



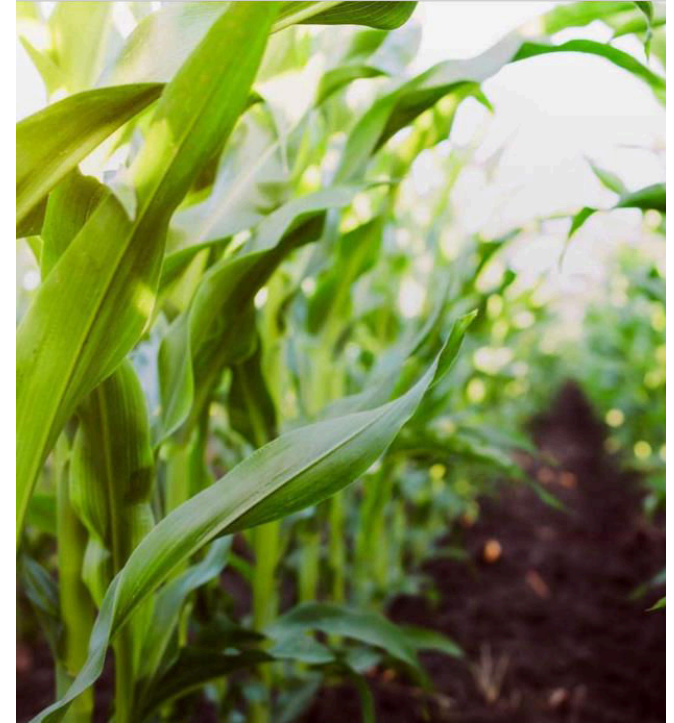
# AVANTIUM Annual General Meeting of Shareholders

14 May 2020

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# 1. Welcome & Introduction

# Attendees

## Supervisory Board



**Edwin Moses,**  
Chairman



**Margret  
Kleinsman,**  
Chair Audit  
Committee



**Denis Lucquin**

## Management Board



**Tom van Aken,**  
CEO

## Other



**Bart Welten,**  
CFO



**Carmen  
Portocarero,**  
General Counsel



**Michelle Jou**



**Antoine  
Westerman,**  
Partner PWC



**Joyce Leemrijse,**  
Notary A&O



# Review 2019





## 2. Annual Report for the financial year 2019

# Impact of the Coronavirus on Avantium - people

- **We do everything we can to safeguard the continuity of our business, while doing our part to prevent the further spread of the Coronavirus**
- **The health and safety of our people is of paramount importance:**
  - Majority of office employees working from home
  - Travel ban
  - Strict hygiene and social distancing guidelines
  - Corona crisis team at management team level coordinates all relevant aspects for operations and the health and safety on a daily basis



# Impact of the Coronavirus on Avantium - business

- **Measures have been taken to minimise the impact of the pandemic and to continue operations in all our businesses**
- **Looking ahead, we see increased uncertainties following the COVID-19 worldwide outbreak and market volatility:**
  - Risk of lower revenues in Catalysis, Renewable Chemistries and Renewable Polymers business units due to travel restrictions, low petroleum prices and economic uncertainty
  - Risk of delays in achieving technical and commercial milestones
  - Risks of partners delaying decisions to collaborate with Avantium or not willing to enter into long-term commitments due to economic uncertainty
  - Higher volatility capital markets may impact our ability to secure financing





# Avantium in 2019 at a glance

Number of safety accidents

**1**

2018: 0

Newly granted patents

**31**

2018: 15

Newly reported inventions

**87**

2018: 110

Investments

**€8.5** mln

2018: €8.1 mln

Consolidated revenues

**€13.8** mln

2018: €11.3 mln

Number of FTE's

**209**

2018: 169

Nationalities employed

**19**

2018: 17

Number of government grant projects

**27**

2018: 23

Government grants recognized\*

**€4.2** mln

2018: €3.6 mln

\*Excluding WBSO



# 2019 was a pivotal year for Avantium

- **Renewable Polymers** made good progress with the implementation of its revised commercialisation strategy:
  - Chemie Park Delfzijl selected as the location for its flagship plant
  - The first important financing milestones were reached
  - The first part of the engineering (process design package) of Avantium's flagship FDCA plant has been completed in March 2020
- **Renewable Chemistries** advances its lead technologies (Ray, Dawn and Volta) towards commercialisation:
  - Secured €9 million in European and regional grants
  - Opening of Ray Technology™ demonstration plant in November 2019
  - Volta scaled up to pre-pilot units in Prodock
- **Catalysis** recorded strong revenue growth of 15%
- Avantium to be included again in Euronext Amsterdam SmallCap Index





