B4PLASTICS

BioBased Building Blocks (B4)

Design and upscale of custom-made eco-plastics

Stefaan De Wildeman

GreenWin International Conferences, May 8th - 9th, Gosselies, Belgium

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Trends in plastic products

Raw materials **shift** to green

Greener products asked by the market

Opportunities for extra/different **functionalities**

Legislation

Customer awareness

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The Status Quo is this…
Any longer acceptable?

We aim at the heart of the Trash Planet Problem:
the chemical re-design of polymers developed in the 20th century

Microplastics

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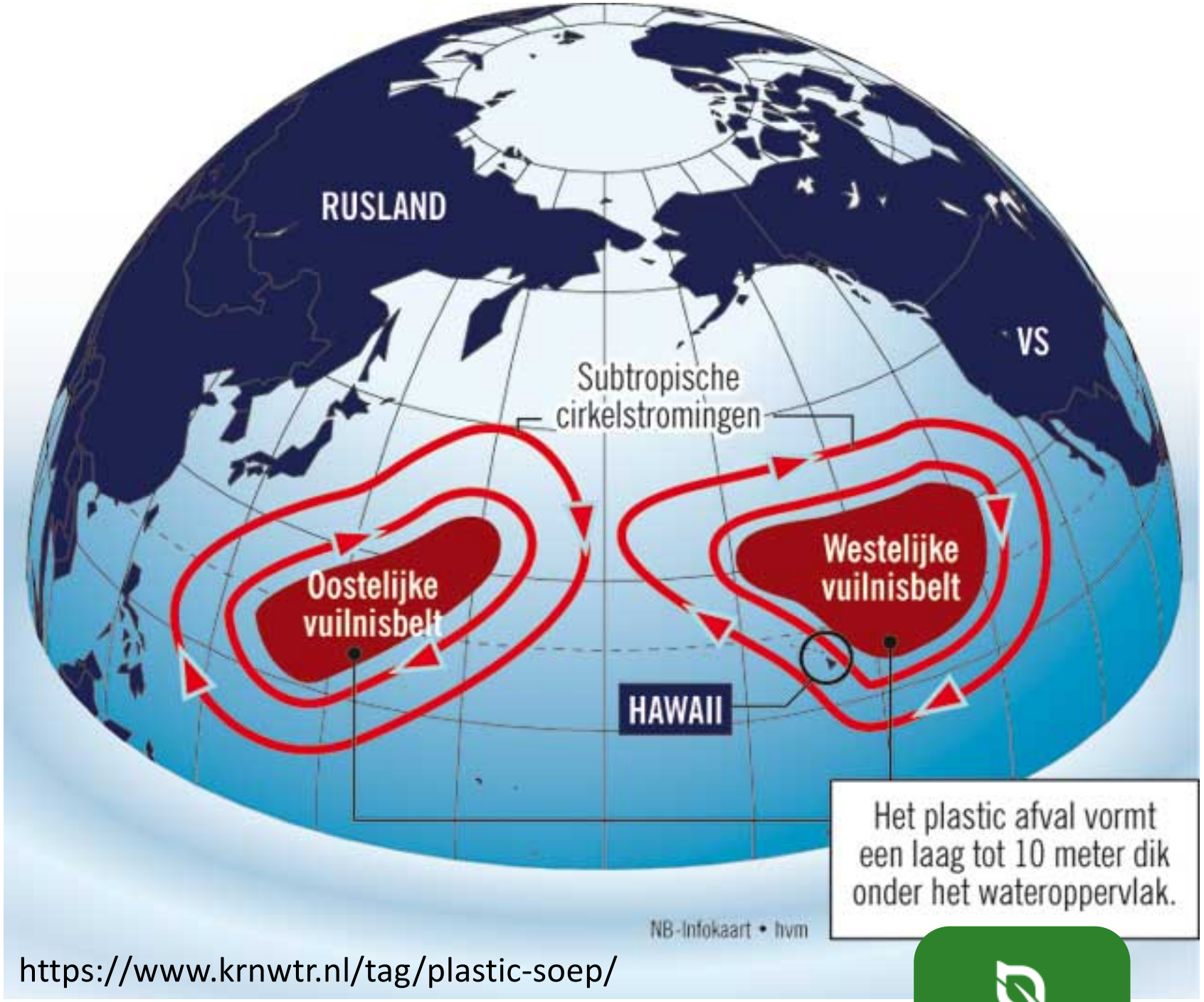

