



SAFE AND SUSTAINABLE BY-DESIGN: BOOSTING INNOVATION AND GROWTH WITHIN THE EUROPEAN CHEMICAL INDUSTRY

OCTOBER 2021



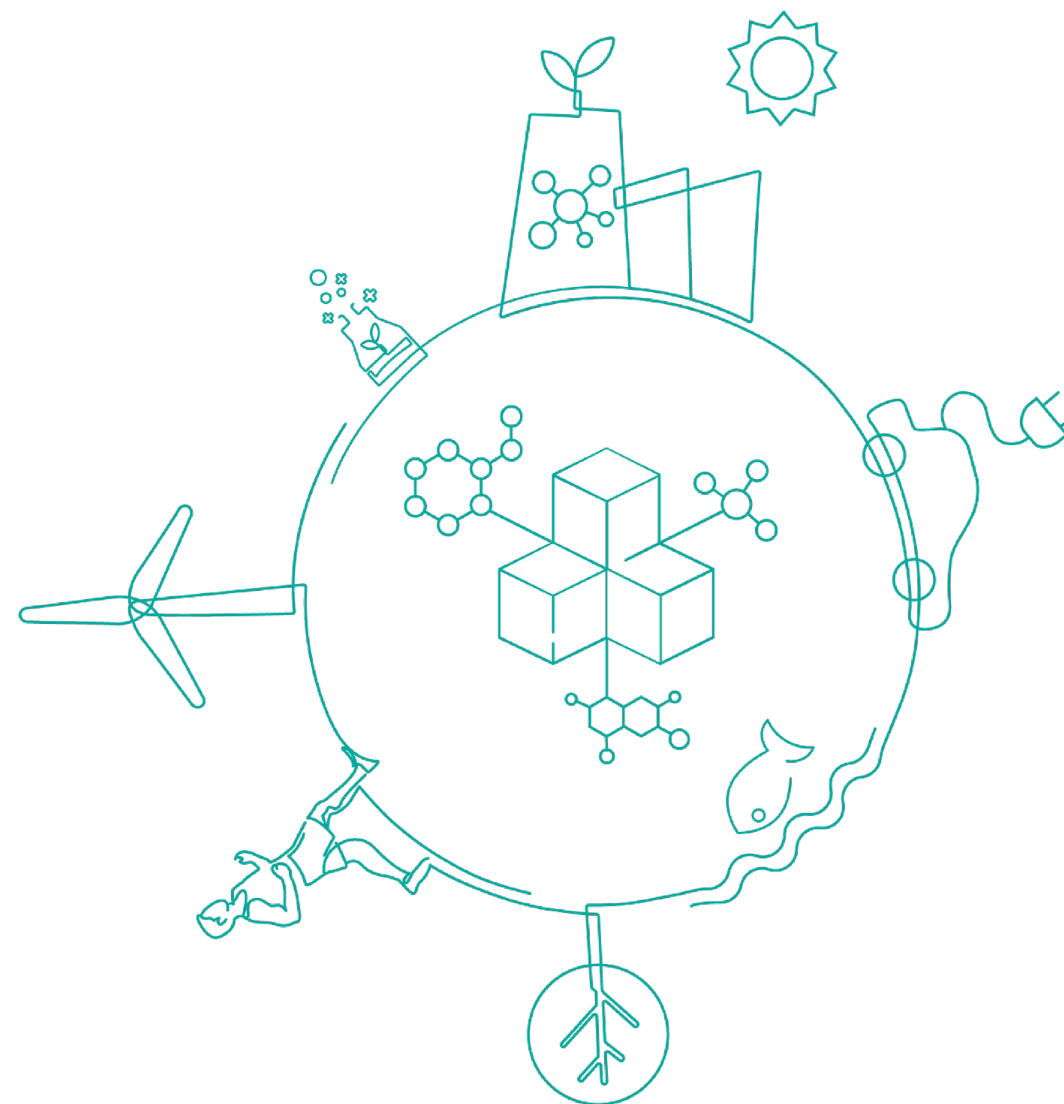


“Chemicals are produced/used in a way that maximises their benefits to society while avoiding harm to planet & people and production and use of safe and sustainable chemicals in Europe becomes a benchmark worldwide...”

As the European chemical industry, we share this vision from the Chemicals Strategy for Sustainability



Safe and Sustainable-by-Design is **the way** to get us there





How do we define Safe and Sustainable-by-Design?