## Avantium Renewable Polymers



# Renewable Polymers: scaling up YXY<sup>®</sup> Technology



## LAB PHASE

- 2008
- Amsterdam
- Kilogrammes
- Innovative research



## DEMONSTRATION PHASE

- 2011 - now
- Geleen
- Tonnes
- Technology development



## COMMERCIAL PHASE

- 2023
- Delfzijl
- 5 kilotonnes
- Commercial launch FDCA & PEF



## INDUSTRIAL PHASE

- 2024 and further
- Global roll-out
- Roll-out to industrial scale (> hundreds of kilotonnes)
- Licensing



# Scale-up and Market Launch Strategy



## Scale of flagship plant

5 kilotonnes a year



## Purpose

- Market launch
- Enabling licensing in high-volume markets



## Location

Chemie Park Delfzijl



## Partners

Committed partners throughout the value chain



## Market focus

High-value PEF applications



## Timing

Investment decision end of 2020, with the goal to have the flagship plant operational in ~2023



## Financial objective

Cash flow positive

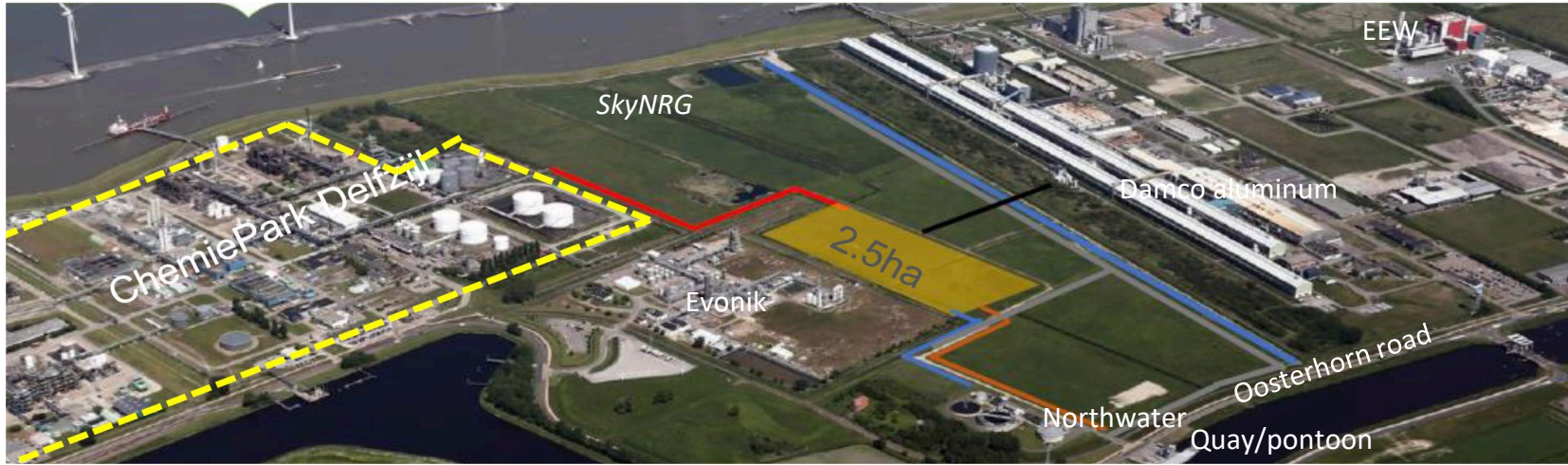


## Funding

€150 million



# Chemie Park Delfzijl



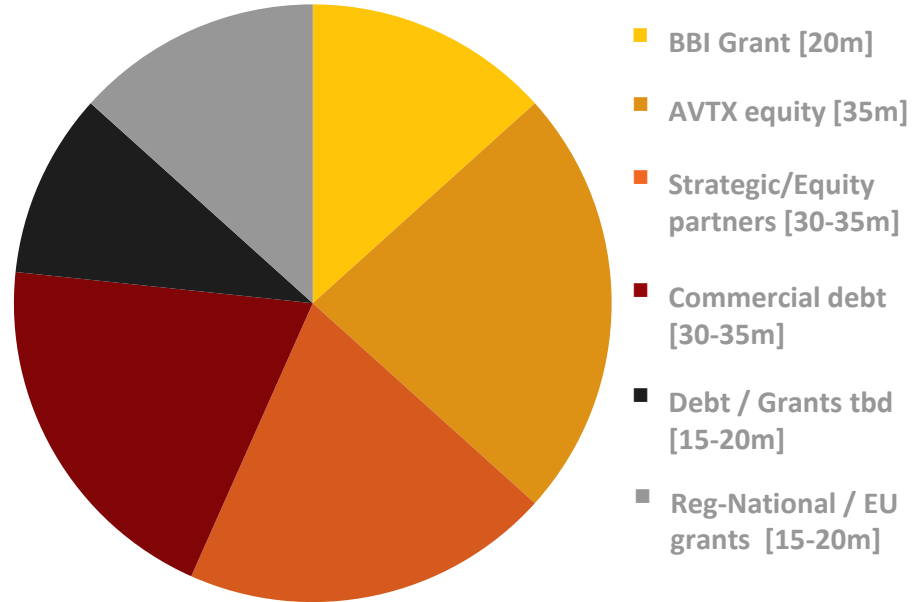
- Steam
- Water
- Electricity
- Nitrogen
- - - Fence around Chemie Park Delfzijl

# Funding FDCA Flagship Plant

## Total funding need

- € 150 million ( $\pm$  20% contingency)
  - CAPEX
  - Start up costs
  - Working capital
  - Ongoing Renewable Polymers expenses (2019-2023)
- December 2019: **BBI grant** of approx. €20 million
- January 2020: €30 million financing package from a regional consortium, comprising **grants, debt and equity**
- Focus is now on strategic partners

