

The image features a light mint green background with abstract, dark green organic shapes in the top right and bottom left corners. The text is centered in a bold, dark green, sans-serif font.

DS BIOSOLUTIONSDAG

VELKOMMEN!

Vi starter kl. 14.15

DS BIOSOLUTIONSDAG

Biosolutions og standarder – et fælles sprog for grønne gennembrud

v/ Tina Helsted Vengsgaard, direktør,
Dansk Standard

DS BIOSOLUTIONSDAG

Danmark som frontløber inden for **biosolutions**

v/ Camilla Hjerminde, kontorchef,
Erhvervsstyrelsen

DS BIOSOLUTIONSDAG



Danmark som frontløber inden for biosolutions

10. november 2025

Kontorchef Camilla Hjerminde

Regeringens ambitioner



"Biosolutions kan blive en af fremtidens helt store vækstmotorer i Danmark. Derfor er det helt afgørende, at sektoren har de bedst mulige betingelser. Med det nye vækstteam får vi kastet lys på, hvordan vi gør det. Det er et vigtigt skridt mod at sikre, at danske virksomheder kan opnå betydelige globale markedsandele og bidrage til en grønnere verden. Alt sammen så dansk biosolutions kan nå helt nye højder til gavn for grøn vækst og jobs i Danmark"

Morten Bødskov (S), Erhvervsminister

Regeringsinitiativer – med betydning for biosolutionsområdet



EU

Biosolutions-dagsordenen er en dansk prioritet under formandskabet

Vækstteam

for fremtidens landbrug, fødevarer og biosolutions

Fyrtårn

Nye TDU-faciliteter - fyrtårnet (DEB) og forskningsreserven

Rød løber

One stop shop
11 nye industri-parker

Iværksætter aftalen

Fondsinitiativet
Regulatoriske sandkasser
Tech-Trans



Regulatoriske sandkasseforløb på biosolutions



POLITIK | ABONNEMENT

Minister vil have "sandkasse" til at fremme udvikling af græsprotein

Minister fortæller, at nyt værktøj skal kigge på barrierer for at skalere produktion af græsprotein.



AGRIWATCH

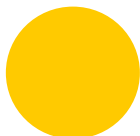


Manglende standarder og mærker på biosolutions området?

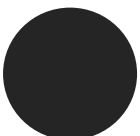


- **Mål- og resultatplan** mellem Erhvervsstyrelsen og Dansk Standard. Her aftales bl.a. politisk prioriterede målsætninger, herunder biosolutions.
- Dansk Standard udpeget som **nationalt standardiseringsorgan**. Varetager derigennem danske interesser i europæisk og international standardisering.

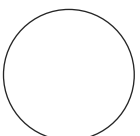
Eksempler på hvad der efterspørges:



Virksomhederne ønsker bl.a. **klare definitioner** på specifikke produkter fx biobaserede materialer/produkter, novel foods og biopesticider

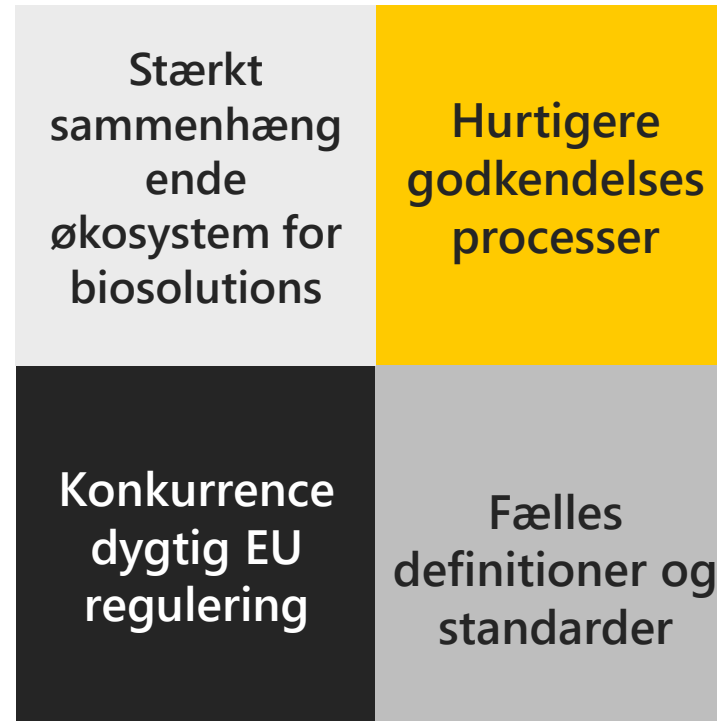


Investorerne efterspørger fx **fælles terminologi** på biosolutionsområdet for at skabe gennemsigtighed og sammenlignelighed



Forbrugerne kan have brug for **tydeligere kommunikation** fx om biosolutions fødevarer

Fremadrettede danske prioriteter inden for biosolutions?





