

# The Bioplastics Puzzle

Fitting Sustainability into Practice



# Plastics care for Future

FKuR Background & Vision

## Nature as guideline – Plastic as passion – Customers as partners

- **Who we are:** Medium-sized, private corporate group passionate about developing, producing, and distributing plastics and compounds designed for diverse, global end-of-life applications.
- **What we do:** Tailored plastic solutions, focusing on biodegradable, bio-based, and recycled materials, prioritizing domestic end-of-life solutions and addressing evolving societal needs.



# What we supply: Versatile Polymer & Compound solutions

## BIODEGRADABLE

## NON BIODEGRADABLE

BIO  
BASED



Bioplastics, e.g. PLA, PHA, PBS

Eastlon



Bioplastics, e.g. biobased PE, PET, PA, PTT

FOSSIL  
BASED

Bioplastics, e.g. PBAT, PCL



Conventional Plastics, e.g. PE, PP, PET







## Material Selection

Material selection for your circular product – we support you with confidence and experience!

## Material Development

From your idea to a sustainable production of application-oriented sustainable plastic resins.



## Technical Support

Available at any time with technical know-how to answer questions about properties, processing and recycling!

## Marketing

With attention to detail: together with our customers we find the right marketing message!

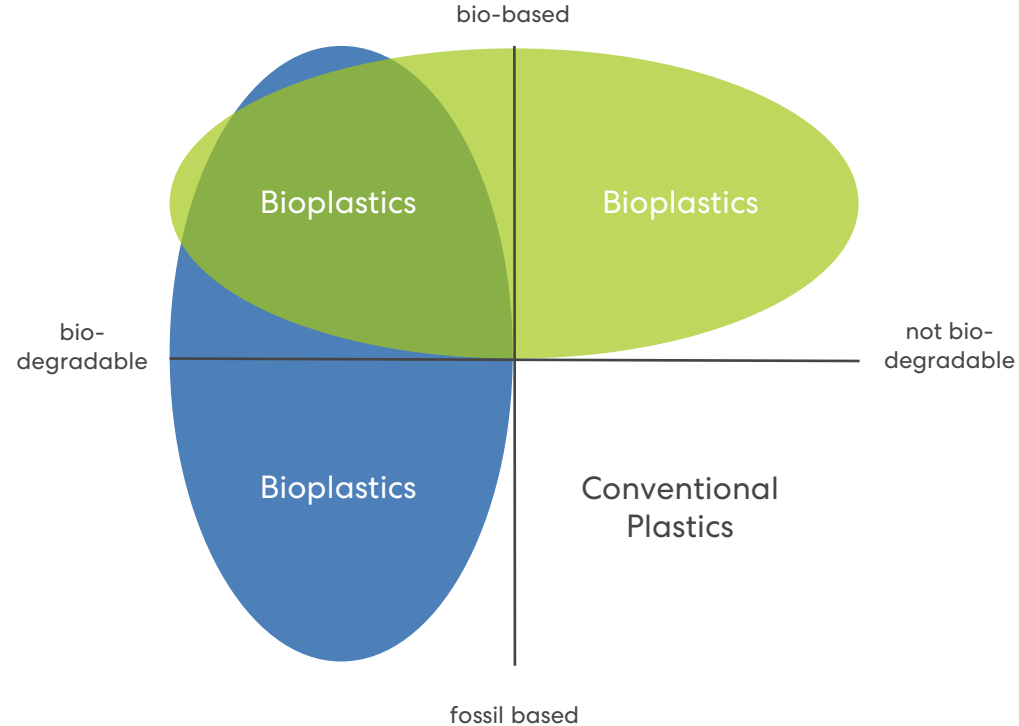


# Bioplastics

## Background Information

Bioplastics are divided into three product groups:

- Bio-based, non biodegradable
- Bio-based, biodegradable
- Fossil based, biodegradable



