

IRISS Kick-off workshop

IRISS Kick-Off Workshop Highlights Need for Innovation-Compatibility in Creating a Successful Safe and Sustainable-by-Design Framework

Under its Chemicals Strategy for Sustainability, the European Commission pledged to develop a framework for safe and sustainable-by-design (SSbD) chemicals, which aims to boost innovation, increase protection of human health and the environment, and strengthen chemicals legislation. For the framework to be successful, it needs to be aligned with industry's innovation practices.

According to Irantzu Garmendia Aguirre, from the Joint Research Centre (JRC), "going beyond regulatory obligations, we want to provide guidance on the design of safe and sustainable chemicals and materials with the objective of minimising impacts on human health, climate, and the environment, along the entire life cycle of chemicals and materials. So this framework enables us to do comparative assessment of chemicals and materials, based on the safety and sustainability performance before considering a specific function or application context".

The IRISS project was created to support the European Commission with this task. The aim is to create a global network on SSbD and support the uptake and implementation of SSbD strategies and principles by the chemical and materials industry, considering their processing and product applications for various value chains. A roadmap will be developed to align and implement research and innovation of several value chains.

During the kick-off workshop of the project held on 25 November 2022, representatives from the packaging, textiles, construction, automotive, energy, and electronic sectors agreed that bringing the SSbD concept and framework to life is a complex task. Each value chain faces specific challenges and is also subject to specific legislation. For the SSbD approach to be successful, it needs to be compatible with the way industry conducts its research & innovation activities.

All stakeholders are invited to work on a two-year testing period to ensure that the SSbD framework proposed by the Commission becomes operational and supports innovation in chemicals and materials R&D.

It is equally important not to start from scratch but to make use of existing initiatives, approaches and tools employed by industry or policymakers to innovate towards safe and sustainable-by-design chemicals. For this, a mapping analysis was initiated with the help of a survey that was addressed to materials stakeholders and the participants in the workshop before the meeting, and a preliminary analysis of the results of the survey was presented.

One of the challenges of chemicals and materials design is to predict the durability and energy efficiency during the use of a component, to select the most appropriate solutions at an early phase of the development. It was explained how tribology tools can help to address these challenges.

Several EU projects has been financed by the EU Commission under Horizon 2020, and during the workshop, the summary of the main results and outcomes of the calls on Nanotechnologies, Advanced Materials, Biotechnology and Advanced Manufacturing and Processing (NMBP) 16 and 17 were presented, addressing the main challenges to be achieved in the future.

The implementation of Safe and Sustainable-by-Design tools and methodologies will depend on the involvement of different stakeholders in the value chain. Representatives of innovation markets were invited to explain their vision, challenges, and main barriers for the implementation, facilitating the collection of cross cutting needs.

The workshop was very successful with involvement of the EU Commission, JRC, Partnership for the Assessment of Risks from Chemicals (PARC), IRISS Partners, NMBP Project partners, materials & value chain stakeholders, and national & regional member representatives. It has received the interest of more than 400 registered participants.