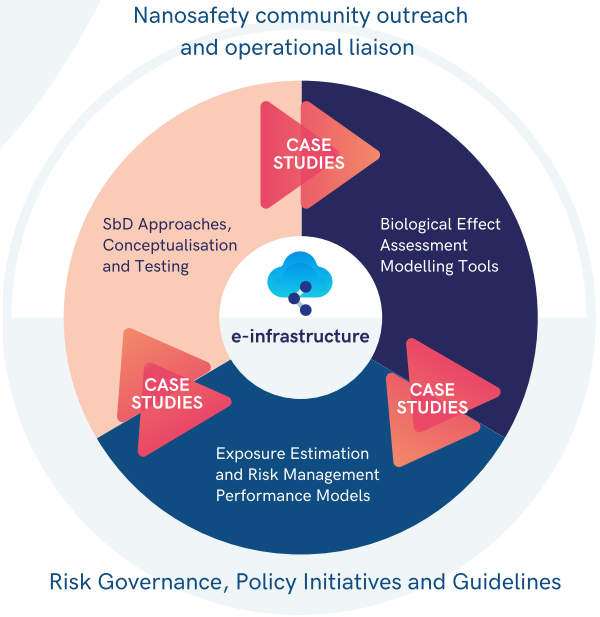
A major challenge for the global nanotechnology sector is the development of safe and functional engineered nanomaterials (ENMs) and nano-enabled products (NEPs). To minimise the risks to human and environmental health during the engineering of NEPs, the goal of the Safe-by-Design for Nano (SbD4Nano) project is to create a novel e-infrastructure for the definition, performance testing and implementation of Safe-by-Design (SbD) approaches in the nano-technology supply chains.



Methodology & Structure

Through close collaboration between the actors of the nanotechnology value chain and the international nanosafety community, SbD4Nano aims to create an e-infrastructure for generating SbD tools based on regulatory and product performance-oriented approaches. This will foster safer innovations that can be implemented at the industry level.

The project is divided into 8 Work Packages designed to facilitate the development of e-infrastructure for safe nano-manufacturing.

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Objectives

- Reduce environmental and human health risks associated with the engineering of ENMs & NEPs
- Create new exposure-driven modelling framework to reduce toxicity
- New nano-biointeractions data and in silico approaches for hazard profiling. Exposure and risk management models
- Surface engineering approaches to reduce (eco)toxicity, exposure and release
- Develop rapid hazard profiling modules
- A novel software interface (the SbD4Nano e-infrastructure), where product information can be exchanged between actors of the nanotechnology value chain fostering collaboration between regulators, researchers and industry
- Integrated e-infrastructure, including severity, exposure, performance and cost calculation algorithms
- New safer by design ENMs and NEPs developed during the project
- Guidelines on the implementation of SbD approaches

Sectors in Focus

Coatings:
The coatings sector has up to 80 identified types of ENMs

Pharma and health technology:
Many nanomaterials are used in the health industry, they are commonly used in drug delivery and in vitro diagnostics

Cosmetics:
The cosmetics industry has up to 250 NEPs in the market

Structural and functional nanomaterials:
The Structural and Functional industry has up to 79 ENMs

The Safe-by-Design for Nano 'SbD4Nano' Project

Enabling Innovation & Safe Nanomanufacturing

To find out more, and to join the project contact us at info@sbd4ano.eu

@SbD4nano

Safe-by-Design for Nano

Powered by Yordas Group

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SbD4Nano

SAFE BY DESIGN FOR NANO

Developing a novel science-based software infrastructure for **safe manufacturing of nanomaterials**