

MATTHEW PIXTON
CTO

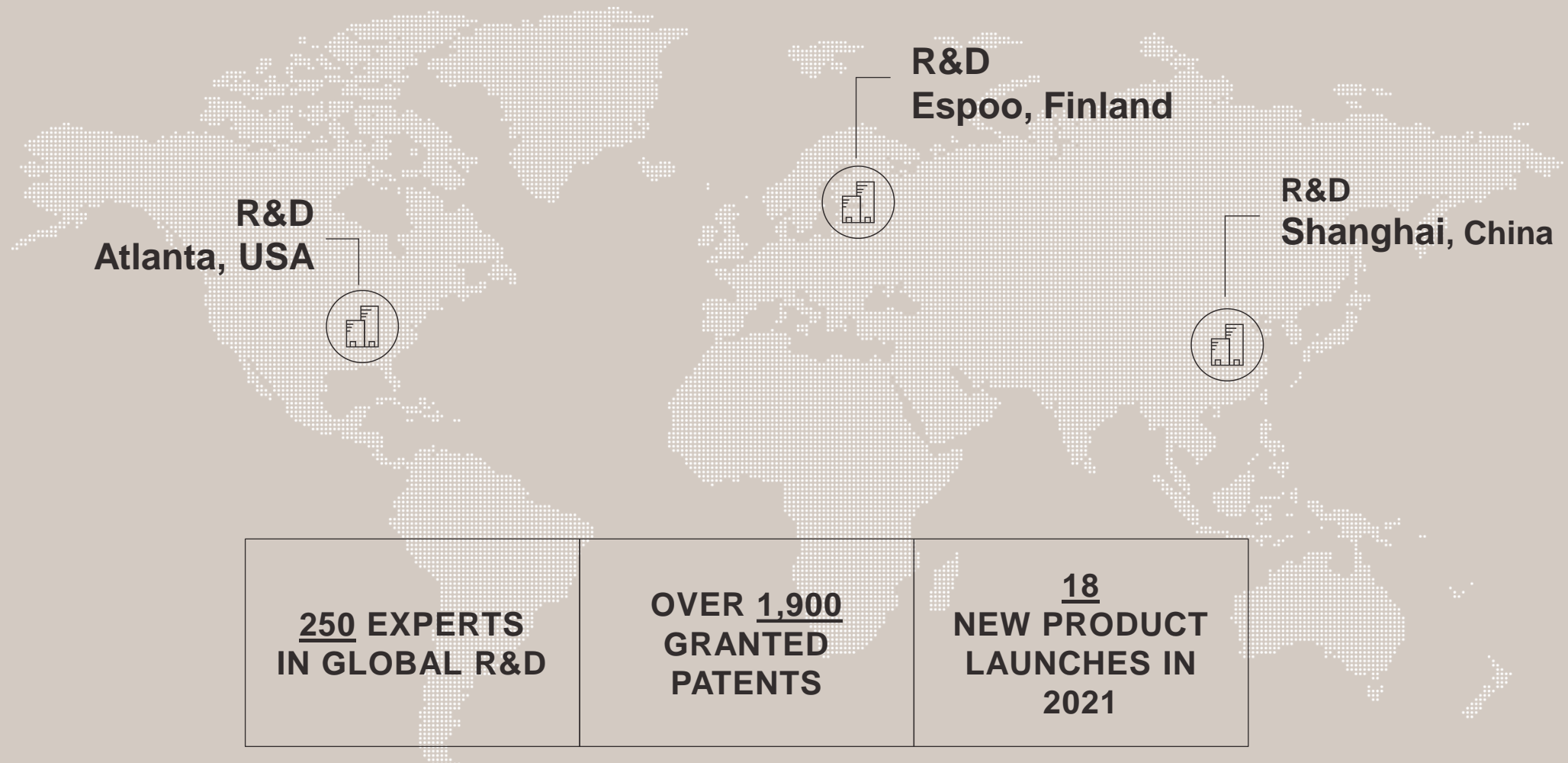
R&D: A critical driver for strengthening competitiveness

