

# **Boosting Europe's future.** The case for more biomanufacturing

**Dirk Carrez**  
BIC Executive Director

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## Europe has to capitalise on its assets in the bioeconomy

- The EU's leadership in technology and biomanufacturing innovation is transformative and enables Europe's long-term competitiveness, sustainability and strategic autonomy.
- There is no lack of good and cutting-edge business cases to be scaled-up, so that these innovations can reach the market.
- Scaling-up innovation and expanding and creating markets for bio-based solutions like bio-materials will be key.
- The next five years will be crucial for the EU bioeconomy and its industries. With its links to biotech and biomanufacturing, the bioeconomy can contribute to a stronger and more sustainable overall EU economy.



# 1. Accelerate defossilisation

- Develop measures to support biomanufacturing “made in Europe” (using local feedstock, producing in Europe).
- Create lead markets to make Europe more independent of fossil raw materials.

# 2. Strategically use renewable feedstock

- Ensure a reliable and affordable supply of sustainably sourced biomass, respecting the cascading and food first principle.
- Defossilisation cannot be obtained in a cost-competitive way with residues and waste only.

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## Is there Enough Biomass to Defossilise the Chemicals and Derived Materials Sector by 2050?

The Bio-based Industries Consortium (BIC) and the Renewable Carbon Initiative (RCI) commissioned a study from the nova-Institute with the co-operation of EuroCARE Agricultural Policy Research and the Thünen Institute of Forestry (TI-WF).

**A Joint BIC and RCI Scientific Background Report**

Authors: Michael Carus, Olaf Porc, Christopher vom Berg (nova-Institute), Markus Kempen (EuroCare), Franziska Schier (TI-WF) and Julia Tandetzki (TI-WF)

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Renewable Carbon Initiative (RCI), Bio-based Industries Consortium (BIC)  
[www.renewable-carbon-initiative.com](http://www.renewable-carbon-initiative.com)

20%  
biobased

25%  
CO2-based

55%  
Recycled

*“Can agricultural and woody biomass combined sustainably provide enough biomass to meet 20% of the future carbon demand of the chemical and derived materials industries in 2050, up from 5.5% (EU27) and 10% (global) in 2023?”*

YES

### BIC key messages:

- The de-fossilization of the chemicals and derived materials sector is critical to achieving EU industrial and climate goals.
- The bio-based industry is ready to drive the transition to a competitive and sustainable and competitive chemicals and derived materials sector.
- Achieving this transition requires technology, innovation, partnerships, and strong policies.
- Policymakers must act on this opportunity to strengthen the EU's competitiveness and strategic autonomy.
- BIC is leading Europe's bio-based transition.



## Bio-waste generation in the EU: Current capture levels and future potential

2<sup>nd</sup> Edition - 2024



**Europe missing out on the potential  
of bio-waste with almost 75% ending  
up in landfills or incinerated.**

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### **3. Create and expand market opportunities for bio-based products.**

- For the EU to become a hub for bioeconomy innovation, it is essential to create a preferred playing field for these biobased alternatives.
- A more innovation-prone EU policy framework will increase the attractiveness of investments in Europe.

