



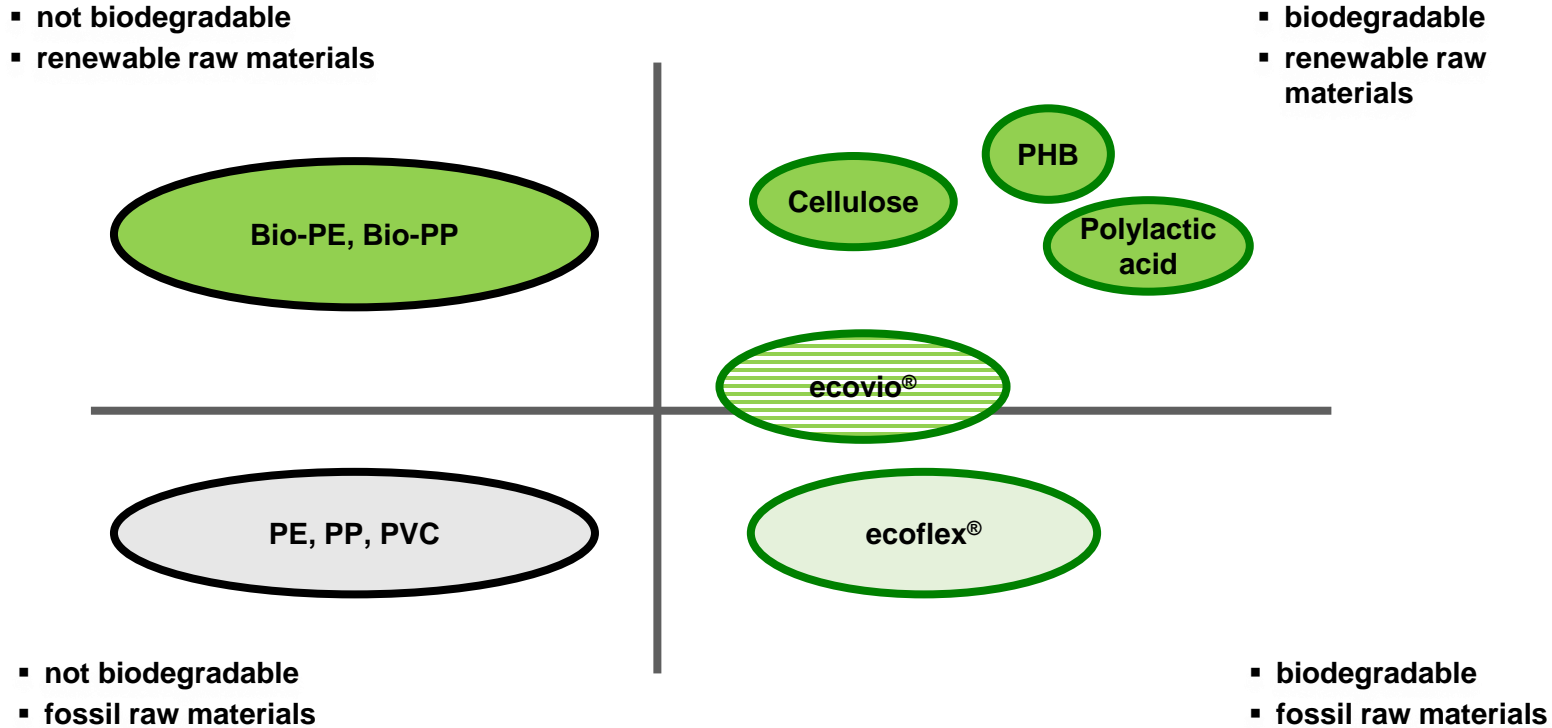
We create chemistry

Sustainable packaging case study – ecovio®

Agata Kruszec, PhD
Market Development & Sustainability, BASF Polska

Warsaw, 27.10.2020

Biopolymer: Definition of bio based and biodegradable polymers



→ Biodegradable polymers can be bio based on fossil or renewable raw materials.

Biodegradable and fully compostable BASF solutions

- Brand name 
- No „magic” additives – naturally biodegradable and compostable
- Partially based on **renewable sources (bio-based)**
- Products made of ecovio® fulfilling all norms of biodegradability and compostability **all over the world**
- **Certification bodies in Europe:** Vincotte i DinCertco