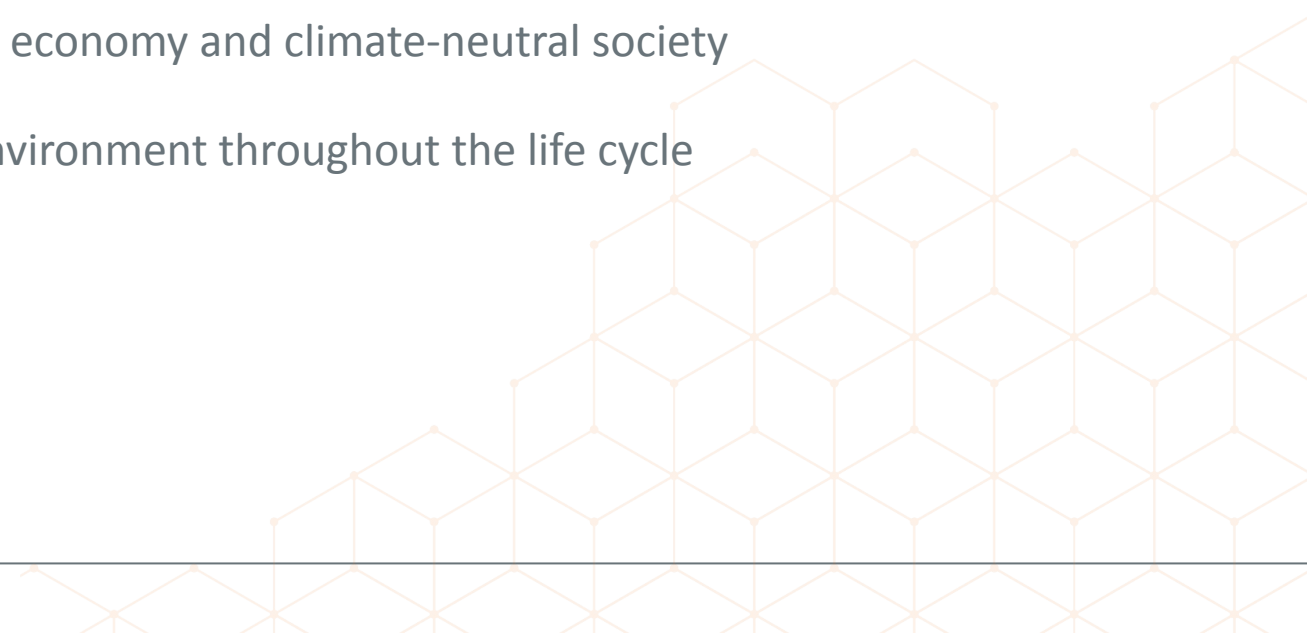
Safe and Sustainable-by-Design is a process to innovate and put on the market chemicals, materials, products and technologies that are:

- safe, and
- deliver environmental, societal, and/or economical value through their applications.

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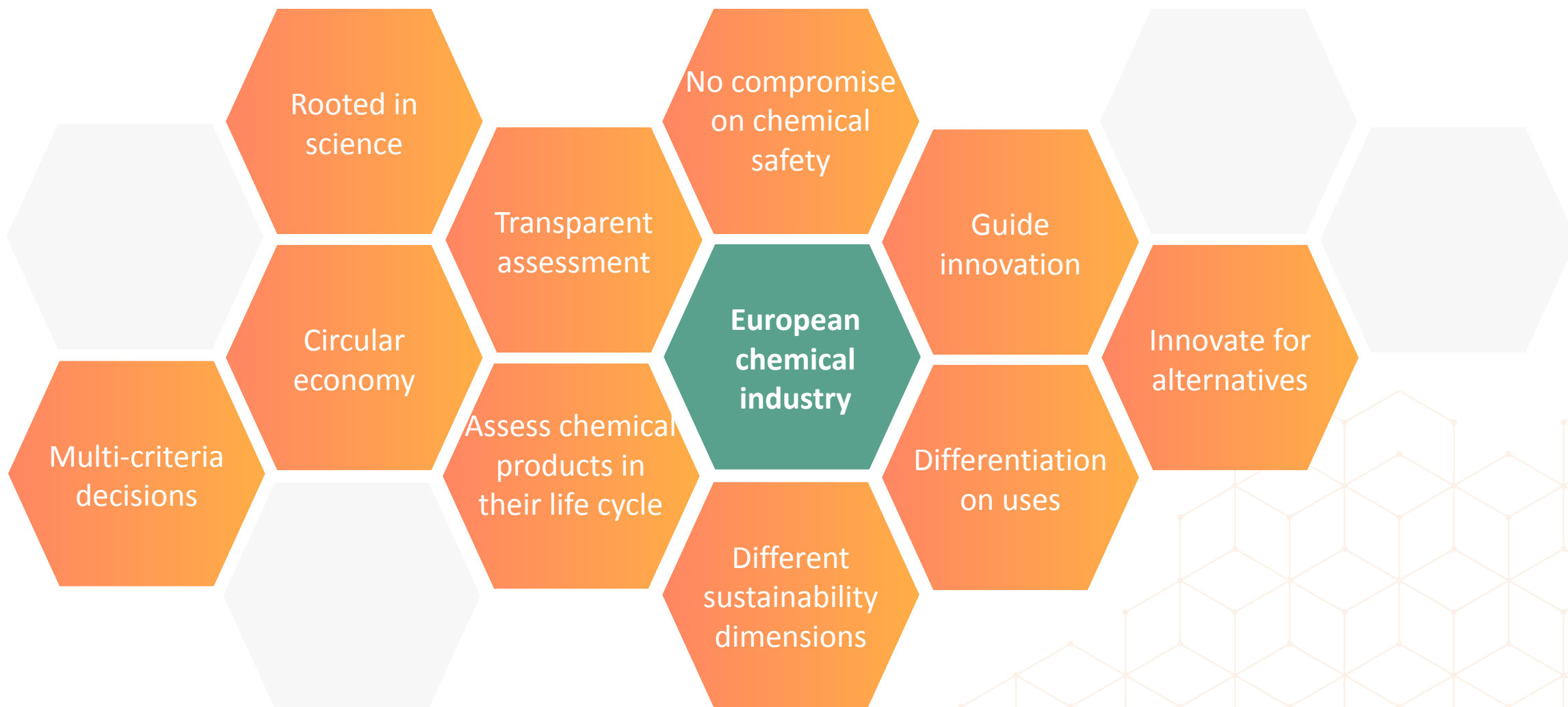