# Definition: Bioplastics

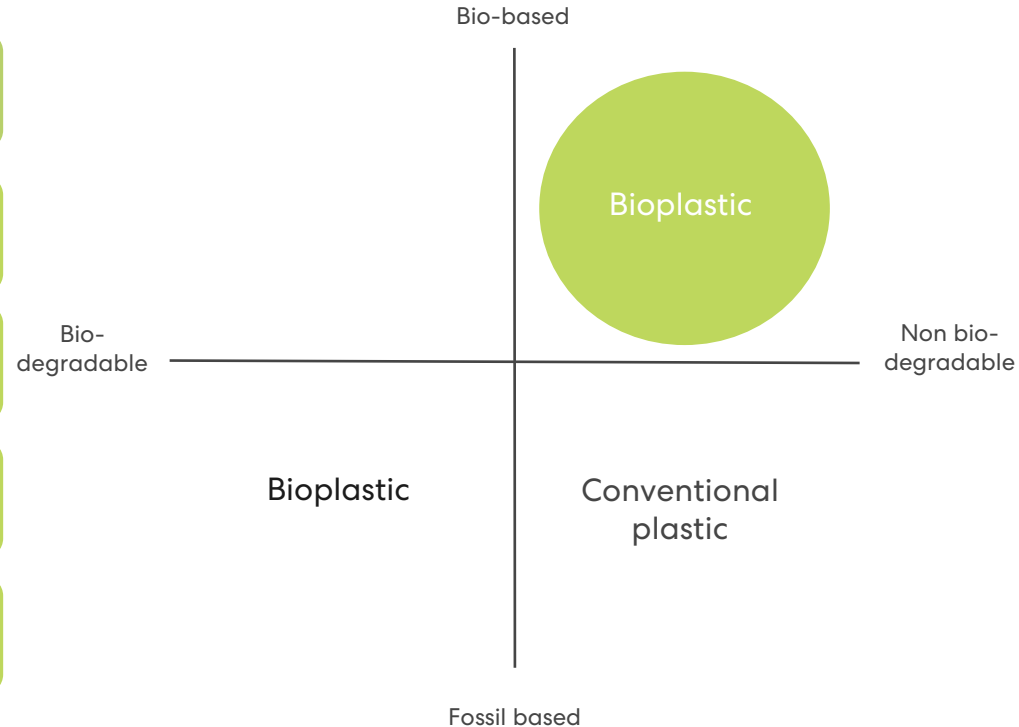
## Characteristics:

