



A new player in the markets for
Biobased Organic Acids

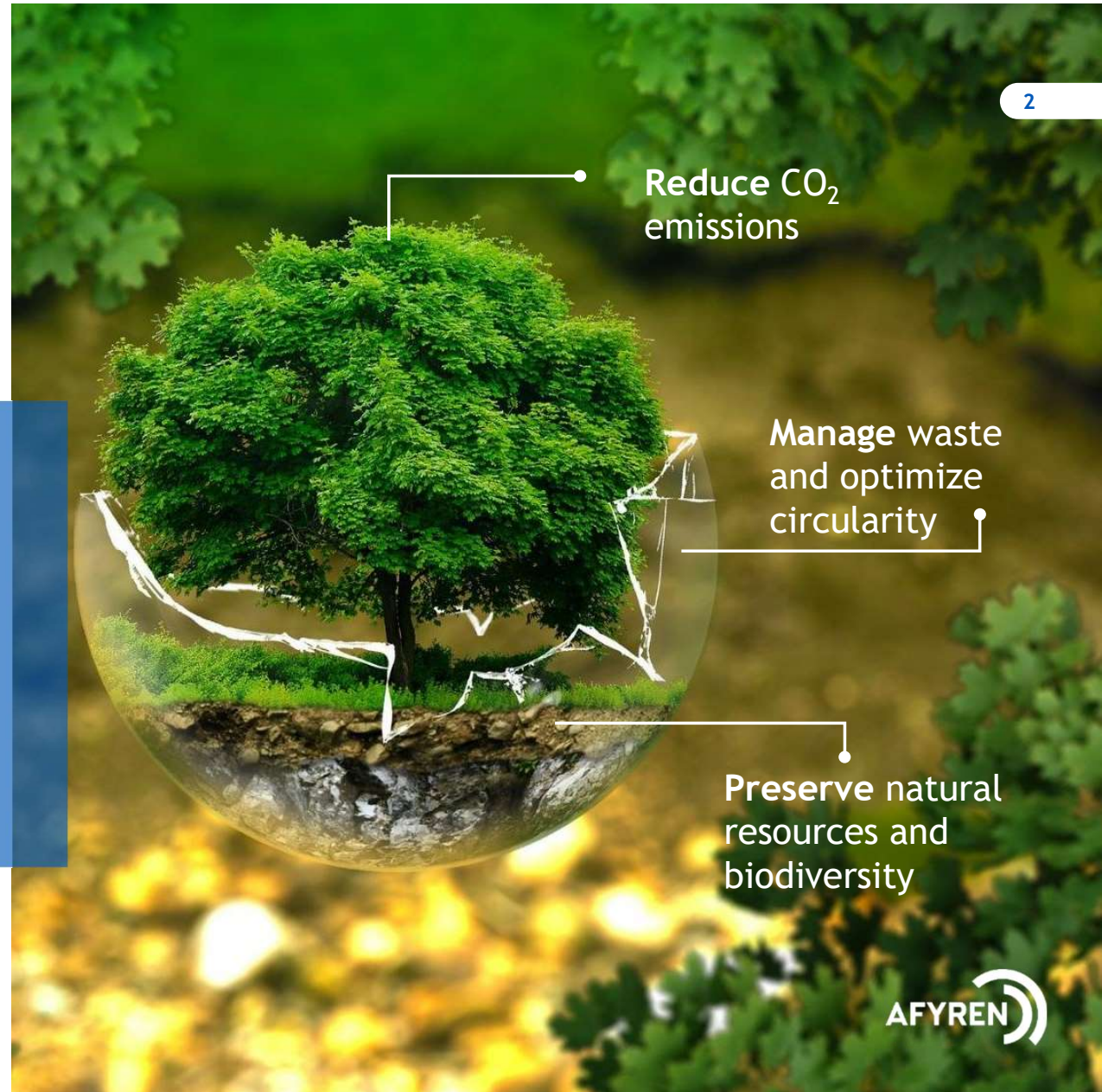
19th of October 2021

Bioproduction : several solutions. AFYREN : from start-up to industrialization
Jérémy Pessiot, Managing Director, CTO and co founder



