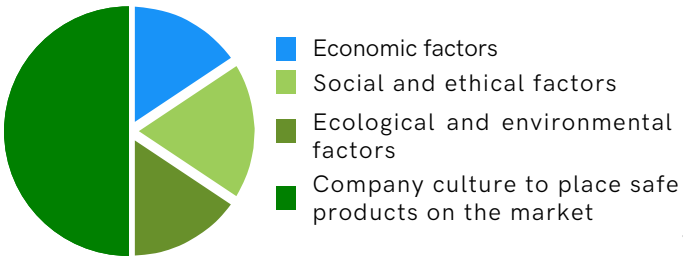
Industry perspective on Safe-by-Design

Safe-by-Design (SbD) is intended to be implemented during the innovation phase of product development. This means that there are probably no significant immediate legal requirements for the adoption of SbD. Although there are other drivers for the integration of the concept, it will need widespread industry uptake to make a significant impact on the safety of products in the future. The SbD4Nano project have had a number of industrial innovators playing an integral role in the project and their perspective gives important direction to where SbD can be improved and where it is working.

Results of industrial partner surveys

Industrial partners on the SbD4Nano project responded to an informal survey on their perspectives on adopting SbD, with the key issues raised shown here.

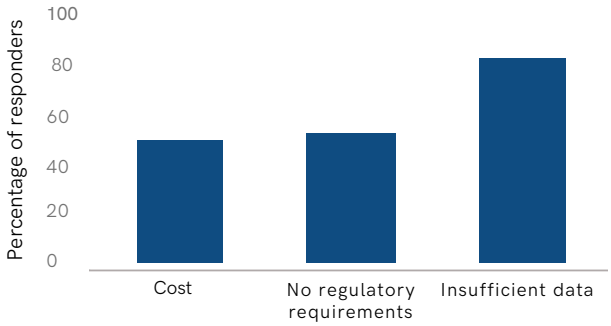
Key motivation for implementing SbD



Potential motivators that were not identified by partners:

- Getting ahead of future governance changes
- Legal compliance
- Good marketing
- None

Main barriers to SbD implementation



Some statements had a unanimous response from industrial partners during surveys.

- SbD will put the company at a competitive advantage
- Aspects of SbD are already in place in the company
- SbD would not be encouraged by penalising those who place unsafe products on the market
- SbD would not be encouraged by customers requesting proof that SbD is implemented.

Industry voices

A number of statements were made by industrial partners about their experiences with the SbD process during the SbD4Nano project during a meeting to discuss the Key Exploitable Results (KERs) from the projects.

Demonstrating a commitment to SbD can help gain trust of the public, customers and regulators.

A clear communication on how the product has been designed with a SbD approach to minimize risks to users or the environment is needed.

Cost/product performance is a limiting factor

SbD protocols should be implemented not just in the final product, but in all of the preparation steps

Implement a tailor-made process based on customer requests is crucial.

Evaluating process modifications "in silico" prior to set up lab experiments saves time and money.

SbD4Nano e-infrastructure could be used for an evaluation of the balance of surfactant potency vs toxicity

Commercial difficulties to publish data for product on market?

Conclusions: Industrial partners have taken some useful learning points for their internal process from the SbD4Nano project. Any application of SbD needs to be made in the context of product performance and related costs. The absence of data is regarded as a significant barrier to SbD adoption but the SbD4Nano e-infrastructure can allow a focused approach to SbD for nanomaterials to overcome some aspects.

This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No. 862195