

Cefic views on circular economy 2.0 – Towards a carbon-smart circular future

Cefic recently presented its 8-point Mid Century Vision for the Future of Europe; a Vision where the European Economy has gone circular, recycling molecules into new materials.

Transitioning towards a circular economy can contribute to addressing our global resource challenge, reduce greenhouse gas emissions through better use and reuse of the materials that already exist in the economy, reduce environmental littering, create new meaningful jobs, and spur economic growth. Going more circular means contributing to meeting the Paris Agreement and the broader UN 2030 Sustainability Development Goals.

In its Mid-Century Vision, the European chemical industry sees itself at the centre of Europe's circular economy. From the design phase of products to their end-of-life, the chemical industry can offer innovative solutions to the benefit of the sector itself and throughout the value chain, enabling downstream industries to become more circular. By transforming waste into valuable, new raw materials, the industry performs a crucial role as recycler for the circular society.

Cefic and its members are ready to take a leading role in accelerating the transition. To be successful in its mission, the industry is dedicated to the following guiding principles:

- **Develop a sustainable business case**
 - which **balances** economical, societal and environmental aspects, maintains the competitiveness of the European industry and demonstrates a **significantly improved environmental impact compared to today's reference**. Circular solutions should have an overall positive impact on the environment, versus linear solutions in keeping with societal and economic demands and benefits.
 - which increases the share of **circular feedstock**. The sector offers solutions to keep materials in the loop as long as technically and economically possible through reuse of materials, extension of lifetime using more durable materials, resource recovery and mechanical,

dissolution and [chemical recycling technologies](#) of waste. Additionally we are increasing the share of alternative feedstock such as [CO₂/CO](#) through carbon capture and use and [bio-based feedstock](#). By using more bio-based and CO₂-based feedstock and the technologies to efficiently transform them into everyday products the chemical industry actively supports the bio-based economy and the growth of carbon capture and use technologies as part of the circular economy.

- which **builds on and drives scientific and technological innovations**. The industry needs to create transition technologies across industry, academia and government. New technologies, when overall more beneficial to society, will replace existing technologies in a dynamic transition towards a circular economy.

- **Take a life-cycle approach**
 - Circular thinking should **start at the product and process design** phase. Solutions should be environmentally benign, cost-effective and should positively contribute to society over the entire lifecycle. Becoming circular should not make the attainment of other sustainability goals more difficult, in particular meeting the climate goals. Trade-offs between impacts of meeting one goal versus another will be unavoidable, thus case-by-case considerations are necessary.

- **Safety first**
 - As for any other activity, the circulation of resources in loops must be managed in a safe way for workers, consumers and the environment. Information on chemicals in products is the first step in reducing exposure and emissions, thus managing the risk. To achieve a safe circular economy, **information on the chemicals in products** will increasingly need to – even more than is already the case today – be shared within the value chain or between stakeholders. Additionally, the sector continues to innovate to bring alternatives to the market, reducing risk and hazards in material cycles and improving the recycling potential. At the same time, new recycling technologies, such as [chemical recycling technologies](#), will address potential concerns in this regard and offer the opportunity to enable the production of secondary raw materials without legacy substances.

- **Increased cooperation across and along value chain partners and stakeholders**
 - Cooperation among all relevant value chain partners is crucial to **unlock the potential of innovation**. The chemical industry is uniquely positioned in the value chain to drive and enable sustainability benefits to both make value chains more circular and develop sustainable products;
 - Circularity is not the responsibility of any one single actor but will require a **systemic approach**. Independent yet interrelated stakeholders creating partnerships across and along the value-chain is essential. For example, industrial symbiosis in increasingly connected industrial clusters is a way forward to increase resource efficiency;
 - **A fit-for-purpose information system on chemicals in products**, is needed to provide recyclers and users of secondary raw materials with sufficient information to enable safe use and recycling and comply with all legal obligations.

Cefic has identified a set of key enablers and success factors for a successful transition towards a carbon-smart and circular future in Europe and around the globe. We call upon policymakers to put the following in place and make Europe the global leader in circularity:

- **A supportive, enabling and forward-looking policy framework, starting with an [EU Industrial Strategy](#) that enables industry to deliver on the EU Green Deal.** We propose:
 - **Promotion of cross-sectoral Value Chain Platforms.** Initiatives such as the [European Circular Plastics Alliance](#), are key to the success of the circular economy. The potential of expanding such platforms should be explored and assessed thoroughly. Within these platforms, the participation of civil society organisations is important to increase awareness and societal acceptance.
 - Progressively transition **from a waste-oriented to a resource-oriented policy framework.** Waste policies should be coordinated and harmonised at an EU level to create a Single Market of materials where resources can be easily transported, traded and used. For example, harmonisation on the contribution of **chemical and dissolution recycling technologies** to the obligatory **recycling targets** of the Member States is essential to help realise the necessary conditions to facilitate deployment of chemical recycling technologies.
 - Widespread acceptance of the **mass balance approach** as a method to account for using bio-based feedstock and the contributions of [chemical recycling technologies](#) in providing circular solutions will offer the opportunity to contribute to increasing the recycling rates and the use of circular bio-based feedstocks in Europe.
 - **Smart, coherent, science-based and cost-effective** policies and legislation. An effective legal framework requires consistency and legal certainty, and an improved coordination among EU authorities and across the Directorate General (DGs) of the European Commission.
 - **Stimulating the demand for secondary materials.** **Product policies** should address the **design phase** to manufacture more circular consumer goods. **Secondary raw materials standards** can be an important tool to increase customers and consumers' confidence in those materials. Stimulation of lead markets, e.g. circular construction, is also considered an important policy stimulating measure.
 - To promote a level playing field between virgin and recycled materials and between EU and imported materials, including support coming from economic instruments.
- **A progressive environment for innovation and education.** European companies are pioneers in Research and Development of sustainable technologies and chemicals. To accelerate the market uptake of these innovative solutions we propose:
 - to promote and safeguard collaboration between industry, companies, universities, research organisations, and industry value chain partners;
 - to support start-ups at pre-commercial stage to allow scale up;
 - to support early screening of hazards and potential risks of new molecules to enable the selection of the most suitable candidate when having multiple molecules to choose from;

- **Sufficient funding streams.** The transition towards a circular economy will require substantial investment¹. Ensuring access to sufficient funding streams, **including innovation funding**, to de-risk investments in the pre-commercial phase is key to attracting further private investment in new technologies, such as the very much needed investments in recycling technologies and for repurposing existing assets. Additionally, access to finance is an essential risk-reduction factor for business in the pre-commercial phase to attract the necessary private or public investment.
- **Tracking progress.** To measure success and determine whether we are on the right path, a monitoring system is important. In this context, **uniformity on how circularity is defined and measured** is key to achieve progress.
- **Global alignment.** As value chains today are multilateral and global, the circular economy will benefit from a global-approach, e.g. internationally acknowledged/accredited tools to evaluate environmental profiles of materials & products and their impacts in their whole life cycle are necessary to substantiate environmental claims and compare materials & products. Harmonisation across countries and regions of tools and environmental impact of materials & products will lead to improved environmental performance of products and improved compliance too. Authorities should engage more with existing public-private and multi-stakeholder initiatives (e.g. World Economic Forum, Carbon Disclosure Project, United Nations, World Bank, etc.).

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About Cefic

Cefic, the European Chemical Industry Council, founded in 1972, is the voice of large, medium and small chemical companies across Europe, which provide 1.2 million jobs and account for 16% of world chemicals production.

¹ Accenture and Dechema