## Funding sources

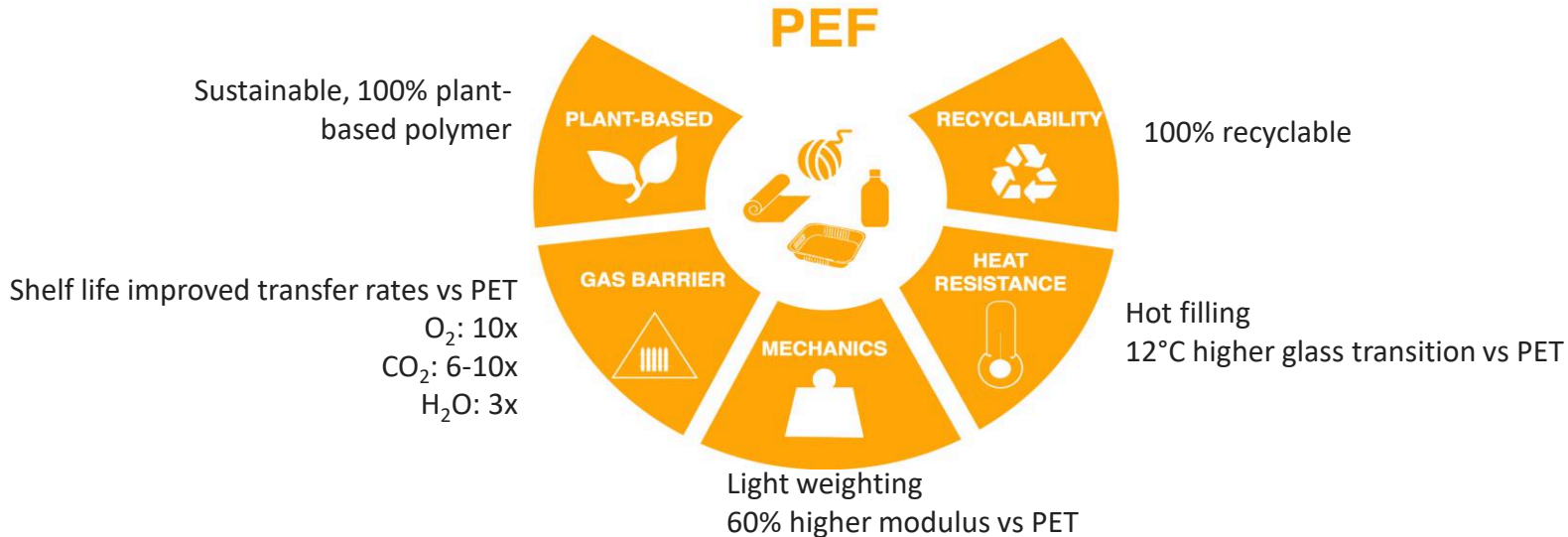




# PEF, the polyester of the future

## Highly differentiating performance characteristics

- Improved barrier properties, leading to longer shelf life of packaged food and drinks
- Higher mechanical strengths and numerous shaping possibilities
- Renewable, re-usable and light weighting

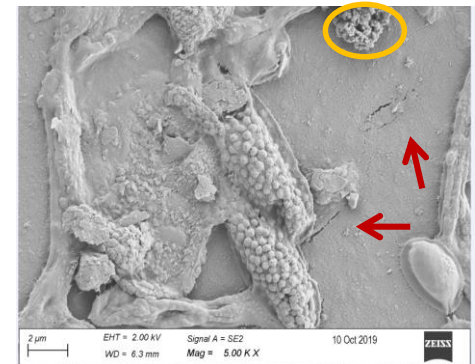
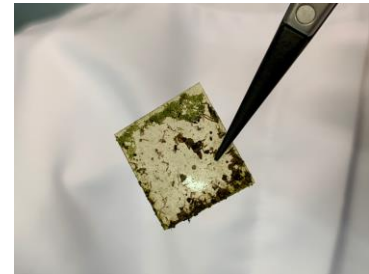




# PEF benefits

## After use

- Designed for recycling and reuse
  - Proven fit with existing sorting and recycling facilities
  - 100% recyclable
  - Addressing goals set by governments (e.g. in the EU, all plastic bottles will need to contain at least 30% of recycled material by 2030)
- What happens if PEF ends up in nature?
  - Tests degradation of PEF by Organic Waste Systems (OWS), Gent, Belgium show that PEF is degradable under industrial composting conditions (250-400 days with air / oxygen @ 58°C in soil)
  - Degradability of PEF under ambient conditions is currently under investigation under an Avantium-led 10 year field trial



# High-value PEF applications



## Multilayer packaging

Replace with single material PEF layers, reducing cost of packaging while enabling recycling



## Enhanced bottles

PEF in small volume CSD/beer bottles or as barrier layer providing performance and enabling recycling



## Optical film

Enable thinner LCD/OLED displays



# Example: Carlsberg Paper Bottle

- Avantium joined the Paper Bottle Company (Paboco®) to develop a paper bottle
- Paper Bottle Project is an innovation community joining leading brands including Carlsberg, Coca-Cola Europe, L'Oréal and The Absolut Company
- Carlsberg presented the first prototypes of the paper bottle in October 2019:
  - PEF will provide the Paper Bottle with the high barrier properties (the ability to withstand gas permeability through the bottle) needed for beverages such as beer and carbonated soft drinks