AFYREN brings solutions to global challenges through its biobased organic acids

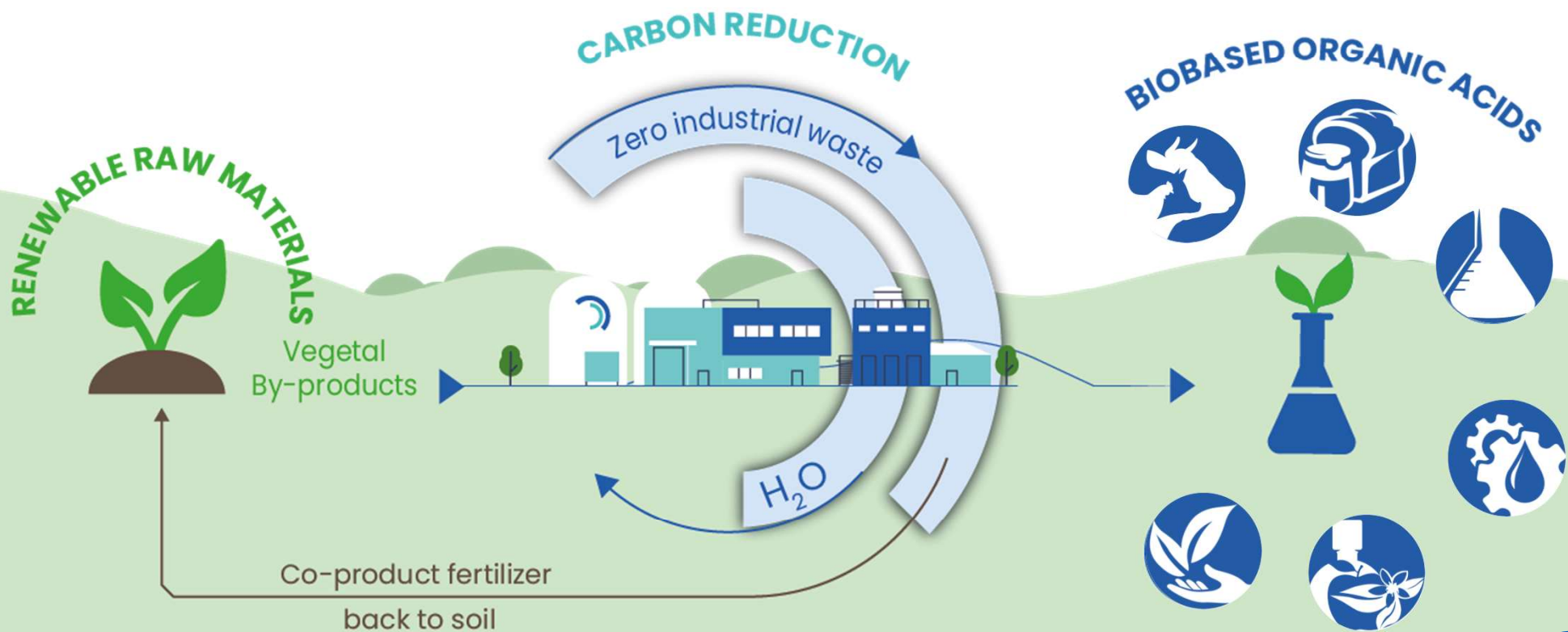
- 🔄 **Limited resources :**
1.7 planet to meet our global resource needs
- 🔄 **Global Warming :**
+3C° by the end of the century
- 🔄 **Biodiversity :**
-68% Biodiversity reduction in the past 50 years



The AFYREN Concept: Biobased ingredients from renewable by-products via fermentation



