

COORDINATION OF THE EUROPEAN RESEARCH COMMUNITY ON NUCLEAR MATERIALS FOR ENERGY INNOVATION: THE CONNECT-NM CO-FUNDED EUROPEAN PARTNERSHIP



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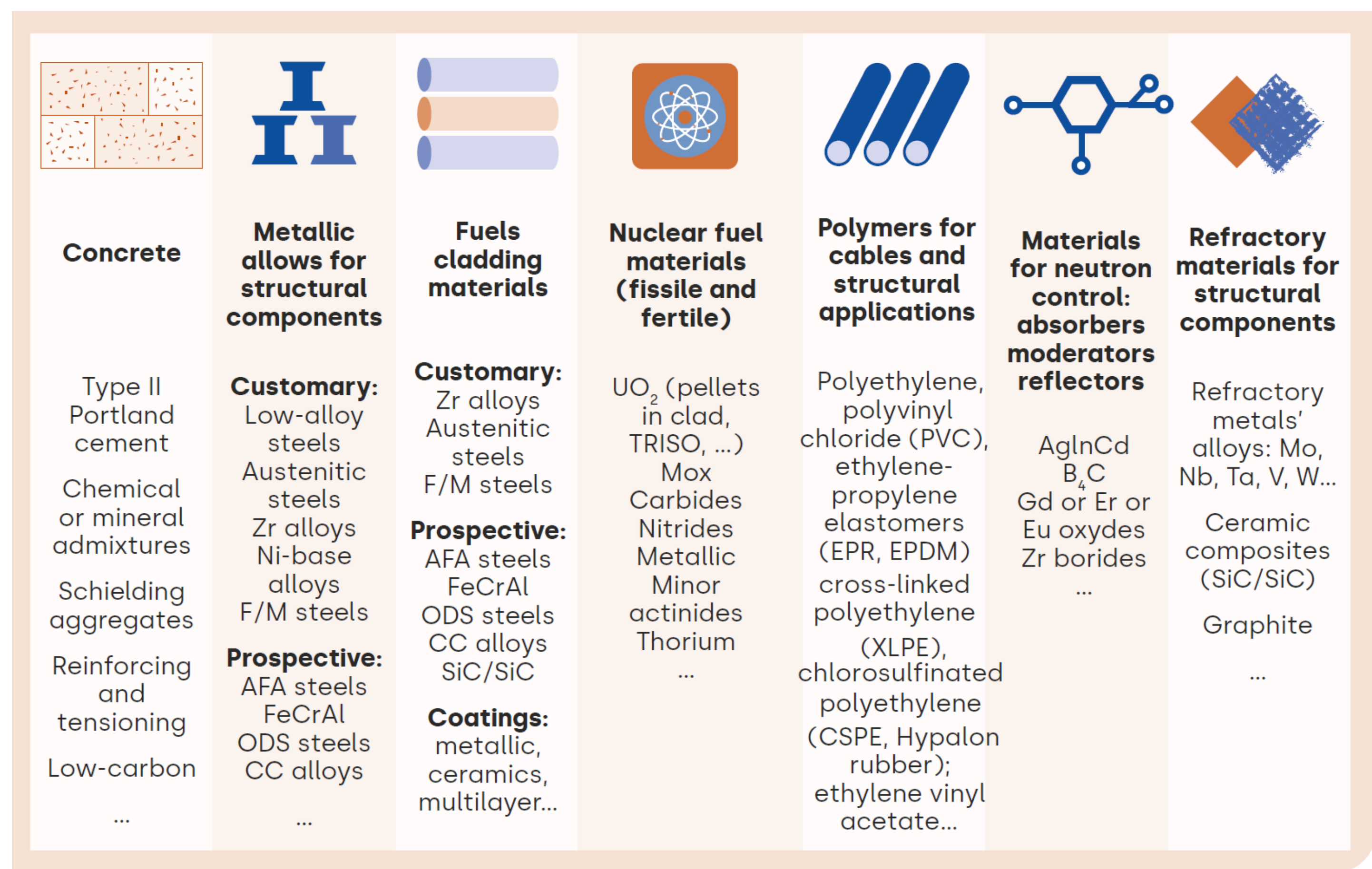
Why a Co-funded partnership on Nuclear Materials