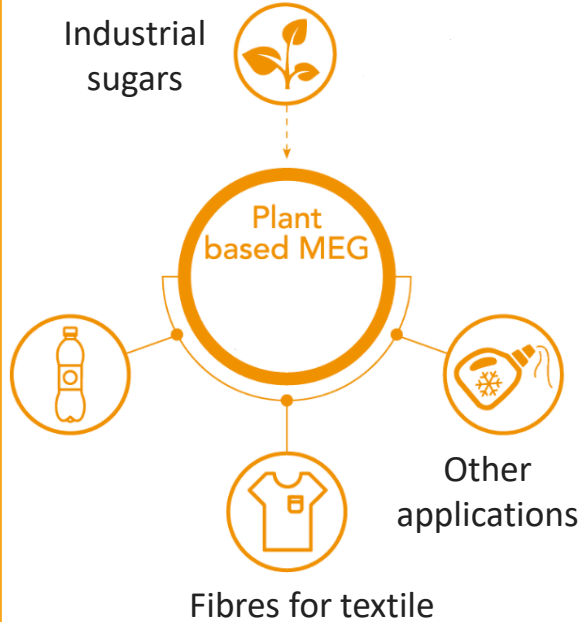




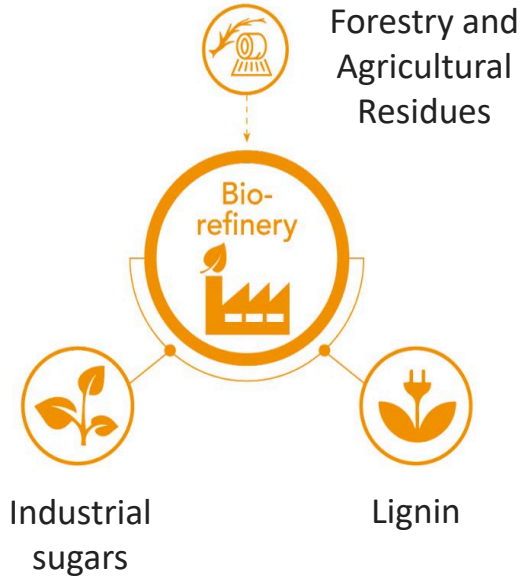
## Avantium Renewable Chemistries

# Three leading renewable chemistry programs

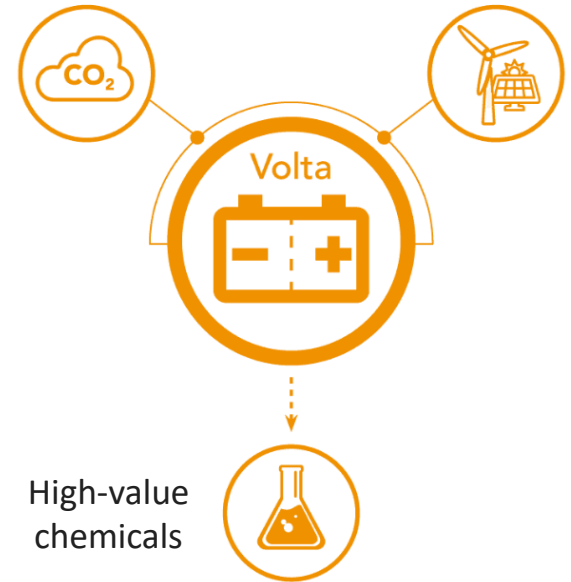
## Ray Technology™



## Dawn Technology™



## Volta Technology



# Securing over €9 million in EU and regional grants

- In 2019, Avantium secured over €9 million in European Union and regional grants for **Ray Technology™** and **Dawn Technology™**:
  - a €2 million grant from the European Regional Development Fund
  - a €1.3 million grant from the Bio-Based Industries Joint Undertaking (BBI JU)
  - A €6 million EU grant as part of a SPIRE grant
- As part of this SPIRE grant, Avantium is coordinating a four-year research programme called IMPRESS:
  - Aim is to demonstrate a new biorefinery concept based on integrating novel processes such as Avantium's **Dawn and Ray Technologies** for the first time
  - Also intends to develop new separation and purification methods by using the advanced high throughput R&D systems of **Avantium Catalysis**





# Renewable Chemistries: scaling up Ray Technology™

Opening Ray Technology™ demonstration plant November 2019



## LAB PHASE



## DEMONSTRATION PHASE

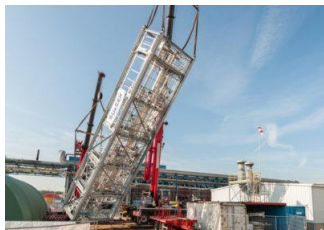
- Opening Demonstration plant 7 November 2019 (Delfzijl)
- Proving the technology
- Proving the economic feasibility



## COMMERCIAL PHASE



## INDUSTRIAL PHASE



# Renewable Chemistries: scaling up Dawn Technology™

## Completed first full year of operations of pilot biorefinery in 2019

- In 2019, the Dawn Technology pilot biorefinery ran several feedstock trials for partners
- In April 2020, Avantium's Dawn Technology™ was awarded €0.5 million to produce lignin for the development of bio-based asphalt
  - DAWN Drive: At the end of 2020, a road will be constructed @Groningen Seaports, which is made from Avantium's plant-based lignin as a substitute for fossil-based bitumen in asphalt