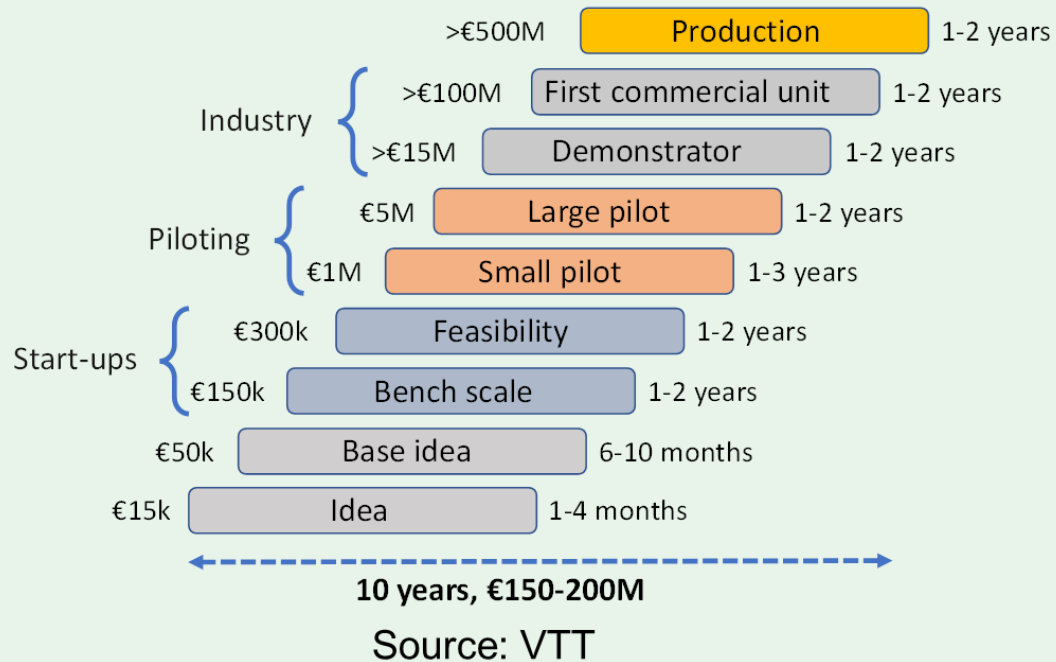
### **4. Harmonised rules across MS on key issues of circularity**

- E.g. end-of-waste criteria and recycling.



# 5. Leverage the potential of the Capitals Market

## Investment needs across the TRL scale



- Bio-based industries are capital intensive
- Often competing with established fossil-based industries
- Public and private investment needs to differ across the TRL range
- Large vs SMEs/start-ups: different needs



Research

Demo

Production

Valley of death 1

- Technology
- Scale-up
- Financing

Valley of death 2

- Market
- Regulation
- Feedstock
- Financing





For more details ...



# BIC 2024-2025 Trend Report



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- [https://biconsortium.eu/sites/biconsortium.eu/files/publications/Trend\\_Report%20web%20version\\_0.pdf](https://biconsortium.eu/sites/biconsortium.eu/files/publications/Trend_Report%20web%20version_0.pdf)



# Opportunity for EU?!

## “Fired”

U.S. government revoked Executive Order 14081 (Advancing Biotechnology and Biomanufacturing Innovation for a Sustainable, Safe, and Secure American Bioeconomy).

## Opportunity for biomanufacturing made in Europe?!

- ✓ US companies to invest in Europe
- ✓ US Investors to invest in Europe
- ✓ US researchers to R&D in Europe



**YOUR FIRED!**



# CBE 2025 topics

Feedstock oriented projects

Market oriented projects (new materials/products & applications)

Re-industrialisation & technologies

## Topic

FLAG-01 Urban-industrial symbiosis for **biowaste** valorisation

FLAG-02 Bio-based **drop-ins/smart drop-in platform chemicals**, via cost-effective, sustainable and resource-efficient conversion of biomass

FLAG-03 Circular-by-design **fibre-based packaging** with improved properties

FLAG-04 **Retrofitting of industrial plants** towards higher-value bio-based products

IA-01 Sustainable **macroalgae** systems for innovative, added-value applications: cultivation and optimised production systems

IA-02 SSbD bio-based solutions to replace hazardous conventional chemicals for **textiles production**

IA-03 Scaling-up **nutritional proteins** from alternative sources

IA-04 Cost-effective and robust **continuous biotech** bio-based processes

IA-05 SSbD bio-based **polymers/(co)polymers** unlocking new market applications

RIA-01 **Valorisation of untapped forest biomass**

RIA-02 Bio-based and biodegradable **delivery systems for fertilising products** to reduce microplastics pollution & promote soil health

RIA-03 Alternative biomanufacturing routes for **natural and synthetic rubber**

CSA-01 **Develop and deploy new curricula** and knowledge exchange practices relevant to bio-based systems

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## Bio-based Industries Consortium (BIC)


Square de Meeûs 38/40, 4th floor  
Brussels 1000, Belgium

[info@biconsortium.eu](mailto:info@biconsortium.eu)

[biconsortium.eu](https://biconsortium.eu)

 [linkedin.com/ company/biobased-industries-consortium/](https://www.linkedin.com/company/biobased-industries-consortium/)

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