CAPITAL MARKETS DAY
SEPTEMBER 13, 2022

kemira



We have a global R&D network close to our customers

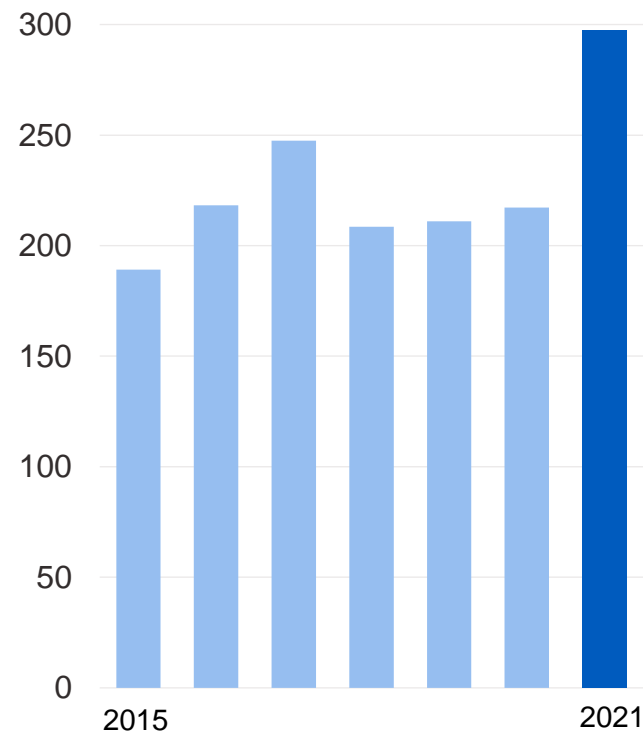


Continuous investment in R&D

WE INVEST IN R&D

- Kemira's R&D spend has been around EUR 30 million or ~1.1% of revenue annually
- R&D focus is on polymers, barriers, sizing and strength product groups
- Strong safety culture and commitment:
 - No lab safety incidents in 2021/22

NEW PRODUCT SALES REVENUE EUR million



KEY FOCUS IN R&D CURRENTLY:

- Lab evaluation and piloting of biobased products:
 - Multiple biobased raw-materials tested for a range of applications
 - Committed partnerships with Danimer Scientific and International Flavors and Fragrances (IFF)
 - ~ 50% of R&D projects in collaboration with partners

New application through partnering

An innovative solution based on fundamental science with partners: Wetsus, Technical University Delft, Kemira, several other private companies and municipal water companies

Kemira owns the ViviMag® patent and will commercialize the technology directly or through partners

Demonstration of longer-term industrial pilot scale starting in 2022 at European wastewater treatment plants



ViviMag®

Magnetic recovery of phosphorus
from sewage sludge

FIBER-BASED FOOD PACKAGING

Novel surface sizing portfolio

- › Broad product safety and regulatory profile, complying with the strictest food contact approvals
- › Fully recyclable to ensure the reuse of valuable wood fibers
- › High sizing performance in demanding conditions

Ongoing work to develop 100% biobased sizing agents, enabling the replacement of fossil-based chemistries and the creation of fully renewable packaging.



Sustainable textiles – emerging growth opportunity

- Kemira has extensive knowledge and application expertise in cellulose-based products. This allows us an entry point to global sustainable textiles markets.
- Regulations (EU 2025 & Finland 2023) will open-up new business opportunities in textile recycling
- Man-made cellulosic fibers will complement the textile fiber market as a sustainable alternative to polyester. Kemira's portfolio of biobased chemistries supports new manufacturing processes utilizing micro fibrillated cellulose (MFC).