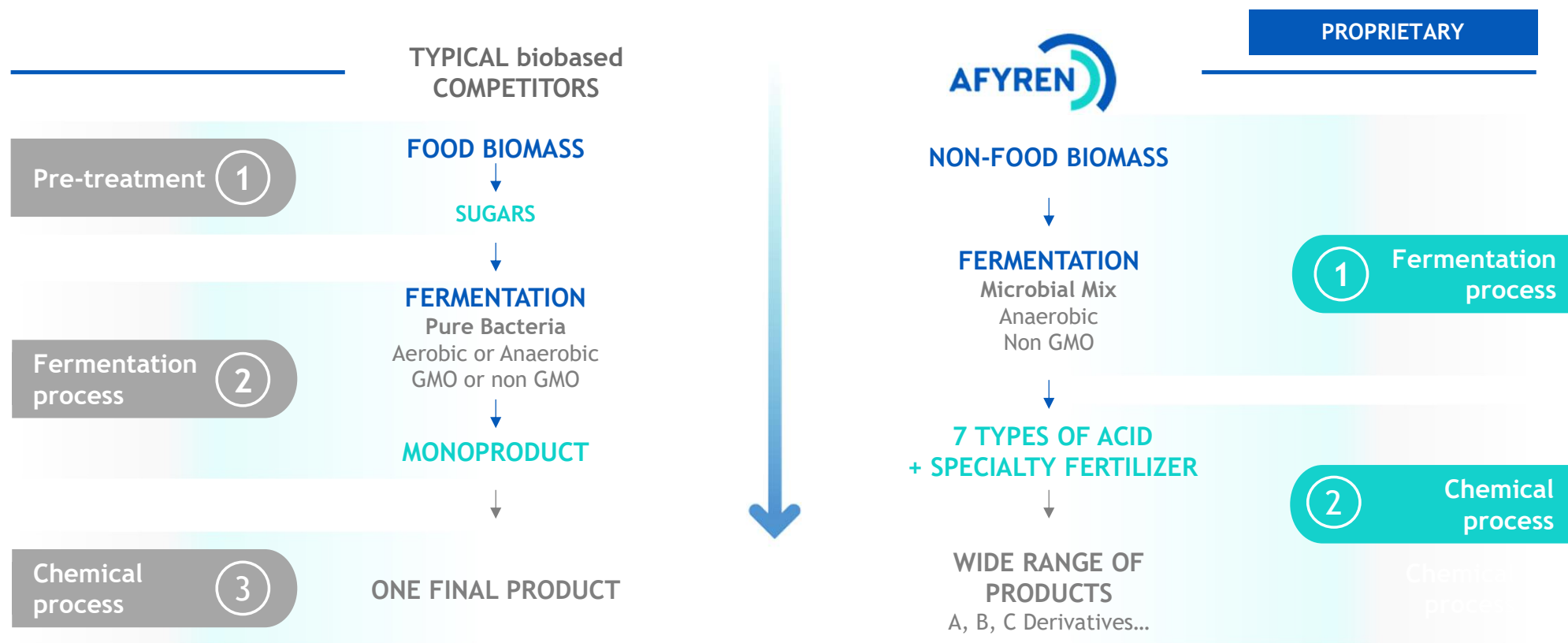
A unique low-carbon circular bioeconomy approach





