

TÜV AUSTRIA GROUP

FROM CERTIFICATION TO COMMUNICATION THE ROLE OF A CERTIFICATION BODY

Philippe Dewolfs | TÜV AUSTRIA | Copenhagen | 27 February 2020

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Survey ING 2019 : EU – US – AUS (#15146)

What do you see as the most pressing problem for the environment?

Problem	Percentage (EU)
plastic waste	~34%
climate change	~33%
air pollution	~14%
depletion of natural resources	~11%
loss of biodiversity	~5%
don't know / none of these	~3%

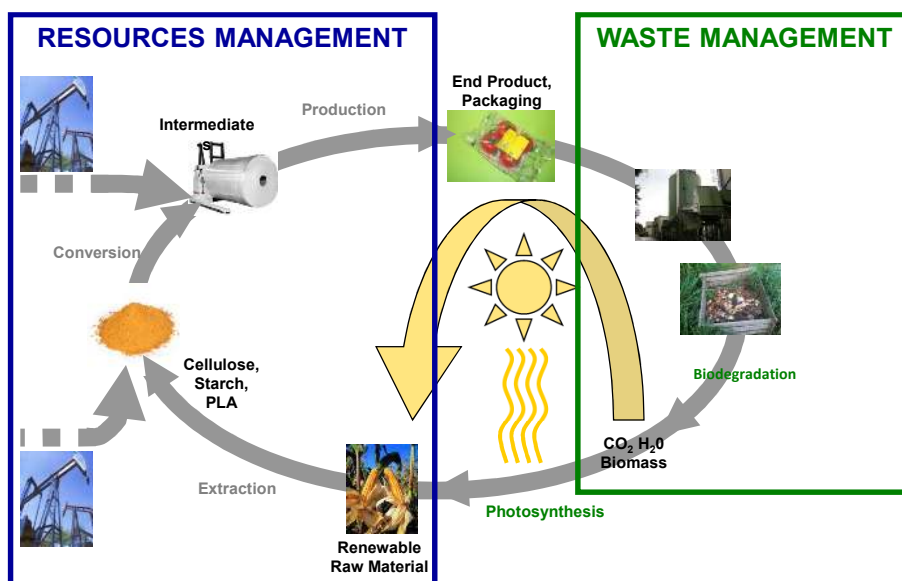
Source : ING International Survey • Consumer choices in the circular economy • Nov 2019 • 15146 people surveyed • 13 EU countries + US + AUS
Excepted in Romania, plastic waste and climate change are the most pressing problems (in Romania, air pollution is the most pressing one)

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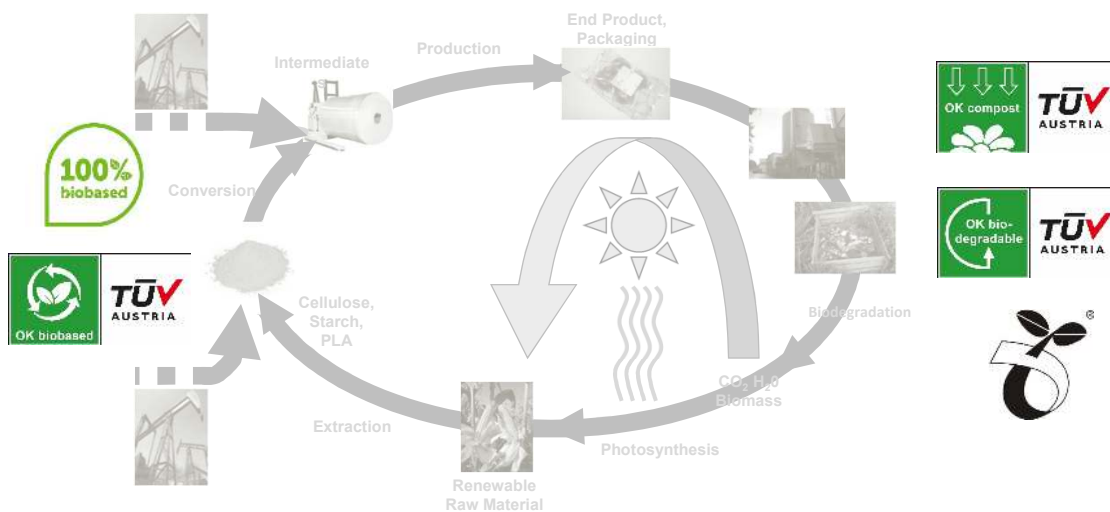
1. Harmonise

BIOplastics ?
BIOdegradable ?
BIObased ?

bio-based or biodegradable / compostable ?

