



International Natural and
Organic Cosmetics
Association



Plastics & Natural Cosmetics: Reuse, renew, recycle, or replace?

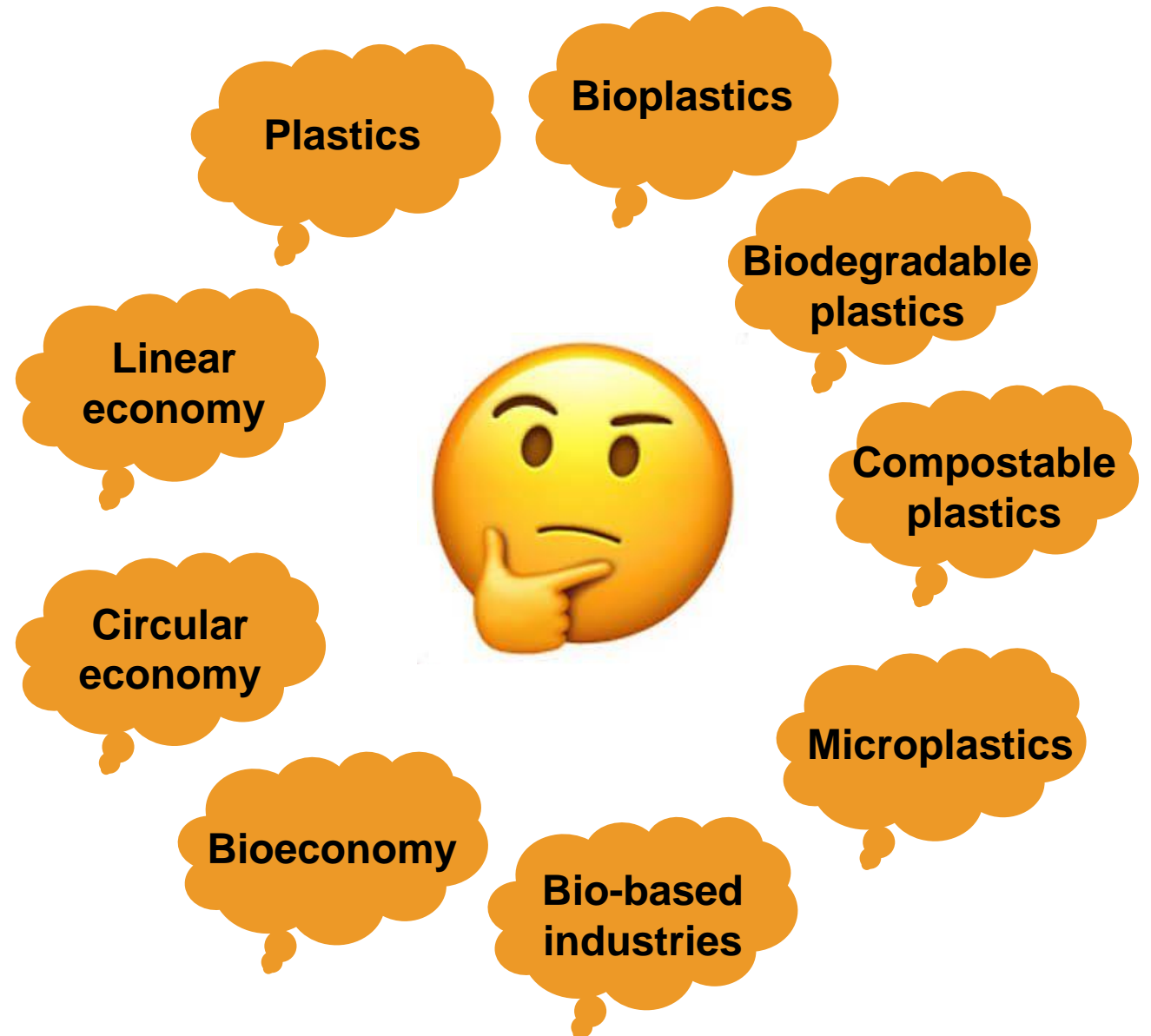
Natural Products Scandinavia, 15th November 2018

Dr. Hana Mušinović

NATRUE Scientific & Regulatory Officer

Overview

1. NATRUE association
2. Terminology
3. Regulatory update
4. Plastics in cosmetics
5. URBIOFIN EU project



Overview

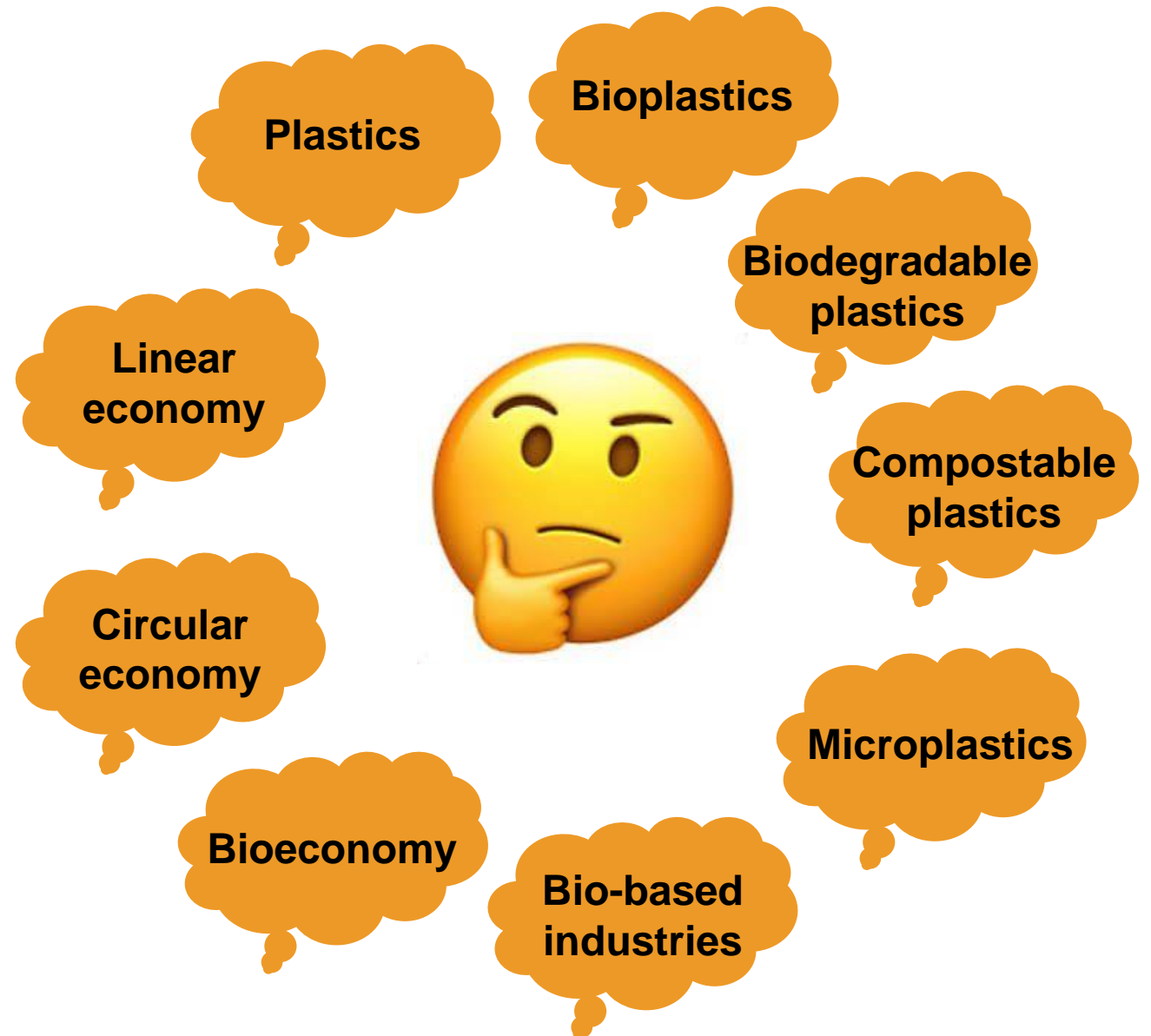
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NATRUE association

