CHEMISTRY THAT MATTERS™

TRUCIRCLE VALUE CHAIN COLLABORATION

Dimitri Daniels, Leader Circular Economy Business Europe
Minisymposium Stoffen, The Hague, 20th April 2022.

MENU FOR TODAY…

- SABIC Carbon Neutrality journey
- TRUCIRCLE program at SABIC
- Product safety
- Value Chain collaboration

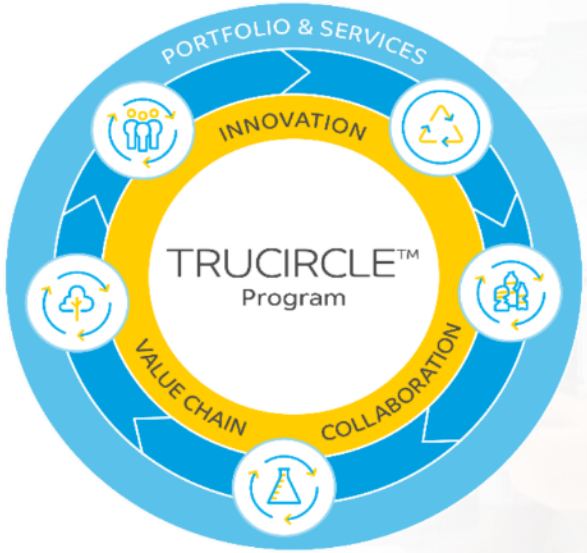
TRUCIRCLE™ SOLUTIONS

A CHALLENGING CONTEXT

ECONOMICS
Key driver

SOCIETY
Growing importance

ENVIRONMENT
Global trend



- LCA
- REGULATIONS
- BRAND OWNER PLEDGES
- CONSUMER FEEDBACK
- RETAILER GUIDELINES
- NGO VIEWS

SABIC'S TRUCIRCLE™ PROGRAM – CASE STUDIES

PORTFOLIO

MECHANICALLY RECYCLED PRODUCTS

CERTIFIED CIRCULAR PRODUCTS

CERTIFIED RENEWABLE PRODUCTS

WORKING SIDE BY SIDE WITH PARTNERS ACROSS THE ENTIRE VALUE CHAIN TO DEVELOP CIRCULAR SOLUTIONS AND FULFILL SABIC'S AMBITION FOR A NEW PLASTIC ECOSYSTEM

SERVICES

DESIGN FOR RECYCLABILITY

CLOSED LOOP INITIATIVES

CLOSING THE LOOP AND CREATING A CIRCULAR ECONOMY FOR PLASTICS

THINK OF ...

