Kayalar Kimya Expression of Interest for CBE-JU Calls

Contact details	
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Partner description and contribution	
Short description of your company/institute	Founded in 1976, Kayalar Kimya is one of the world's leading manufacturers of furniture paints and varnishes, driven by a people-centered, science-focused, and production-oriented approach. Continuously expanding its investments, Kayalar Kimya offers world-class paint and varnish products to its customers with a production capacity of 142,000 tons and the strength of its R&D center. Guided by values such as leadership, customer and business focus, continuous improvement, and innovation, the company achieves international success through its goal-oriented human resources, robust dealer network, and strategic partnerships. In Turkey, Kayalar Kimya was the first company in the furniture sector to be awarded the status of an R&D center in 2011. Additionally, it established the first "Technical Support, Application, and Simulation Center" in the field of furniture paints and varnishes. Today, Kayalar Kimya operates under several brands, including Genç (1979) in furniture paints and varnishes, Düfa (2005) in decorative paints, Genç Noroo (2012) in industrial coatings, and Woodsol (2017) in exterior wood protection systems. In 2024, Kayalar Kimya ranked 73rd on the Coatings World list. With modern automation systems in its production facilities, the company continues its operations with a product portfolio of 3,000 different varieties, maintaining its commitment to innovation and excellence.
Are you interested in providing a use case?	As Kayalar Kimya we develop and produce coatings, thus we can contact relevant organizations for attracting them as end-user to the consortium.
Please explain your market impact related to project outcome.	Kayalar Kimya's growth strategy is based on a mission that focuses on innovative products and services as well as having fast and flexible action taking capabilities and being open to global markets. With a market share of 23% in Turkey, a range of 3000 different product range, besides its more than 4000 domestic and international customers (mostly from Middle East, Turkic Republics, Eastern Europe, North Africa and the Balkans) Kayalar Kimya improves its competitive capacity by using the globally accepted best practices and initiatives and targets to have more market share in Western Europe, Americas, Southeast Asia and Africa. Kayalar Kimya, which has been awarded successively with the "Stars of Export" award by the Turkish Exporters Assembly with its export performance realized in 60 countries, in December 2016, with its brand GENÇ, has been taken under the scope of TURQUALITY which is the world's first and only state sponsored branding program by the Ministry of Economy of Republic of Turkey.
Specific skills and proposed activities related to the topic Indicate the specific skills and	Kayalar Kimya specializes in developing advanced coatings, functionalized surfaces, and sealants with expertise in: • Fast-curing, robust, and environmentally resistant coatings.

competence in relation with	R&D capabilities using advanced analytical techniques (FT-IR, GC-MS,
interested calls	GPC, XRD, NMR).
	 Optimized automated production processes ensuring high-quality,
	efficient output.
	 Comprehensive testing for durability, drying speed, and mechanical
	resistance.
	 Compliance with EU regulations and sustainability goals.
	Proposed Activities:
	Kayalar Kimya will contribute by:
	 Developing novel coatings with reduced curing times (90% improvement).
	2. Enhancing performance evaluation through rapid testing and validation.
	 Collaborating with industry stakeholders for real-world application and feedback.
	Improving recyclability and sustainability of materials.
	Contributing to standardization efforts and FAIR data principles.
	Developing a business case and exploitation strategy to expand market reach.
	 Establishing international collaborations, especially with Japan and EU stakeholders.
	Kayalar Kimya aims to leverage its experience to drive innovation, ensure
	industrial applicability, and support Europe's sustainability goals.
Interested Calls	 Cost-effective and robust continuous biotech bio-based processes - €14 million
	 SSbD bio-based polymers/copolymers unlocking new market applications - €13.5 million
	 Develop and deploy new curricula and knowledge exchange practices relevant to bio-based systems - €1 million

Technologies: What technologies are you going to provide or develop?

Kayalar Kimya aims to contribute to the project by leveraging its expertise in advanced coatings, functionalized surfaces, and sealants. Their competencies include fast-curing, durable coatings, advanced R&D capabilities using analytical techniques (FT-IR, GC-MS, GPC), and state-of-the-art automated production processes ensuring high quality and sustainability.

Technologies to be Developed/Provided:

- 1. Advanced Coatings: Fast-curing, self-healing, recyclable formulations.
- 2. Digital Manufacturing: Automation and Al-driven predictive maintenance.
- Sustainable Materials: Bio-based, non-toxic coatings, and recycling technologies.
- 4. High-Performance Testing: In-situ monitoring and durability assessments.
- 5. Custom Application Systems: Smart spraying and adaptive technologies. Proposed Activities:
 - 1. Develop IAM-based coatings with reduced curing times.
 - 2. Accelerate performance evaluation and validation processes.
 - 3. Collaborate with industrial stakeholders for market-ready solutions.
 - 4. Enhance sustainability through recyclability and eco-friendly materials.
 - 5. Contribute to standardization and FAIR data methodologies.
 - 6. Establish a business case and exploitation strategy for global expansion.
 - 7. Foster international collaborations, particularly with EU and Japanese partners.

Kayalar Kimya aims to drive innovation in IAM-based solutions and support Europe's sustainable industrial leadership.

Open science, dissemination, and communication activities – list of events or journals where we can disseminate the project results.

Kayalar Kimya will disseminate the project results through:

- Scientific journals such as Coatings, Journal of Coatings Technology and Research, and Progress in Organic Coatings.
- Participation in industry events like European Coatings Show, PaintExpo, and World Congress on Materials Science and Engineering.
- Collaboration with industry associations and academic conferences to present findings.
- Leveraging digital platforms, webinars, and social media to reach a wider audience.
- Engaging with regulatory bodies to align project outcomes with industry standards.