges needed, social actors & level of involvement of various actors in the process	**All participants**
17:00	**Closure**	
18:00	**Social dinner**	

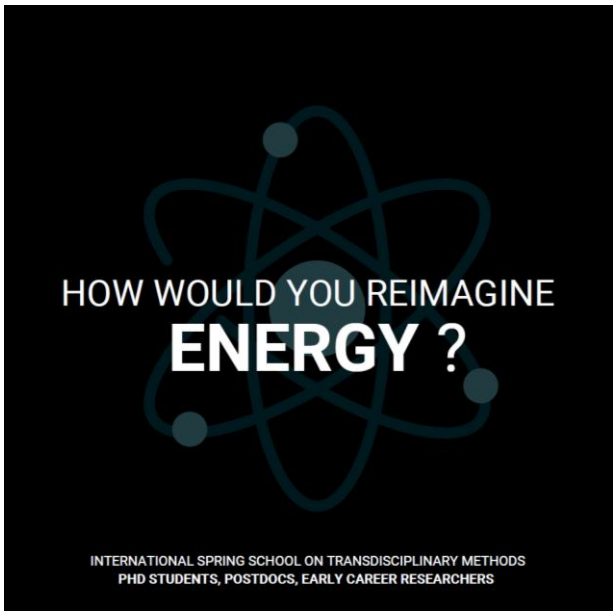
Exploring
a better tomorrow

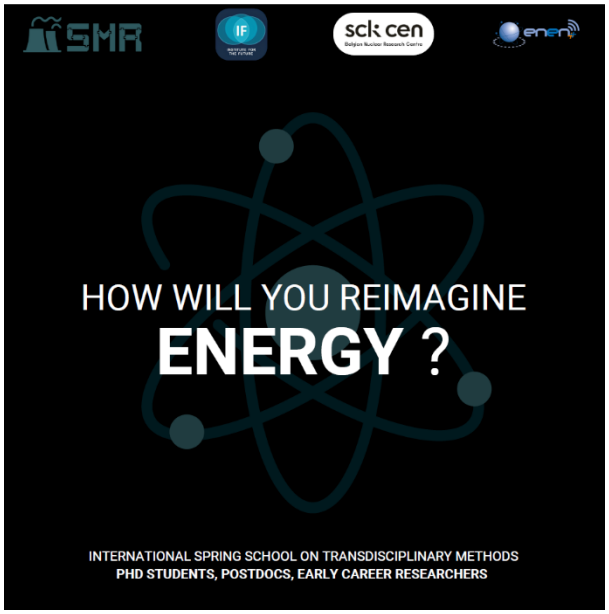
Day 2 | October 6, 2023

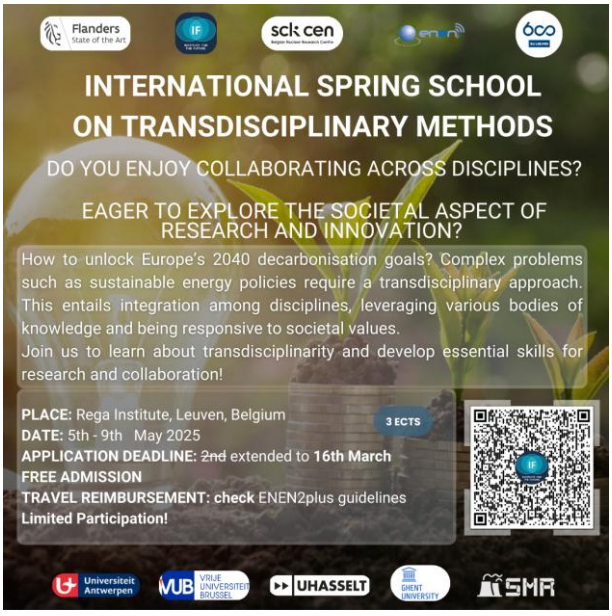
09:30	Continuation of discussion from previous day	**All participants**
10:30	Presentation and feedback from other participants	**All participants**
11:00	Break	
11:15	Critical reflection on the formulation of the research question and the role of different actors (part 1)	**All particpants**
12:30	Lunch	
13:30	Critical reflection on the formulation of the research question and the role of different actors (part 2)	**All participants**
14:30	Break	
14:45	Final presentation of projects and feedback	**All participants**
15:45	Wrap up	**Jakob Luyten, Catrinel Turcanu & Robbe Geysmans**
16:45	**Closure**	

4.3 ANNEX III Flyer and communication materials International Spring School on Transdisciplinary Methods: Addressing the Energy Puzzle