INNOVATIVE AND SUSTAINABLE BIOBASED TECHNOLOGY

Differentiated process yielding greater efficiency



Pilot plant has demonstrated successful scale-up

 Process optimization from pilot to pre-industrial scale and proof of concept

1st Pilot
equipment
1m³ capacity

2014

3m³ capacity
pilot

2016

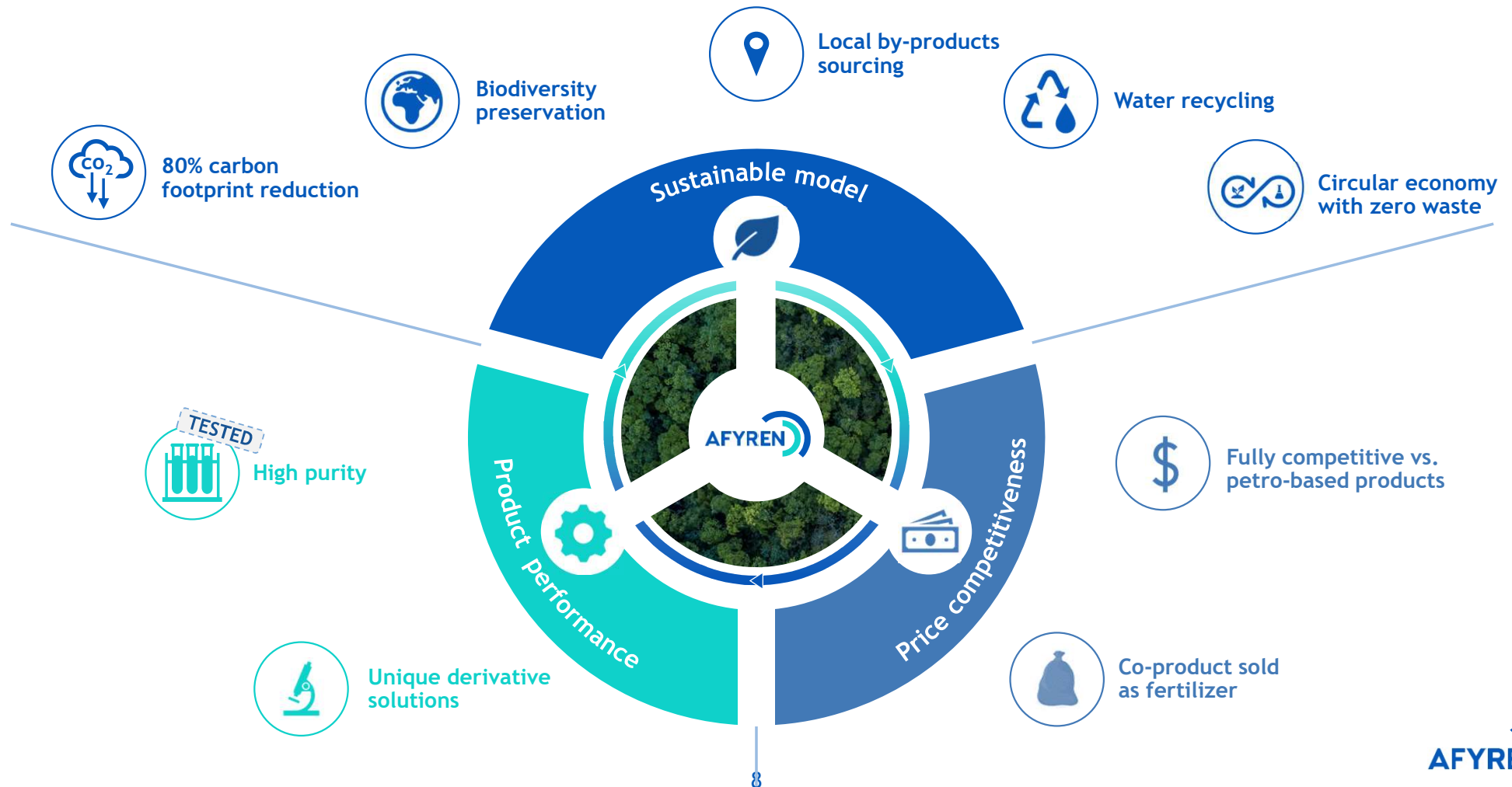
1st 70m³
pre-industrial
scale up

2017

- ↳ Successfully produced organic acids from by-products, confirming AFYREN's fermenting technology
- ↳ Optimised purification process to reach client specifications
- ↳ Test batches delivered to the first customers

 Well-proven technologies and equipments used to de-risk the scale-up

Low-carbon circular bioeconomy model



AFYREN today



10 years
of R&D



10 Patents⁽¹⁾
Bio-mimetic
non-GMO
technology



7
Biobased
Organic Acids
+
Green Specialty
Fertilizers



55/100 Score
Advanced level
(vs.benchmark 34)