- International Natural and Organic Cosmetics Association
- **Mission:** protect and promote natural and organic cosmetics for the benefit of consumers worldwide
- Brussels-based, **founded in 2007** by the pioneers of the sector including....





NATRUE: Areas of Activity

1. Advocacy

- No official legal definition - **voice** for the authentic sector

2. Label

- **Internationally applicable**, founded in **2008**
- **> 6000** certified products, **250** brands, **32** countries

• 3. Research

- Involved in scientific projects

TRUE NATURAL COSMETICS
ARE RECOGNISED
BY THIS SEAL



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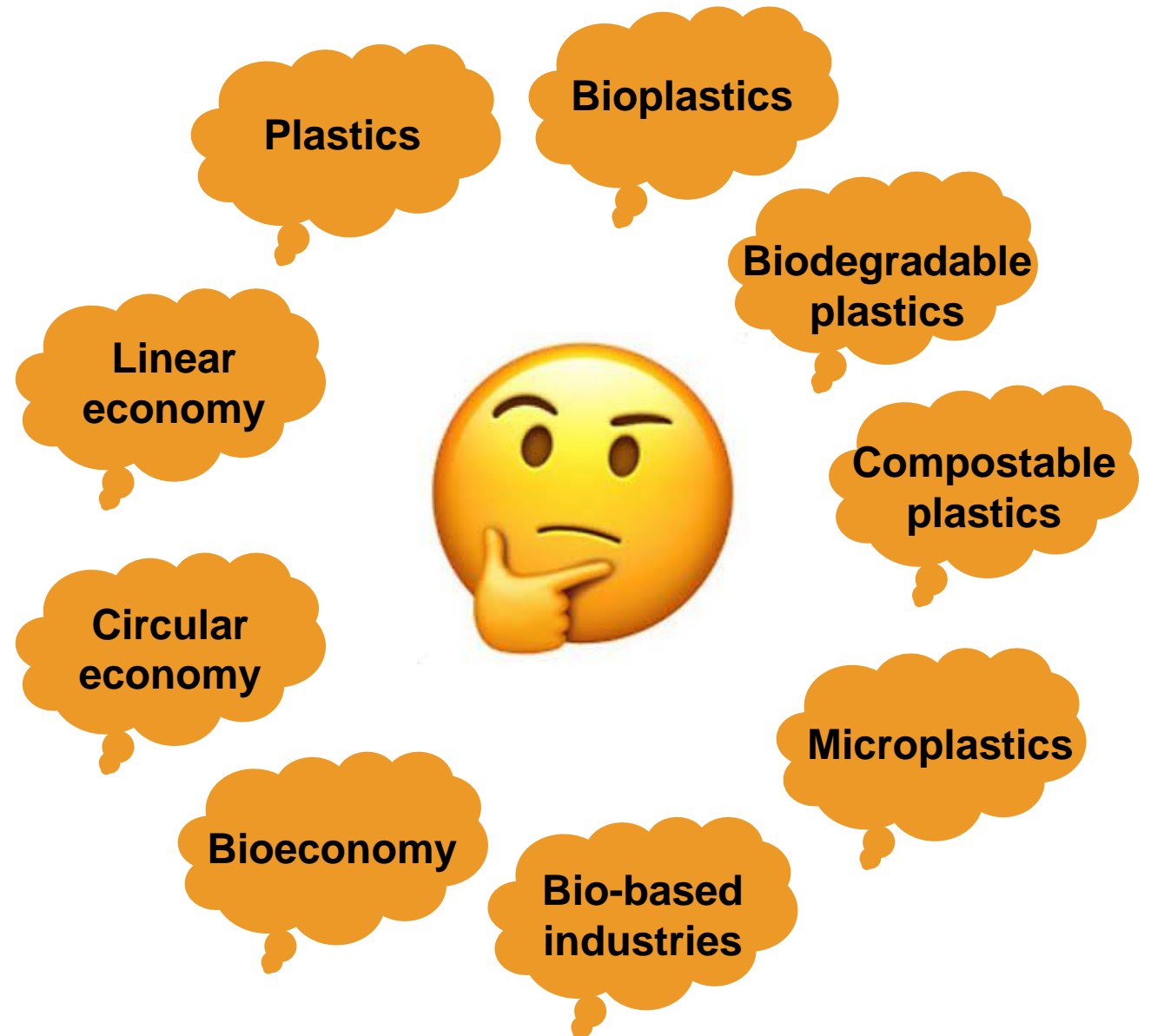
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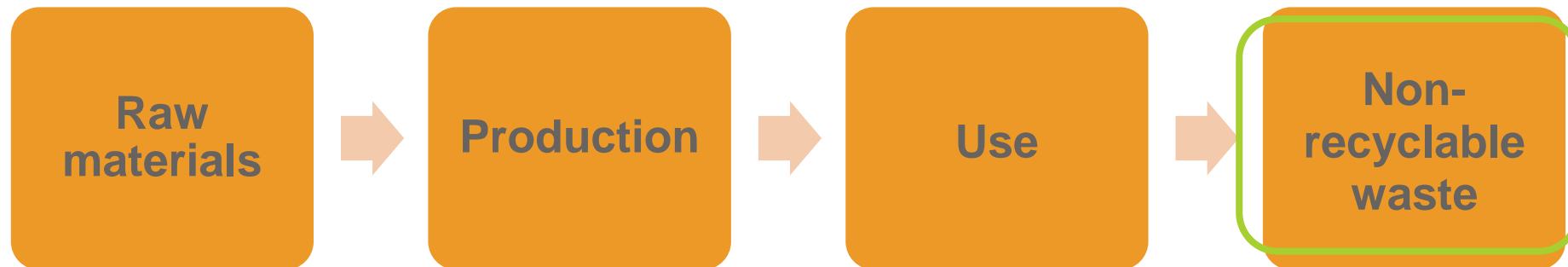