identical chemical structure

same polymer properties

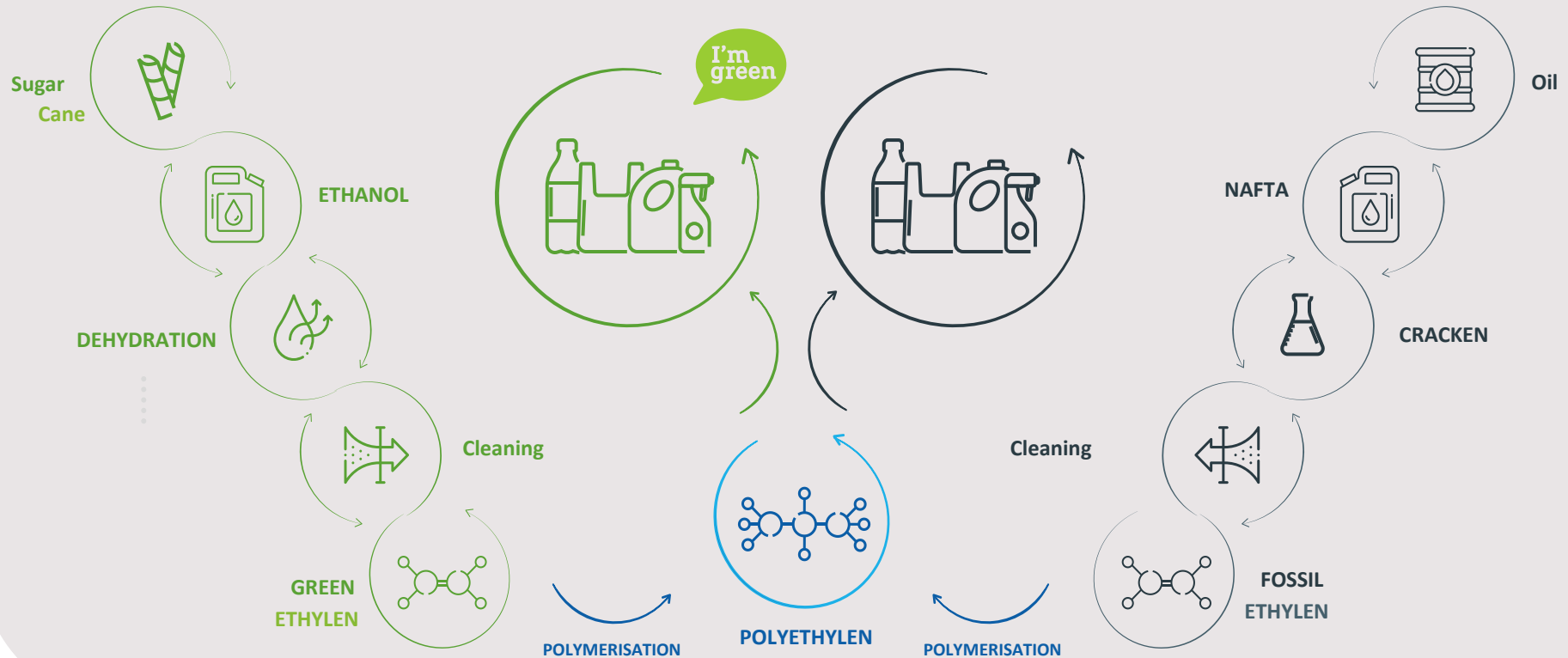
analog processing

same application properties



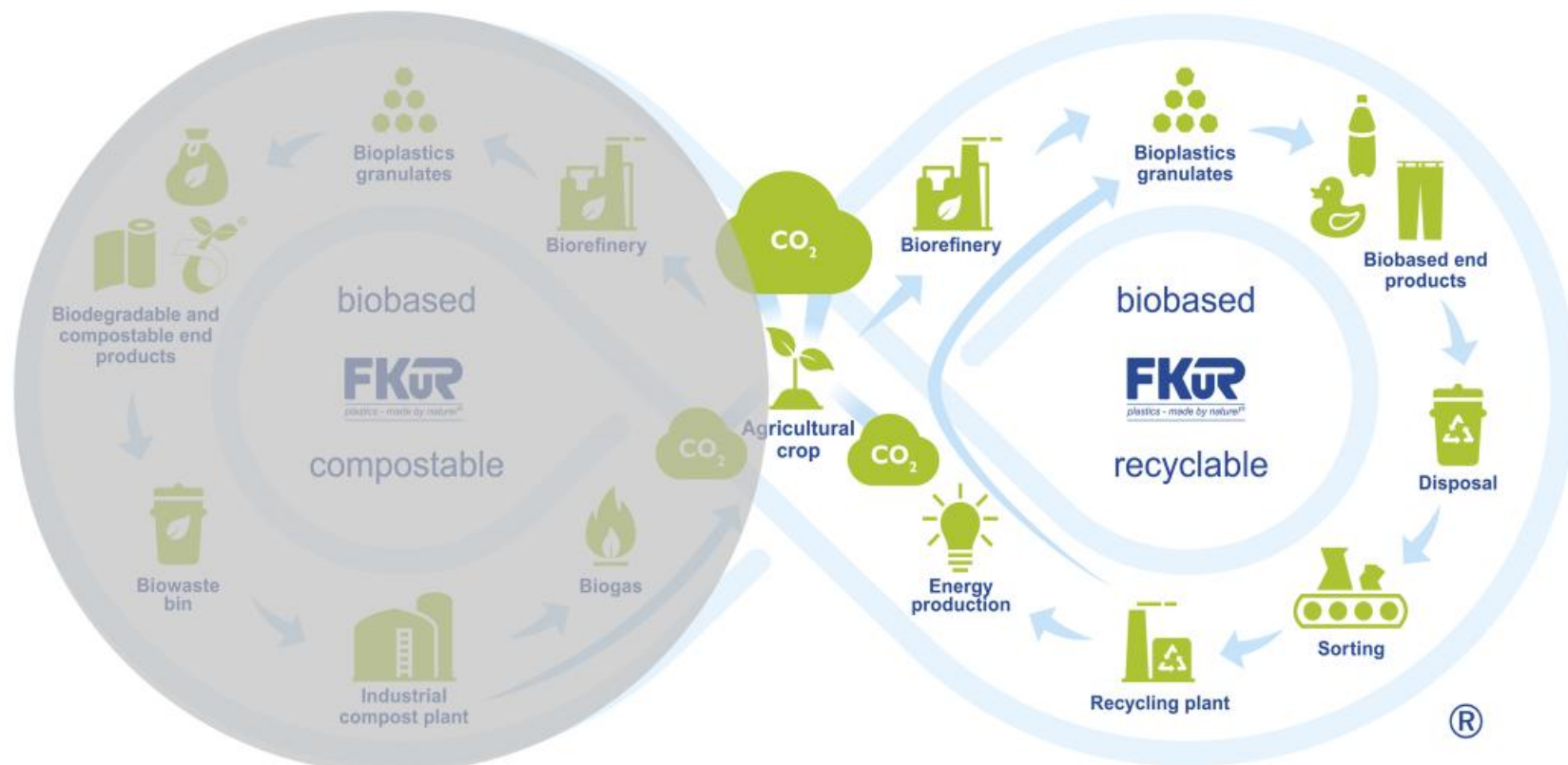


# Example: production route for bio-based PE vs. fossil PE



Source: Braskem