70
employees
c.100 by end of 2021⁽²⁾



Production
starting
in 2022

COMMITMENT, AGILITY, HUMILITY

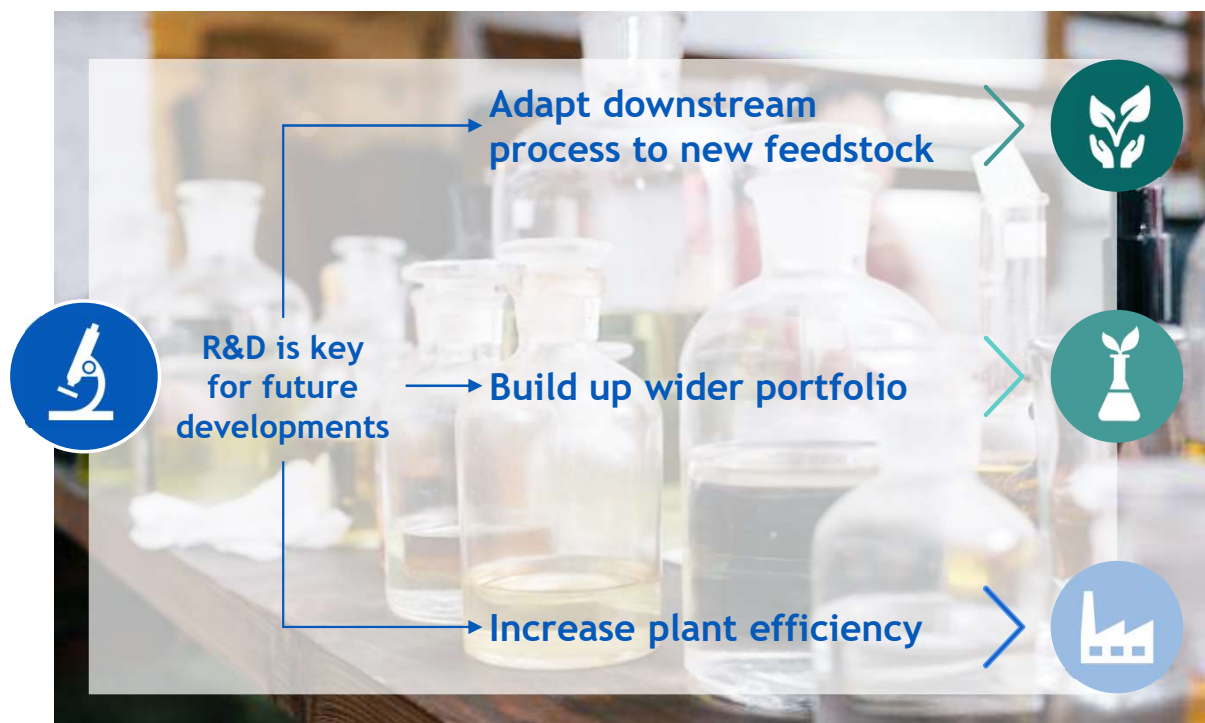


Note: (1) of which one is on going publication; (2) Including AFYREN NEOXY employees;

R&D at the heart of technology improvement

Facts & figures

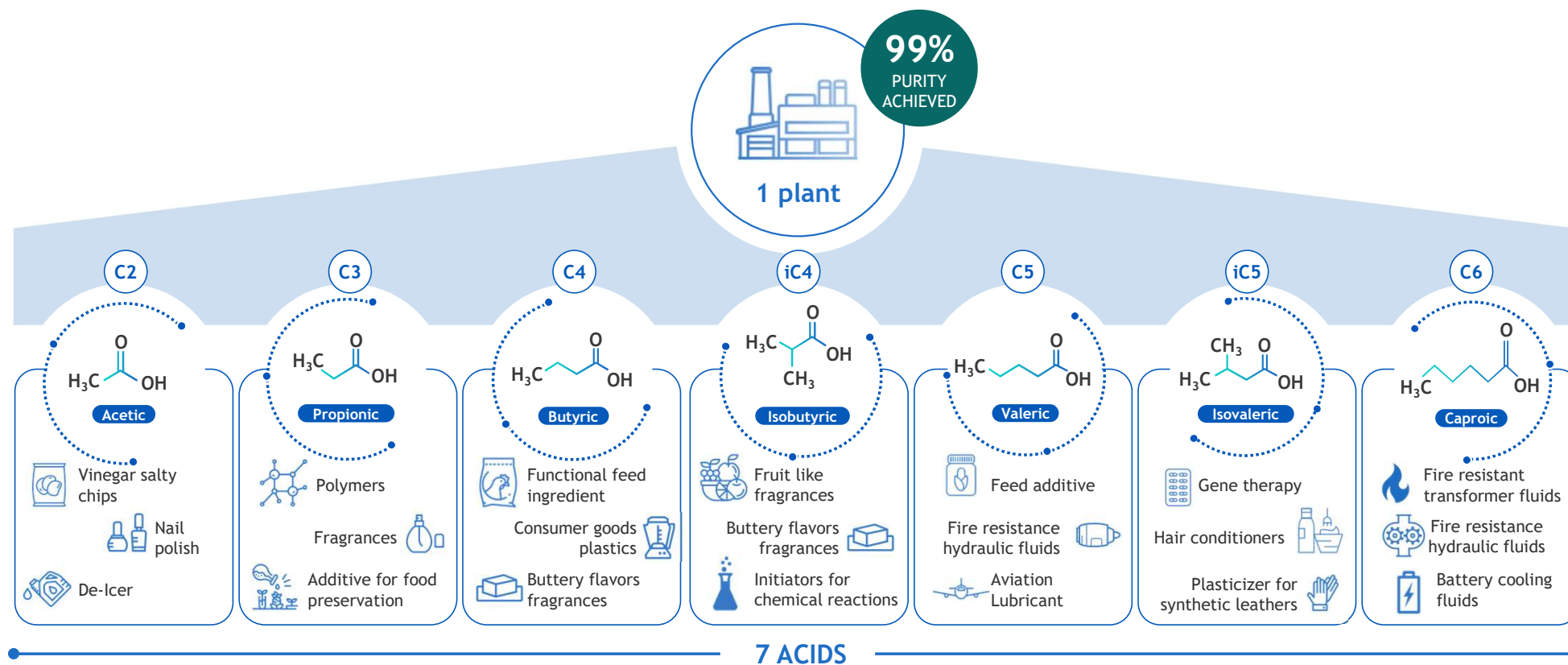
- ↪ 10 years of R&D
- ↪ 1/3 of resources dedicated to R&D⁽¹⁾
- ↪ 10 patent families worldwide⁽²⁾
- ↪ Strong know-how in natural fermentation
- ↪ A large panel of expertise in bioprocess, microbiology, chemistry, industrial engineering...