https://www.krnwtr.nl/tag/plastic-soep/

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It is fossil…

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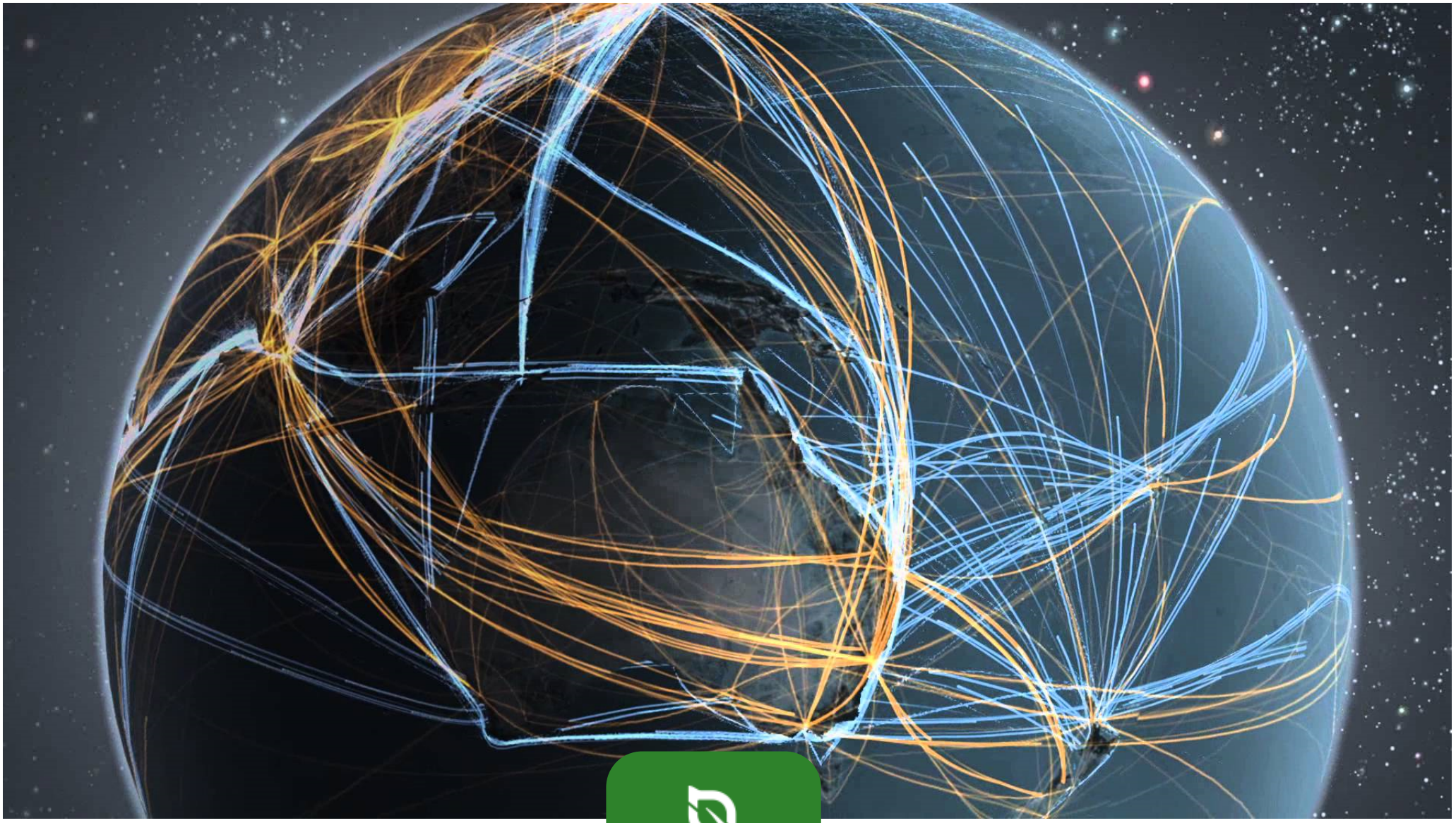
…and it comes from far



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Who explains the logic…

… of sticking to our current set of fossil building blocks,

while completely switching our resources from fossil to renewable ?