# Approach: FKUR's view of closing the natural loop





## Product example





# Product example





## Advantages

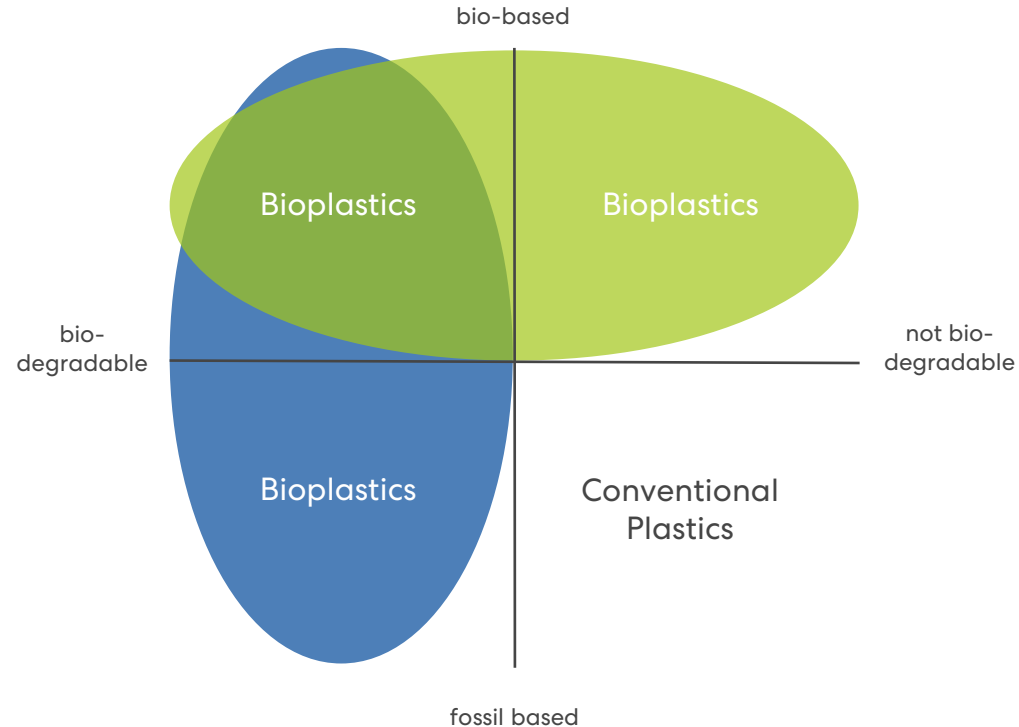
- Easy change - drop-in solution
- Identical material properties
- Compatible with circular economy
- Favorable CO2-Footprint
- In accordance with EU Strategy 2030
- Many options for communication