Europa



compostable

EN 13432

Australia



compostable

AS 4736

Azja



グリーンプラ
生分解性プラスチック

GreenPla

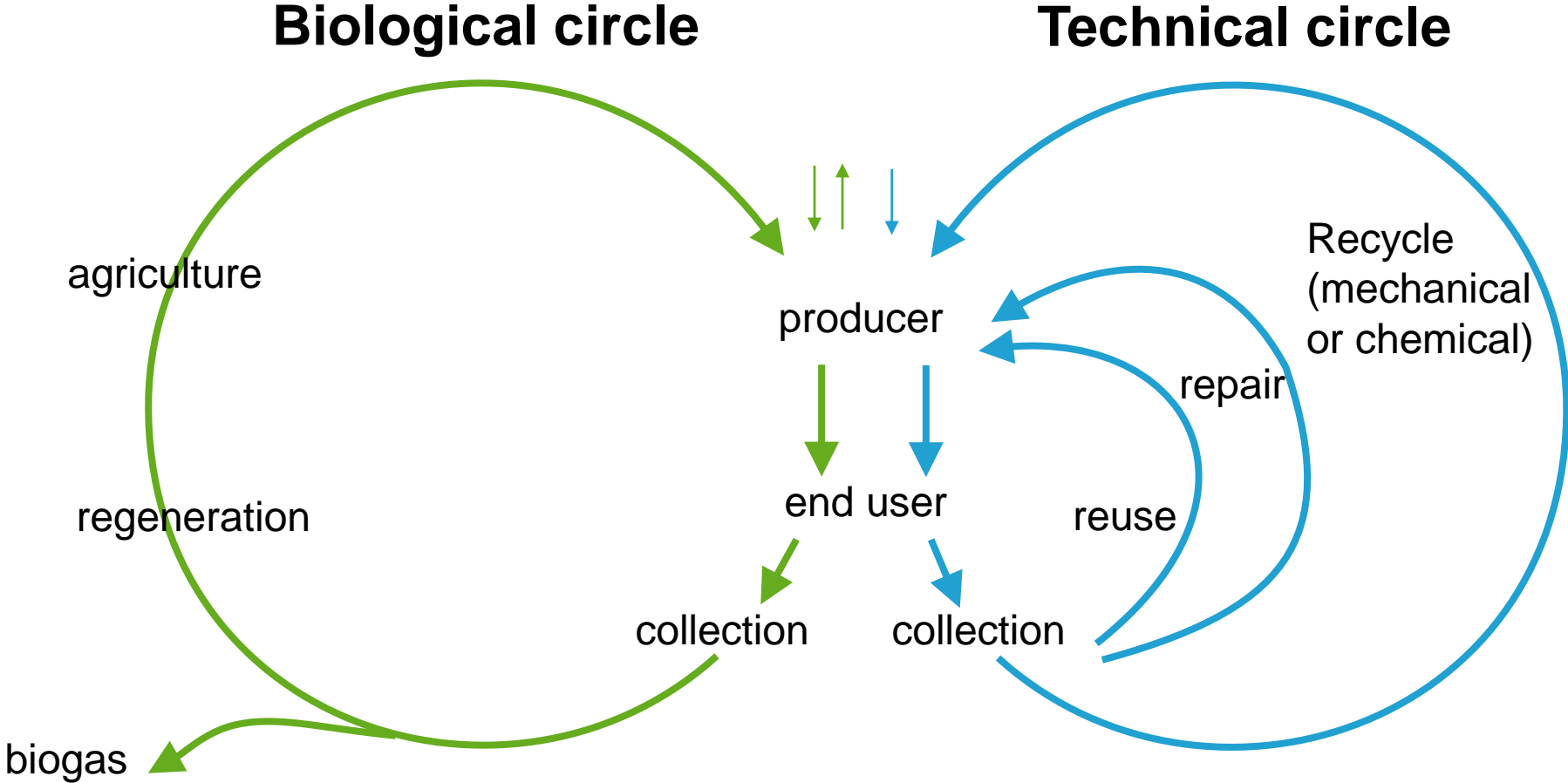
Ameryka Północna



COMPOSTABLE
Biodegradable Products Institute | US Composting Council

ASTM 6400

Rethinking Plastics: New plastics economy aligns with circular economy principles