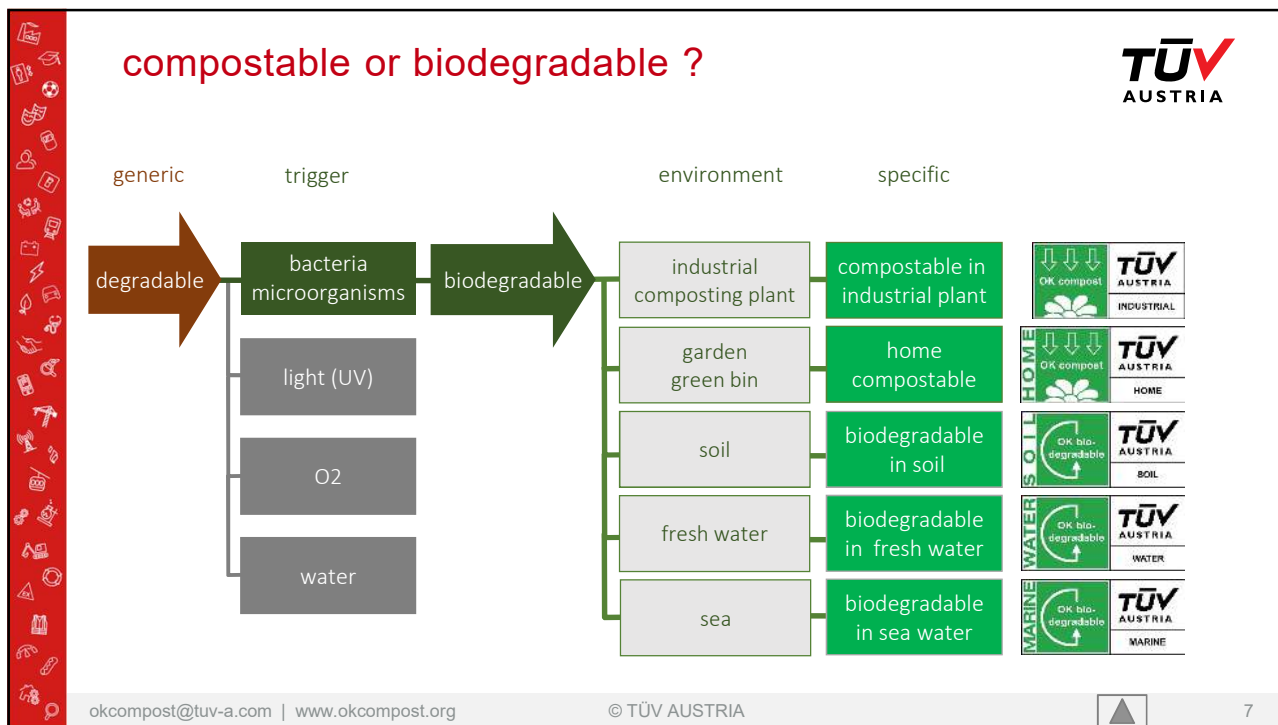


bio-based or biodegradable / compostable ?