Plastic

- *Polymeric material that may contain other substances to improve performance and/or reduce costs (IUPAC)*
- In the 1960s – from fossil fuels and their derivatives
- Today - plastics make up **85%** of beach litter

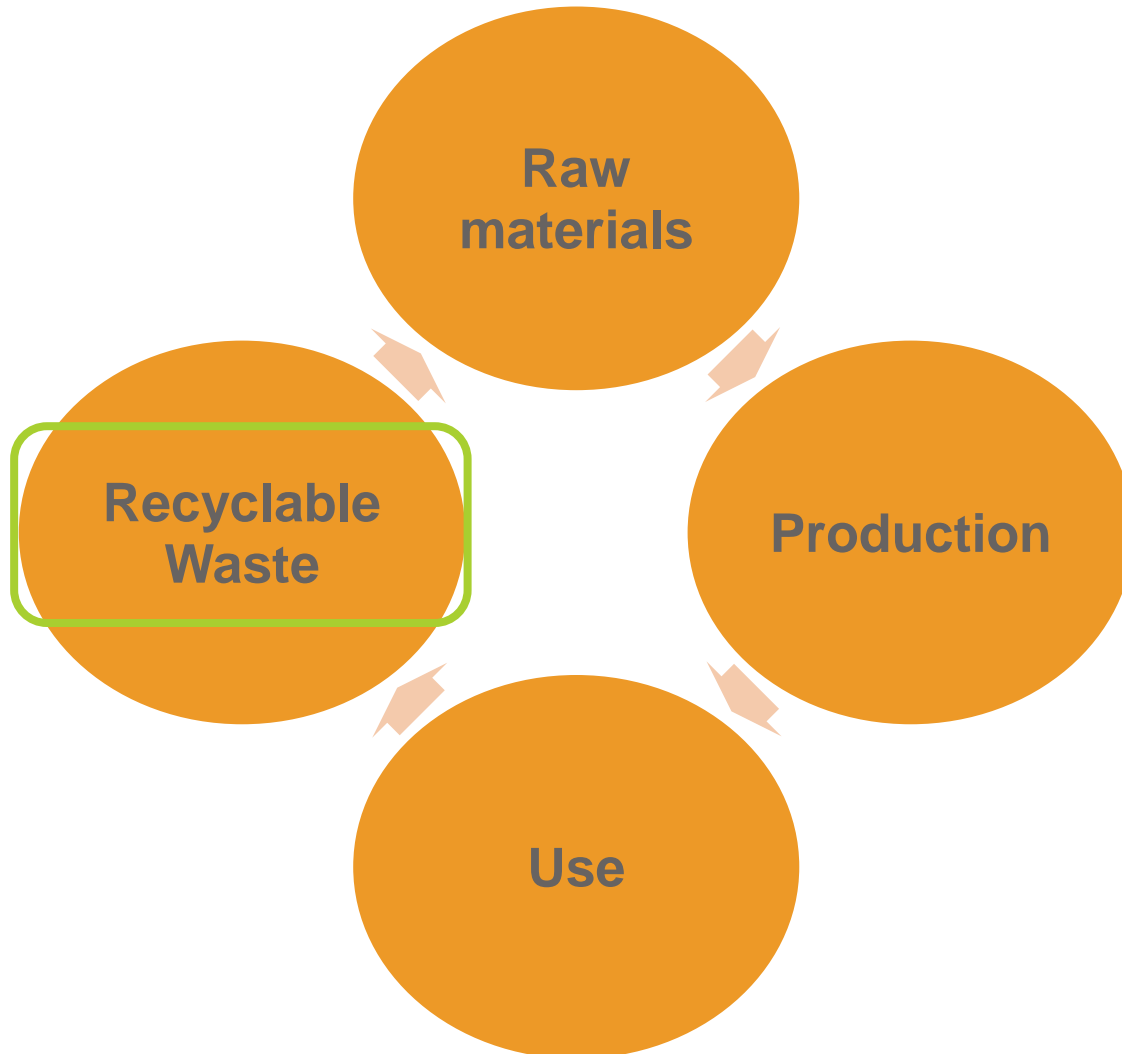
Linear economy




- Finite resources + growing human population



Circular economy

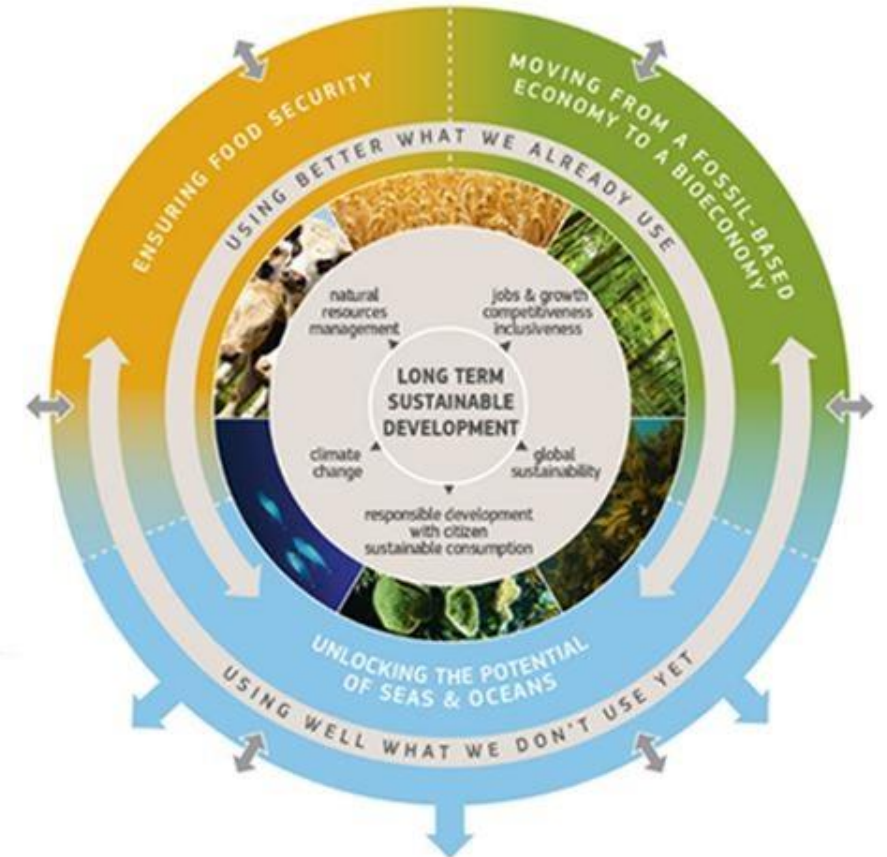


From waste to new products - Waste valorisation contributes to the transition: linear  renewable circular economy



Bioeconomy & Bio-based industries

- **Bioeconomy** – the **renewable segment** of the circular economy, including:
- **Bio-based industries** - industries that produce products and services from natural, **renewable resources**, as well as waste, rather than from finite petrochemical sources

