



— CO2BIOCLEAN —

WE CONVERT CARBON EMISSIONS INTO NATURAL BIOPOLYMERS

# Pitch Perfect and Boost the European Bioeconomy 2024

Microbes and gaseous feedstocks

3<sup>rd</sup> December 2024



# CO2BIOCLEAN addresses two critical global challenges



Climate Change due to CO<sub>2</sub>

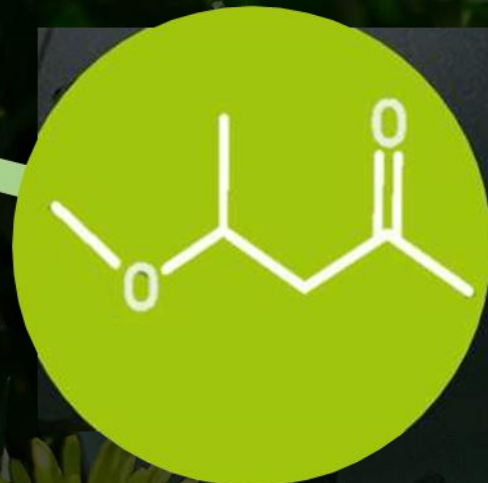


Plastic Pollution

# Our solution: Biopolymers from Green house gas CO<sub>2</sub>



CO<sub>2</sub> Emissions

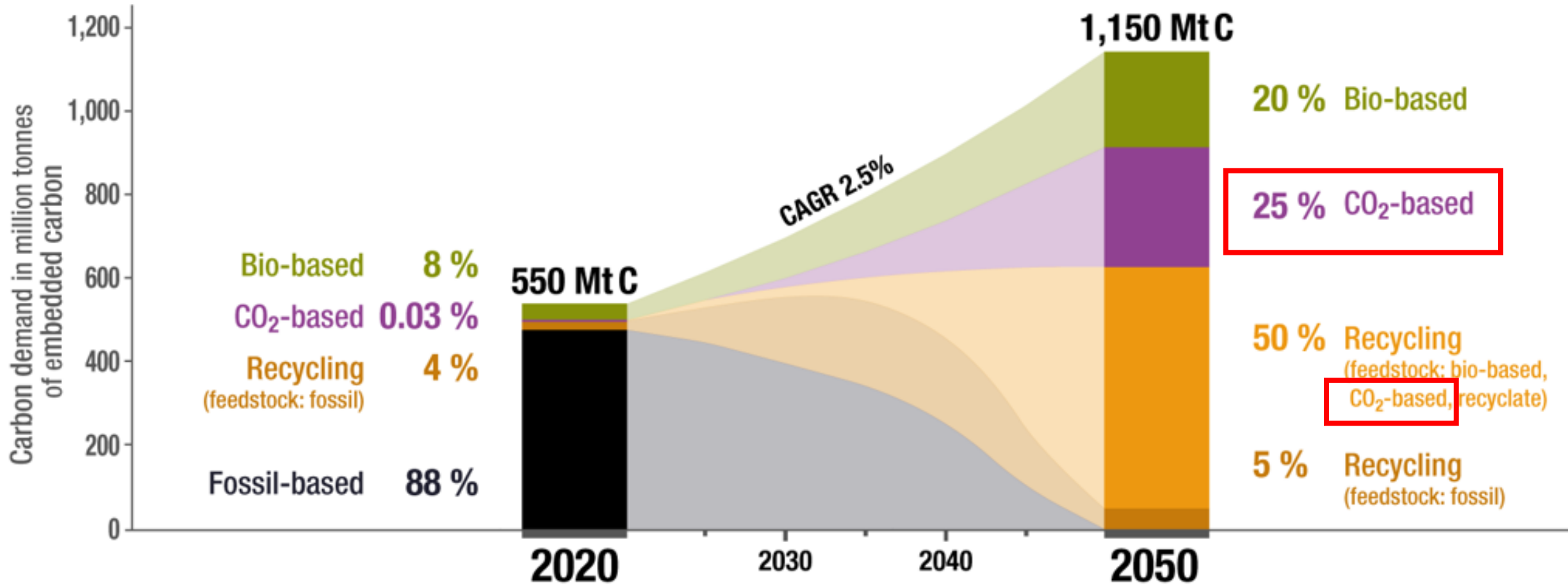


Globally patented  
**CO2BioClean** Technology

End uses for our biodegradable polymers (PHA)