biodegradable & compostable





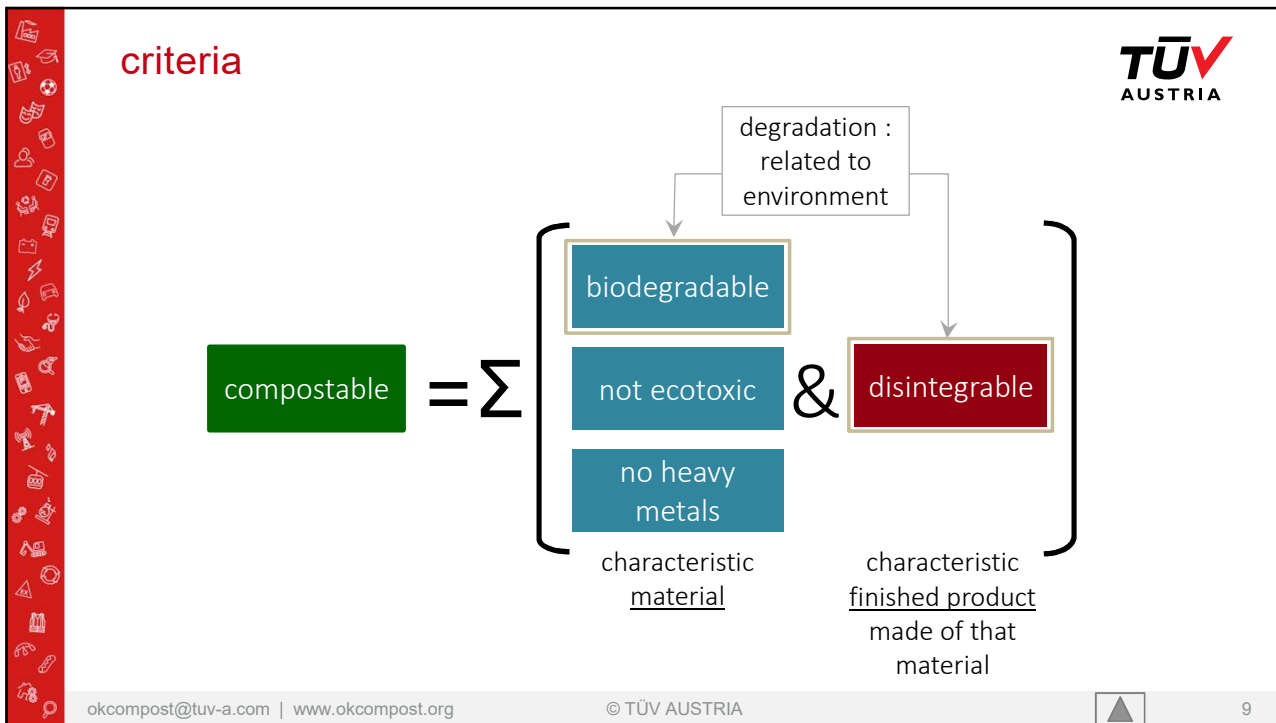
compostable or biodegradable ?

The table provides specific criteria for biodegradation and disintegration. It is organized by testing temperature (high vs. ambient) and end-of-life management (managed vs. unmanaged). Biodegradation is measured as a percentage (>90%) and disintegration as a percentage (>90%). Specific timeframes are listed for each category. The table also includes a section for 'static' (solid - fungi) and 'dynamic' (liquid) materials, which are linked to specific TÜV AUSTRIA certifications.

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<u>Biodegradation</u> > 90%	<u>Disintegration</u> > 90%	Testing temperature	end-of-life	Material Type	Certification
≤ 6 months	≤ 3 months	high 40 – 70 °C	managed	"static" - solid - fungi	INDUSTRIAL
≤ 12 months	≤ 6 months	"ambient" 20 - 30 °C	unmanaged	dynamic - liquid	HOME
≤ 24 months	/				SOIL
≤ 8 weeks	/ (option soluble)				WATER
≤ 6 months	12 weeks				MARINE

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tests

2. Evaluate

- ✓ Biodegradation (chemical)
- ✓ Disintegration (physical)
- ✓ Heavy metals
- ✓ Ecotoxicity

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compostable products : market



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- **Short-live**, thin, not recyclable/recycled products
- Products **facilitating the delivery of bio-waste** to composting centres