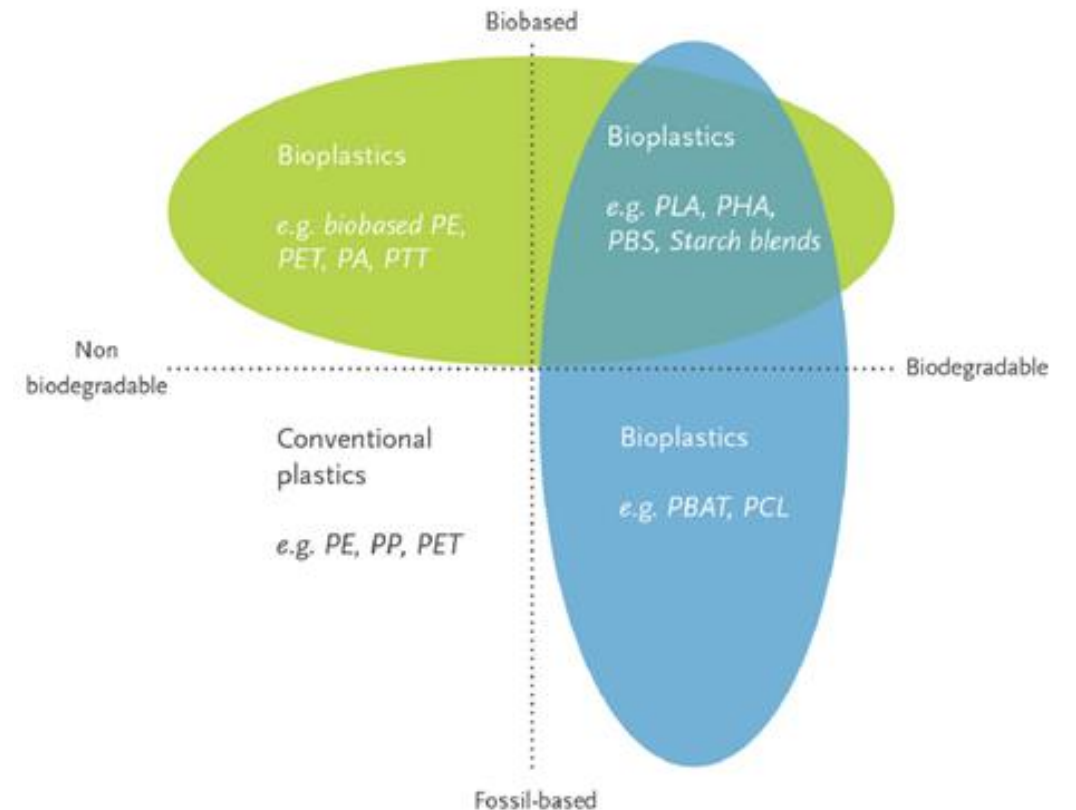




Bioplastics

- Plastics derived from **renewable biological substances** (biomass) rather than the traditional methods using petroleum

	≠ biodegradable plastics	≠ compostable plastics
Degraded by	naturally occurring microorganisms (bacteria, fungi and algae)	
Time needed	no reference	consistent with other compostable materials
End products	no reference	<ul style="list-style-type: none">CO₂, H₂O, inorganic compoundsno visible, distinguishable or toxic residues





Overview

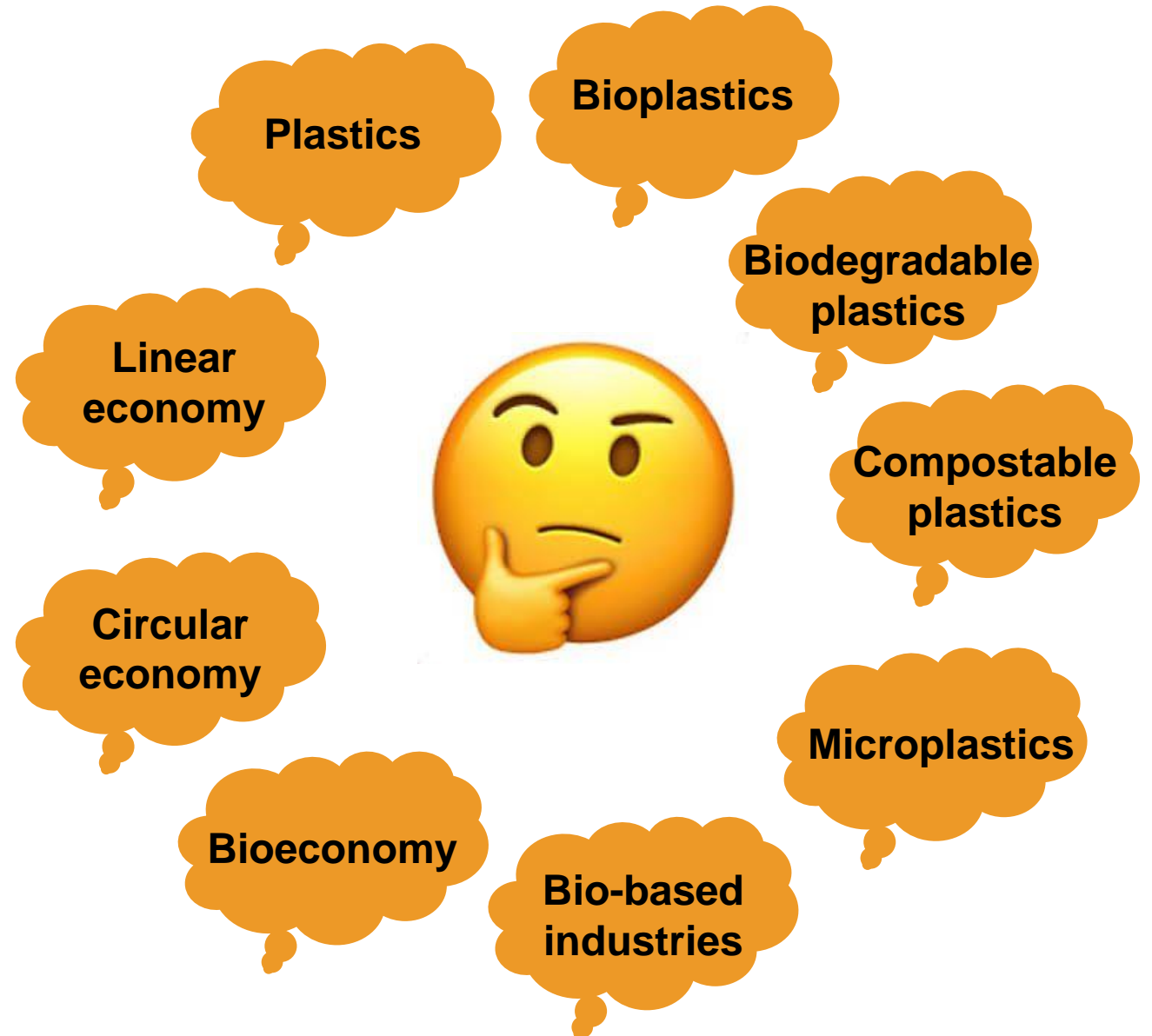
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EU strategies