## To keep in mind

- No differences in visual and haptical appearance
- General reservations (e. g. land use, food competition)
- Not biodegradable
- High marketing effort

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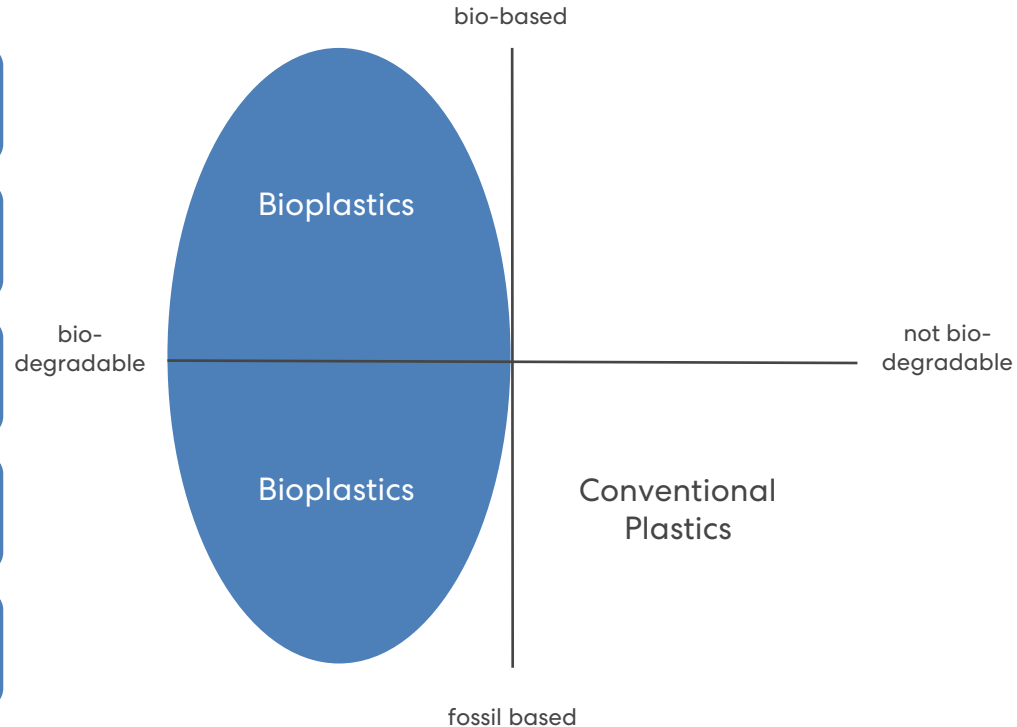
## Characteristics:

special material group

different properties

adapted manufacturing process

alternative disposal possibilities



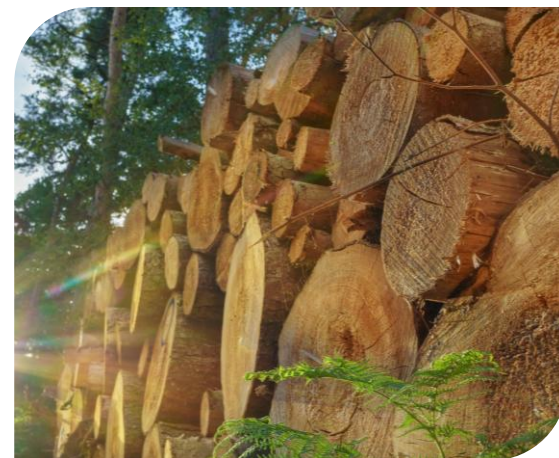
# Biodegradability depends on thickness and time spans