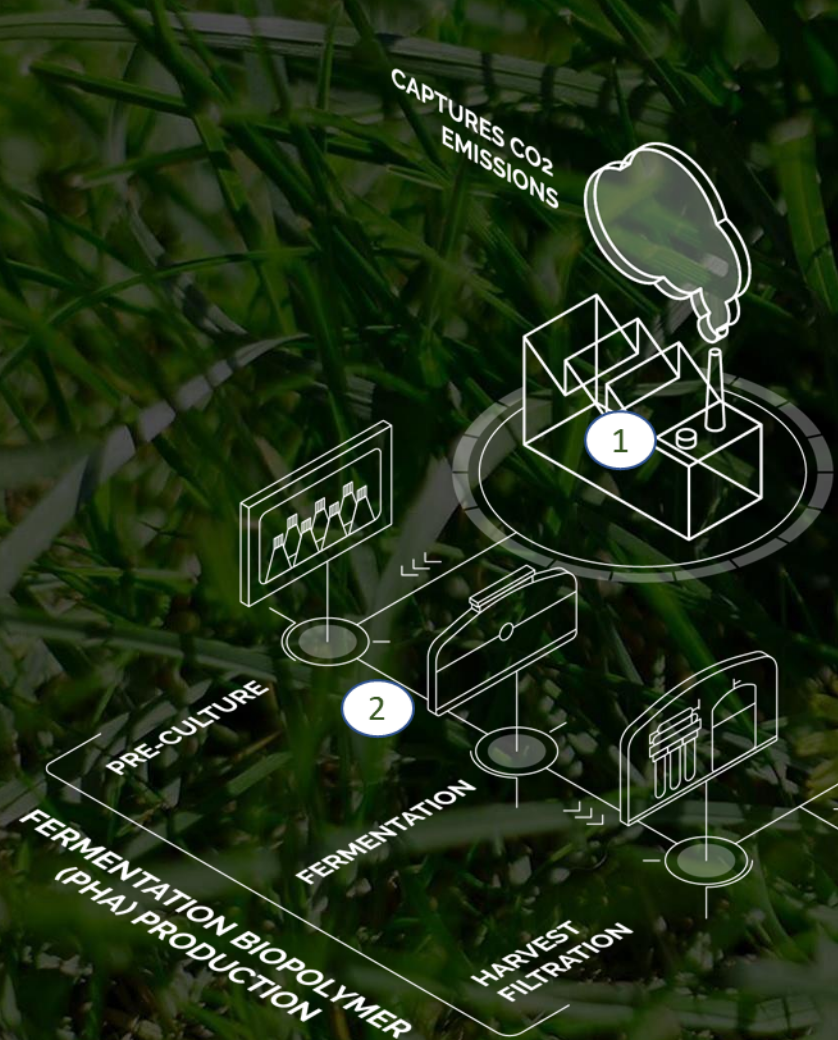


# Our technology is at the spearhead of the emerging CO<sub>2</sub> economy



Source: Nova Institute <https://renewable-carbon.eu/publications/product/explorative-scenario-carbon-embedded-in-chemicals-and-derived-materials-png/>

# How CO2BIOCLEAN works conceptually



## 1 CO<sub>2</sub> Capturing

- CO<sub>2</sub> is captured e.g. from bio-gas plants or from industrial emissions
- CO<sub>2</sub> capturing is done together with partners – it is not core CO2BioClean technology