EU Biotech Act – en katalysator for Europas grønne omstilling

v/ Morten Løkkegaard, MEP (V),
næstformand, Renew Europe

DS BIOSOLUTIONSDAG

Fra plov til petriskål: Den store fødevaretransformation

v/ Marie-Louise Boisen Lendal, direktør,
Tænketanken Frej

DS BIOSOLUTIONSDAG

Fra plov til petriskål

Den store fødevaretransformation

Marie-Louise Boisen Lendal | CEO | Thinktank Frej

Chairperson | Plant-Based Food Grant

Board Member | Friland

Member | Governments Growth Team



A **meat-lover**
from the
countryside

falafels?



or



meatballs?

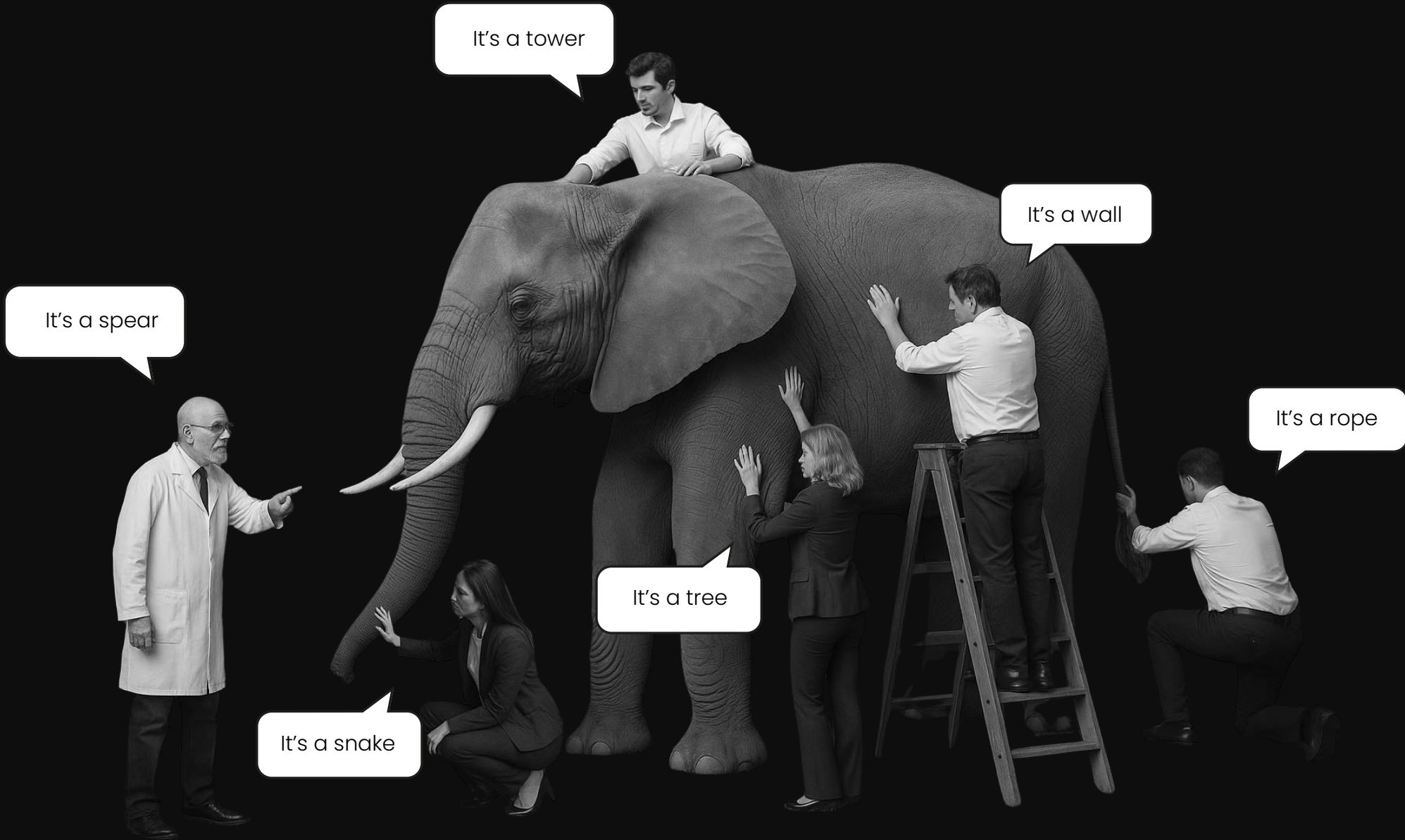
Børsen?