We want to ensure profitable growth

BY BECOMING THE LEADING PROVIDER
OF SUSTAINABLE CHEMICAL SOLUTIONS
FOR WATER-INTENSIVE INDUSTRIES

FROM BASELINE
REVENUE IN 2019

**~100
MEUR**

FROM BIOBASED
PRODUCTS

TARGET REVENUE
IN 2030

**>500
MEUR**

FROM BIOBASED
PRODUCTS

FROM BASELINE
SHARE IN 2019

13%*

OF RENEWABLE
CARBON OF ALL
CARBON CONTAINING
RAW MATERIALS

TARGET SHARE
IN 2030

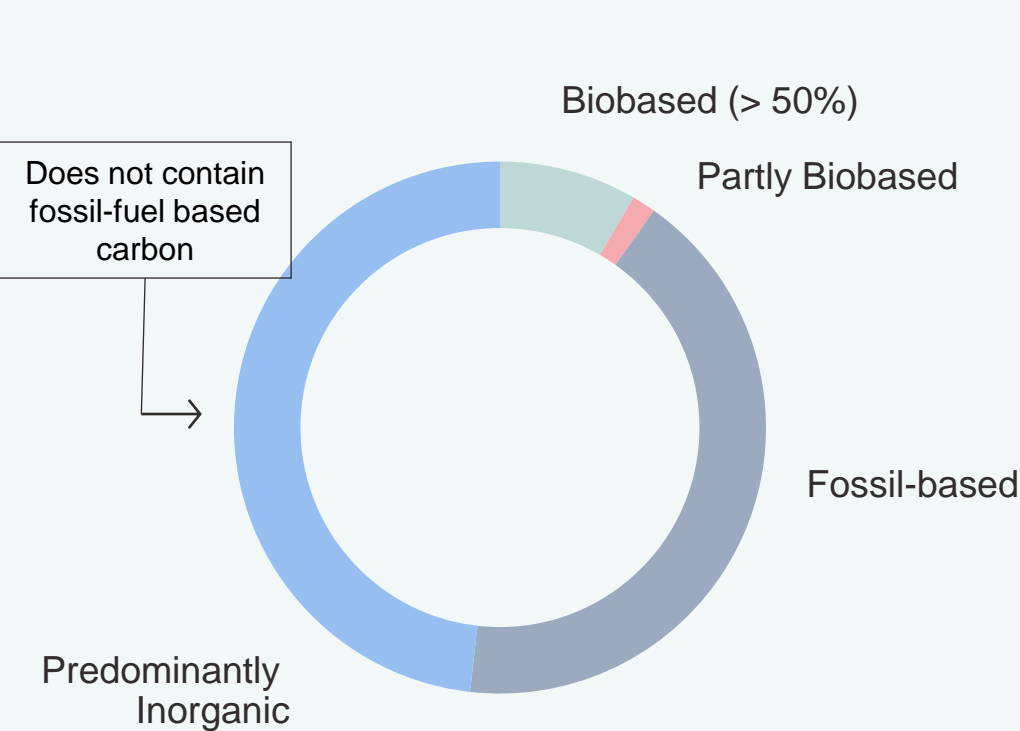
40%

OF RENEWABLE
CARBON OF ALL
CARBON CONTAINING
RAW MATERIALS

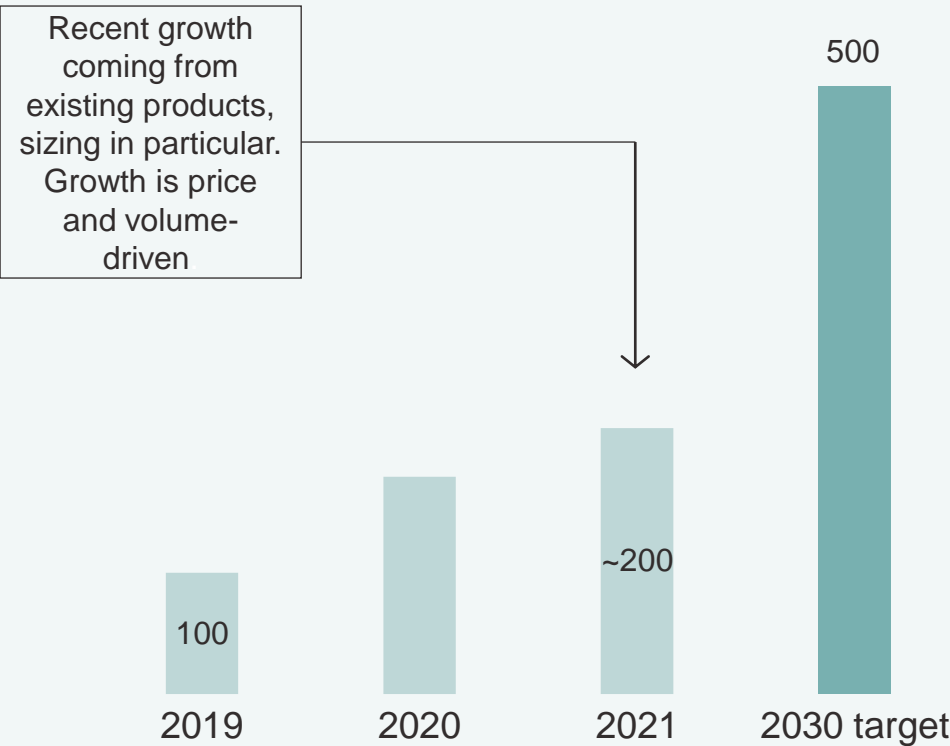
*) baseline year figure has been revised slightly upwards due to change in methodology.