# Renewable Chemistries: scaling up Volta Technology

## Beyond lab phase

- Avantium's Volta team cooperates with over 35 partners in European grant consortia, also providing Avantium with over €5m of grants
- In 2019, Avantium opened a pre-pilot test unit for the Volta technology at the Port of Amsterdam





## Avantium Catalysis

# Strong revenue growth Avantium Catalysis

- Avantium Catalysis recorded strong revenue growth of 15%, mainly driven by increased systems sales:
  - **Catalysis Systems** further enhanced its presence in the growing Asian market
  - There is a growing demand for the smaller testing unit Flowrence XD, with 5 units delivered in 2019
- **Catalysis Services** has developed a strong, international customer base:
  - Renewal long-running partnership with Shell for four additional years
  - Expansion of our Refinery Catalyst Testing capacity to better serve the strong demand from customers





**Publication date: 25 March 2020**

**Along with the 2019 Annual Report and Earnings, we also published  
Avantium's Sustainability Manifesto**

# Sustainability priorities

We structure our sustainability priorities under  
**three pillars**



By the end of 2020, we will develop and publish a time-bound action plan setting out ambitious 2030 targets across all these areas



# Key financial developments during 2019

- **Consolidated revenues** from operations increased by 22% to €13.8 million (FY 2018: €11.3 million), mainly driven by increased systems sales by Avantium Catalysis
- Reported net **loss** for 2019 amounted to €23.5 million (versus loss of €68.3 million in 2018)
- **Cash** position at 31 December 2019 was €45.4 million (31 December 2018: €83.3 million)
  - Excluding a one-off payment of €17.4 million to regain full ownership of Avantium Renewable Polymers (formerly known as Synvina), cash out of operations was €21 million





### 3. Remuneration Report 2019 *(advisory vote)*

# Remuneration Report 2019



Reference is made to the Remuneration Report 2019, published on the website of Avantium







