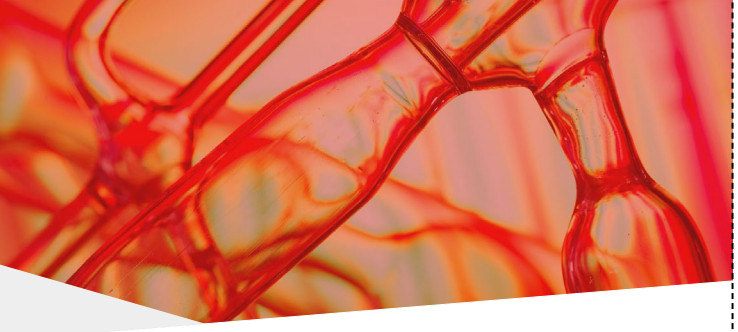
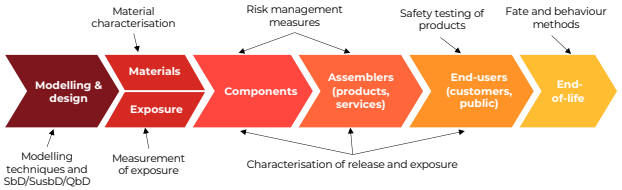


About DIAGONAL

DIAGONAL aims to bring new methodologies to guarantee long-term nanosafety along the **multicomponent nanomaterials and High Aspect Ratio Nanoparticles life cycle**: from design and production to their application into nano-enabled products, the product use and end of life phases.

To be able to do so, DIAGONAL will analyse the materials' physicochemical properties, toxicology, behaviour, and environmental exposure, as well as human safety along their life cycle. For that, the project will develop and validate **multi-scale modelling tools** able to predict and characterise nano-specific properties.



Partners

The DIAGONAL team consists of 21 European partners spread across 13 countries and one US partner.

All partners contribute actively to the project, ensuring the flow of ideas and projects results to the wider community.

Get in touch with us!

info@diagonalproject.eu

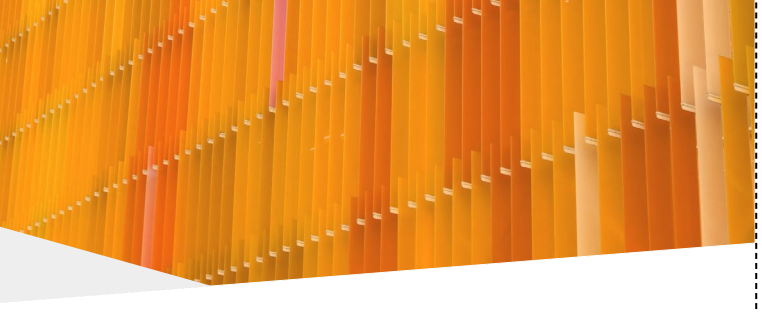
DIAGONAL

Development and scaled Implementation of safe by design tools and guidelines for multicomponent nanomaterials and High Aspect Ratio Nanoparticles

To learn more visit:

www.diagonalproject.eu

DIAGONAL project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 953152.



Scale Up

All the knowledge generated during DIAGONAL's runtime will be the basis to create specific risk management guidelines and Safe-by-Design* tools, integrating Life Cycle Sustainability to make the material not just safer but greener and economically feasible.

In order to implement the planned work, the project will be supported by **seven industrial demonstrators** acting as nanomaterials and/or nano-enabled products manufacturers, to provide:

- **Material samples**
- **Industry insight**
- **Application and validation of computational tools and Safe-by-Design strategies**
- **Mainstreaming safe innovations**

*Safe-by-Design principles actively eliminate or reduce risk during design development and ensures that remaining risks are effectively communicated.

DIAGONAL will provide a holistic approach by addressing in its industrial demonstrators the following sectors:

- **Cosmetics**
- **Health**
- **Automotive**
- **Aerospace**
- **Oil & Gas**
- **Textile**
- **Printed electronics**

Demonstrators

1. Metal Matrix Composites (MMC) with nano-size reinforcement for titanium and aluminium based composites
2. Nanocatalytic powders as coating in automotive industry
3. Graphene reinforced metallic coatings
4. Graphene-based NMs applied in fabrics and metal coatings
5. Single Wall Carbon Nanotubes (HARNs) embedded in epoxy additive
6. Metallic HARNs for printed electronics
7. Metallic NPs for applications in cosmetics and biomedical industries

DIAGONAL fills the gap in:

- **Risk Assessment**
- **Risk Management**
- **Risk Governance**

The project relies on experimental and modelling research to understand and ultimately predict interactions among the **nanomaterial components** and their **transformation products** with the environment, promoting a better **understanding of potential adverse effects on human health and biota**.

DIAGONAL will contribute to build a trusted environment for industries, especially SMEs, to fulfil REACH* requirements, helping to increase the safety of nano-enabled products along their life cycle, while encouraging more industries to start using nanomaterials at reduced business-related risks.

*Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) is a European Union regulation that addresses the production and use of chemical substances, and their potential impacts on both human health and the environment.