- Part of the transition towards a more circular economy
 - To improve the sustainability of the EU economy
1. **EU Circular Economy Strategy** – aims to transform EU linear to circular economy (**December 2015**)
 2. **EU Plastics Strategy** – aims to transition plastics economy to respect 3R – reduce, reuse, recycle (**January 2018**)
 3. **EU Bioeconomy Strategy** – aims to develop EU sustainable and circular bioeconomy (**October 2018**)



1. EU Circular Economy Strategy

- **December 2015**
- Covering the whole life cycle from production and consumption to waste management
- Targets to recycle **75%** of packaging waste by the year **2030**



2. EU Strategy for Plastics

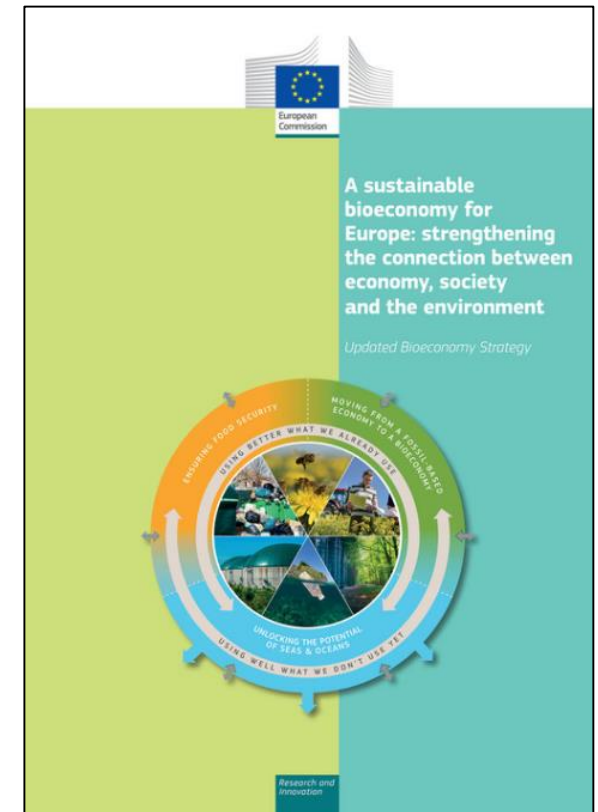
- **January 2018**
- Every year EU generate **25 M tonnes** of plastic waste
- Less than **30%** is collected for recycling.
- EU Strategy for Plastics provides a basis for :
 - ✓ Transforming the way plastics and plastics products are designed, produced, used and recycled
 - ✓ Ensuring that all plastic packaging recyclable by 2030
 - ✓ Reducing the use of single-use plastics
 - ✓ Action that could restrict intentional use of microplastics





3. EU Bioeconomy Strategy

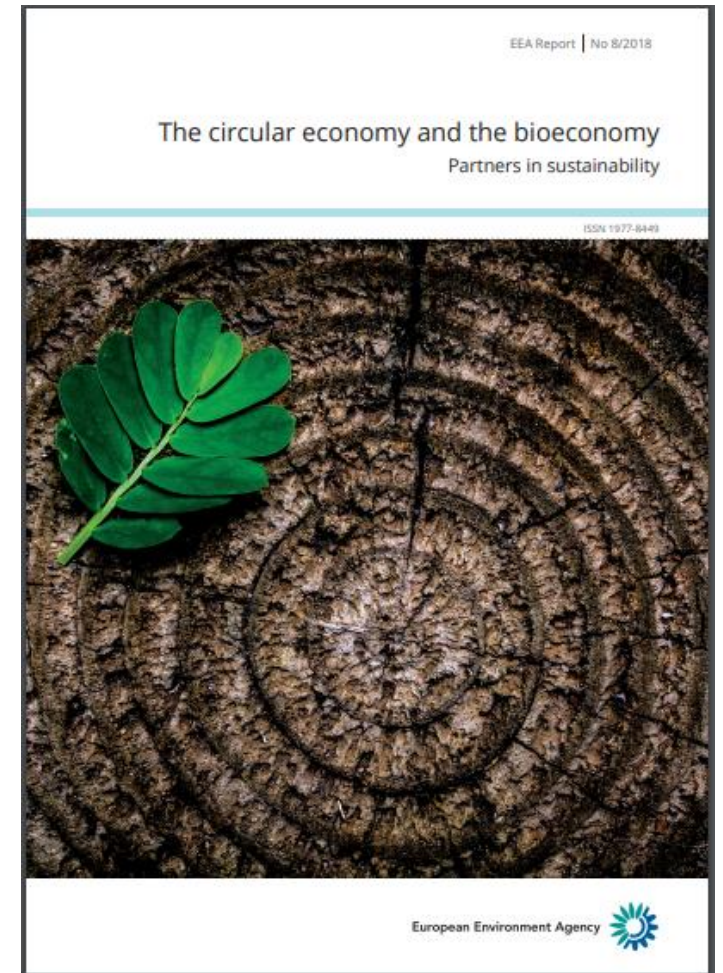
- **October 2018**
- 14 concrete measures in 2019 under 3 key objectives:
 1. Strengthening the bio-based sectors
 2. Deploying bioeconomies across Europe
 3. Protecting the ecosystem and understanding the ecological limitations of the bioeconomy
- EU total bioeconomy creates a turnover of €2 T and provides more than 18 M jobs





EEA report - The circular economy and the bioeconomy

- **August 2018**
- 3rd in a series of reports on the circular economy evaluating EU circular economy policy from an environmental perspective
- Addresses circularity aspects of bio-based products and the sustainable use of renewable natural resources, also applied to cosmetics





Why is this of interest to NOCs?