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bio-based content

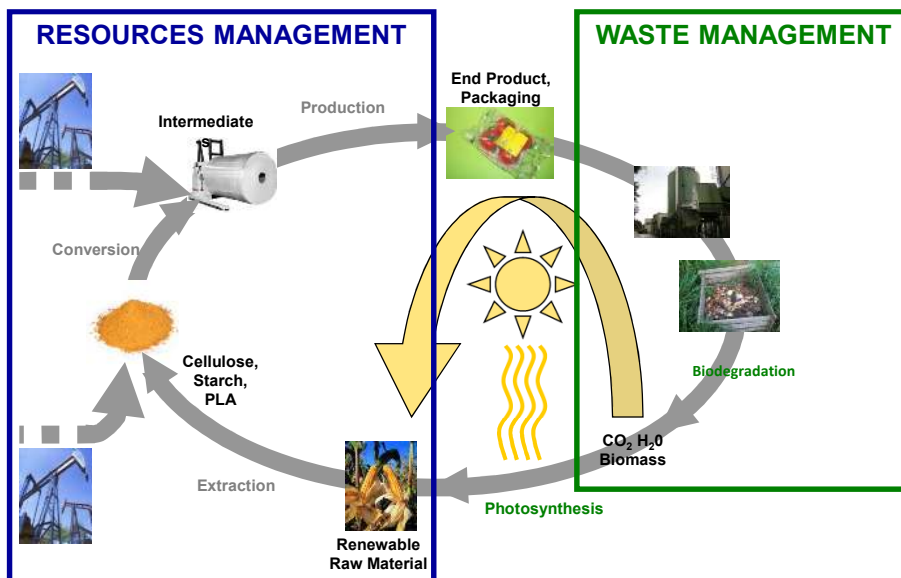
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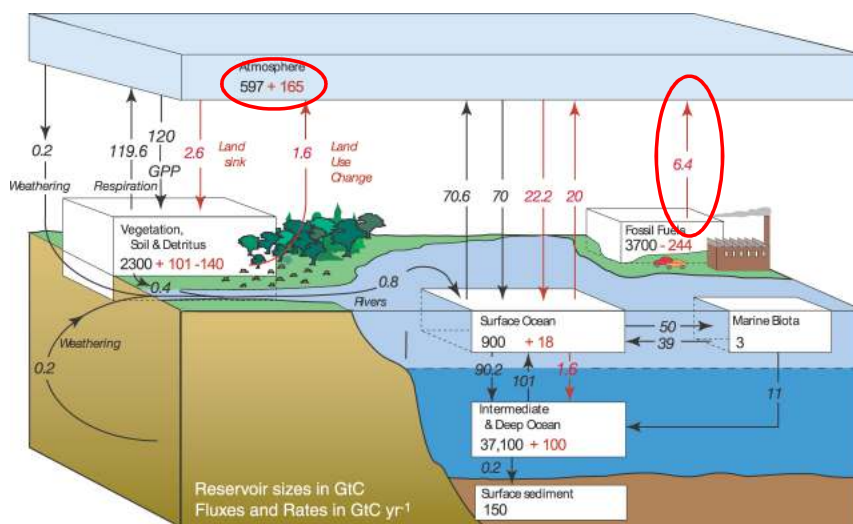