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In other words…

…are the blocks that contribute to ultimate sustainability,
per definition those that arose
from a non-sustainable era ?

(Stefaan De Wildeman, DSM, December 2012)

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“The New Plastics Economy”

Ellen McArthur Foundation – Report January 2016

FOREWORD

H. E. Mogens Lykketoft
President of the UN General Assembly for the 70th session

We live in a defining moment in history — a moment where the international community has come together to agree on an ambitious framework to resolve some of the world’s most daunting challenges.

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“The New Plastics Economy”

Ellen McArthur Foundation – Report January 2016

There are many innovation and improvement efforts that show potential, but to date these have proved to be too fragmented and uncoordinated to have impact at scale. Today's plastics economy is highly fragmented. The lack of standards and coordination across the value chain has allowed a proliferation of materials, formats, labelling, collection schemes, and sorting and reprocessing systems, which collectively hamper the development of effective markets. Innovation is also fragmented. The development and introduction of new packaging materials and formats across global supply and distribution chains is happening far faster than and is largely disconnected from the development and deployment of corresponding after-use systems and infrastructure. At the same time, hundreds, if not thousands, of small-scale local initiatives are launched each year, focused on areas such as improving collection schemes and installing new sorting and reprocessing technologies. Other issues, such as the fragmented development and adoption of labelling standards, hinder public understanding and create confusion.

Fragmented

Disconnected

Small-scale local initiatives

Hindered public understanding

Confusion

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We present…

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Vision

Plastics as they exist today,
are under pressure.

Their resources, their production processes,
their current way of use, and their after-life,
ask for incremental to radical changes.

Changes to a higher ecological level
balanced with acceptable cost and functionality.

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Mission

*We want to make it **easier** for our customers, partners and end-consumers*

*to change current fossil-born plastic products to **greener** and **more local** alternatives*

*thereby gearing up their **relationship** with everyday plastics to a higher ecological level*

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Our locations

Biobase Europe – Ghent (B)
Biochemical

VKC/partners – Kortrijk (B)
Plastics processing

Chemelot – Geleen (NL)
New building blocks & backbones

B4plastics – Maasmechelen (B)
Central coordination and logistics

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B4plastics is different

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B4plastics is different

“bio-based building blocks”

- ***Established*** **or** ***novel*** **chemicals – optimized for local and renewable sourcing**
- **Fine chemical R&D and partnering**
- **Modeling “winning bio-based building blocks”**

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B4plastics is different

NEW BACKBONE

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B4plastics is different

NEW BACKBONE

- ***Novel*** **backbones leading to new (combinations of) functionalities**

- **Polymer R&D and partnering**

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Our innovation funds

VIPRISCAR (8 partners, BioBased Industries, EU) 2018-2021

New IS building blocks incorporated in novel materials

"This project has received funding from the Bio Based Industries Joint Undertaking (JU) under the European Union's Horizon 2020 research and innovation programme under grant agreement No 790440. The JU receives support from the European Union's Horizon 2020 research and innovation programme and the Bio Based Industries Consortium.".

TriggerPlastics (2 partners in Benelux, EU) 2017-2018

Development, prototyping and pilot production of designed plastic backbones for triggered functionalities