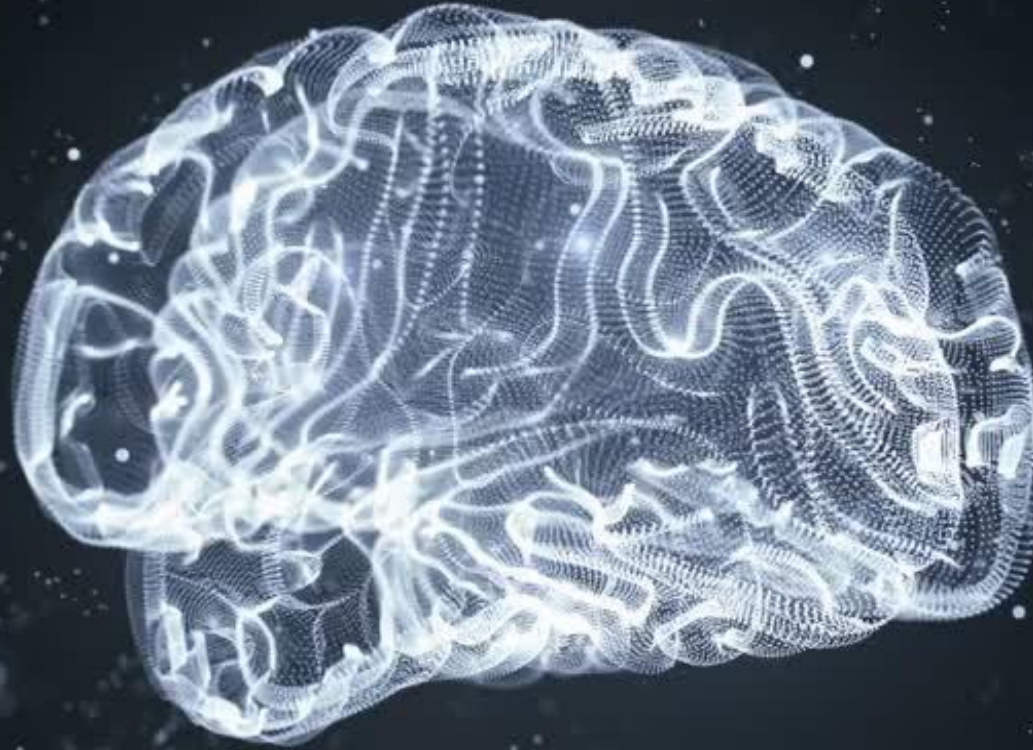
eller



Information?



confirmation

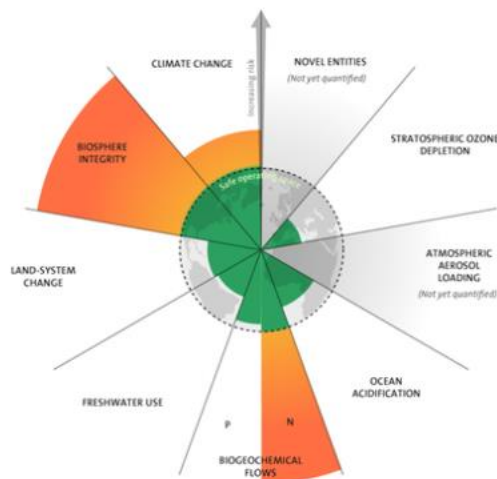


bias

Frej bygger bro og motiverer
til grøn forandring fra **mark til**
måltid hos aktører og mellem
generationer