Compostable



Compostable



Biodegradable,  
but not compostable

## Product example





## Product example



## Product example





## Product example

**FKR**  
plastics - made by nature®



## Advantage



- Bio-based and biodegradable (compostable)
- Closing natural cycles
- Organic recycling
- In accordance with the EU 2030 strategy

## Keep in mind



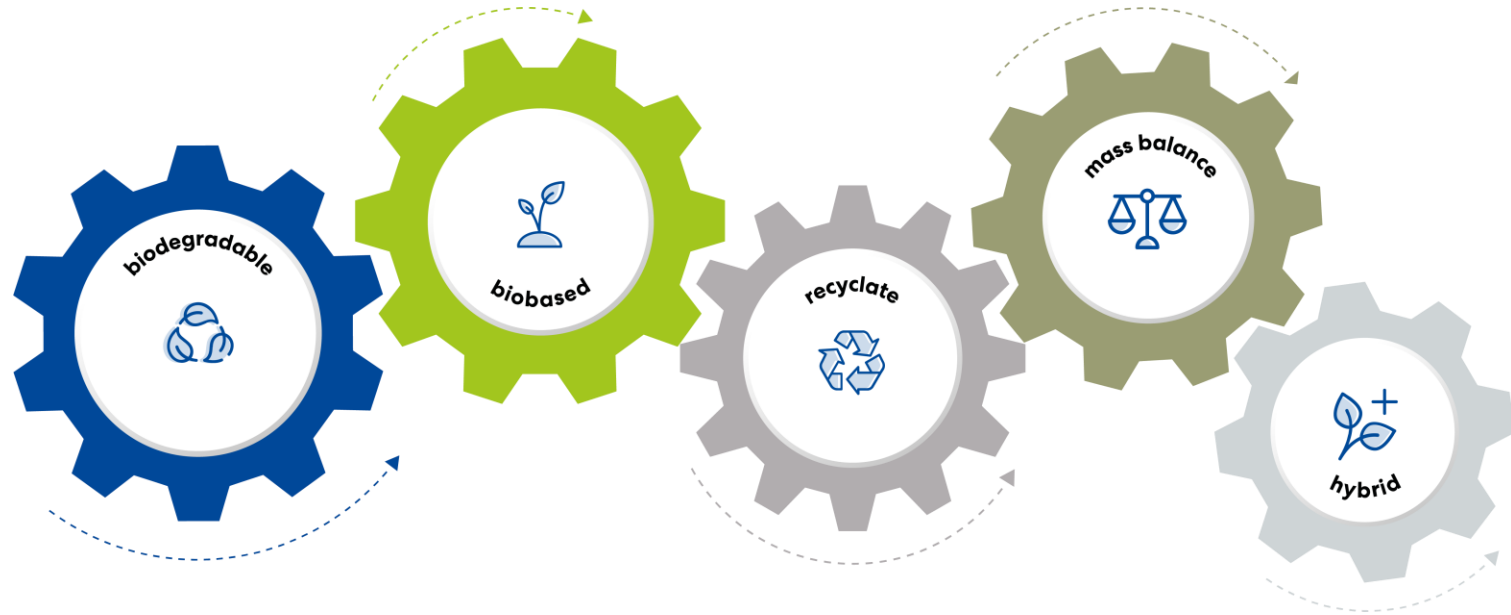
- Different properties
- Biodegradability under certain conditions
- Country-specific laws in the EU
- General concerns (e.g. land use, littering, food competition)
- Risk of littering due to inadequate labeling
- High marketing efforts

In regions where waste management systems are not well-established, the preferred polymer solutions might differ from those in, for example, the EU. This could mean that, in such contexts, even using compostable bottles might be a better solution.





# Different regions, markets & applications require tailored material solutions



Every market and application demands an individual, sustainable raw material solution based on the available and preferred end-of-life options in that specific context!

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**Glad to  
answer your  
questions**



Thank you for your attention!



**Niklas Voß**

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