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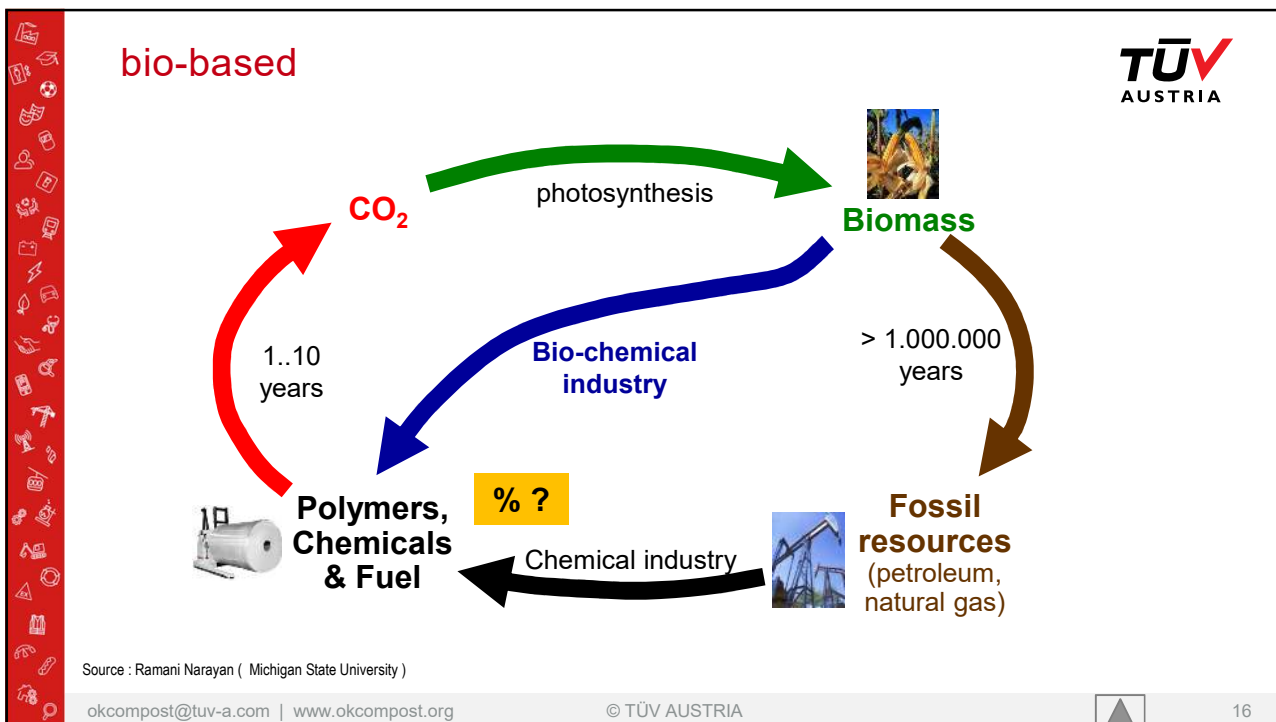
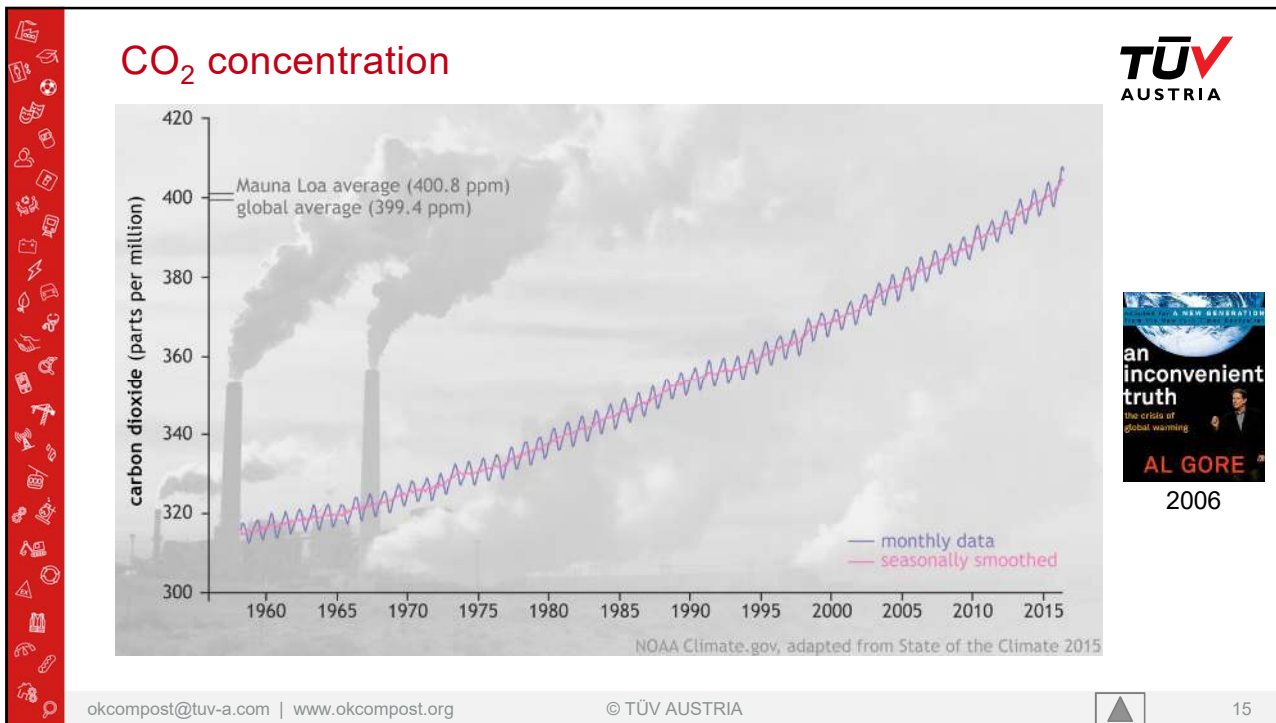
bio-based or biodegradable / compostable ?