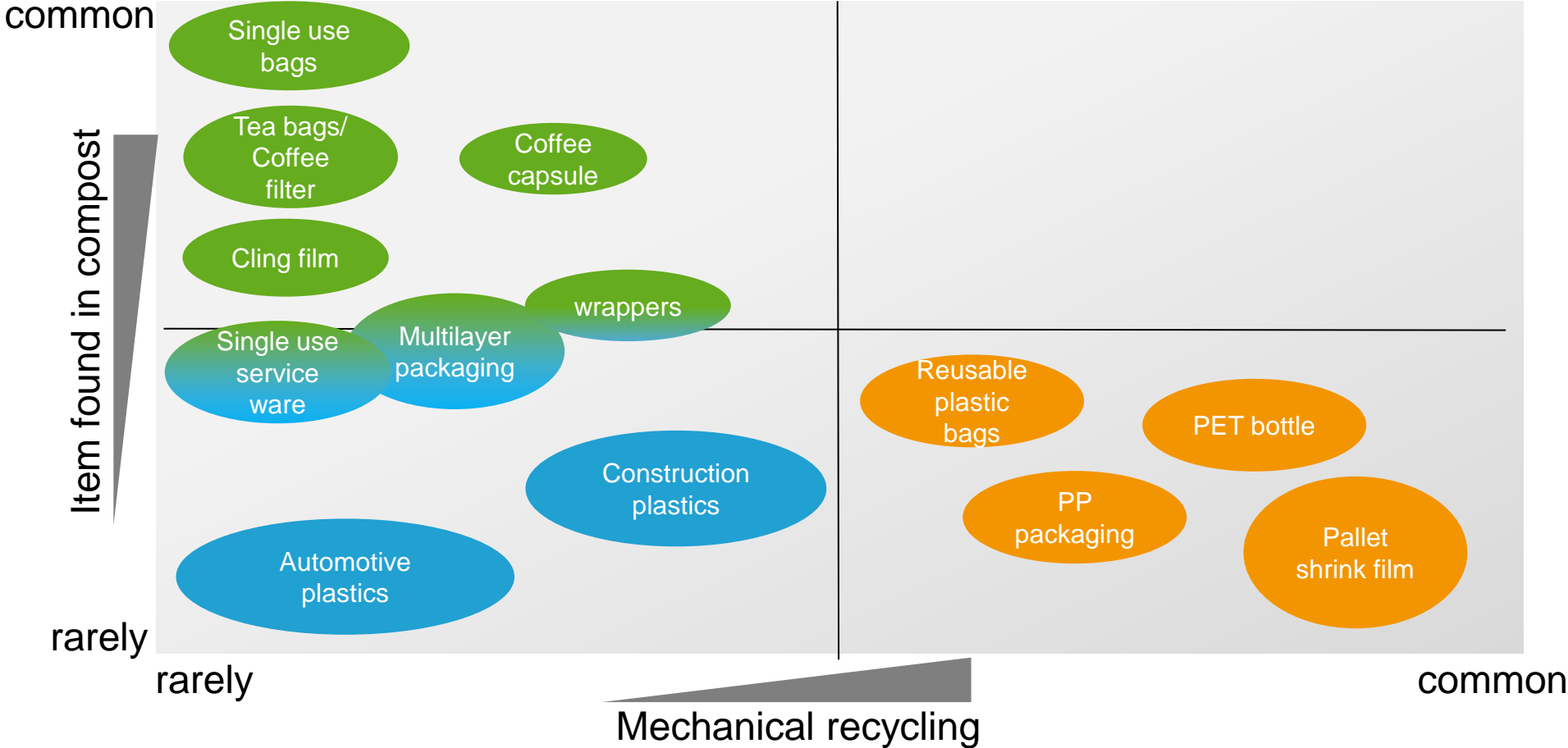
Simplified Graphic based on:
Source: Ellen MacArthur Foundation, SUN, and McKinsey Center for Business and Environment; Drawing from Braungart & McDonough, Cradle to Cradle (C2C).