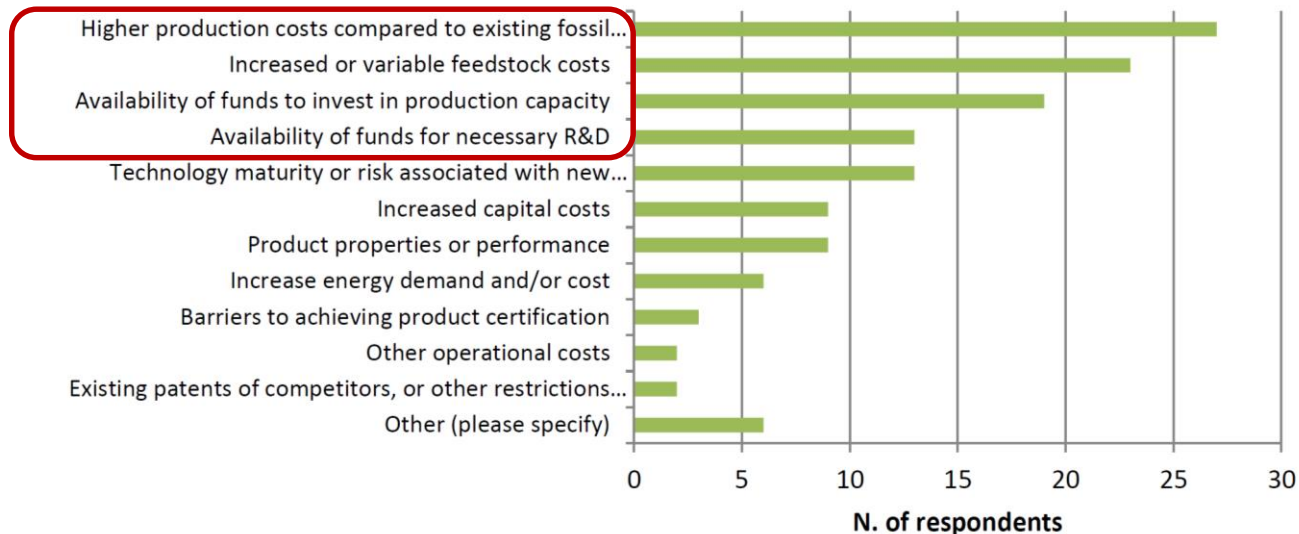
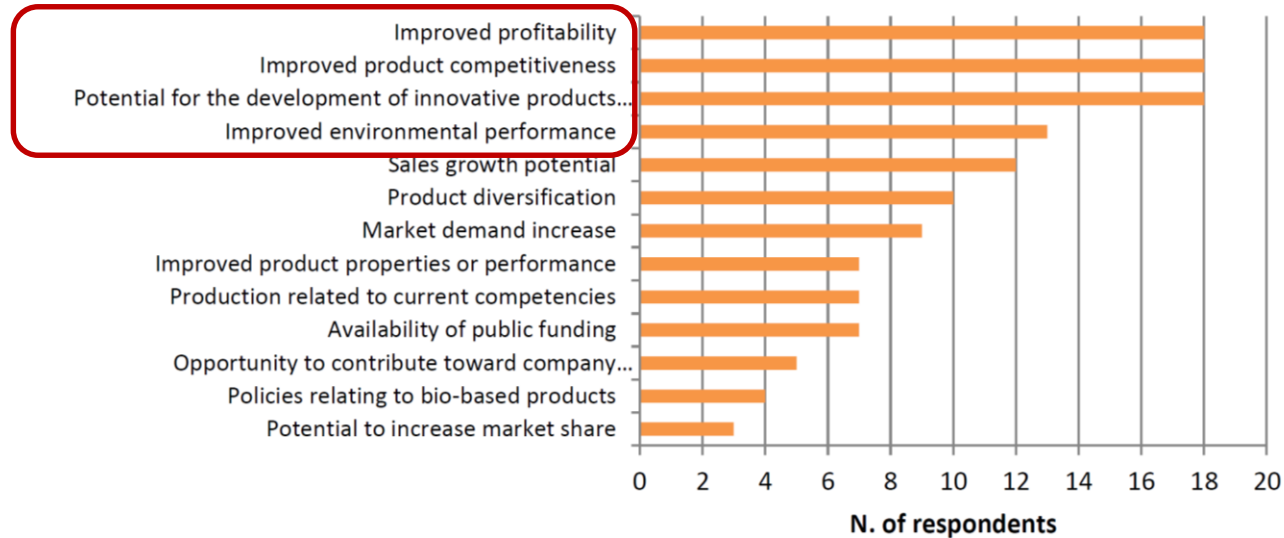
- ✓ **New innovation** - supporting increased natural share ingredients, replacement of petrochemicals, sustainable sourcing
- ✓ **Less waste** - Use of side streams for cosmetics (food by-products); optimising of manufacturing processes
- ✓ **Growing consumer interest** – increased awareness of a product's total environmental impact

Advantages – improvements to a product's environmental footprint, its sustainability profile & fostering innovation for greener solutions

- Microplastics restrictions & new packaging materials



Bio-based products development – drivers and constraints



<https://ec.europa.eu/jrc/en/publication/eu-bio-based-industry-results-survey>

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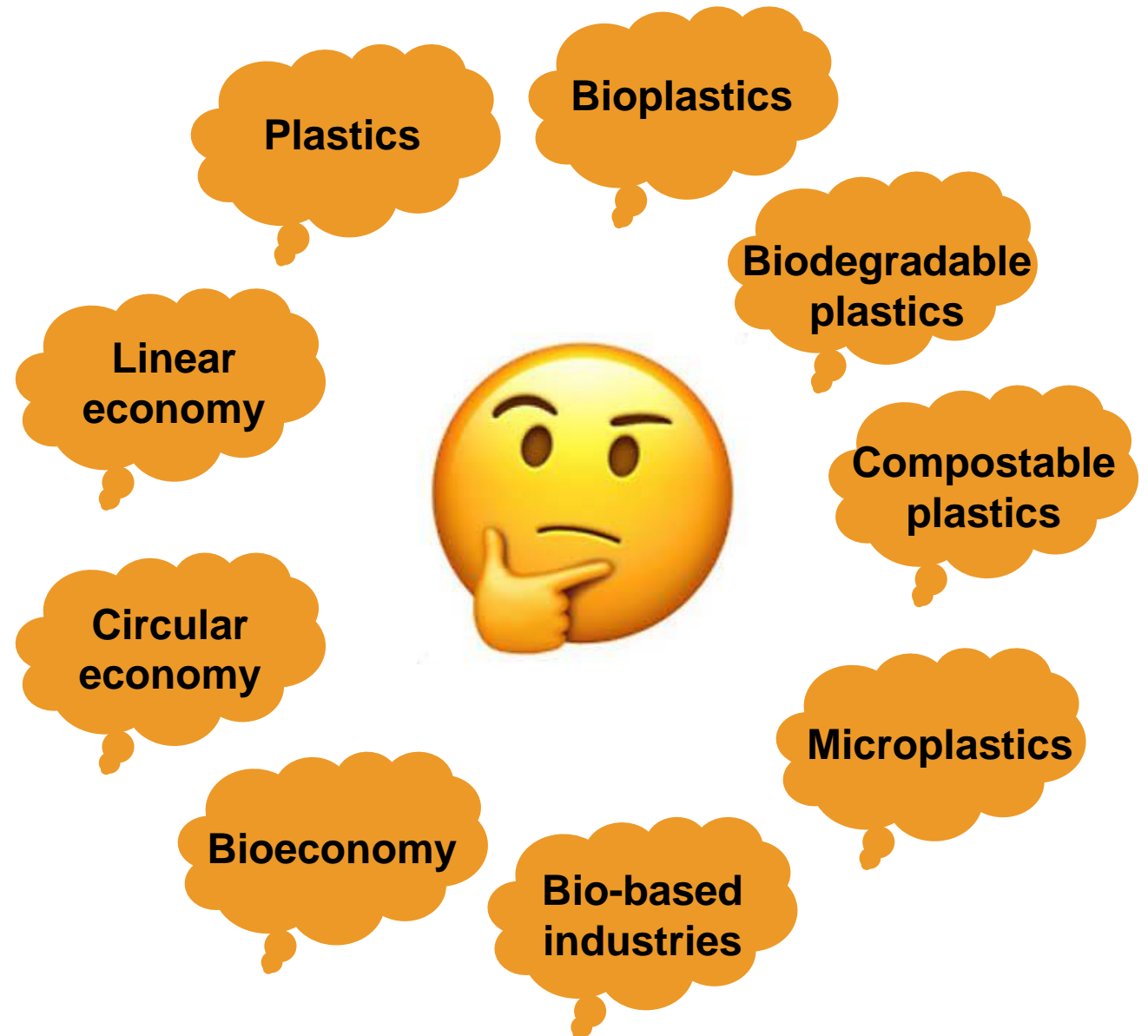
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Plastics IN cosmetics - microplastics