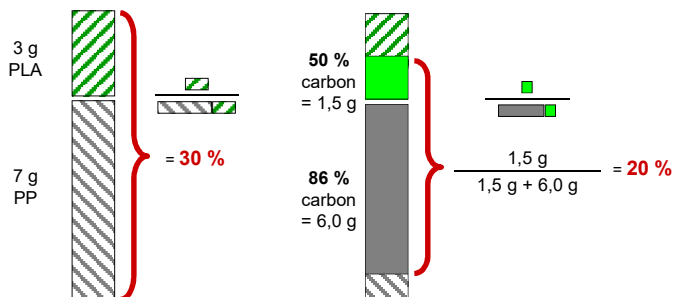
Carbon flux



Detailed view of budgets and fluxes in the global carbon cycle in the 1990s. Pre-industrial or 'natural' values are given in black, anthropogenic values in red. Source: IPCC



bio-based content vs bio-based carbon content

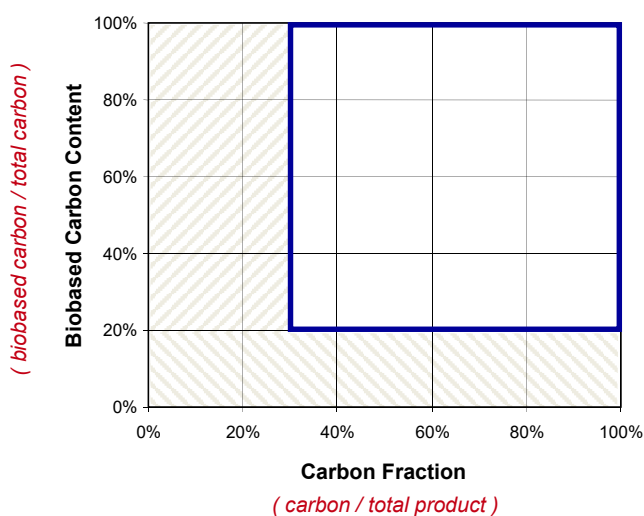


EN 16785-1
bio-based content
(since 2015)

ASTM 6866 – EN 16640
bio-based carbon content
(since 2006)



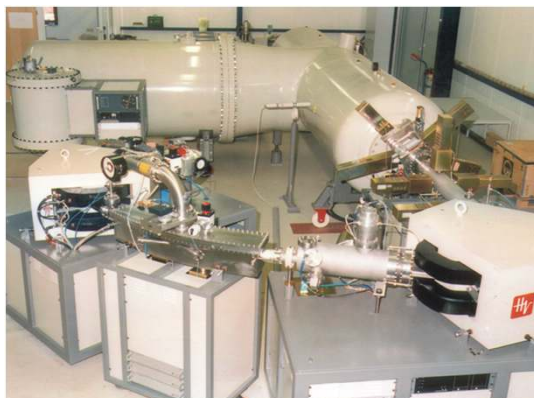
bio-based carbon content & carbon fraction



tests



- ✓ Liquid Scintillation Counting (LSC)
- ✓ Accelerator Mass Spectrometry (AMS) & Isotope Ratio Mass Spectrometry (IRMS).

