SAFE AND SUSTAINABLE BY DESIGN FRAMEWORK FOR THE NEXT GENERATION OF CHEMICALS AND MATERIALS

SSbD4CheM

SSbD4CheM ambition

SSbD4CheM is an EU-funded project (HE) working to introduce screening and testing methods for safe- and sustainable material development in three relevant demonstrators being textile, automotive and cosmetics industry.

The **main objective** of the SSbD4CheM is to promote the development of products and processes that are safe for humans and the environment, while being guided by a comprehensive sustainability assessment. The platform aims to integrate safety and sustainability considerations into the design and development of new products and processes, rather than addressing them as an afterthought. SSbD4CheM is constructed as a toolbox with a collection of resources and tools designed to support the development of safe and sustainable products and processes.

The **SSbD4CheM toolbox** includes a range of tools, guidance documents, databases, and other resources that can be used by stakeholders in industry, government, academia, and civil society to incorporate safety and sustainability considerations into their product and process design.

Expected results

SSbD4CheM toolbox & data management ecosystem

- Computational tools based on physics and data-driven modelling for human hazard and ecotoxicity assessment - *in silico* models
- Ex-ante LCA method supported by molecular and data-driven modelling
- Robust alternative methods for the reliable assessment of chemicals and (nano-) materials along their life cycle
- Validated alternative tools for safety assessment of a variety of substances and new materials - *in vitro* tools
- SSbD4CheM communication and dissemination tools

Industrial demonstration and acceptance

Formulation design | Scaling up / validation | Use and end of life

Bio-based self-cleaning/water repellent & antimicrobial treatments for apparel textiles

Renewable based composites for automotive interior

Nanocellulose for applications in cosmetics

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UK and CH contribution: **€ 1 966 420,00**

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Partners

19 partners | **14** countries

10 research institutes | **2** LEs

3 universities | **4** SMEs

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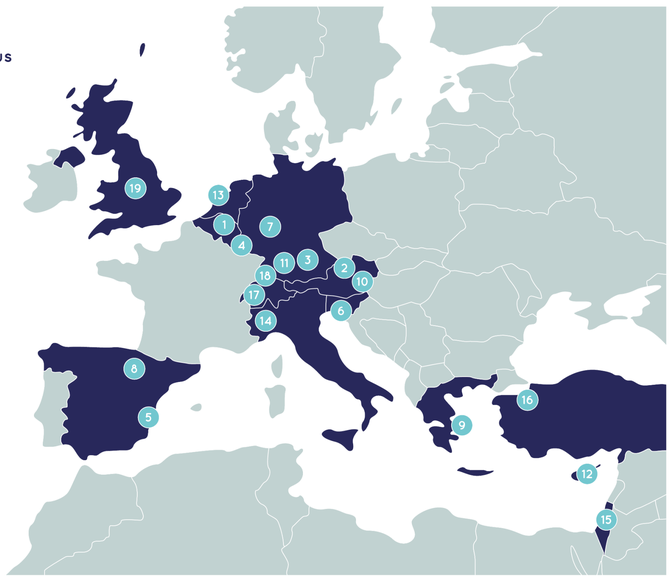

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UK Research and Innovation

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