

Balancing Consumer Perspectives and Environmental Sustainability in the Adoption of CO₂-Based Plastics



Ujwal Arkaigud

EVP Lux Research, Founder, Lux-MotivBase



Arij van Berkel, Ph.D.

SVP and Group Director, Lux Research



The
Deciding
Factor

It's not enough to simply develop new and novel materials and technologies.

For success, we must enhance consumer appeal for these new materials and technologies; otherwise, we risk making no meaningful impact on the world or our bottom line.

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Beyond their environmental implications, novel materials must also align with consumer expectations to truly thrive in the market.

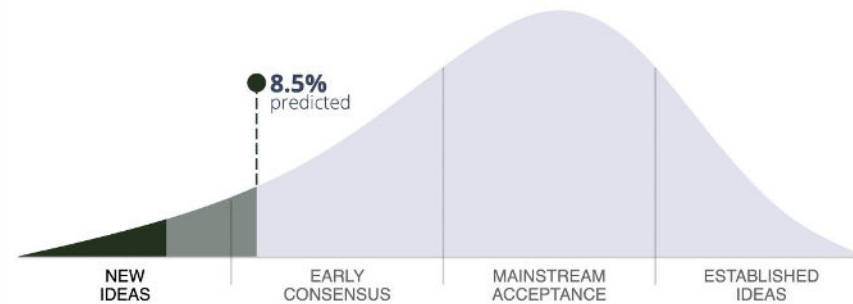
Let's examine the case of
CO₂-based plastics
through the lens of
anthropology

The idea is still very nascent in the minds of consumers but ...

They believe that CO₂-based plastic is most sustainable when used in products and applications with a long life span — long-lasting plastic products not only produce less plastic waste but may also act as a carbon store when made from captured-carbon material.

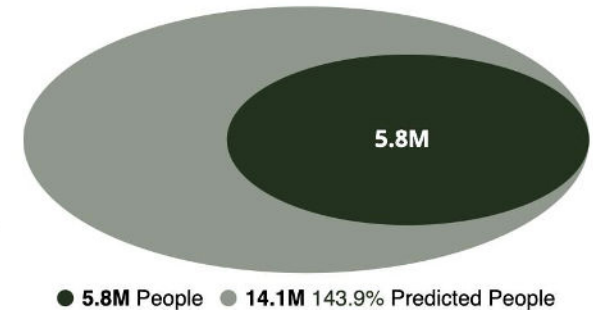
Maturity Curve for Macroculture: carbon dioxide, catalyst, plastic material

Maturity Curve
3.5%
current



This topic scores **3.5%** on the maturity curve and is expected to expand to **8.5%** in 12-24 months.

This culture is currently relevant to **5.8M** people and is expected to grow by **143.9%** in 12-24 months.



Functional and durable plastics

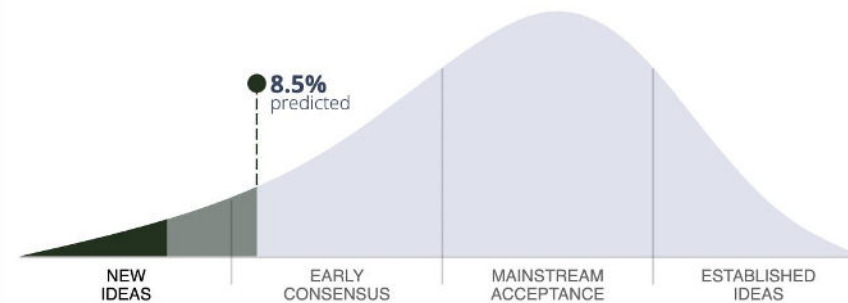
This is where it all begins for the consumer.

Even though the industry seems to be focused on packaging applications

Consumers feel that plastics made from CO₂ may be more durable and associate it with materials that can withstand harsh temperatures.

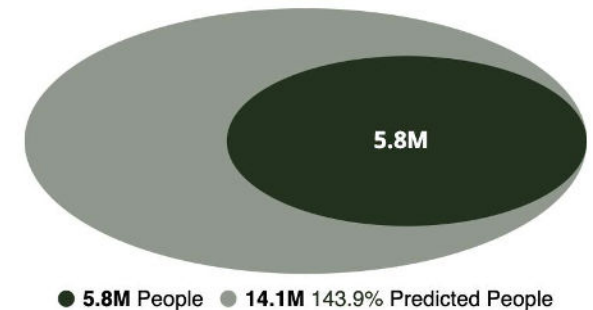
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End-of-life management

Consumers still worry about CO₂-based plastic causing harm and pollution in the long run.

What are people talking about?

1

Consumers are concerned about the proper management of plastic waste throughout its life cycle and are curious about the fate of plastic made from captured CO₂ once it enters the waste stream.

2

Consumers wonder about the types of plastic that CO₂ can produce and whether this kind of plastic remains durable and usable when recycled.

3

Consumers are interested in the development of biodegradable plastics derived from captured CO₂.

This is the biggest barrier to the adoption of CO₂-based plastics

People are worried that they will be greenwashed again.

Better feedstock?

Consumers compare the sustainability benefits of using recycled CO₂ for plastic with producing bioplastics from biomass as feedstock.



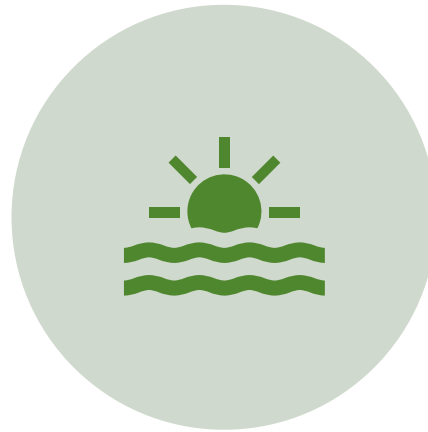
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What are people talking about?



CONSUMERS WONDER WHETHER USING CO₂ AS PLASTIC FEEDSTOCK CAN AVOID SOME OF THE DRAWBACKS OF OTHER SUSTAINABLE OPTIONS, SUCH AS BIOPLASTICS MADE FROM PLANT MATTER.



THERE ARE CONCERNS ABOUT ENERGY UTILIZATION, LAND USE, WATER USE, AND GREENHOUSE GAS EMISSIONS FROM MANY OF THESE NEW NOVEL MATERIALS.



RELATEDLY, CONSUMERS ARE INTERESTED IN LEARNING MORE ABOUT THE PERFORMANCE AND SAFETY OF CO₂-BASED PLASTICS.

What does the consumer want?

The problem is, you can't deliver on just one of these three requirements and expect results. But you can begin with one and make your way toward the others.

They want to be more in sync with nature.

They want more functional solutions.

They want to gradually lead a healthier life.

Key Takeaways

- 1 Not enough to simply develop novel materials and technologies**
Beyond their environmental implications, novel materials must also align with consumer expectations to truly thrive in the market.
- 2 Functional and durable plastics are key**
Consumers are cautious of waste and wary of greenwashing, seeking genuine progress toward sustainable materials.
- 3 The type of plastic we create is going to be crucial to adoption**
Consumers are more knowledgeable than we might expect, and they're asking questions about energy utilization, safety, and more.

Thank you

A link of the webinar recording will be emailed within 24–48 hours.

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