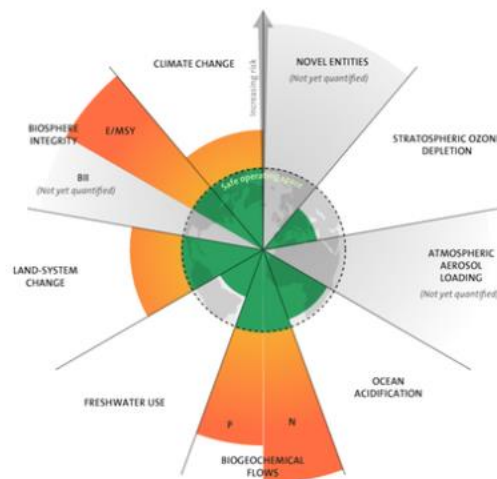
Planetary boundaries

2009



7 boundaries assessed,
3 crossed

2015



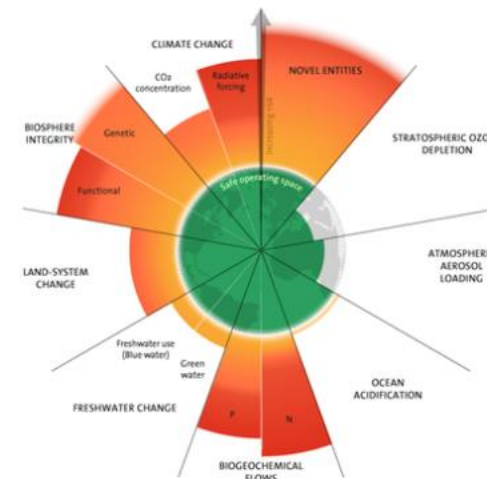
7 boundaries assessed,
4 crossed

2023



9 boundaries assessed,
6 crossed

2025

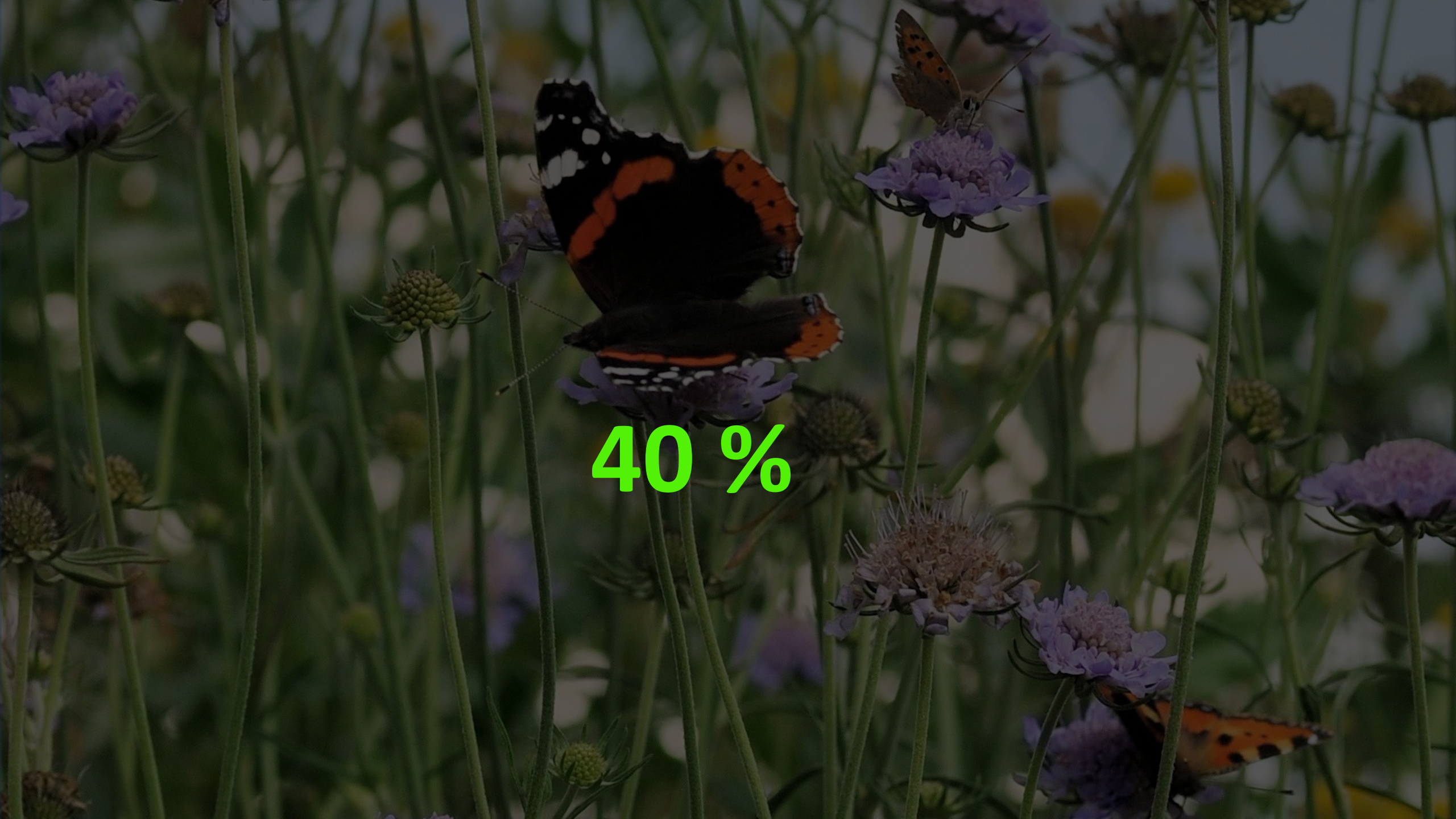


9 boundaries assessed,
7 crossed

Fødevarerektoren er
hovedårsag til
overskridelse af 6 ud
af de 9 planetære
grænser



1/3

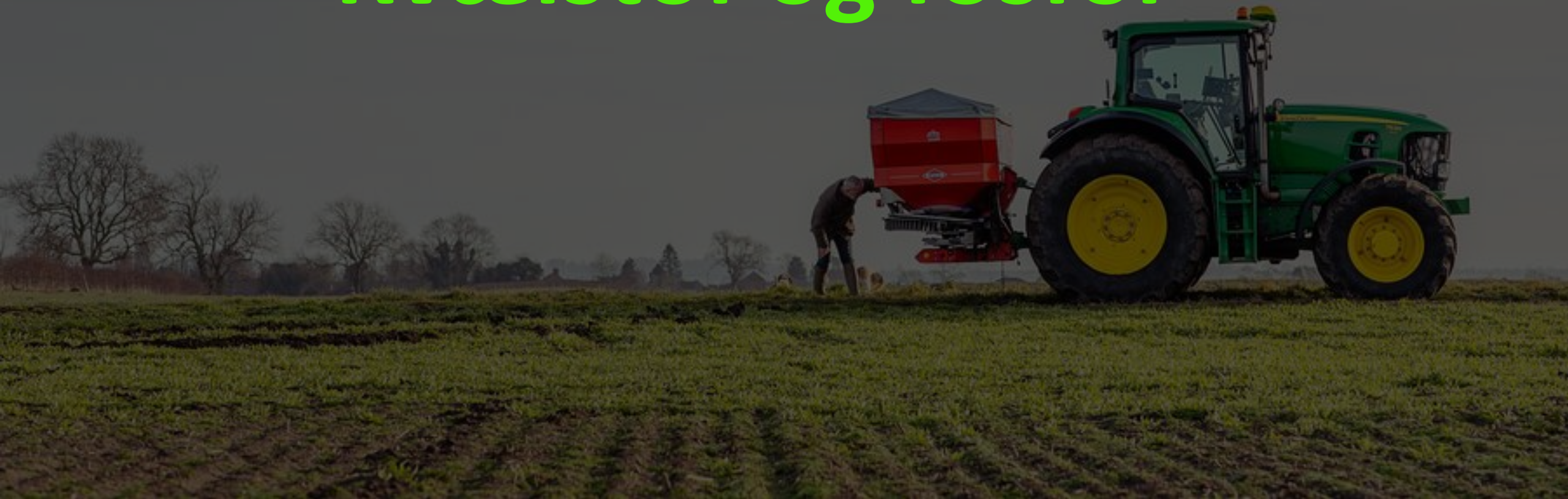
A photograph of a field of purple flowers, likely scabiosa, with several butterflies. The image is dimly lit, with a dark overlay. A large, bright green percentage '40 %' is centered in the lower half of the image. The butterflies are primarily black with orange and white markings, characteristic of the Red Admiral species. One butterfly is perched on a flower in the upper right, another is on a flower in the center, and a third is partially visible in the lower right. The background is filled with more flowers and green stems, creating a dense, natural setting.