## 4. Adoption of the Annual Accounts 2019 (*voting item*)

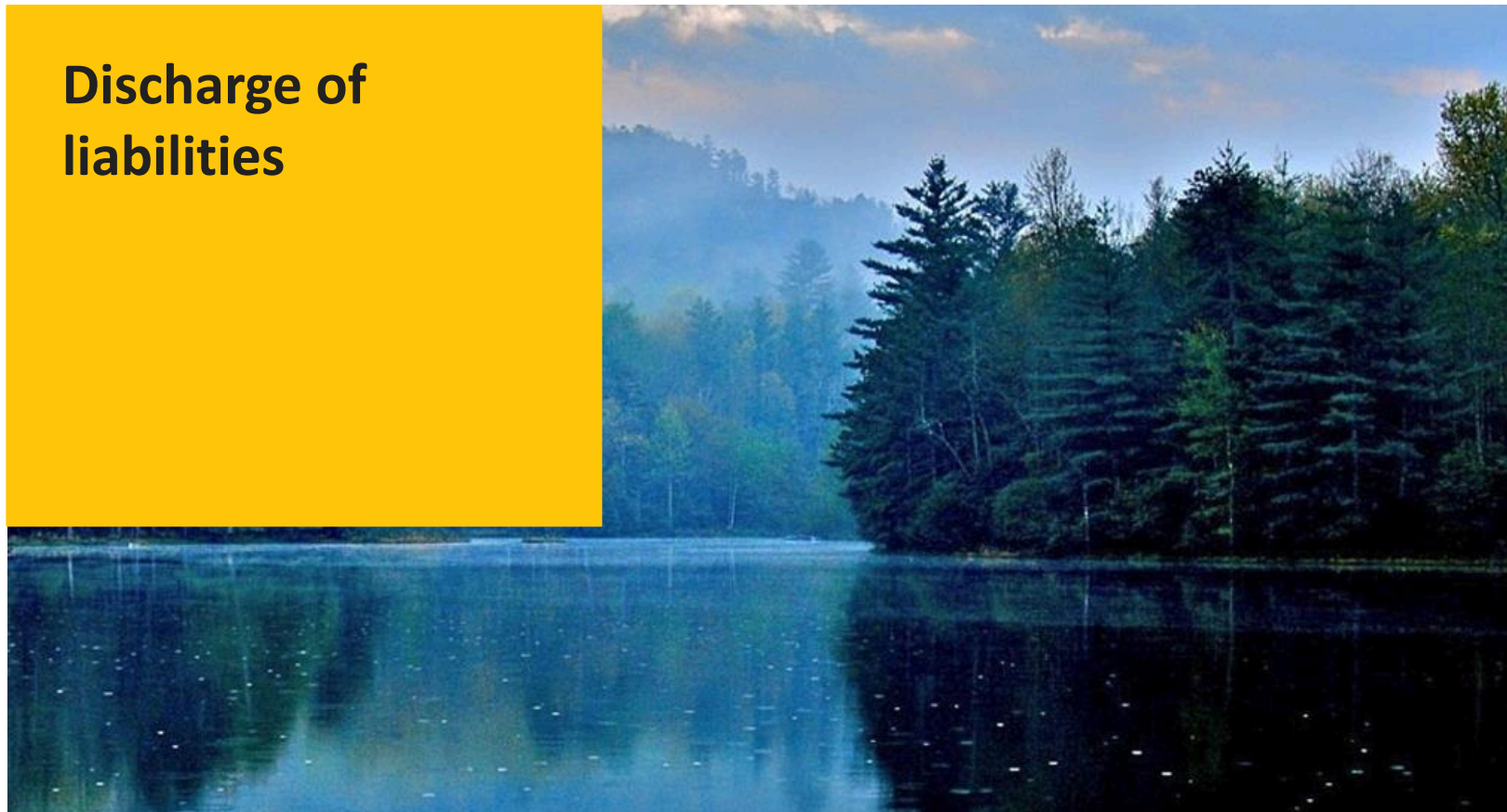
# Annual Accounts 2019



Reference is made to the Annual Report 2019, published on the website of Avantium



# Discharge of liabilities





5a. Discharge from liability of members of the Management Board for the performance of their duties in financial year 2019 (*voting item*)



5b. Discharge from liability of members of the Supervisory Board for the performance of their duties in financial year 2019 (*voting item*)

# Remuneration Policies





6a. Adoption of the remuneration policy for the Management Board (*voting item*)



6b. Adoption of the remuneration policy for the Supervisory Board (*voting item*)



# Composition Management Board





7. Appointment of Mr B. Welten as a statutory member of the Management Board (*voting item*)





# Composition Supervisory Board



8. Appointment of Mrs M. Jou as member of the Supervisory Board (*voting item*)



# Authorisation shares





- 9a. Designation of the Management Board to issue up to 5% ordinary shares and to exclude pre-emptive rights in connection with the Company's long term incentive and share-based compensation plans (*voting item*)