Note: (1) 2020 (2) of which one is on going publication



Offering a large suite of acids with one technology

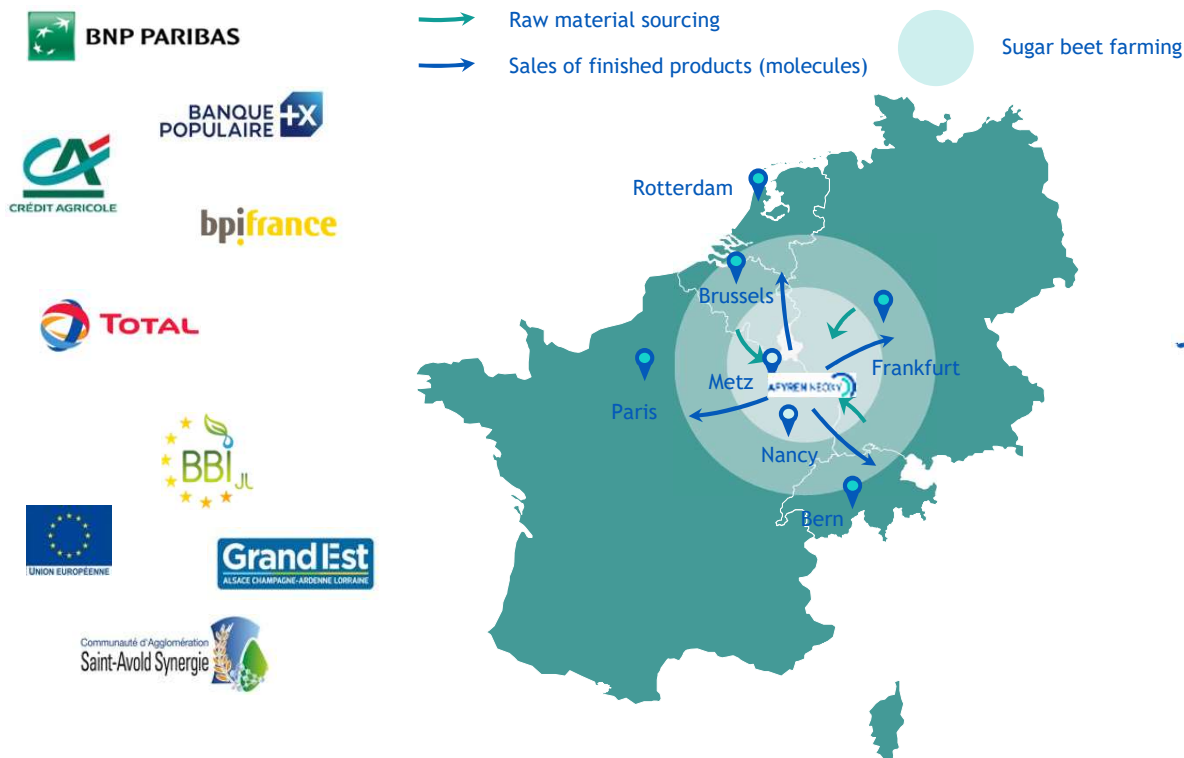


Well diversified portfolio addressing a wide range of applications

AFYREN NEOXY at the heart of a local ecosystem

13

With the support of major partners



The Carling Saint-Avold site in brief



Abundance of raw materials within a 250km radius



Proximity to the main customers in Europe



Highly skilled labor in the region

AFYREN NEOXY in brief



The image features a high-resolution, realistic depiction of the Earth as seen from space. The planet is centered, showing lush green continents and deep blue oceans, surrounded by a thick layer of white clouds. The background is a solid, deep blue. Overlaid on the right side of the Earth is a stylized logo consisting of two concentric, semi-circular arcs. The outer arc is a dark blue, and the inner arc is a lighter, cyan blue. To the left of this logo, the words "THANK YOU" are written in a clean, white, sans-serif font.

THANK YOU