40 %

An aerial photograph of a tropical landscape. The foreground is a cleared area with dry, brownish vegetation and scattered tree stumps. The background is a dense, lush green forest that stretches to the horizon. A sharp line separates the cleared area from the forest. The text 'Arealanvendelse' is overlaid in the center in a bright green, bold font.

Arealanvendelse

Kvælstof og fosfor



A high-speed photograph of a water droplet falling into a pool of water. The droplet is captured mid-fall, just above the surface, and its reflection is visible in the water below. The background is a solid, dark blue color.

70%

A green tractor is shown from the side, moving through a field of young corn plants. It is pulling a red frame with a white tank, which is spraying a fine mist of liquid onto the plants. The field is filled with rows of small green corn seedlings in dark brown soil.

Pesticider & antibiotika

Hvor der er udfordringer
- er der **muligheder**



Frejs fremtidsvision



En landbrugs- og
fødevareproduktion, der
respekterer planetens
grænser



Et fødevareforbrug,
der respekterer
planetens grænser



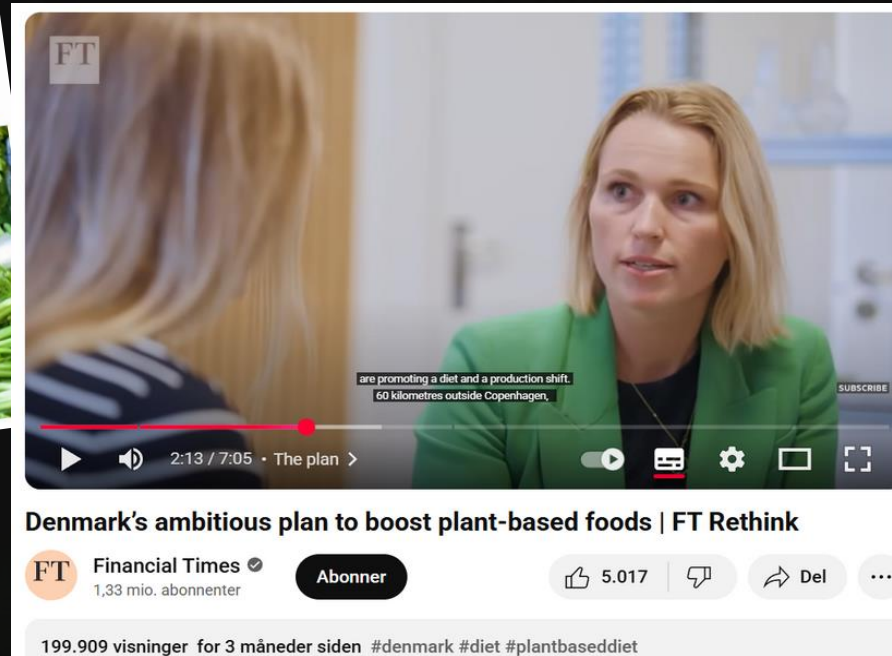
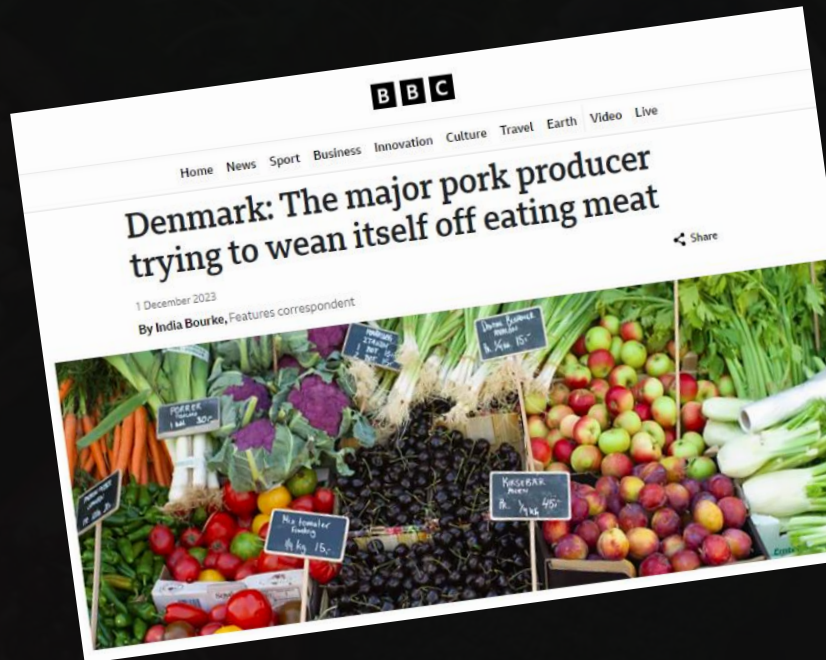
Et samfund, der satser
på nye fødevarer,
forbrugsmønstre og
teknologier