MIXED PLASTIC WASTE

NEW OCEAN BOUND PLASTIC

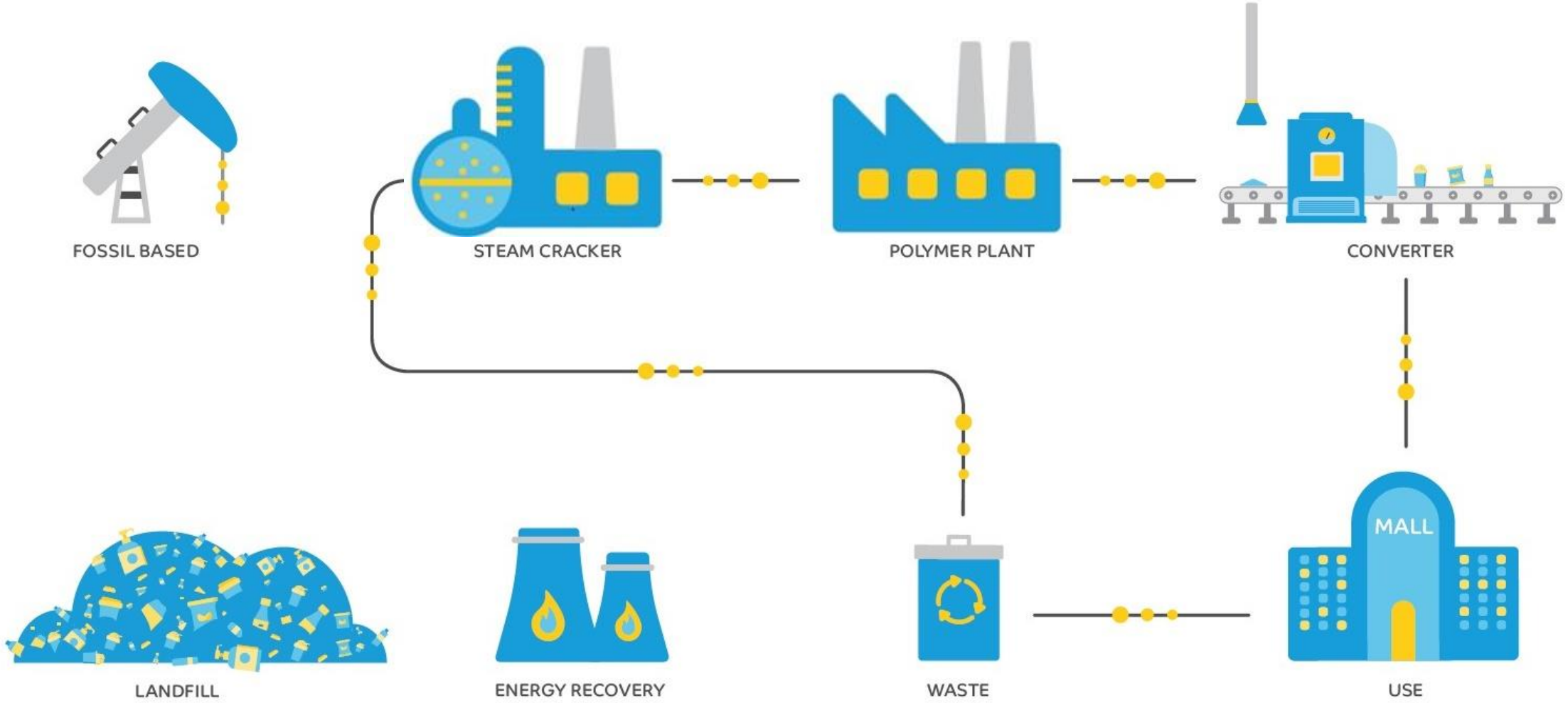
CERTIFIED CIRCULAR PRODUCTS

CRUDE TALL OIL

NEW USED COOKING OIL

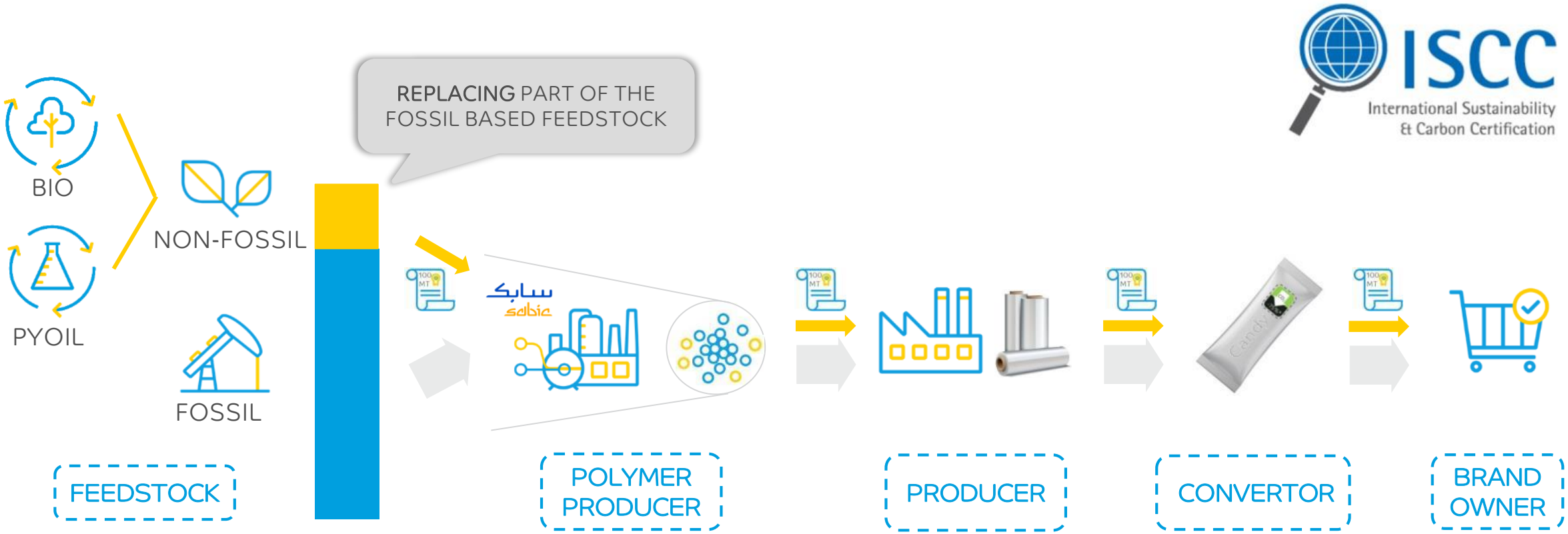
CERTIFIED RENEWABLE PRODUCTS

PLASTIC WASTE TO FEEDSTOCK FOR POLYMERS: FROM LINEAR TO CIRCULAR



ADVANCED RECYCLING CREATES FEEDSTOCK FROM DIFFICULT-TO-RECYCLE-PLASTICS

TRACEABILITY OF CERTIFIED PE, PP AND PC SOLUTIONS



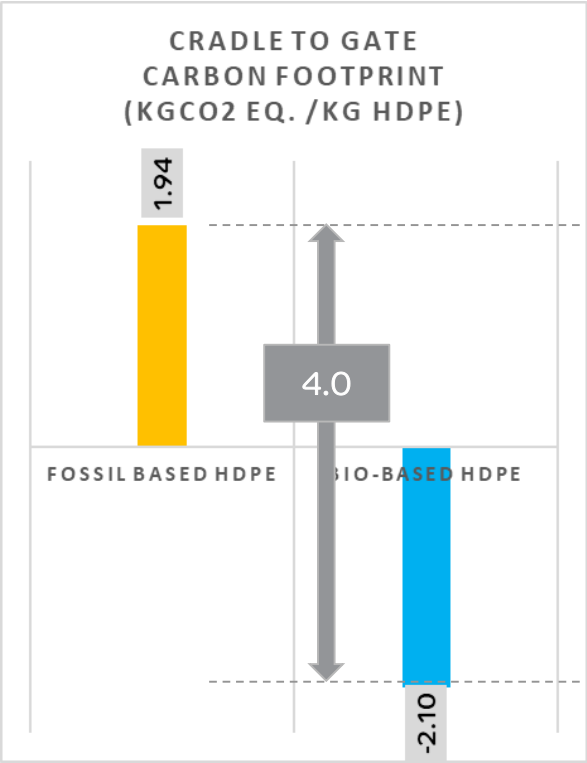
CERTIFICATION BY MASS BALANCE CHAIN OF CUSTODY

LIFE CYCLE ANALYSIS

PRODUCT SAFETY

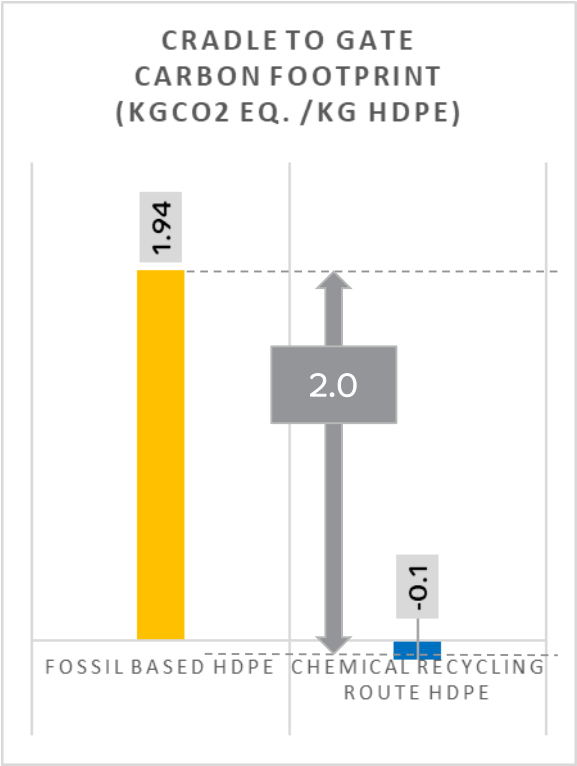
LCA CONSIDERATIONS

CERTIFIED RENEWABLE POLYMERS



Based on results of "Cradle to Gate" study on **SABIC certified renewable polymers**, carbon footprint reduction is about 4 kilograms of CO_2 per kilogram of resin in comparison to fossil route to HDPE*.

CERTIFIED CIRCULAR POLYMERS



Based on results of "Cradle to Gate" study on **SABIC certified circular polymers,** carbon footprint reduction is about 2 kilograms of CO_2 for every kilogram of polyolefins produced via chemical recycling route in comparison to fossil route*.

This reduction includes the benefit realized from avoidance of mixed plastic waste diversion to energy recovery.