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Our messages to the world

Founder speaks at TEDx Maastricht 2017

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Our Products & Services

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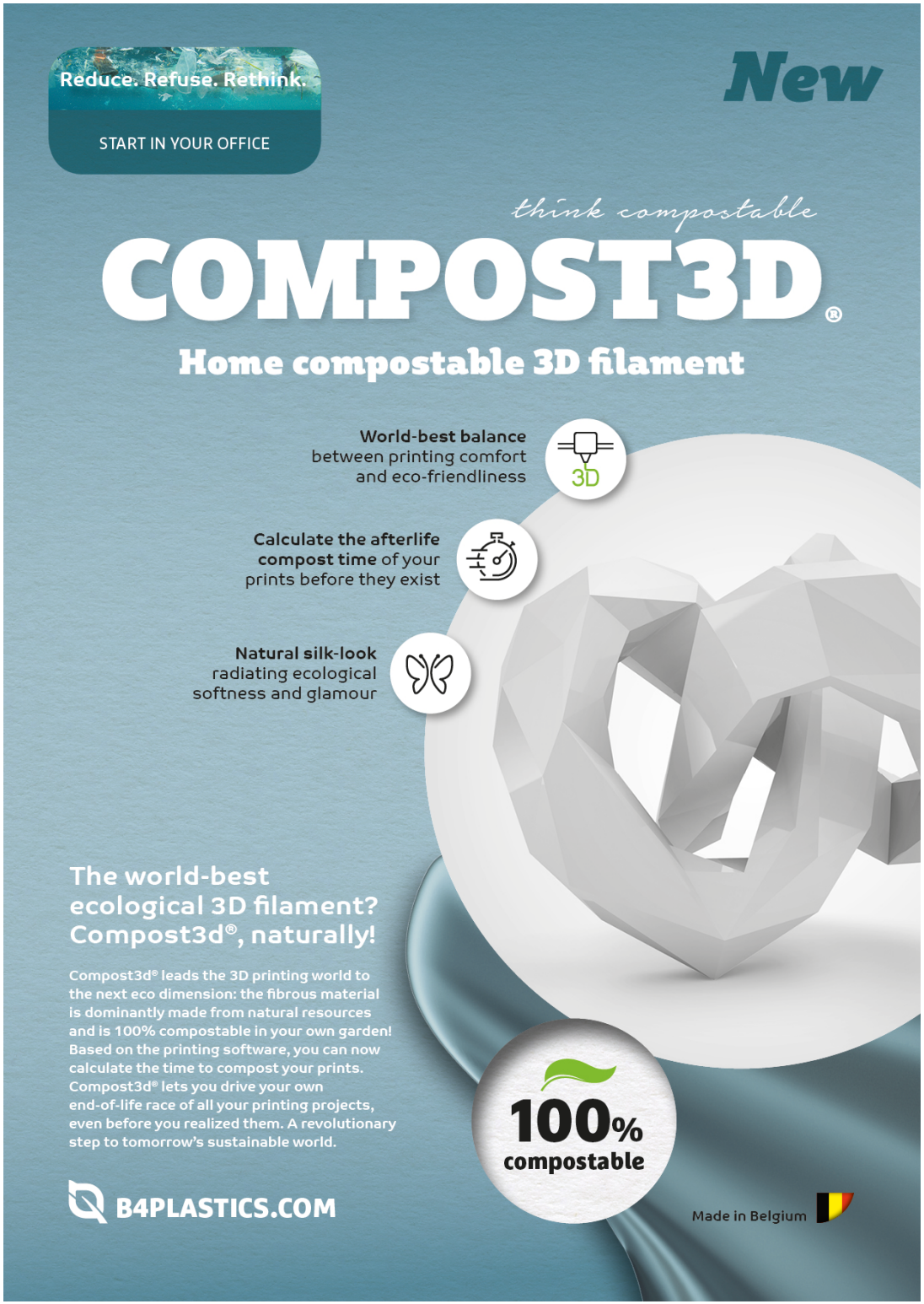
B2C

