

Stronger together!

Industry collaboration for a net-zero and
circular chemicals future



Charlie Tan

Chief Executive Officer,
Global Impact Coalition



Frédéric Nyssen

Director of Strategy & Prioritization
Net Zero Accelerator, BASF

Our mission

We aim to **reduce carbon emissions** and **increase circularity** in the **chemical industry** by providing an **enabling platform** for leading companies to **co-create new business models and technologies** as proof-of-concept **pilots**.

The Global Impact Coalition



From incubation at the **World Economic Forum** to an independent entity



❖ Guided by CEOs and CXOs from 8 of the world's leading chemical companies.

❖ An enabling platform to collaborate, exchange, co-create and innovate.

❖ Developing tangible projects to reduce carbon emissions and increase circularity.

Example of a successful spin-off

From incubation within GIC to project launch



R&D Hub for Plastic Waste

WHAT: A hub for R&D focused on developing new technologies for waste processing with a lower carbon footprint and greater levels of plastic waste recycling.

WHO: Managed by Dutch innovation agency TNO and sponsored by 7 chemical companies, including BASF, Covestro, Dow, LyondellBasell, Mitsubishi Chemical, SABIC and Syensqo.

WHY: Plastic recycling rates are very low for many types of polymers due to technical challenges of waste processing, in both mechanical and chemical recycling.

HOW: The first four projects focus on sensing, polymer/inorganics separation at mm and μm -scale, and enhanced solvolysis for composite recycling.

PROJECTS IN EXPLORATORY PHASE:

Automotive plastics circularity

Optimizing plastic recycling from end-of-life vehicles during the disassembly process, gaining access to specific polymer feedstocks for the chemical industry to increase recycling.



THE ISSUE:

Cars are not designed for circularity: metals are usually recycled but plastics are mostly landfilled/incinerated.

Have **increasing regulation** and **OEM demand** for recycled plastics.

PAIN POINTS:

Current EoL treatment for cars (shredding) creates a plastic fraction that cannot be used and ends up in landfill or incineration

Disassemblers lack knowledge to recover the right plastic fractions

Removal of single polymers is often economically not sustainable

UNLOCK LEVERS:

Create sufficient demand to pull out parts for dedicated recycling

Knowledge sharing through collaboration with OEMs & disassemblers

Creation of economies of scale by waste stream pooling and sufficient waste stream demand

PROJECTS IN EXPLORATORY PHASE: CCU Accelerator



Developing a technical concept for an EU localized CCU demonstration plant to test feasibility and showcase the relevance of regulatory rules for a positive business case.



THE ISSUE:

CCU is a key building block to decarbonize the chemical industry.

Key barriers and lack of a clear business case have **prevented the scale-up and adoption of emerging technologies.**

PAIN POINTS:

CO2 point sources from chemical production not fully utilized at scale

New CO2 conversion technologies are hard to scale

CO2 accounting rules are not always fit for purpose for CCU in the chemical industry

Some industry players require competitive CC tech for their power-to-X business but do not develop it

UNLOCK LEVERS:

Identify & match existing CC and U technologies (mid TRL)

Jointly remove tech barriers and hurdles for scale-up

Apply a CO2 certification scheme to avoid double counting along the value chain

Accelerate adoption of emerging tech like accelerated photosynthetic-lookalikes



Global Impact Coalition

Enabling a net-zero chemicals future

contact@wearegic.com
www.globalimpactcoalition.com