- Accelerating the transition towards a circular economy and climate-neutral society
- Preventing harm to human health and the environment throughout the life cycle





Principles taking the concept forward





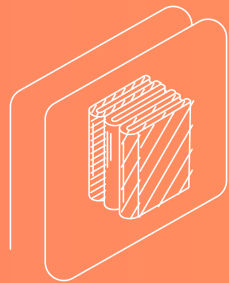
Towards design criteria

Taking the Safe and Sustainable-by-Design concept successfully forward will need a **set of harmonised criteria and an assessment framework**.

Cefic proposes 4 steps to define criteria that can be used to assess the impact of a new or alternative process or product throughout an innovation process.

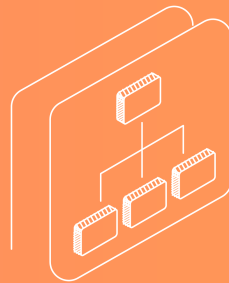
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MAP EXISTING
CRITERIA



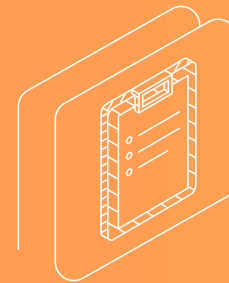
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ASSESSMENT
FRAMEWORK



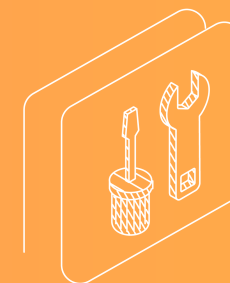
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KEY CRITERIA
FOR EVALUATION



4

TOOLS & DATA
INVENTORY





SSbD in practice

The chemical industry is already investing in innovations that are Safe and Sustainable-by-Design, from fashion to insulation materials and hygiene products.

And wants to accelerate this process!



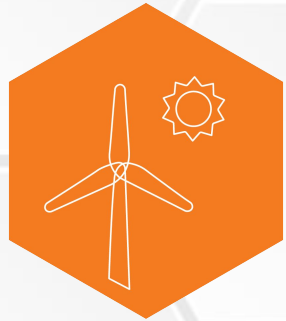
Through ChemistryCan, we show the results of these investments!

The European chemical industry invests approximately **9 billion** in research & innovation annually.

Chemistry
can



Our innovations focus on...



Going climate neutral



Driving the circular economy



Enhancing the quality of life



Scaling up digital and tech



How can the SSbD concept give the EU industry a competitive advantage?

- **Clear strategic direction and pathway** inserted into a broader Chemicals Strategy for Sustainability, and a **common methodological** framework
- **Innovation support** to stimulate and encourage collaboration over the value chains
- The **market uptake** of safe and sustainable chemicals needs to be incentivised
- The EU should take a global leadership role, to create a **level playing field** between different geographies



Join us in our journey to define the Safe and Sustainable-by-Design process and criteria.



We want to work with the European Commission and all other stakeholders to come up with a **harmonised framework** that can accelerate innovation in the chemical sector.



And we invite you to unite in a **Future Chemistry Network** to accelerate chemical innovations which are Safe and Sustainable-by-Design!



Read the full version of this paper at www.cefic.org



@Cefic



Cefic (European Chemical Industry Council)



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