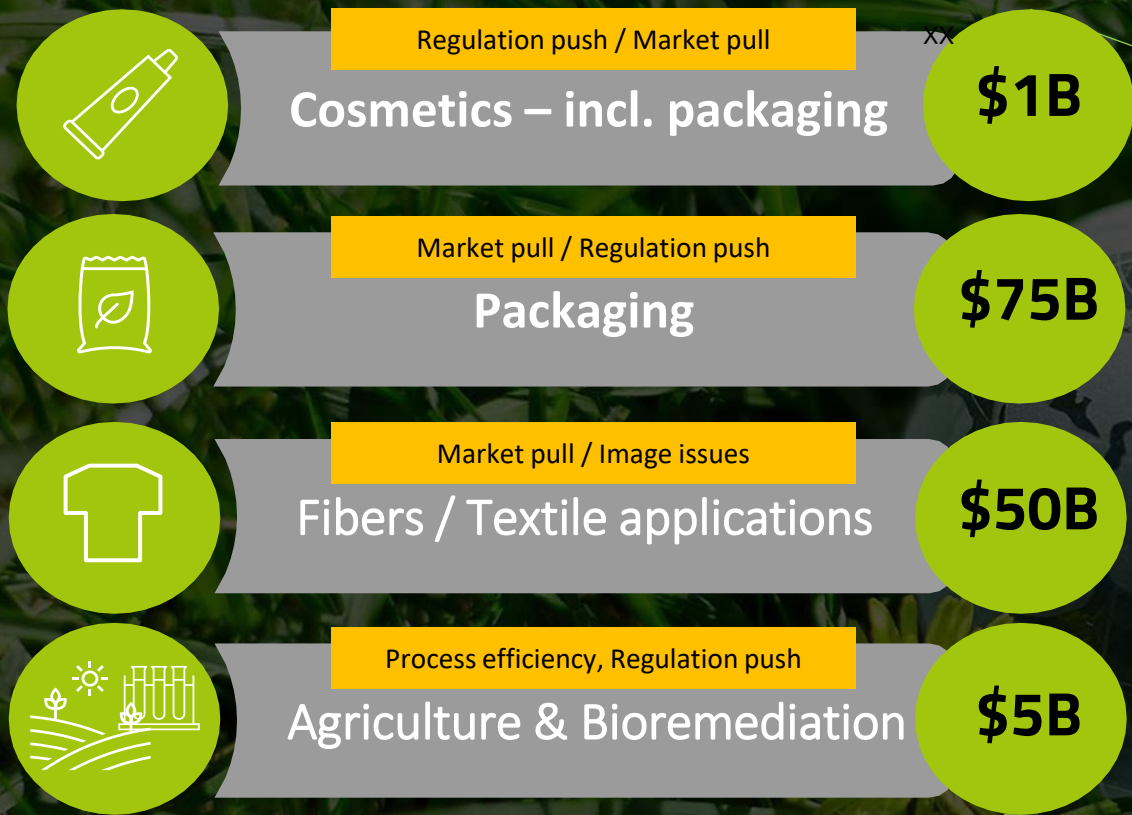
## 2 H<sub>2</sub> enabled CO<sub>2</sub> Conversion to biopolymers

- IP protected 3-step-process: Pre-culture – fermentation – harvest.
- After pre-culture of bacteria conversion takes place in a fermentation reactor. In 3<sup>rd</sup> step biopolymers are separated from bacteria

