

The Sustainable Source ™

How technology can transition the materials industry towards a circular economy

Bioeconomy Conference

June 14,2023, Leuna, Germany



Where do the products and materials you use every day come from?

What if the source is unclear? Supply Chain Risk.

Consumers increasingly demand product transparency.

Rarely are brands able to map and trace their most critical sources.

Our major brand partners (who recently invested into Geno initiatives) tell us directly that transparency and traceability are rare and create massive supply chain risks for their brand.

What are some of the risks?

• supply chain disruptions

• unclear Scope 3 emissions

- human rights abuses
 human health impacts
- importation bans on critical materials



of consumers say they value transparency + would likely pay more for products from transparent companies

Source: Quantis, 2020 Make Up the Future Report



EU ban on deforestation-linked goods sets benchmark, say US lawmakers

Campaigners hail EU move, and congressman says it gives fresh impetus to similar US plans

THE WALL STREET JOURNAL.

n. 24, 2023

Companies Rush to Trace Sprawling Supply Chains as Sustainability Rules Loom

Stricter regulations on supply-chain sustainability are coming.



What are the products largely made of? Carbon.

Carbon is the building block of most materials in our everyday life.

Generally, we know most of the carbon comes from unsustainable sources, such as hydrocarbons - which often are seen as a driver of geopolitical instability and the climate crisis. Where specifically that carbon is sourced for a consumer product is largely unclear.

96%

of all materials are made from carbon coming from hydrocarbons (oil, gas, coal – fossil fuels). These fossil fuels make everything from our home cleaning, personal care and beauty products, to apparel products like the clothes you are wearing to the foam in the chair you may be sitting in right now.









20%

of every barrel of crude oil, and a significant fraction of natural gas, are used to make nonfuel products₁.

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Where will all the carbon come from? \$4T Transition Opportunity.



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The Sustainable Source TM

of technology and ingredients to power the Materials Transition



Renewable Sources of Carbon. Same Exact Materials.



Scale x Carbon Savings x Speed = Impact



Illustrating our impact with one commercially available technology

Measuring the impact of just one of the many Geno technologies to deliver the same exact materials from a renewable source of carbon, compared to conventional fossil-based sources of carbon



LARGE ESTABLISHED MARKETS

Attractive existing markets, accessible with drop-in molecules aligned with pull-demand

> \$36B total addressable market

PROVEN MULTI-LICENSOR

Multiple licensed installations in place or under construction with first process technology

100,000

tons product per year

SCALE & SYNERGY

Demonstrated production of multiple products from same commercial-scale facilities

4,100,000

liters fermentor reactor volume

SUSTAINABILITY IMPACT

50-90% GHG saving for each bioproduct vs current fossil; full adoption GHG reduction:

85,000,000

tons CO² equiv. per year

We accelerate the Sustainable Materials Transition, together.

We have a strong chemical industry in Europe that can be converted to green chemistry under the right conditions.

To get there, let's start by answering some of the tough questions:

- Is international carbon pricing the right choice and/or possible?
- Is our industry <u>adequately addressing the issues that we care about most</u> like deforestation, child labor? How or how not?
- Is <u>mass balance</u> the answer, or only a partial, interim solution? Who in our space is speaking about mass balance effectively?
- How can we create <u>ecosystems across value chains</u>? I.e., Funding, synthetic biology, purification, production assets and more.

