SEAKNOT

SEvere Accident research and KNOwledge managemenT for LWRs
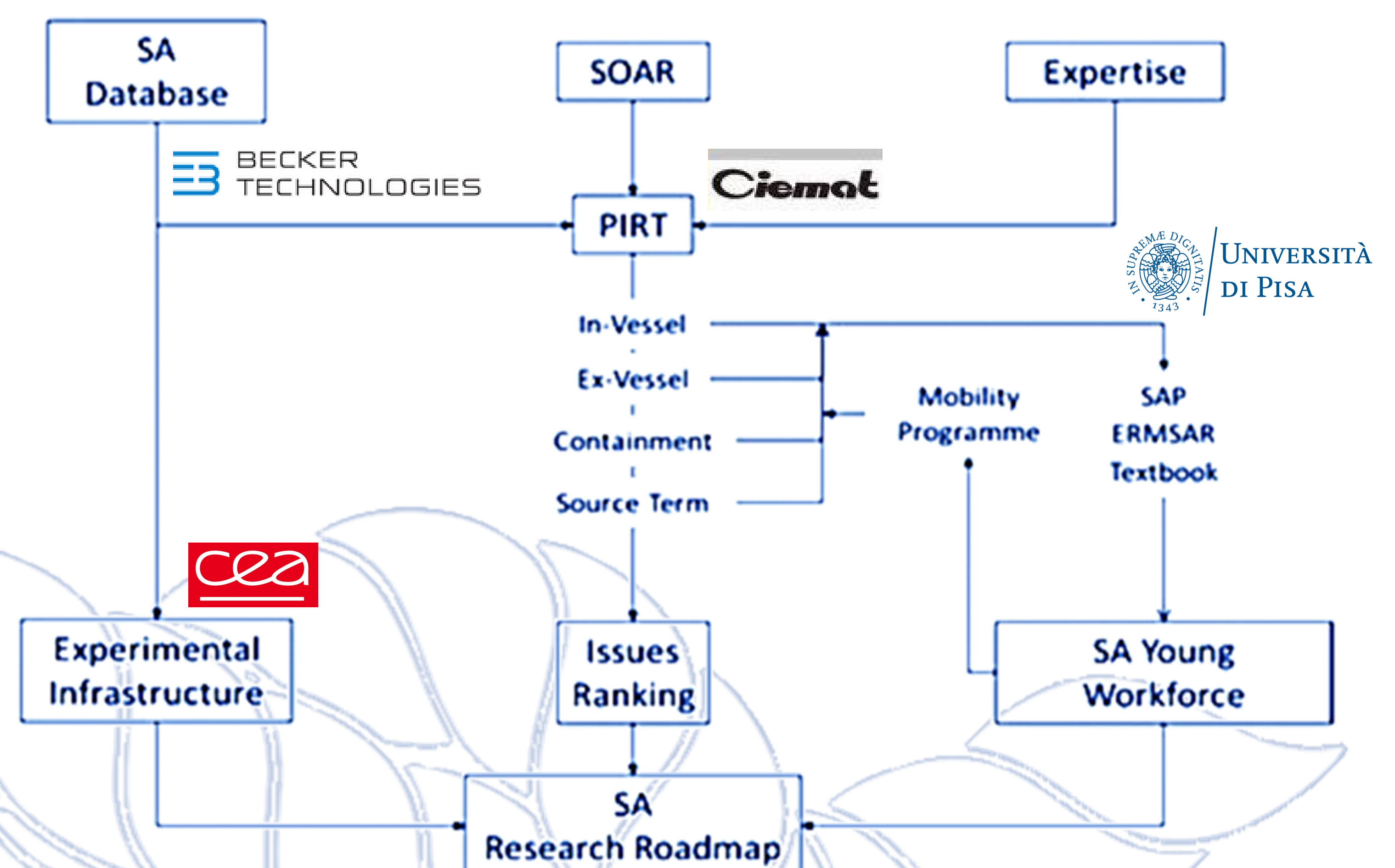
OBJECTIVE: Management, Exploitation and Assessment of Severe Accident Knowledge

In order to achieve this objective, specific goals are pursued:
- ❑ Carry out a critical analysis of the current knowledge on Severe Accidents (SA)
- ❑ Make recommendations for further reduction of risks associated with existing and forthcoming nuclear technologies (SMLWRs & ATFs)
- ❑ Identify experimental research needs required to support & optimize SA mitigation measures
- ❑ Strengthen the young generation background and skills through an efficient plan to achieve Knowledge and Know-how Transfer from senior scientists and engineers

Major Outcomes
- ❑ Roadmap for the SA research over the next decade
- ❑ SA Phenomena Identification Ranking Table (PIRT)
- ❑ Validation Database Directory
- ❑ Experimental infrastructure network
- ❑ Strengthening of the young workforce (Textbook, SAP Course, ERMSAR, etc.)
- ❑ Mobility grants for young researchers

EXPECTED IMPACTS
- ❑ Enhance NPP safety outlining the most efficient path for investigation to be conducted
- ❑ Maintain and further expand EC expertise in SA domain
- ❑ Strengthen abilities and skills of the workforce responsible for conducting SA research
- ❑ Reinforce education & training activities on SA

HIGHLIGHTS
- ❑ Strong benefit from previous EU and non-EU research
- ❑ Collaboration with NEA/CSNI and IAEA related Working Groups, strong link with NUGENIA TA2 Nuclear Generation II&III Alliance
- ❑ Creation of a "common space" for SA experts and young nuclear generations
- ❑ SA research needs reset based on what's known, what's unknown and what's safety significant

PARTNERS

CIEMAT, IRSN, KIT, JSI, UPM, FZJ, UJV, TRACTEBEL, FRAMATOME, KTH, VTT, ENEA, **CEA**, **UNIPI**, **BT**, LGI, PSI

DURATION & BUDGET
October 2022 to September 2026
Budget €2,726,993.75

CONTACTS
Technical Project Leader
Prof. Luis E. Herranz (CIEMAT)
✉ luisen.herranz@ciemat.es

MAIN EVENTS

Severe Accident Phenomenology (SAP) Course
two editions planned in June 2023 (UPM Madrid) and 2025 (FZJ Julich)

European Review Meeting on Severe Accident Research (ERMSAR Conference)
two editions planned in May 2024 (KTH Stockholm) and 2026 (CIEMAT Madrid)