We already have a significant number of biobased products in our portfolio

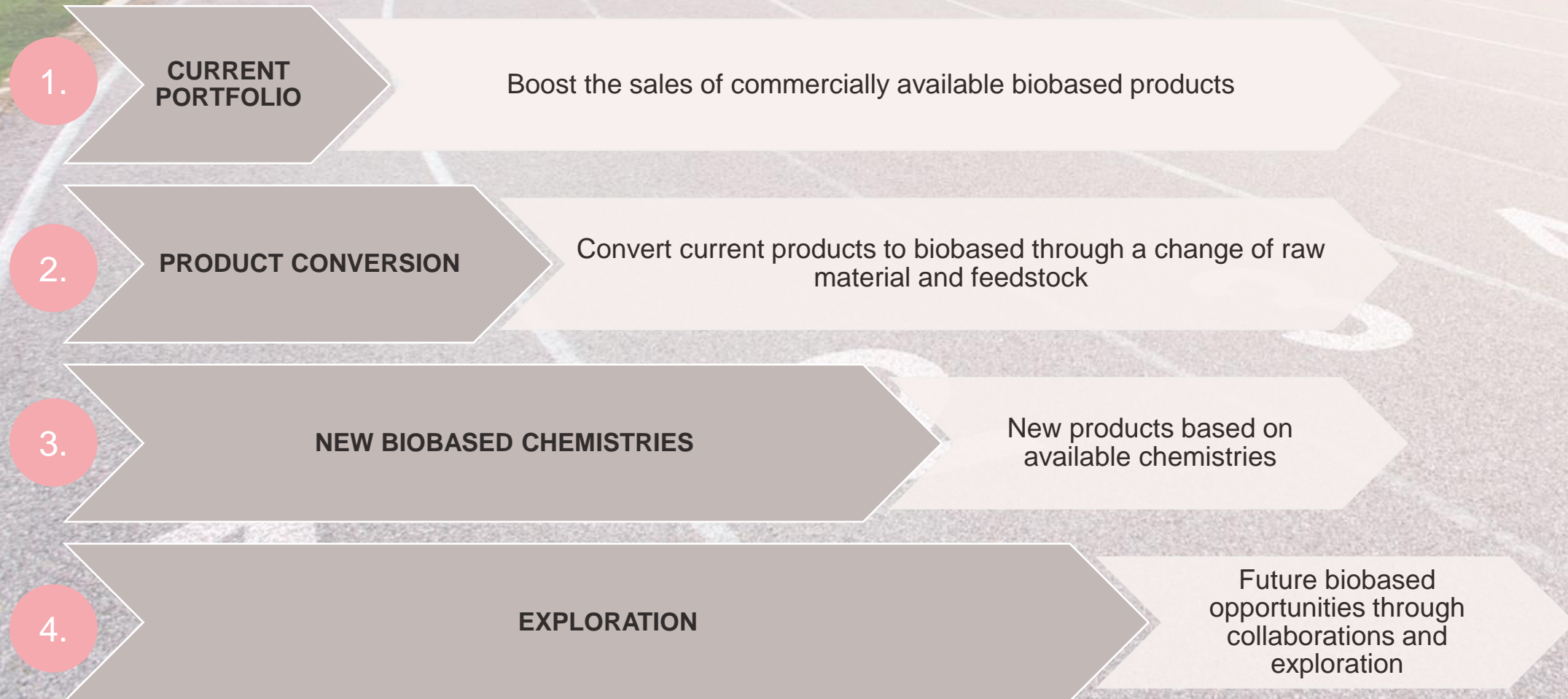
REVENUE SPLIT BY TYPE IN 2021



BIOBASED REVENUE DEVELOPMENT

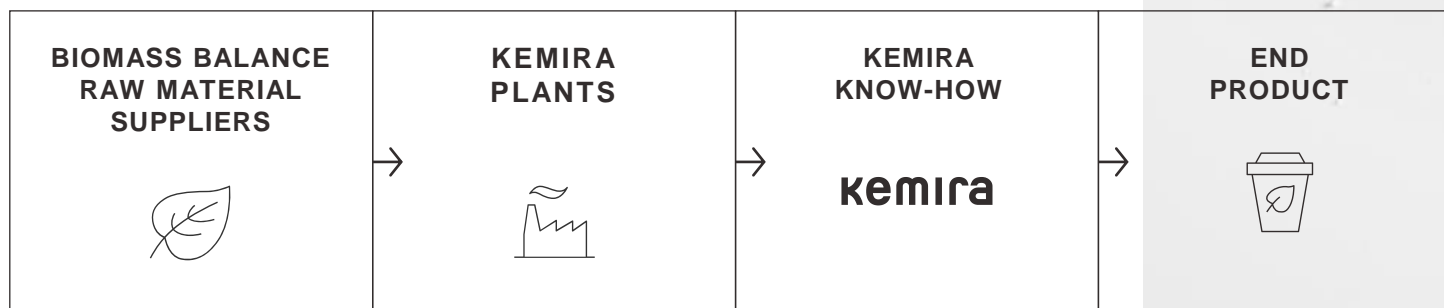


Our path towards 500 MEUR biobased revenue target advances via 4 tracks



Biomass Balanced products

- Product based on biobased feedstock. Kemira was first to start full-scale production with first commercial volumes shipped in 2022 to HSY (Helsinki Region Environmental Services)