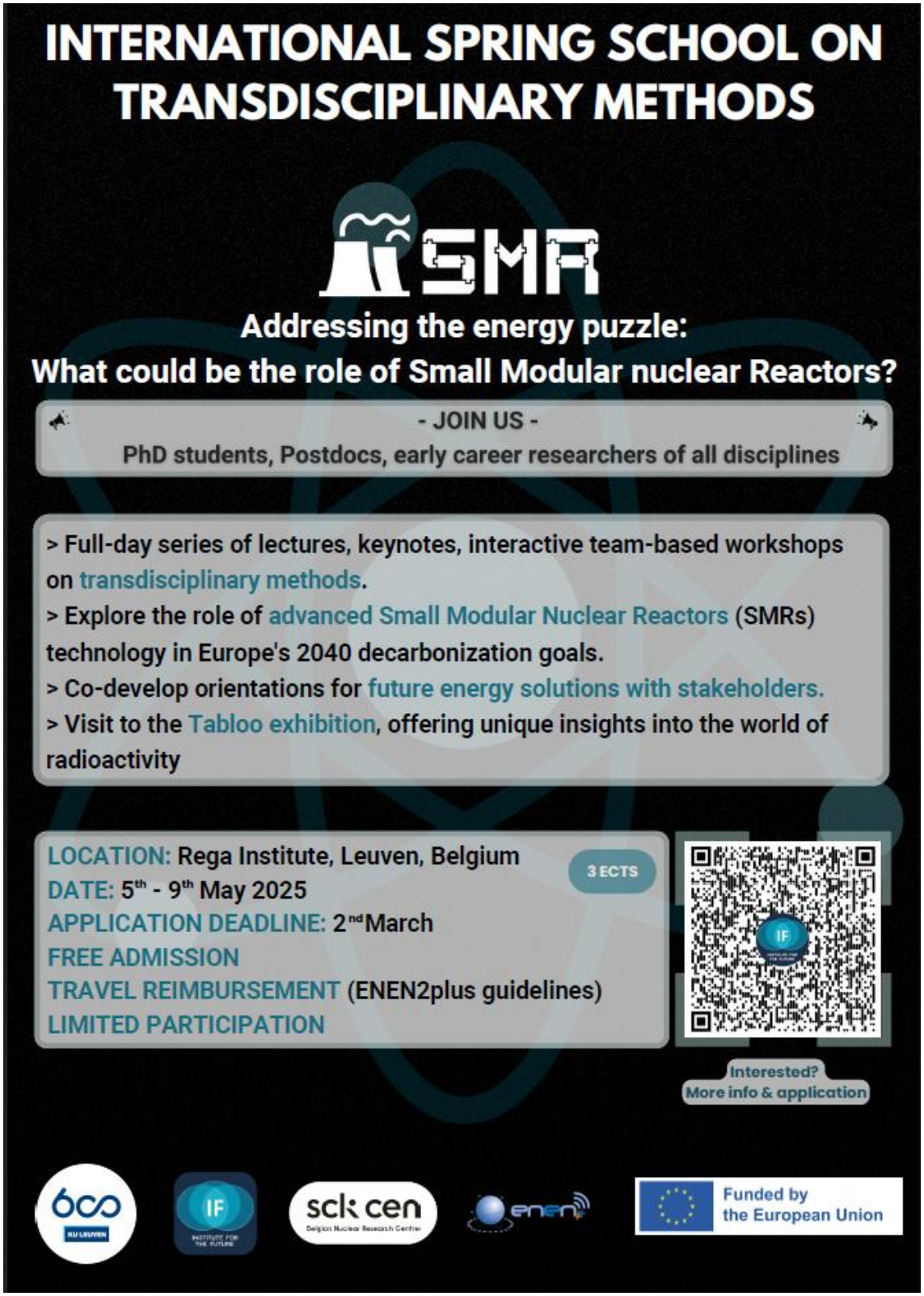
Social media material



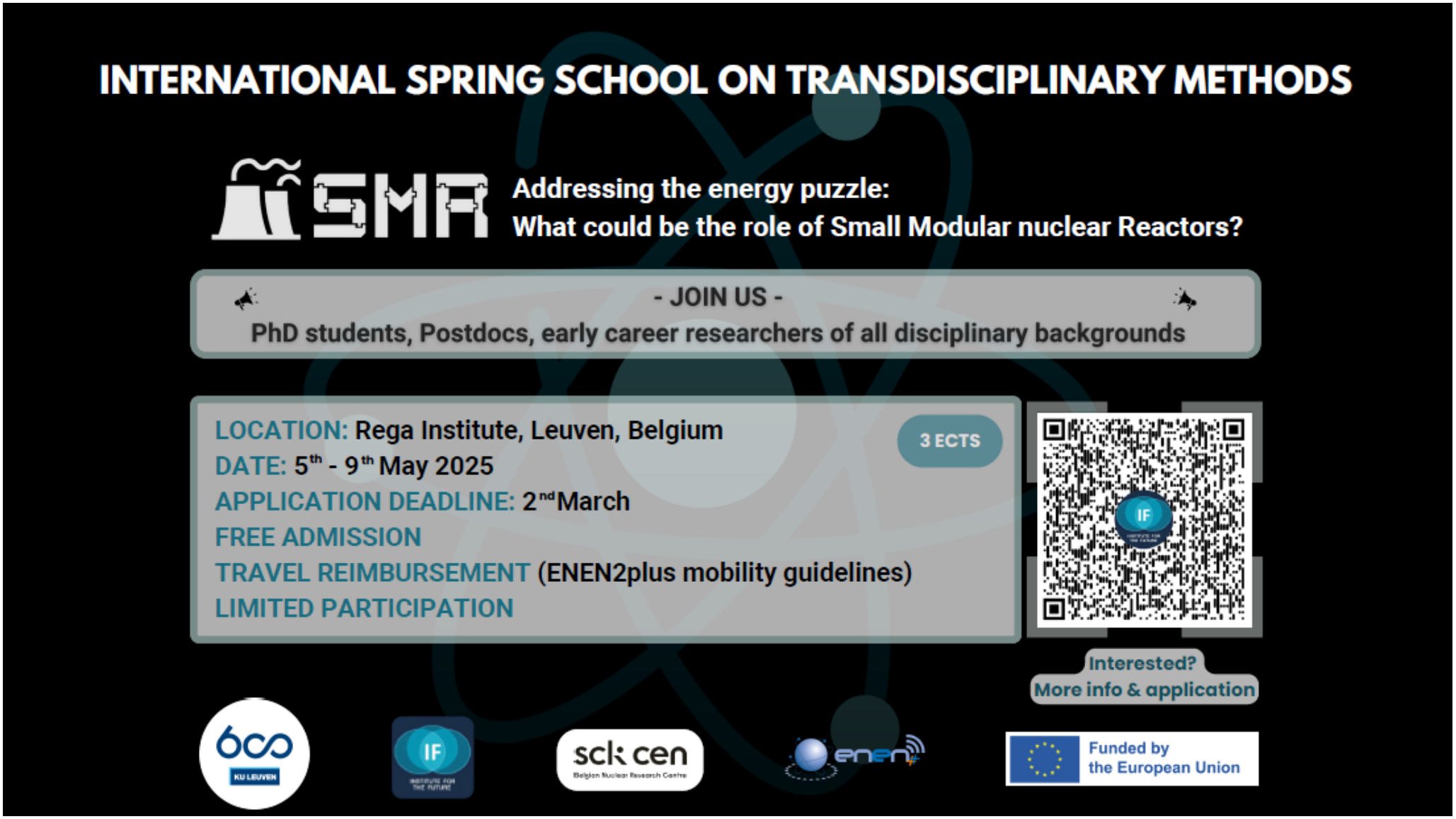




Flyer


INTERNATIONAL SPRING SCHOOL ON TRANSDISCIPLINARY METHODS
SMR
Addressing the energy puzzle:
What could be the role of Small Modular nuclear Reactors?
- JOIN US -
PhD students, Postdocs, early career researchers of all disciplines
> Full-day series of lectures, keynotes, interactive team-based workshops on transdisciplinary methods.
> Explore the role of advanced Small Modular Nuclear Reactors (SMRs) technology in Europe's 2040 decarbonization goals.
> Co-develop orientations for future energy solutions with stakeholders.
> Visit to the Tabloo exhibition, offering unique insights into the world of radioactivity
LOCATION: Rega Institute, Leuven, Belgium
3 ECTS
DATE: 5th - 9th May 2025
APPLICATION DEADLINE: 2nd March
FREE ADMISSION
TRAVEL REIMBURSEMENT (ENEN2plus guidelines)
LIMITED PARTICIPATION
Interested?
More info & application
sckcen
Funded by the European Union

Website banner/Digital slide



4.4 ANNEX IV programme of the International Spring School on Transdisciplinary Methods: Addressing the Energy Puzzle

International Spring School on Transdisciplinary Methods

Addressing the Energy Puzzle:
What could be the role of advanced nuclear technology in responsible energy transitions?