Vi skal spise meget mere **planterigt**

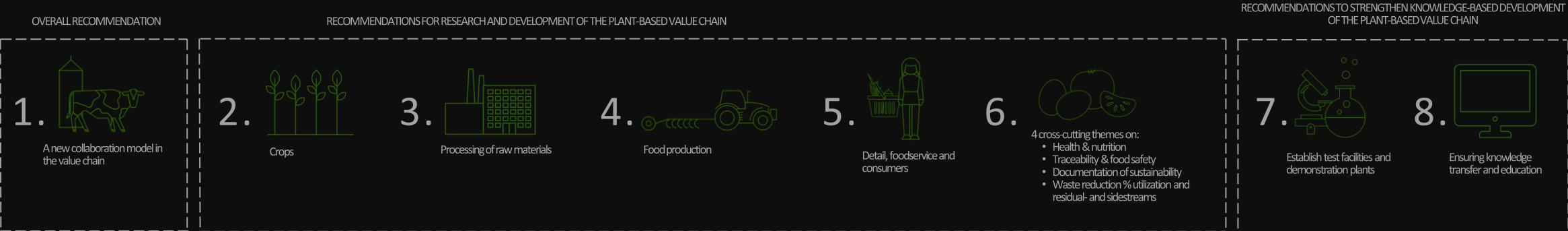


PLANT-BASED
FOOD GRANT

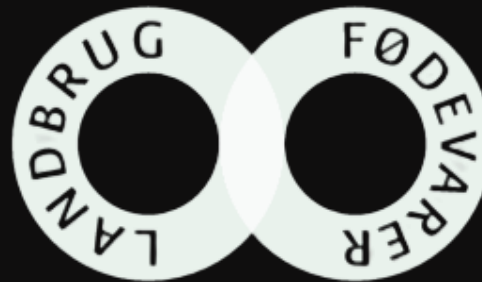
Danmark leder vejen



Brobygning er løsningen



frej



Vegetarisk
Forening



Biosolutions er en vigtig del af løsningen

- Biologiske bekæmpelsesmidler
- Fermentering til sunde, plantefødevarer
- NGT'er til robuste planter og høje udbytter
- Kød uden dyr
- Proteiner med lavt input
- Mikronæringsstoffer til plantesundhed

Biosolutions kræver også brobygning

Udland

Italien forbyder falsk kød - producenter trues med bøde på 1,2 millioner kroner

Inden afstemningen kom landbrugslobbyister og
oppositionspolitikere i flæsket på hinanden.