Value proposition of biodegradable polymers: closing the food value chain



ecovio bags

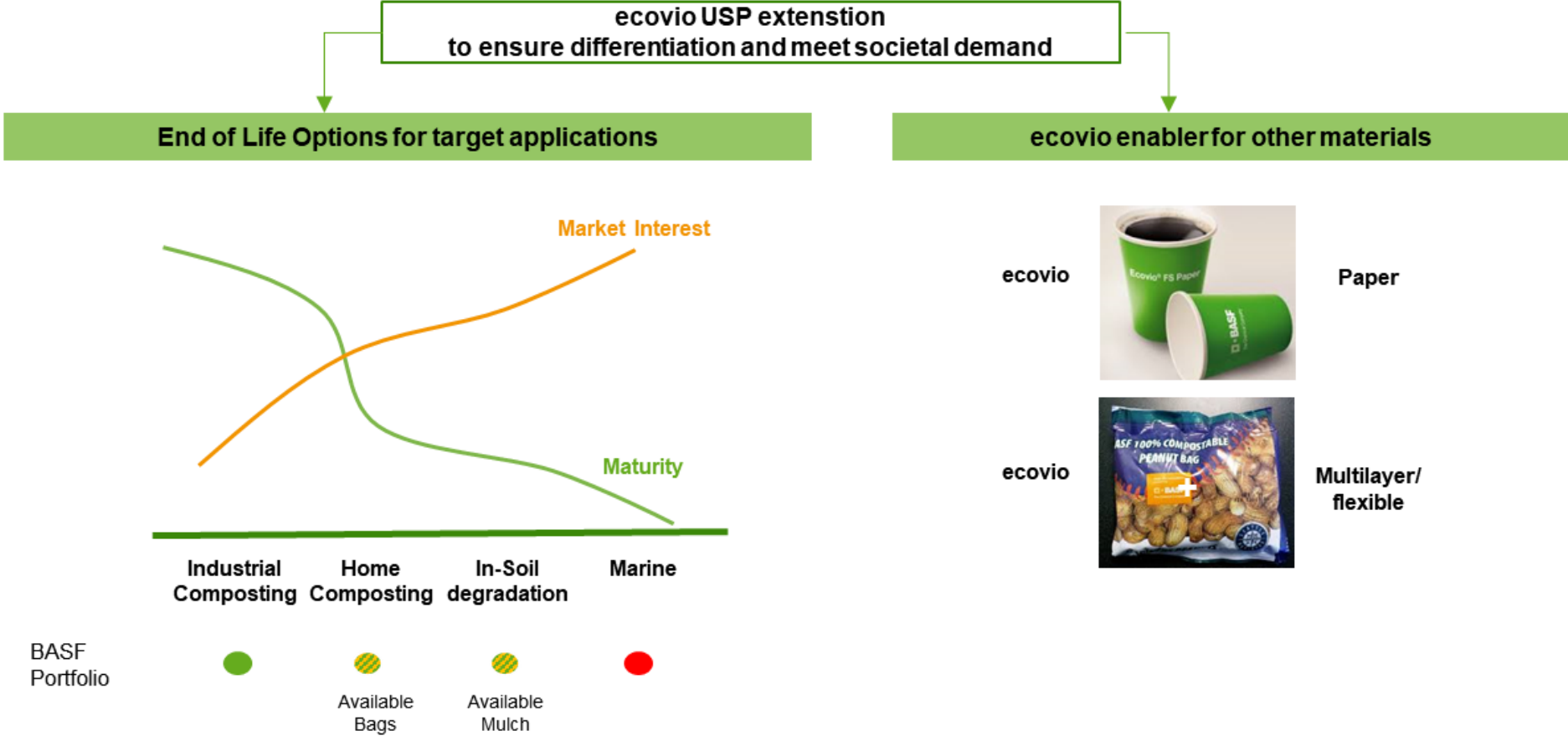
Plastic items (examples only): How to recycle?



Compostability advisable
Chemical recycling
Mechanical recycling

Hamprecht, Schlegel (2019)

Extension of Biopolymers value proposition through broader End of Life options and Combination with other materials



Examples of sustainable ecovio® packaging

ecovio® paper and board coating

Key technical benefits

- Good barrier properties against fats, liquids and odors
- Suitable for food contact (also when microwaved)

Fields of applications

- For applications with cold or hot contents
- For bowls and plates with dry, solid, fluid or fatty contents

Sustainability benefits

- Certified compostable according to EN 13432
- enables the use of recycled paper in food applications
- The high content of renewable raw materials offers a reduced material carbon footprint, which allows savings of greenhouse gas emissions and combats climate change



Examples of ecovio® coated paper solutions

200 billion
The world uses 200 billion paper cups every year



Our pioneering coatings technology makes this a fully compostable, recyclable cold drink cup

100%
Recapture of paper currently sent to landfill





Challenge:
How to get rid of plastics?
BASF Catalyst Plant in Środa Śląska, Poland

Circular cantine in practice



ecovio® coffee capsules

beanarella

Key technical benefits

- Quick cycle times in processing on standard plastics processing machines
- Good thermal resistance (due to material choice and design)
- Stiff material with very good impact behavior

Fields of application

- Thermoformed coffee capsules
- Injection-molded coffee capsules

Sustainability benefits

- Fully compostable according to EN 13432
- Composting along with the coffee grounds - more resource-efficiency
- Reduction of greenhouse gases emission
- High content of renewable raw materials reduces the overall carbon footprint

ecovio® Cling Film System – at a glance

PVC free, fully compostable and optimized fresh food preservation

In cooperation with leading cling film producer Fabbri Group (Italy), BASF has developed a compostable, plasticizer-free cling film solution, offering optimal performance profile for fresh produce packaging

Background

- Plasticized PVC is today's standard for most cling wrap packaging of fresh produce
- PVC foil under law and social pressure due to content of plasticizers and lack of recyclability
- Plasticizer-free conventional alternative PE is lacking specific performance characteristics (e.g. water vapor permeability), often leading to a reduced shelf life of packed fresh produce

Key product characteristics of ecovio Cling Film

- PVC & plasticizer-free cling film for manual & automatic* wrapping application
- Optimal breathability for fresh food packaging (high water vapor & oxygen transmission)
- Highly transparent film
- Certified compostable film
- Good anti-fog performance
- Complete solution possible, consisting of compostable film, tray and label

*no drop-in solution; only in combination with Fabbri wrapping machine





We create chemistry