Other polyolefins show the same relative effect, but with slightly different absolute footprints

** The above studies have successfully passed ISO Critical Review*

BENEFITS OF ADVANCED RECYCLING

SUPPORTING CUSTOMERS IN ADDRESSING CORPORATE SUSTAINABILITY GOALS

SABIC'S CERTIFIED CIRCULAR POLYMERS

PURE AND CARING
NO COMPROMISE ON PRODUCT PACKAGING PROPERTIES
BIG WINDOW OF APPLICATIONS, INCLUDING F&B CONSUMER PACKAGING, E&E, PERSONAL CARE, AUTOMOTIVE, …

DROP-IN SOLUTION
IDENTICAL PRODUCT SPECIFICATIONS TO OUR CURRENT POLYOLFIN GRADE PORTFOLIO
PROCESS ON EXISTING EQUIPMENT WITHOUT MODIFICATIONS
DOWN GAUGING OPPORTUNITIES (COMPARED TO MECHANICAL RECYCLING)

TRULY RECYCLABLE
NO LIMITATIONS IN NUMBER OF RECYCLING STEPS

VALUE CHAIN COLLABORATION

OUR JOURNEY SO FAR... MANY FIRSTS

PROVEN SOLUTIONS

MASS BALANCE chain of custody
for polymers

2014

D4R WITH TF-BOPE
Mono-material solutions to overcome limits of conventional PE film

2019

CERTIFIED RENEWABLE POLYCARBONATE
from second generation renewable feedstock

2019

CLOSED LOOP
with Tesco, Plastic Energy & Partners

2021

PCR COMPOUNDS
up to 70% mechanically recycled content

2021

CIRCULAR PRODUCTS based on OCEAN PLASTIC

2014

CERTIFIED RENEWABLE PE & PP
from second generation bio-based feedstock

2019

CERTIFIED CIRCULAR PE & PP
from advanced recycled feedstock

2019

CERTIFIED RENEWABLE CHEMICALS
supporting launch of new renewable value chains

2020

CIRCULAR PRODUCTS based on OCEAN BOUND PLASTIC

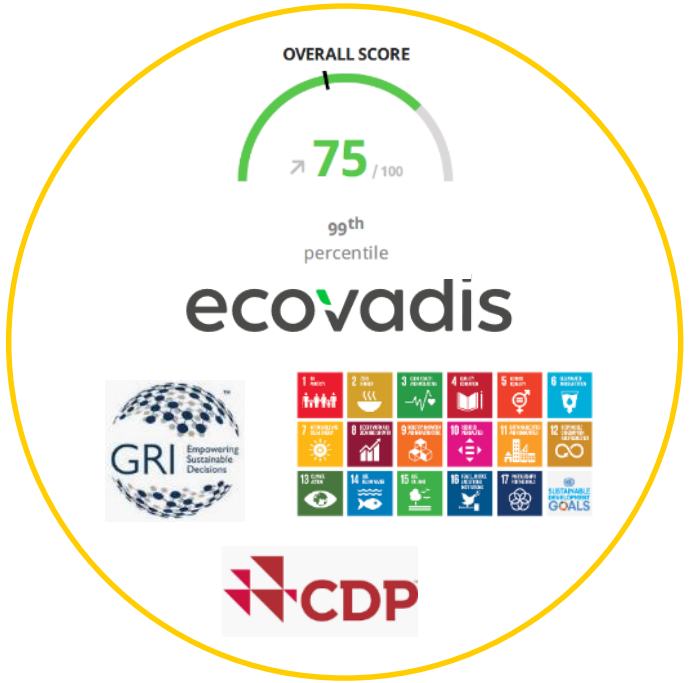
2021

CERTIFIED RENEWABLE PRODUCTS
from diversified second gen Used Cooking Oil

2021

VALUE CHAIN COOPERATION CRITICAL TO OUR FUTURE

EXTERNAL REPORTING



SABIC IS IN THE TOP 1% OF COMPANIES

in category basic chemicals, fertilizers, plastics & rubber assessed by Ecovadis*

PARTICIPATING INITIATIVES

SABIC IS A FOUNDING MEMBER OF THE ALLIANCE

Supporting Infrastructure development to manage waste and increase recycling

AS A VALUE CHAIN

SABIC IS A FOUNDING MEMBER & DRIVER OF WPC

Supporting UN and G20 initiatives to prevent marine litter

CHEMISTRY THAT MATTERS™

COLLABORATION. IT'S MAKING THE CIRCULAR ECONOMY GO ROUND.

As we adapt to a new normal, we're helping support more sustainable economies.

That's why SABIC introduced the TRUCIRCLE™ initiative to work with our collaboration partners to rethink recycling. SABIC's collaborations are making it possible to create materials of high enough quality for food packaging by breaking complex, low quality waste plastics down to their original state. We can use, reuse and repurpose more of our resources without using new ones. It's innovative technology that's making the circular economy reality with Chemistry that Matters™.

Meet one of the world's leading chemical companies at SABIC.com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THANK YOU