Ecotrim® 3.0

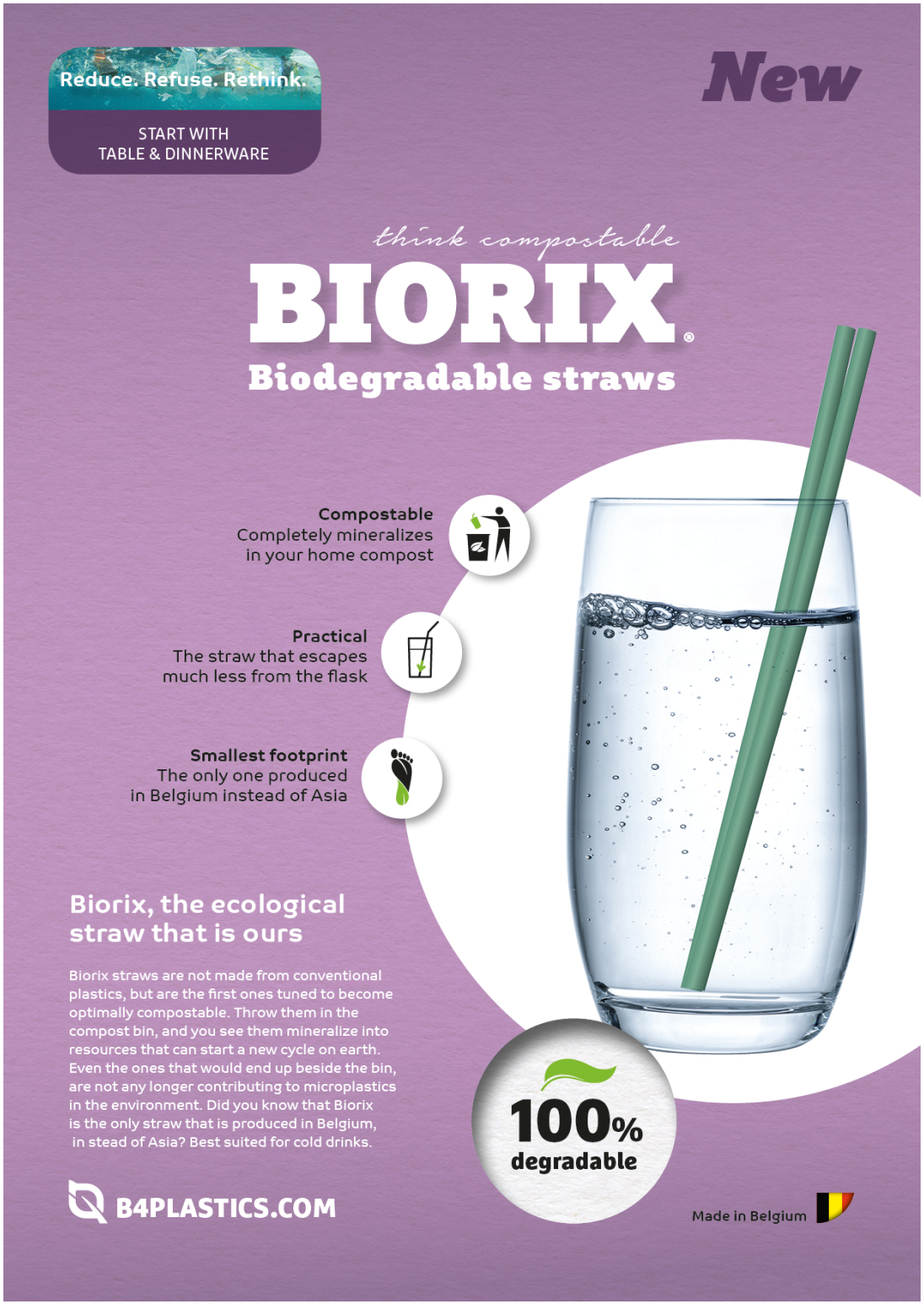
strongest trimming line in the market with tunable degradation *(performance tunable per region)*



B2C

COMPOST3D® 1.0

First plastic product in the market with IT-supported service package *(end-of-life simulation before use)*



B2C

BIORIX® 2.0

Fastest degradable bio-plastic drinking straw in the world
(proven home-compostability)

B2B

NEW BACKBONE

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Reduce. Refuse. Rethink.