Program Overview

KU Leuven | Institute for the Future
Rega Institute, seminar room 2
Herestraat 49, 3000 Leuven, Belgium

KICK-OFF — 31 March (Online)

13:00 - 13:30	Welcome and introduction *Simona Pesaresi, KU Leuven*
13:30 - 14:00	**Lecture:** Wicked problems and transdisciplinary research *Anne-Mieke Vandamme, KU Leuven*
14:00 - 14:30	**Keynote:** Addressing the energy puzzle: What could be the role of advanced nuclear technology in responsible energy transitions? *Robbe Geysmans, SCK CEN*
14:30 - 14:45	Break
14:45 - 15:00	**Get started in your teams**
15:00 - 15:30	**Break-out sessions:** Team warm-up (ice-breaker)
15:30 - 15:45	**Lecture:** Introduction to the Theory of Change *Anne-Mieke Vandamme, KU Leuven*
15:45 - 16:00	Presentation of the preparatory tasks and wrapping up

DAY 1 — 5 May 2025

13:00 - 13:30	Registration
13:30 - 14:00	Welcome speeches: Organization, activities and aim of the spring school; presentation of the ENEN2plus Project
14:00 - 14:30	**Keynote:** SMR technology in a sustainable energy mix *Nathal Severijns, KU Leuven*
14:30 - 15:00	**Keynote:** Introduction to country case studies *Catrinel Turcanu, SCK CEN* *Robbe Geysmans, SCK CEN*
15:00 - 15:30	**Workshop:** create a safe space
15:30 - 16:00	**Pitch session**
16:00 - 16:30	Coffee break
16:30 - 17:30	**Workshop:** Joint problem framing

DAY 2 — 6 May 2025

08:30 - 09:00	**Team report:** report on problem framing
09:00 - 09:30	**Lecture:** Multilevel stakeholder engagement *Simona Pesaresi, KU Leuven*
09:30 - 10:00	**Workshop:** background reading
10:00 - 10:30	Coffee break
10:30 - 11:30	**Workshop:** Actor constellation
11:30 - 12:00	**Pitch session**
12:00 - 13:00	Lunch break
13:00 - 14:00	**Lecture:** systems mapping and leverage points *Catherine Decouttere, KU Leuven*
14:00 - 14:30	**Workshop:** background reading on trends, patterns, notable events related to the challenge
14:30 - 15:30	**Workshop:** developing PESTEL
15:30 - 16:00	Coffee break
16:00 - 17:00	**Workshop:** developing the causal loop diagram
17:00 - 17:30	**Team reflection exercise**

DAY 3 — 7 May 2025

08:15	Meet at departure point
08:30 - 10:00	Travel to Dessel (from Leuven)
10:00 - 10:30	Students meet with stakeholders (STORA, MONA, SCK CEN personnel, etc.)
10:30 - 12:00	**Workshop:** get feedback on joint WHY and co-create causal loop diagram with stakeholders
12:00 - 12:30	**Pitch session**
12:30 - 14:00	Lunch break + Repository Walk
14:00 - 14:30	**Pitch session**
14:30 - 16:30	**Expo tour** with guide
16:30	Back to Leuven

DAY 4 — 8 May 2025

09:00 - 09:30	**Workshop:** identify leverage points
09:30 - 10:00	**Team report:** report on joint HOW
10:00 - 10:30	**Lecture:** Futures methods *Anne-Mieke Vandamme, KU Leuven*
10:30 - 11:00	Coffee break
11:00 - 12:00	**Keynote:** How do you engage with stakeholders and the public? Some key lessons from more than 30 years of experience in transdisciplinary case studies *Michael Stauffacher, ETH Zürich*
12:00 - 13:00	Lunch break
13:00 - 14:00	**Workshop:** Applying tools to building future scenarios
14:00 - 15:30	**Peer talks** and groups present their initiatives
15:30 - 16:00	Coffee break
16:00 - 16:30	**Team reflection exercise**
16:30 - 17:30	TDI students present their **TDI challenge and action**
17:30 - 21:00	Reception

DAY 5 — 9 May 2025

08:30 - 09:30	**Workshop:** review joint ToC and finalize presentation
09:30 - 11:30	**Team presentation:** team ToC pitch
11:30 - 12:00	Coffee break
12:00 - 13:00	**Awards certificates** and closing words

BIBLIOGRAPHY

1. **Holden, Petra, a iní.** Supporting and developing competences for transdisciplinary postgraduate research: a PhD scholar perspective. [Online] https://open.lib.umn.edu/changeagents/chapter/supporting-and-developing-competencies/.
2. *Nuclear dating: sharing experiences, knowledges and views on Responsible Research and Innovation in the nuclear field.* **Silvikko de Villafrance, Marika, a iní.** 3, 2022, Radioprotection, Zv. 57, s. 249-255.
3. **NewHoRRizon.** [Online] https://newhorrizon.eu/.