- Small, water-insoluble particles (< 5 mm) from synthetic plastic polymers (non-biodegradable)
- **Microbeads** in cosmetics - exfoliation in skin care or tooth polishing
- Enter water waste and pass unfiltered ending up in the sea
- **NATRUE Label criteria prohibited**
- **Natural alternatives:**
 - ✓ Inorganic minerals (quartz sand)
 - ✓ Plant Isolates and derivatives:
 - Abrasives (sucrose from sugar cane); exfoliants (finely milled fruit seeds or shells e.g. from apricot, olive, walnut); cellulose beads; waxes (Carnauba Wax); hydrogenated oils (castor oil)



Microplastics control

- **October 2015** Cosmetics Europe recommended to its members to discontinue microplastics usage by 2020
- EU Commission requested **ECHA** to prepare a proposal for possible restrictions concerning intentionally added microplastic particles under the scope of REACH – expected in January 2019
- NATRUE was invited to attend an ECHA workshop in May 2018, providing information on behalf of the natural cosmetics sector
- Some countries already ban (UK, France, Sweden, Canada, Taiwan, NZ) or are preparing it (Belgium, Italy, India, South Africa)





Plastics AROUND Naturals - Cosmetic Packaging

- NATRUE Packaging requirements
 1. Kept to a **minimum**
 2. Designed for **multiple uses**
 3. **Recyclable packaging materials**, possibly of renewable raw materials
 4. **Halogenated plastics prohibited**
 5. **Pressurised gas packs** only with Air, N₂, O₂, CO₂, Ar
- NATRUE SC is currently reviewing new/updates to the Label criteria

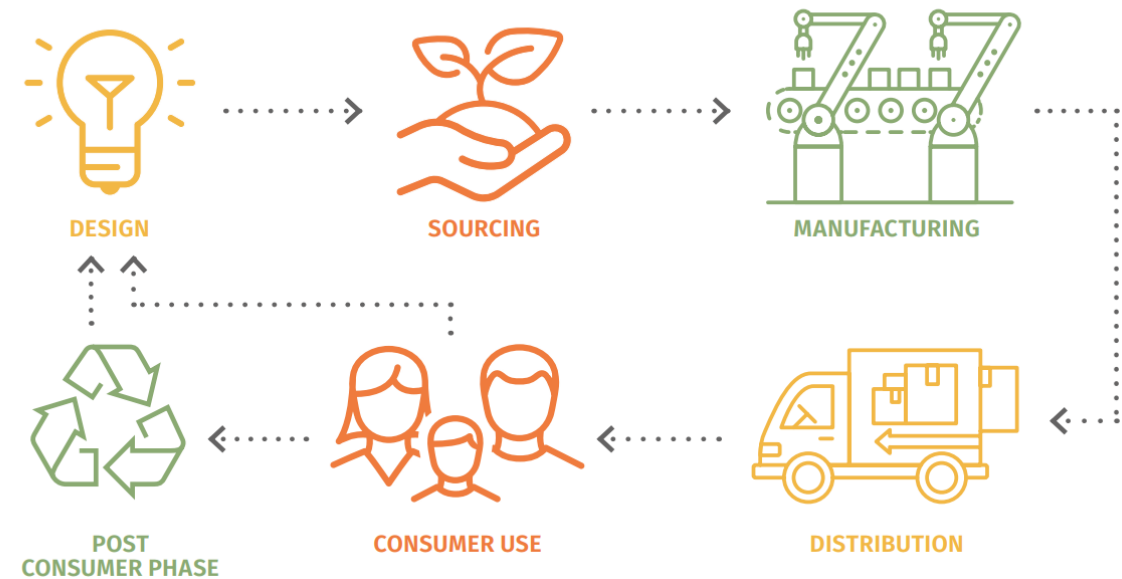




Reuse, renew, recycle, or replace?

- **Practical** considerations – glass?
- **Sustainability** considerations - glass vs. plastics?
- **Safety** considerations – migration between product and packaging
- **Reuse** - not all plastics are (easily) recyclable & not all PC material is 100% reusable for the necessary (cosmetic) quality
- **Drivers** for change - changes in legislation and consumers demands