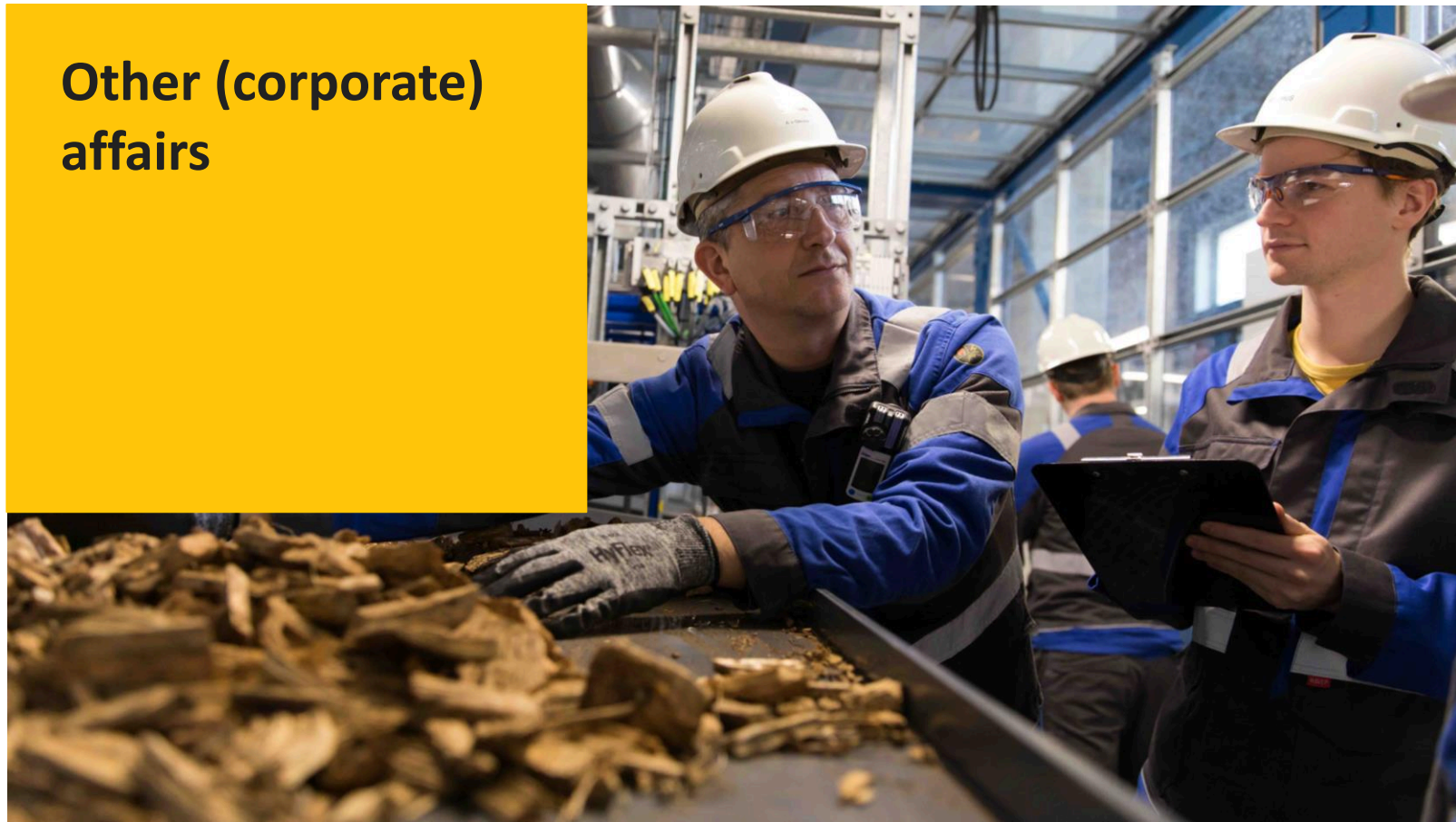
- 9b. Designation of the Management Board to issue 20% ordinary shares and to exclude preemptive rights (*voting item*)



- 9c. Authorisation of the Management Board to repurchase shares in the share capital of Avantium on behalf of Avantium (*voting item*)



## Other (corporate) affairs





10. Appointment of PricewaterhouseCoopers Accountants N.V. as external auditor for the financial year 2020 (*voting item*)



11. Any other business

# Preliminary voting results

| No.   | Agenda item   | Outcome        |
|-------|---|----------------|
| 3     | Remuneration Report 2019 ( <i>advisory vote</i> )   | <b>Adopted</b> |
| 4     | Adoption of the Annual Accounts 2019  | <b>Adopted</b> |
| 5 (a) | Discharge from liability of members of the Management Board for the performance of their duties in the financial year 2019  | <b>Adopted</b> |
| 5 (b) | Discharge from liability of members of the Supervisory Board for the performance of their duties in the financial year 2019 | <b>Adopted</b> |
| 6 (a) | Adoption of the remuneration policy of the Management Board   | <b>Adopted</b> |
| 6 (b) | Adoption of the remuneration policy of the Supervisory Board  | <b>Adopted</b> |
| 7     | Appointment of Mr B. Welten as a statutory member of the Management Board   | <b>Adopted</b> |



# Preliminary voting results

| No.   | Agenda item   | Outcome        |
|-------|---|----------------|
| 8     | Appointment of Mrs M. Jou as member of the Supervisory Board  | <b>Adopted</b> |
| 9 (a) | Designation of the Management Board to issue up to 5% ordinary shares and to exclude pre-emptive rights in connection with the Company's long term incentive and share-based compensation plans | <b>Adopted</b> |
| 9 (b) | Designation of the Management Board to issue 20% ordinary shares and to exclude pre-emptive rights  | <b>Adopted</b> |
| 9 (c) | Authorisation of the Management Board to repurchase shares in the share capital of Avantium on behalf of Avantium   | <b>Adopted</b> |
| 10    | Appointment of PriceWaterhouseCoopers Accountants N.V. as external auditor for the financial year 2020  | <b>Adopted</b> |





## 12. Closing (including Q&A)