First Open Workshop of the SEAKNOT Project

Virtual Meeting - October 2, 2025

Becker Technologies GmbH

The EURATOM **SEAKNOT** project, which stands for **SEvere Accident Research and KNOwledge ManagemenT for LWRs**, focus on managing, exploiting, and assessing knowledge related to severe accidents (SA) in nuclear technologies. These objectives aim to ensure that the knowledge and expertise in SA research are preserved, improved, and effectively utilized for future advancements in nuclear safety.

1. Critical analysis of current knowledge.
2. Identification of research needs to address knowledge gaps with high potential safety significance.
3. Development of a roadmap for SA research over the next decade.
4. Strengthening skills of the young generation in the field of SA.

The project is structured in three main technical working packages (WP):

WP1 Phenomena Identification Ranking Table on Severe Accidents focuses on identifying and ranking phenomena related to SA, based on their importance for safety and level of knowledge. This has required the development of a new prioritization methodology, capable of addressing SA, and it will settle the research target to further enhance the management of present and future reactor technologies, including ATFs and WC-SMRs.

WP2 Validation Data Base Directory is responsible for creating a database of experimental data for assessing SA modeling and possible mitigation actions. It will provide a valuable resource for future research and development activities, also ensuring that information about experimental data will be both preserved and accessible.

WP3 Severe Accident experimental Infrastructure NETwork has mapped the European facilities involved in SA research and is currently designing a network to enhance future collaboration in this field. By crossing these outcomes with the WP1 ones, some new requirements and methods for structuring experimental infrastructure may emerge, contributing to the WP1 roadmap.

Open Workshop Objectives

This first workshop will focus on SEAKNOT's innovative contributions to future advancements of SA research. Rather than just presenting progress updates, this dynamic event will spotlight how SEAKNOT is driving innovation, collaboration, and strategic direction in SA research across Europe. It will also provide a platform for researchers, industry professionals, and stakeholders to discuss and exchange ideas on SA research strategy and the project's methodologies and outcomes towards a European severe accident roadmap.

Shaping the Future of Nuclear Safety – Be There!

Are you involved in SA research, NPP safety, or nuclear innovation? This Workshop is for you.

Connect with the SEAKNOT Community! Join leading **researchers, industry experts, and international stakeholders** for an exclusive event focused on the real-world impact of the SEAKNOT project—**paving the way toward a unified roadmap for SA research**.

Who Will Benefit?

- Experts in SA and nuclear safety
- Innovation leaders in the nuclear field
- Representatives from **IAEA** and **OECD/NEA**, key platforms for future SA collaboration
- **EC Project Officers** and **SNETP/NUGENIA TA2** members—those directly shaping and benefiting from SEAKNOT outcomes

SEAKNOT First Open Workshop - Agenda

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Neckarstr. 12-14, 65239 Hochheim am Main, Germany

October 2, 2025

9:00 – 9:30	**1. Introduction and Overview** ***(L.E. Herranz - CIEMAT and M. Freitag - BT)*** ▪ Welcome and opening remarks ▪ Brief introduction to the SEAKNOT project
9:30 – 10:30	**2. Challenge of "full-scope" severe accident PIRTs** ***(L.E. Herranz - CIEMAT)*** ▪ Genuine aspects of the methodology ▪ Insights and rationale behind ▪ Q&A
10:30 – 11:00	Coffee break
11:00 – 12:00	**3. Validation Data Base Directory** ***(M. Freitag - BT)*** ▪ Most innovative aspects of the SEAKNOT VADD directory ▪ Major benefits and synchronization with external activities ▪ Future steps in areas where data are missing or in demand ▪ Q&A
12:00 – 13:00	**4. SAINET Insights** ***(C. Journeau – CEA and P. Piluso – CEA)*** ▪ Presentation of insights from the SAINET network ▪ Potential applications ▪ Final roadmap to address issues and facility needs ▪ Q&A
13:00 – 14:00	Lunch Break
14:00 – 15:00	**5. Open Discussion** ***(SEAKNOT Executive board members)*** ▪ An opportunity to gain deeper insights and clarify any doubts about the project's innovative aspects and future research roadmap
15:00 – 15:30	**6. Closure of the Workshop** ***(L.E. Herranz - CIEMAT and M. Freitag - BT)***

We look forward to your participation and valuable contributions to the workshop.

Let's work together to shape the future of Severe Accident research!

This first SEAKNOT virtual Open Workshop is open, with no registration fees.
Further information and registration link available on
SEAKNOT webpage https://seaknot-project.eu/

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