- Europe aims to be climate-neutral by 2050. The transition towards an economy with net-zero greenhouse gas emissions relies on a secure and sustainable energy supply
- Nuclear energy has an important role to play in this regard being the second largest source of low-carbon electricity in the world
- Nuclear materials represent a key element for the safety, efficiency, economy, and sustainability of nuclear energy
- Hence the importance of establishing an ambitious and coordinated research and innovation EU-wide partnership that catalyses EU Member States' national resources towards consensually defined objectives

Main Expected Outcomes

- To reduce drastically the time required to improve, develop, and even discover new or advanced nuclear materials and elaborate advanced manufacturing processes
- To accelerate the qualification of nuclear materials for safe operation
- To enable safer and more efficient management of the lifetime of nuclear components
- To improve the capability of prediction of the behaviour of nuclear materials in operation
- To create the conditions for nuclear materials data to be correctly collected and stored, so as to be fruitfully analysed and used

Materials of nuclear reactors



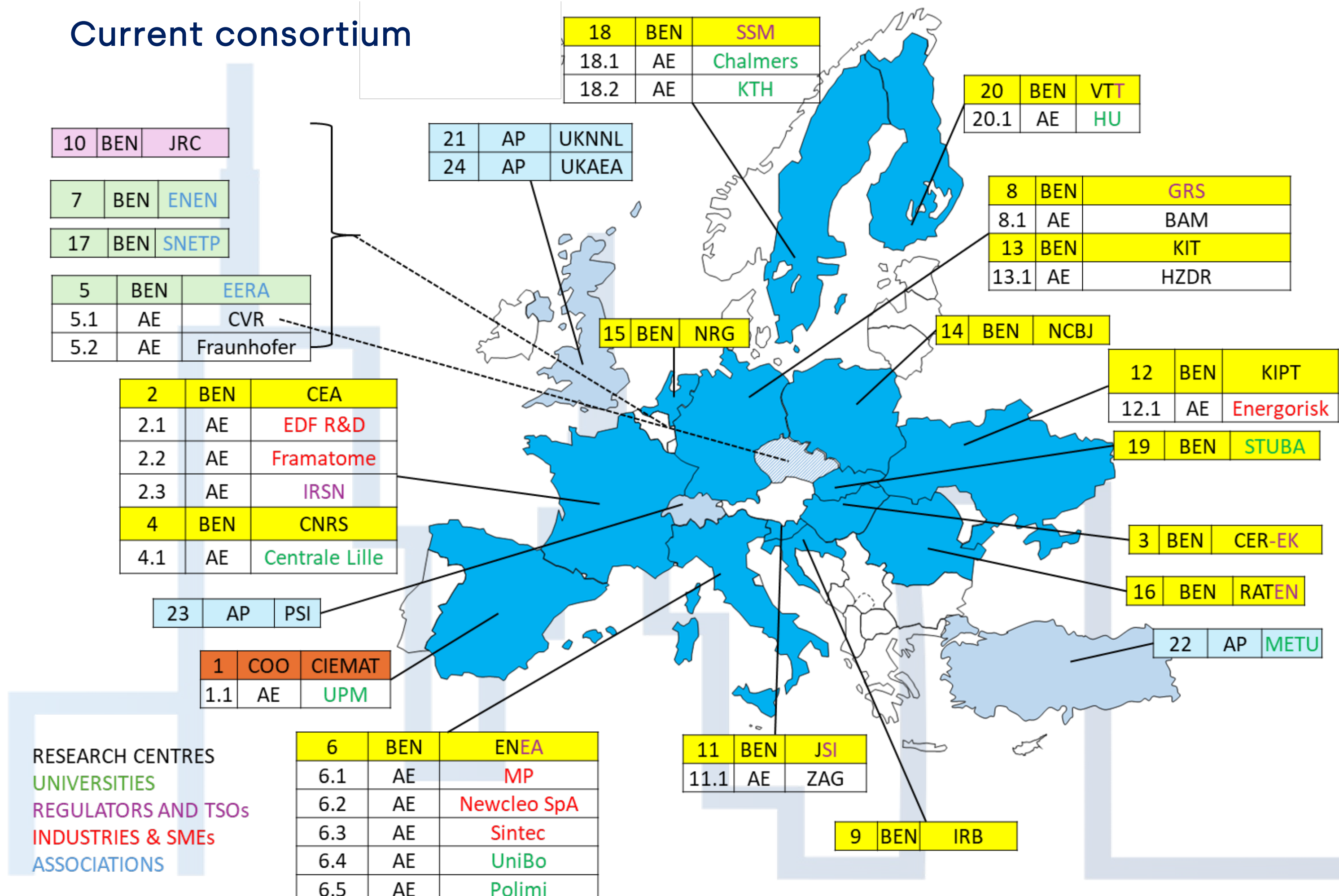
Materials ID cards presenting needs produced in ORIENT-NM project. Research activities will be funded by the partnership