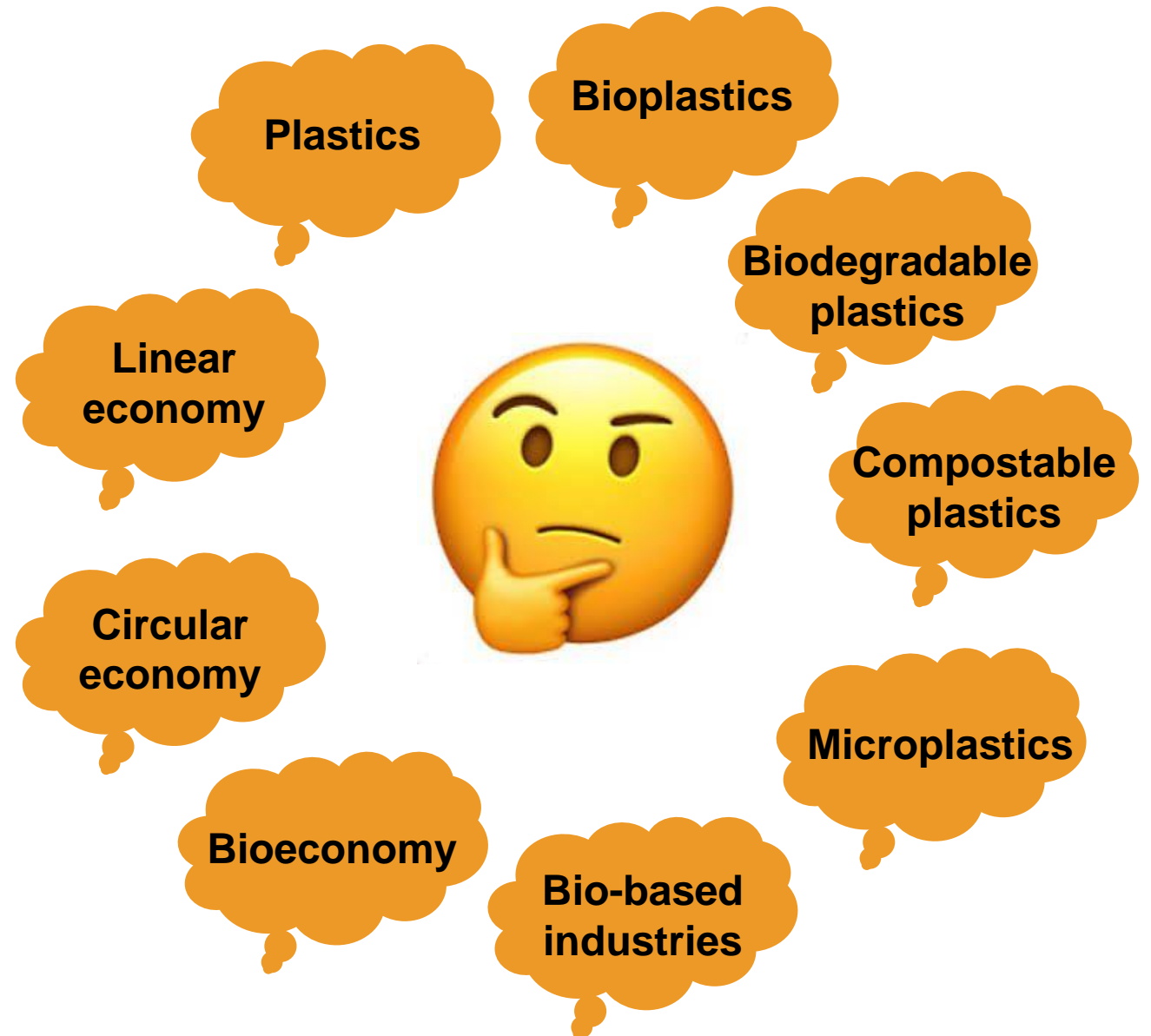
COSMETIC PRODUCT LIFE CYCLE



Source: Cosmetics Europe

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NATRUE for sustainability

- Rapid population growth, especially in the cities → increase of urban waste
- EU inhabitant generates **0.5T MSW / year**
- **40-50% is organic waste** - useful raw materials
- → **100 million T of biomass / year** in the EU
- **NATRUE involvement in the EU industry consortium**

“... to help solve environmental pollution and contribute to the transition to a renewable circular bio-economy through sustainably converting municipal waste into targeted products like cosmetic packaging.”



EU project URBIOFIN

- From **municipal solid waste** to → **cosmetic packaging**
- Funded by BBI JU under EU Horizon 2020 (2017-2021)



Horizon 2020
European Union Funding
for Research & Innovation

- www.urbiofin.eu



FROM **URBAN** WASTE TO **BIOPRODUCTS**
THROUGH **BIOREFINERY**

URBIOFIN objective

- **Biorefinery** converting 10 tonnes of OFMSW per day into different **bioproducts with a high industrial interest**:

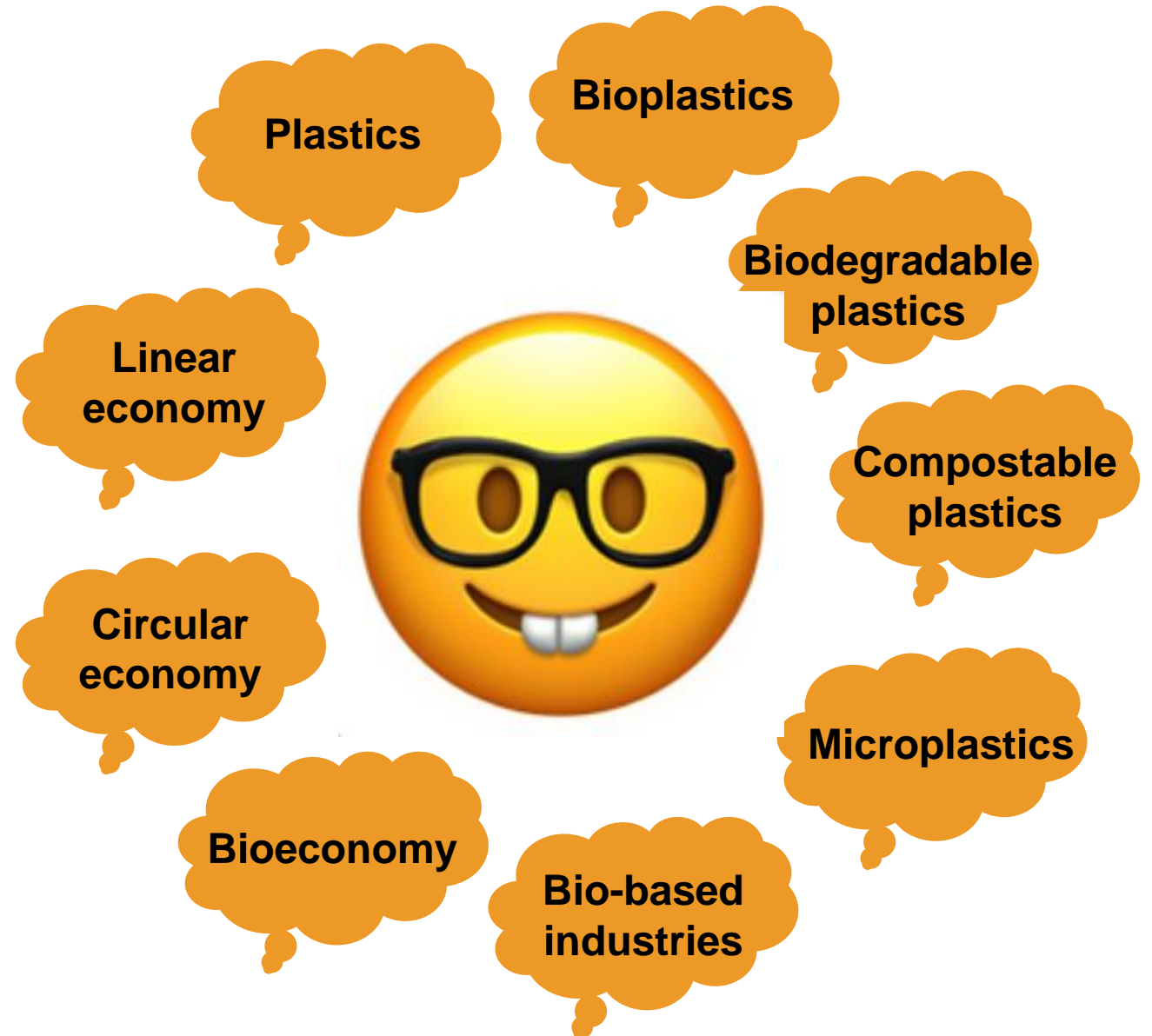
➤ Contributing to:

- ✓ Solving **environmental pollution**
- ✓ Transition to a **renewable circular bio-economy**
- ✓ Reduction of the **biodegradable fraction** of MSW sent to landfill
- ✓ Environmental and socio-economical **sustainability**
- ✓ Implementation of the EU **Bioeconomy Strategy**



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True Friends of
Natural and Organic
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Videos:

EN -

<https://www.youtube.com/watch?v=8eSFaY39AdE>

DE -

<https://www.youtube.com/watch?v=leVvWdsRFVM>

FR -

<https://www.youtube.com/watch?v=cuWIN-sRFlo>

IT -

<https://www.youtube.com/watch?v=9DchZRnYHPc>





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*Many thanks for
you attention!*

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