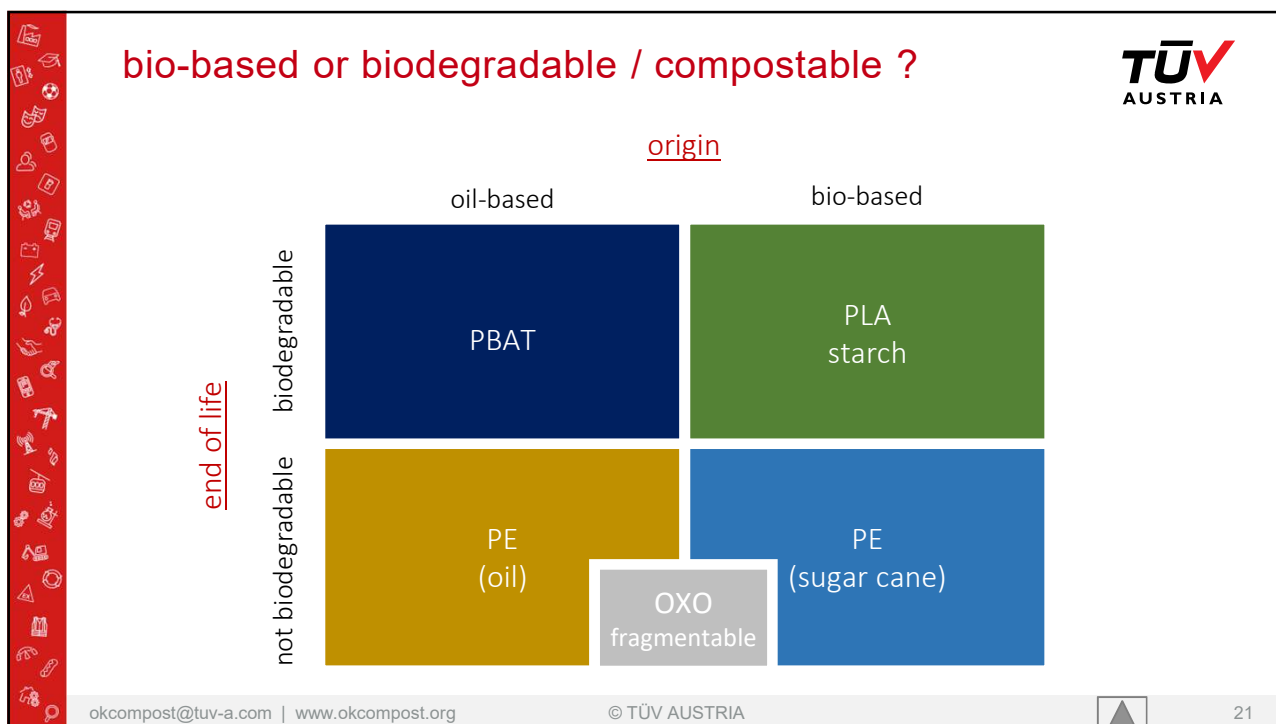


biobased products : new market



- Historical market (bags / packaging / catering)
- + **Long life** products





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certification
&
communication

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VISION & MISSION


- ✓ TÜV AUSTRIA is a leading, impartial and independent service provider for integrated management of safety, quality, environment and resources with international orientation
- ✓ Autonomy and impartiality are the principles of our actions in the service of safety.
- ✓ We are committed to performing our services in a socially and environmentally responsible and ethical way.
- ✓ Our mission is the sustainable improvement of safety and quality.


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assessment & monitoring





3. Certify

```

graph TD
    Application([Application]) --> Assessment[Assessment]
    Assessment --> Conform1{Conform?}
    Conform1 -- no | --> CA1[Corrective Actions]
    CA1 --> Assessment
    Conform1 -- yes | --> Certification[Certification]
    Certification --> WWW[www]
    Certification --> Market[Market Monitoring]
    Market --> Conform2{Conform?}
    Conform2 -- yes | --> Market
    Conform2 -- no | --> Suspension[Suspension]
    Suspension --> CA2[Corrective Actions]
    CA2 --> Conform2
    
```

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from technic to logo

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4. Communicate

	Technical content	Easy to understand
Mark - Logo (B2C)	-	★★★★
Certificate (B2B)	★	★★★
Assessment report	★★★	★★
Test report	★★★★	★



A conformity mark translates complex technical matters in an easy-to-understand message

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certifiable or not ?

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Y Yes

Y+ Yes with additional requirements (technical)

Y! Yes with restriction (communication)