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XXX 1.0

NEW functional materials

- ***Kg prototyping within 3-6 months***
- ***Upscale protocol included***
- ***Supply agreement option***

Product portfolio

B2B

- **Custom-made production of specialty plastics (100 ton/yr)**
- **Design and development of novel and exclusive (combinations of) functionalities**
- ***Trigger-forming or Trigger-degradable backbones***

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Our people

H1 2019

- **Headcount** — **6 payroll**
  3 outsource
  (production, legal, sales, marketing)
- **Highly educated/specialized**
- **Payroll diversity** — **BE – DE – NL – UK**
  Age 24 - 65
- **Strong HR pipeline**

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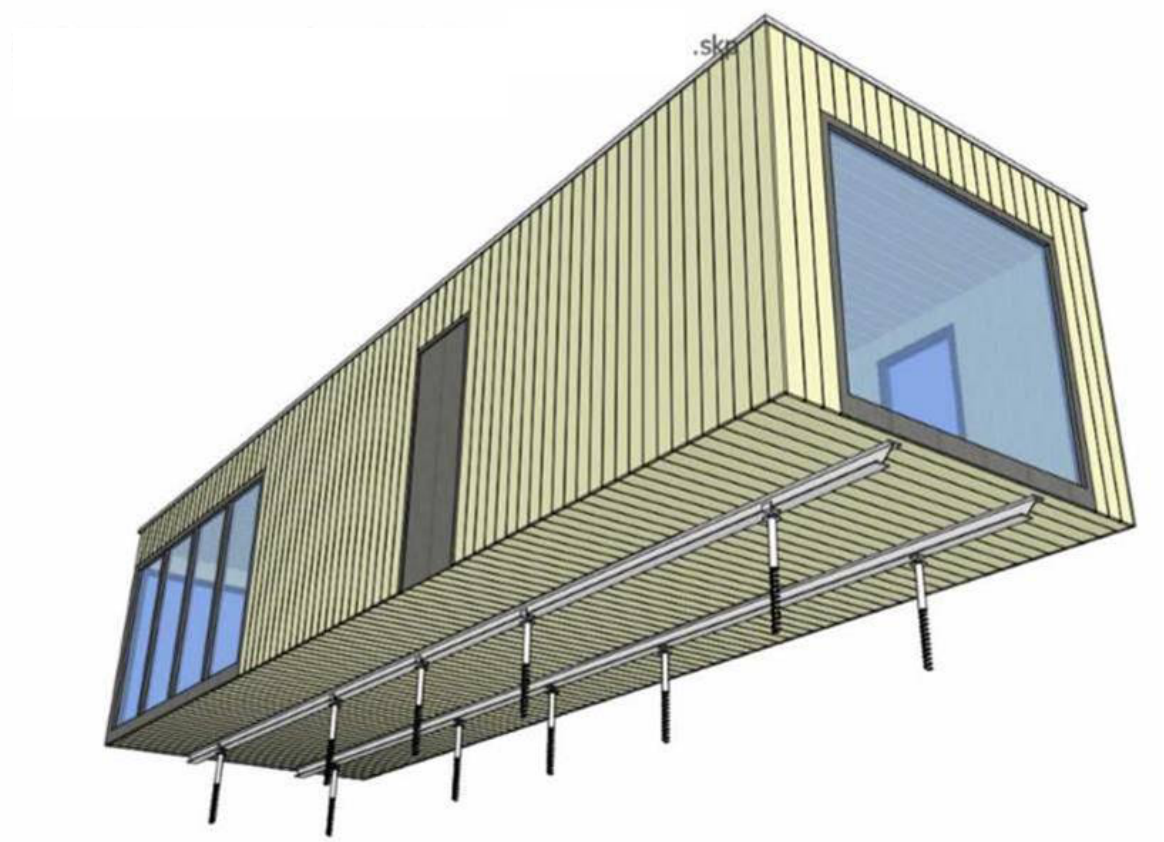
Our offices

H1 2019 – Mobile – Circular – Made in Belgium

Systimber technology



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Outlook

B2B and B2C expansion

- **Novel B2C products and *plastic experiences***
- **Pioneering B2B technologies via sampling/projects**
- **Upscale of novel materials in supply agreements**
- **First mover advantage / Strategic patent positions / *Eco-plastic sustainability trendsetter***
- **Headcount growth**
- ***Media - Consumers***

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Reduce. Refuse. Rethink.
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