- The novel polymers are manufactured according to the principles of biomass-balance (majority of fossil-based raw materials are replaced by ISCC Plus certified biobased and renewable mass-balanced feedstocks)
- Further customer discussions ongoing. The polymer can be used in water, paper and energy industries.



Key Initiative: PHA*

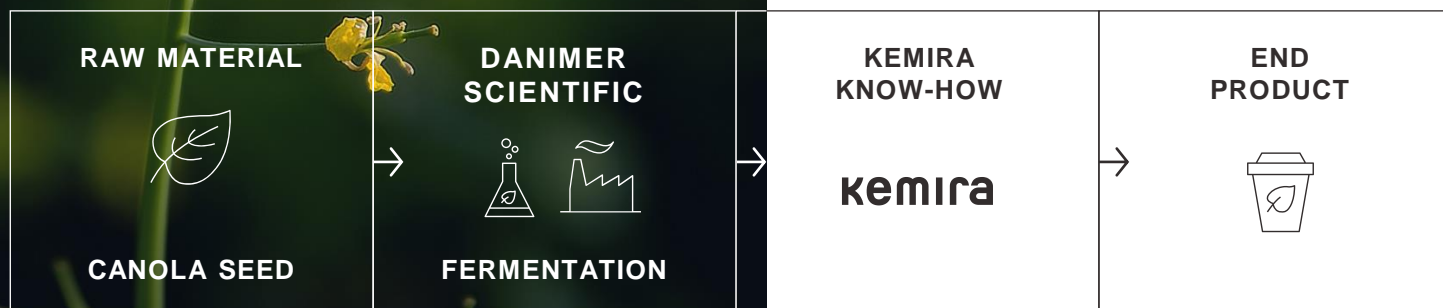
R&D collaboration with Danimer Scientific started in 2019. Multi-year commercial partnership announced in May 2022:

- Exclusivity for paper and molded fiber applications in Americas and EMEA
- Next generation product development, enabling broader market utility

Kemira "value add": - Unique formulations, application expertise and faster market adoption

Good progress in technical Proof-of-Concept since 2021, with multiple coating and converting trials

Strong pull from brand-owners continues



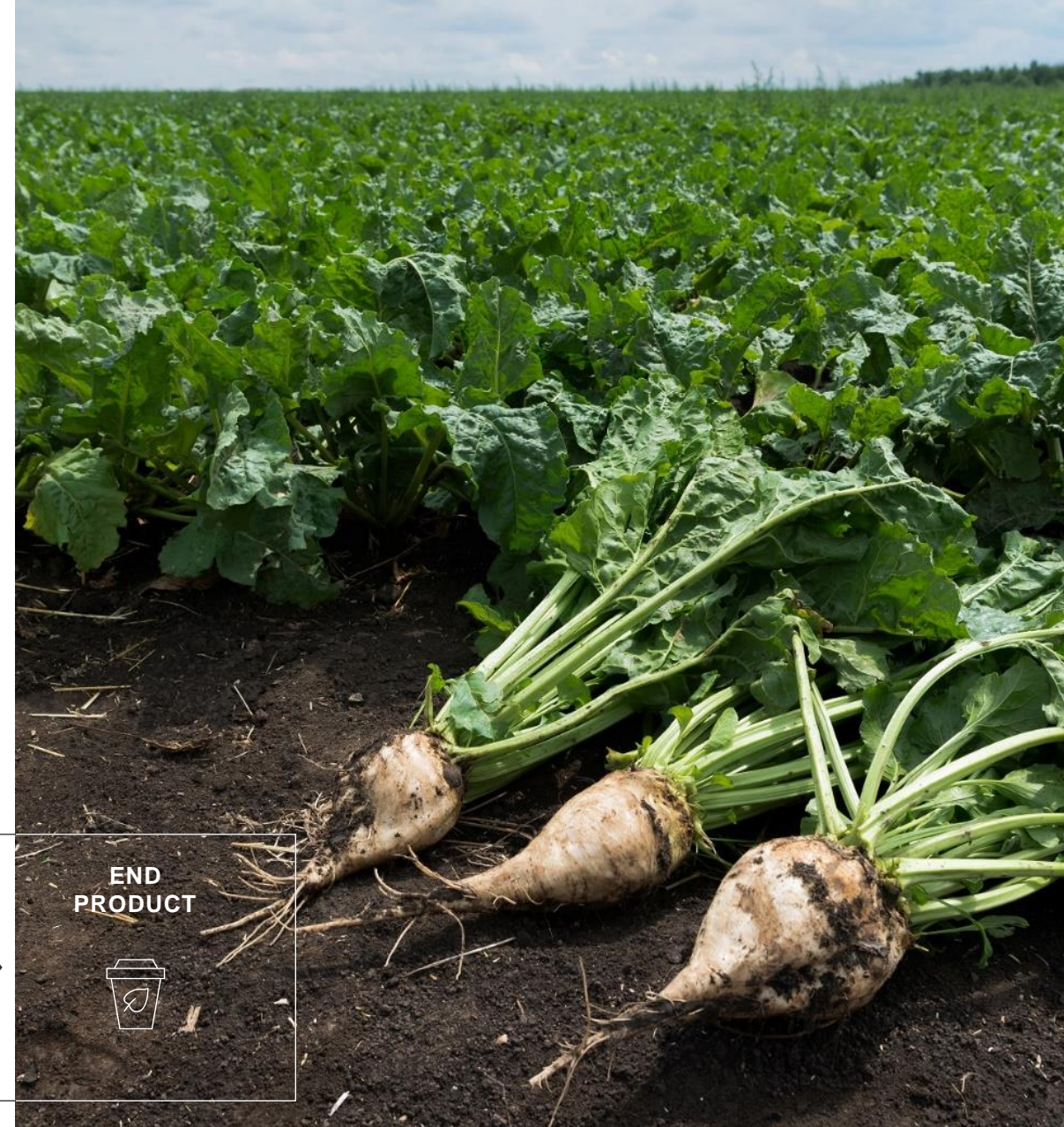
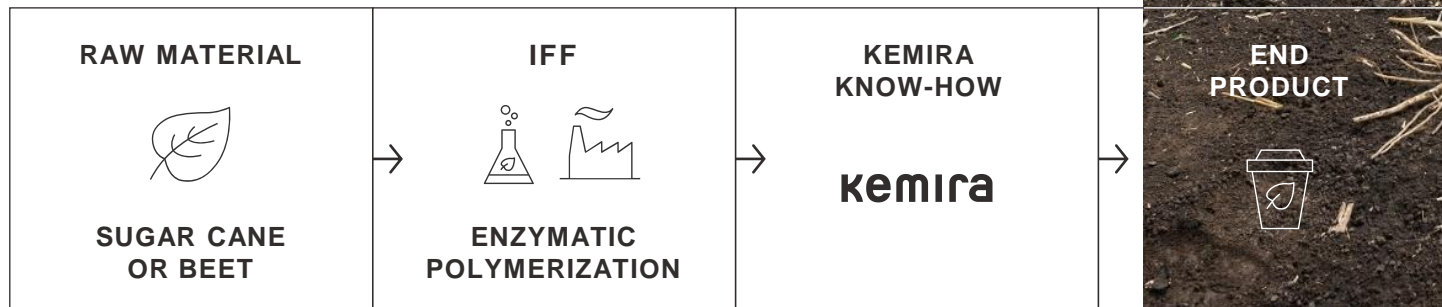
*) PHA= polyhydroxyalkanoate, a family of biopolymers