Strategic programming activities only

Partners

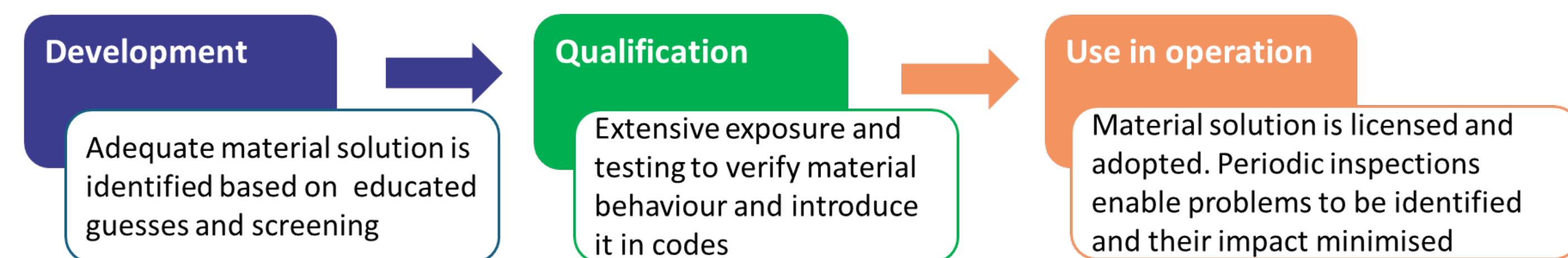
- Beneficiaries: EU (MS/AC) organisation mandated by the corresponding ministry to manage the participation of the MS/AC or associations
- Affiliated entities: EU (MS/AC) organisations with established link with beneficiary
- Third parties: EU (MS/AC) organisations that do not qualify as AEs (max. grant 300 k€)
- Associated partners: Non-EU organisations that participate entirely at their own cost, but have access to results (e.g. CH, TR, UK)

Current consortium

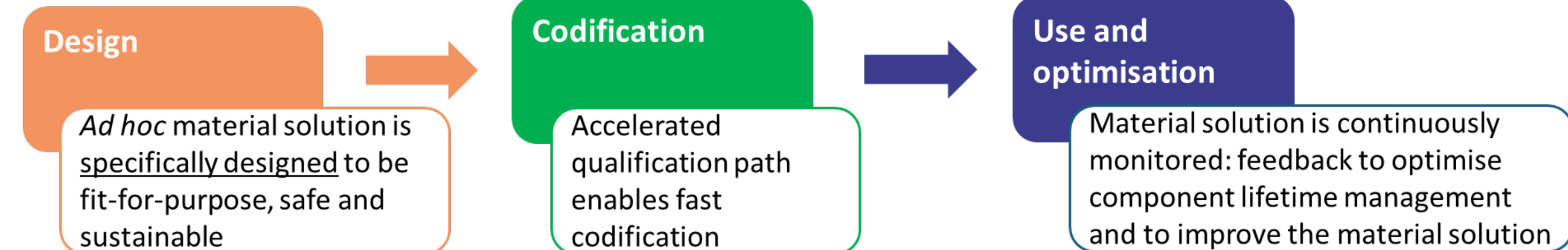


Approach : From "observe and qualify" to "design and control"