## 3 Use in applications

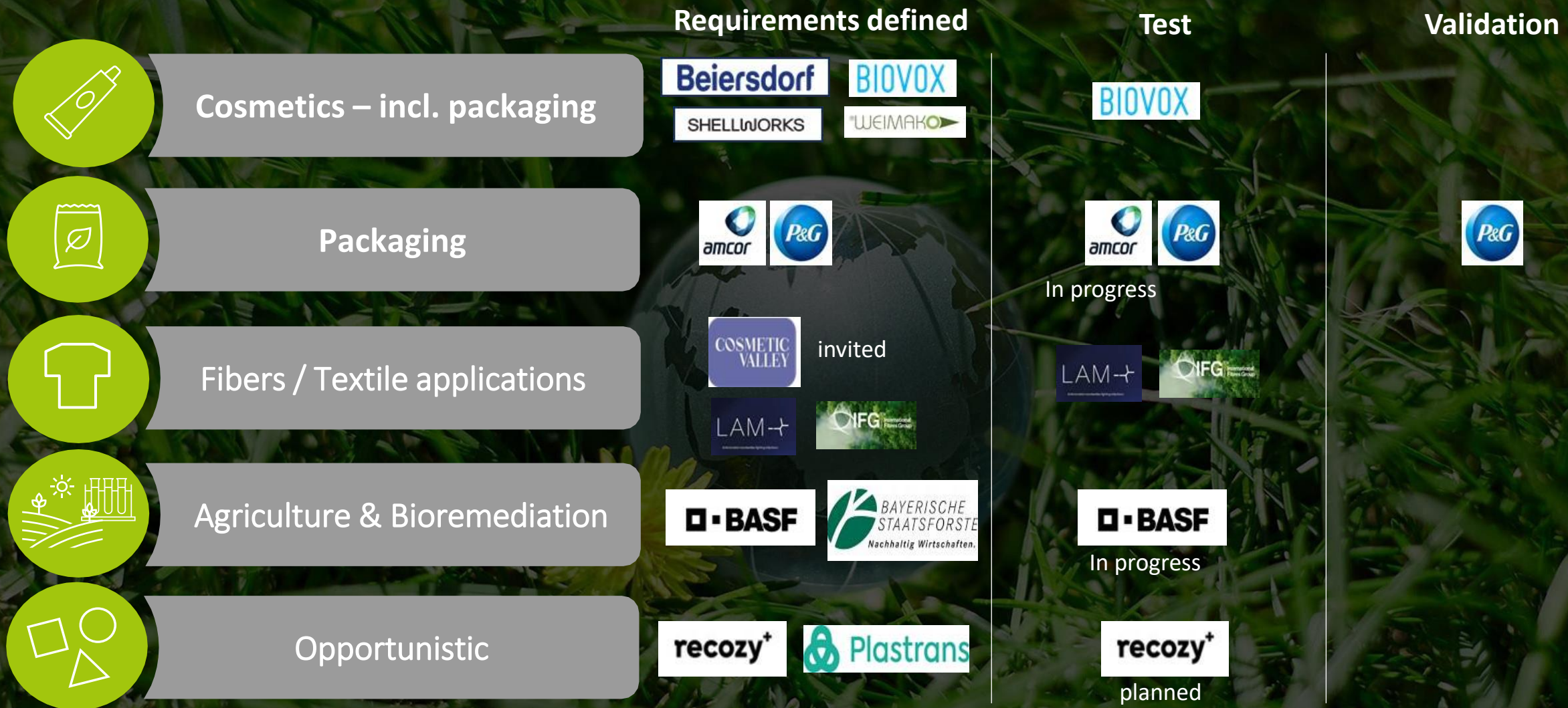
- CO2BioClean has know-how to modify polymers towards the needs of specific applications
- Furthermore CO2BioClean can support manufacturers replacing conventional plastics with biopolymers

# We focus on four segments of the huge plastics market



Not all applications can be technically manufactured with PHA, e.g. high temperature applications, outdoor tubes, foams, ...

# Our application development pipeline is starting to fill-up



# Key aspects from our Business Plan

## Business Unit Portfolio Strategy

**CORE BUSINESS SUPPORT**

- Complete solution
- Sales expertise to support licensing customers
- Engineering Support for tailor-made developments and scaling up



**PENETRATION**

- One 1250 KTA site
- End-to-end successful business for showcasing
- Premium segment: 53€/ kg

**CORE BUSINESS**  
Long-term sustainable revenues and profits



# Our team understands biotech AND customer value chains

## Management team



Dr. Fabiana Fantinel, MBA

CEO & Co-Founder

20+ years experience in the Plastics and Chemicals industry (e.g. BASF, LyondellBasell, DuPont) PhD in Chemistry & Postdoc in Material Science



Alessandro Carfagnini

CTO & Co-founder

15+ yrs of experience in the Plastics industry as Founder and CTO MSc in Industrial Chemistry & Organic Chemistry



Dr. Josef Glass

COO

20+ yrs of experience in operations management as Managing Partner & Consultant of which 10 yrs in the chemicals industry



Prof. Helmut Schwab

Advisor

50 yrs of experience in Molecular Biotechnology as CEO, Professor and Founder.

## Advisors/Experts

## Core team



Tristan Wang

Biotechnology

Experience in cultivating microorganism. Double MSc in Biotechnology and Molecular Bioscience



Anusriha Shanmugam

Fermentation & Process Design

Experience in Bioprocess engineering and biochemistry MSc in Microbial and Plant Biotechnology



Moritz Tettenborn

Extraction & Spinning

Experience in synthetic biology and biotechnology MSc in Biochemistry



David Newman BA Hon.

Communication Manager

30 years experience in Communication (e.g. BBIA, Biogas Association)

## Our Investors

BASF



Ghazan Global



Hessen Kapital III (EFRE)



EIC Fund



Opening Cerimony with German Minister

Thank you. We are looking forward to speaking to you!



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