Key Initiative: Alfa-Glucan*

Collaboration with International Flavors and Fragrances (IFF) started in 2020. Our aim is to commercialize a range of new biobased and biodegradable products across Kemira's key product lines.

Partnership to leverage IFF's platform; Kemira brings market, application/development expertise

Piloting done with customers in both segments during 2022



*) Alfa Glucan = family of engineered polysaccharides

ONGOING ACTIVITIES
WITH MORE THAN

50

EXTERNAL
PARTNERS

JOINT
DEVELOPMENT IN

38

INNOVATIVE
PARTNERSHIP
PROJECTS

R&D network and collaboration

- Complements Kemira's internal competence, know how and resources
- Enables public funding and risk sharing in innovation
- Broadens our cooperation in existing and future value chains
- Significant shortening lead time to commercialization
- Growth Accelerator set up in June to speed up commercialization



R&D is a critical driver for strengthening competitiveness

<div data-bbox="231 748 461 788">CORE R&D</div> <ul style="list-style-type: none">• Strong pipeline of projects from concept to commercialization phases, on track for record new product sales in 2022	<div data-bbox="1225 481 1554 521">BIOBASED R&D</div> <ul style="list-style-type: none">• Biobased strategy progressing well towards EUR 500 million revenue target. Partnerships, supplier and customer, are key.• 2021 biobased revenue at ~EUR 200 million, meaningful revenue growth from new products from 2024 onwards• New Growth Accelerator Unit established to speed up the commercialization of biobased products
PROFITABILITY & CASH FLOW	GROWTH

Kemira

Chemistry with a purpose.
Better every day.