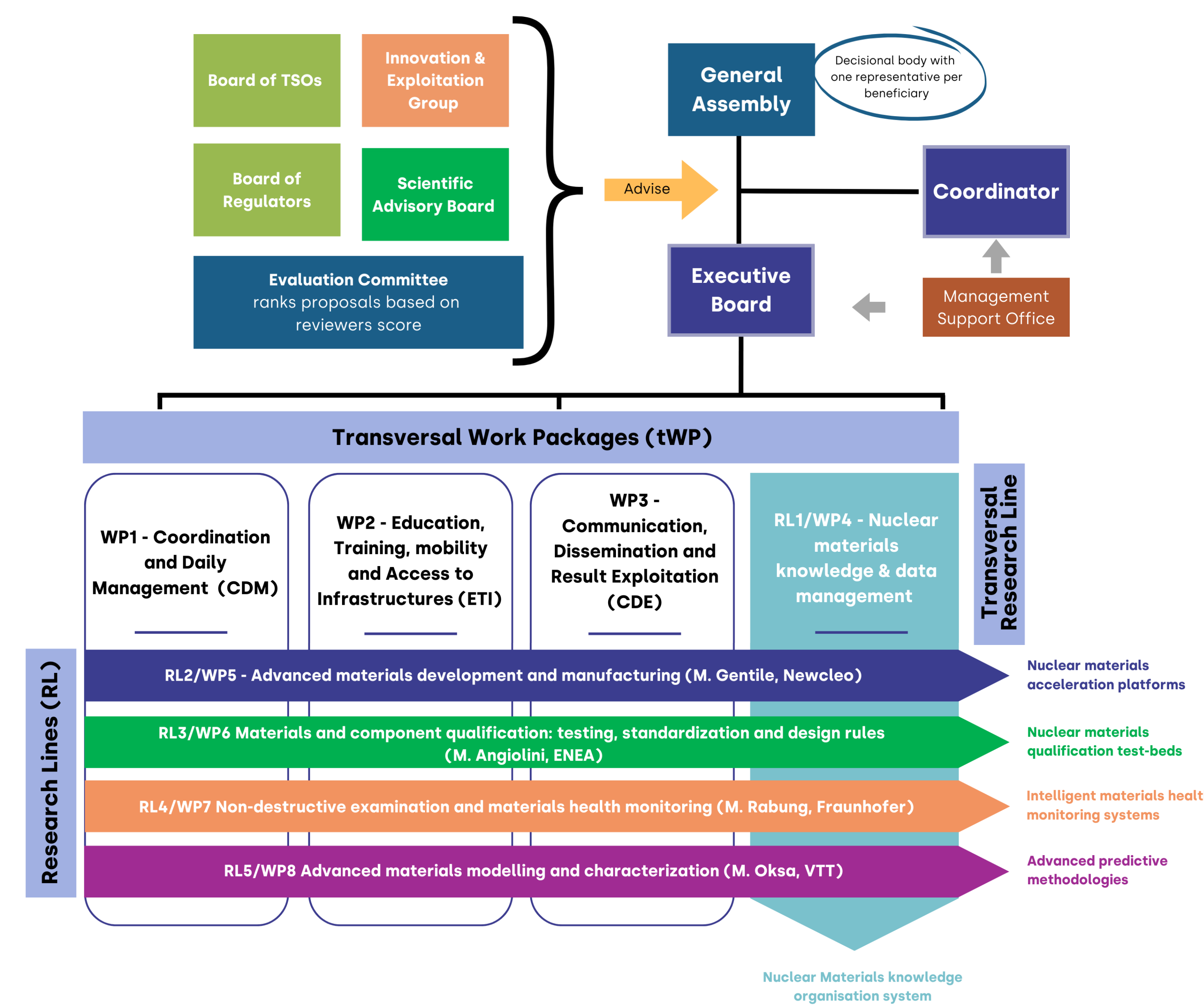
Observe and qualify



Design and control



Structure of partnership



Implementation of research

- Budget for technical activities will be awarded mainly through calls for projects
- Priorities will be defined for each call to maintain balance between the various activities and reach the expected outcomes
- Guarantees input from the community (bottom-up) and gives flexibility to the partnership
- Proposals will have to comply with the criteria of the call specific for each research line and clearly show how they are contributing to the objective of the RL
- First open call for proposal in progress (two-stage evaluation) : publication in January 2025, deadline for first phase: March 21, 2025, deadline for second phase: July 7, 2025, beginning of selected projects in January 2026
- Option for more calls if more budget granted
- Consortium will grow when projects are accepted
- Alignment between national priorities guaranteed by cofunding (50% EC, 50% by participating organisations)

Acknowledgement

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