N Not certifiable

compostable vs biodegradable




OK compost : **Y**
OK biodegradable : **N**

origin vs end of life



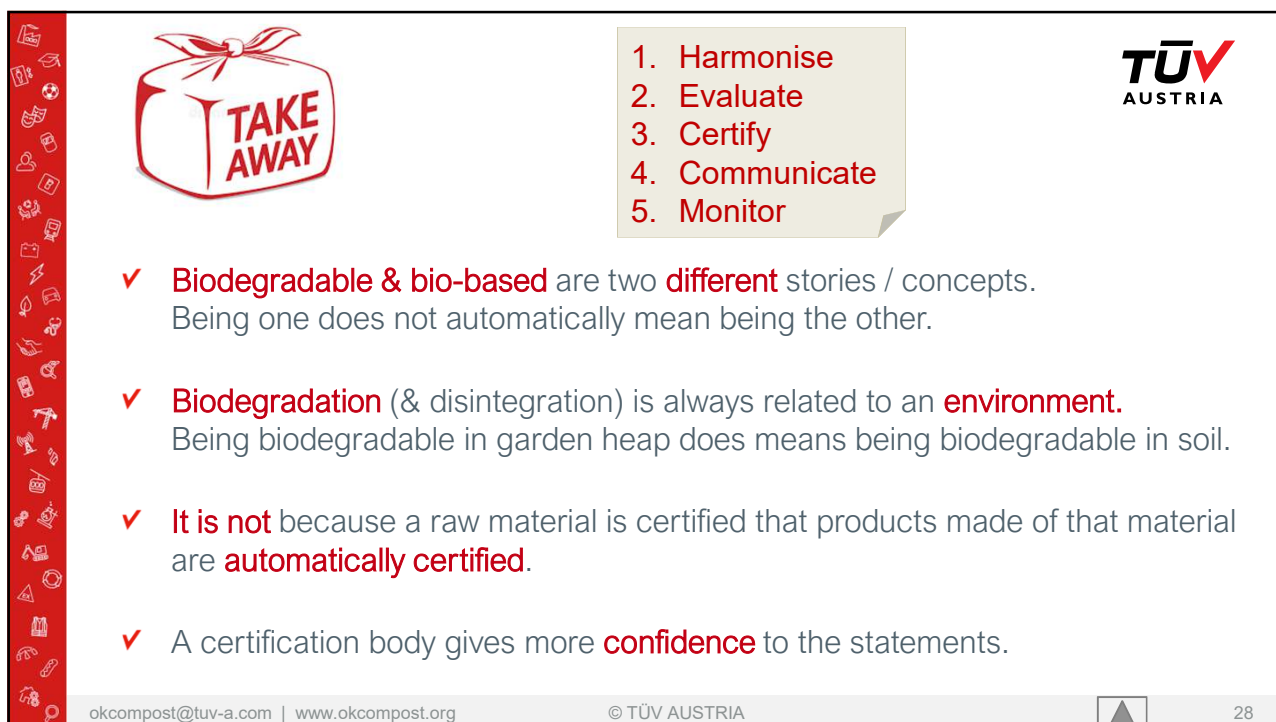
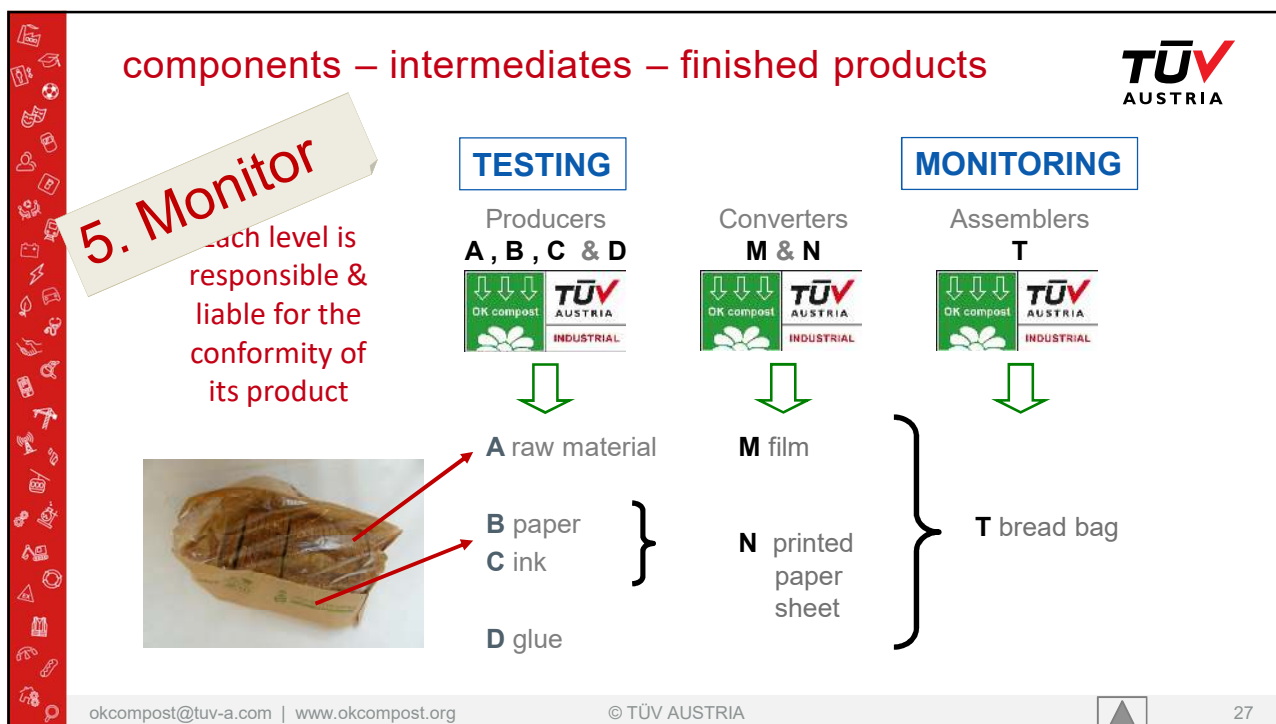
OK compost : **N**
OK biobased : **Y**

finished product vs dust / resin



tyre : OK biodegradable MARINE : **N**
dust : OK biodegradable MARINE : **?**

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education first !



The sea begins here, do not litter

biodegradability is never an excuse for littering !

Thank you

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