



WP 10 **ANCHORS-** **HYDRAULIC MECHANICAL CHEMICAL** **EVOLUTION OF BENTONITE FOR BARRIERS** **OPTIMISATION**

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ERUAD 2 Annual event n°2



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ANCHORS MAIN OBJECTIVE

Increase the optimisation potential of bentonite barrier systems, to support Performance Assessment and the Safety Case resilience.

ANCHORS ADDED VALUE

- **Qualify multiple bentonite types and mixtures as alternative sealing materials, considering the effects of chemical conditions and heterogeneities.**
- **Improve predictive capabilities for bentonite barrier behaviour through advanced THMC(G) constitutive models.**
- **Establish a comprehensive THMC(G) material database, including the properties of different bentonite types and mixtures.**
- **Develop recommendations for better bentonite quality control.**

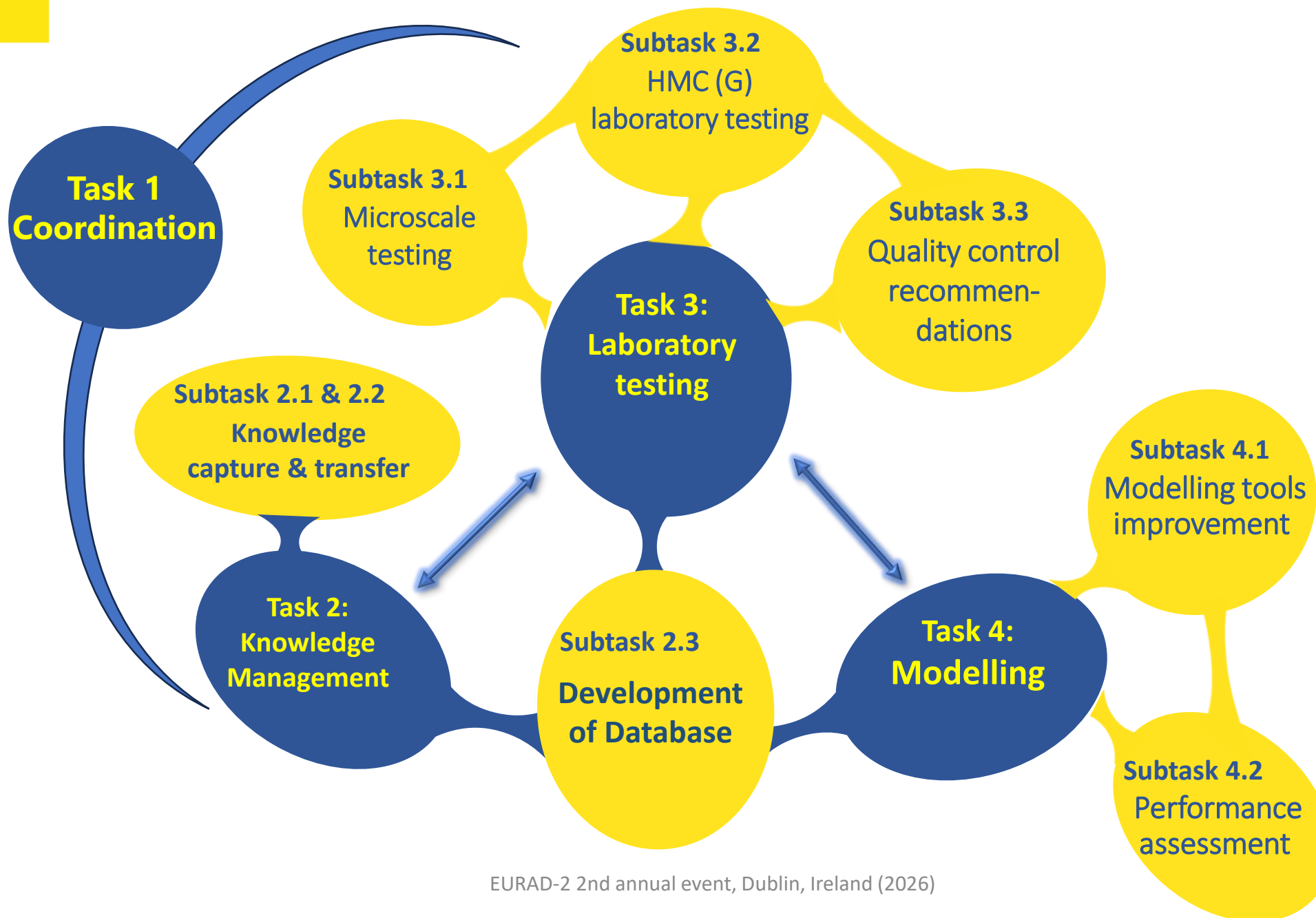


ANCHORS consortium

- **35 EU partners +2 AP From 15 countries**
- **12 End Users**

EURAD-2 2nd annual event, Dublin, Ireland (2026)

ANCHORS-TASK BREAKDOWN



ANCHORS – Key Achievements After Two Years

- **First ANCHORS doctoral school on “THMC behaviour of bentonite and bentonite mixture: From the experimental investigation to the numerical modelling” August 2025, Liege.**
- **Joint ANCHORS/OPTI workshop, entitled "Optimization: Bridging Science, Strategy and Society" with the attendance of invited regulators, end users" April 2026, Prague.**
- **First experimental benchmark results, providing the first inter-laboratory comparison of HMC processes.**
 - ➔ To be presented by Jiri Svoboda in the next session
- **State-of-the-art review on quality control methods, establishing the basis for future recommendations.**
- **Completion of the first stage of the numerical benchmark, establishing the modelling framework for the next phase**

ANCHORS: Next Steps

- **4th ANCHORS WP Meeting, Barcelona, 14–16 October 2026.**
- **Submission of MS92 and MS148 (September 2026) – Beta version of the database and updated definition of the numerical benchmarking exercise.**
- **Launch of the second stage of the numerical benchmark, focusing on modelling the experimental benchmark tests.**
- **Distribution of Bulgarian bentonite to partners for testing, extending the experimental programme to a sixth bentonite**

THANK YOU FOR YOUR ATTENTION!