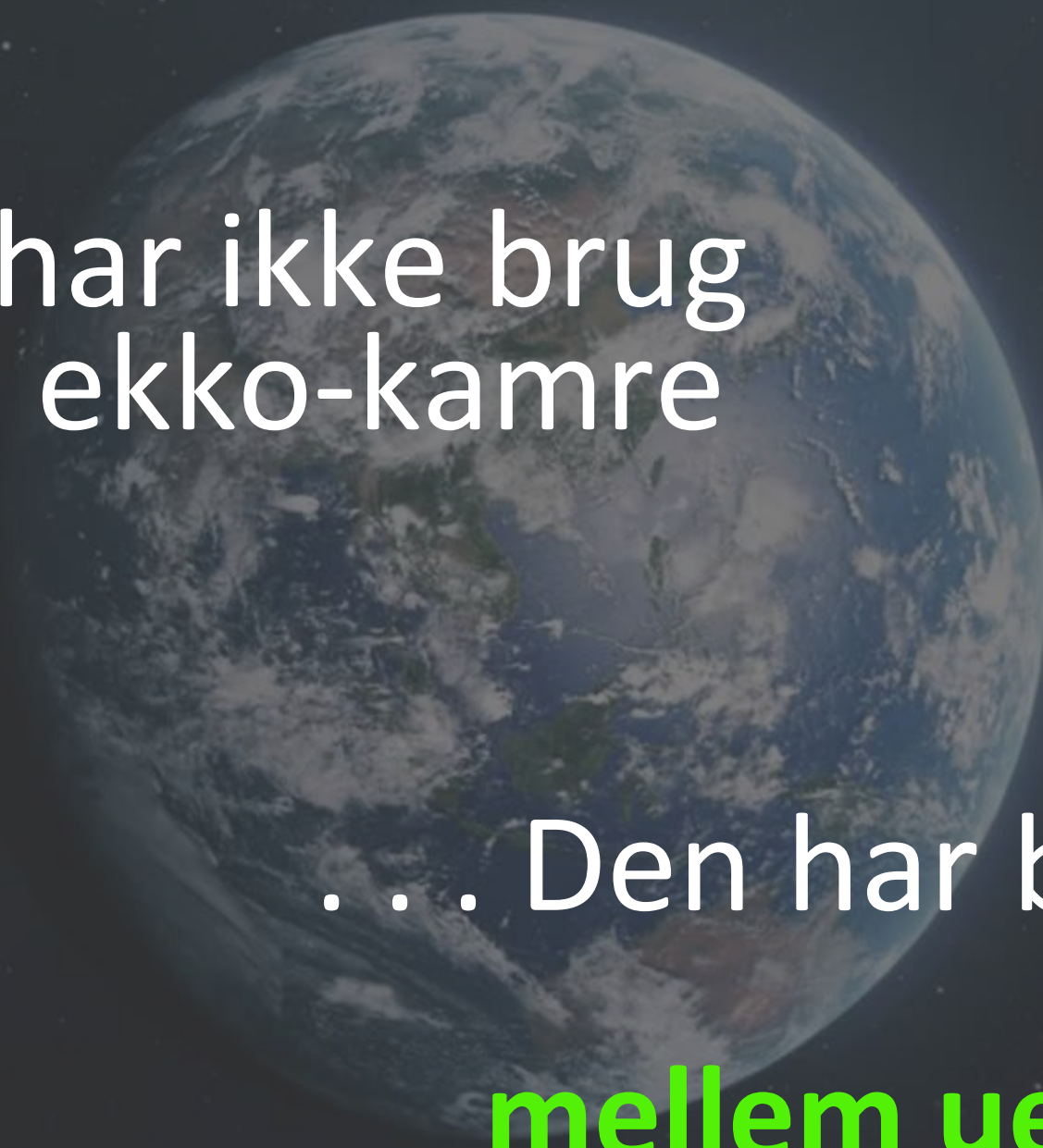
Biosolutions kræver også brobygning

EU Council deadlock on NGTs further
delays innovation for Europe's plant
breeders and farmers

June 26, 2024

European seed sector - Plant breeding innovation





Verden har ikke brug
for flere ekko-kamre

. . . Den har behov for
dialog
mellem uenigheder

A Level Playing-Field for Biosolutions

v/ Peter Steen Mortensen, Director Public
Affairs, Novonesis A/S

DS BIOSOLUTIONSDAG

Level playing field and why a cow is not a biosolution

A biosolutions is a solution
based on nature's toolbox
optimized through industry
level fermentation
technology

With 100+ years of innovation as our foundation,
we will keep delivering transformative solutions

novozymes® 

CHR HANSEN

novonesis

We have the world's most advanced biotech toolkit,
enabling world-class innovations

100+

years of
dedication
to science

~11%

of turnover
is re-invested
in R&D

~2,000

employees
in R&D

~40

R&D and
application
centers

1

unparalleled library
of 100,000
documented
microbial strains
and enzymes

~10,000

patents

Global presence with local reach

~40

R&D and
application centers

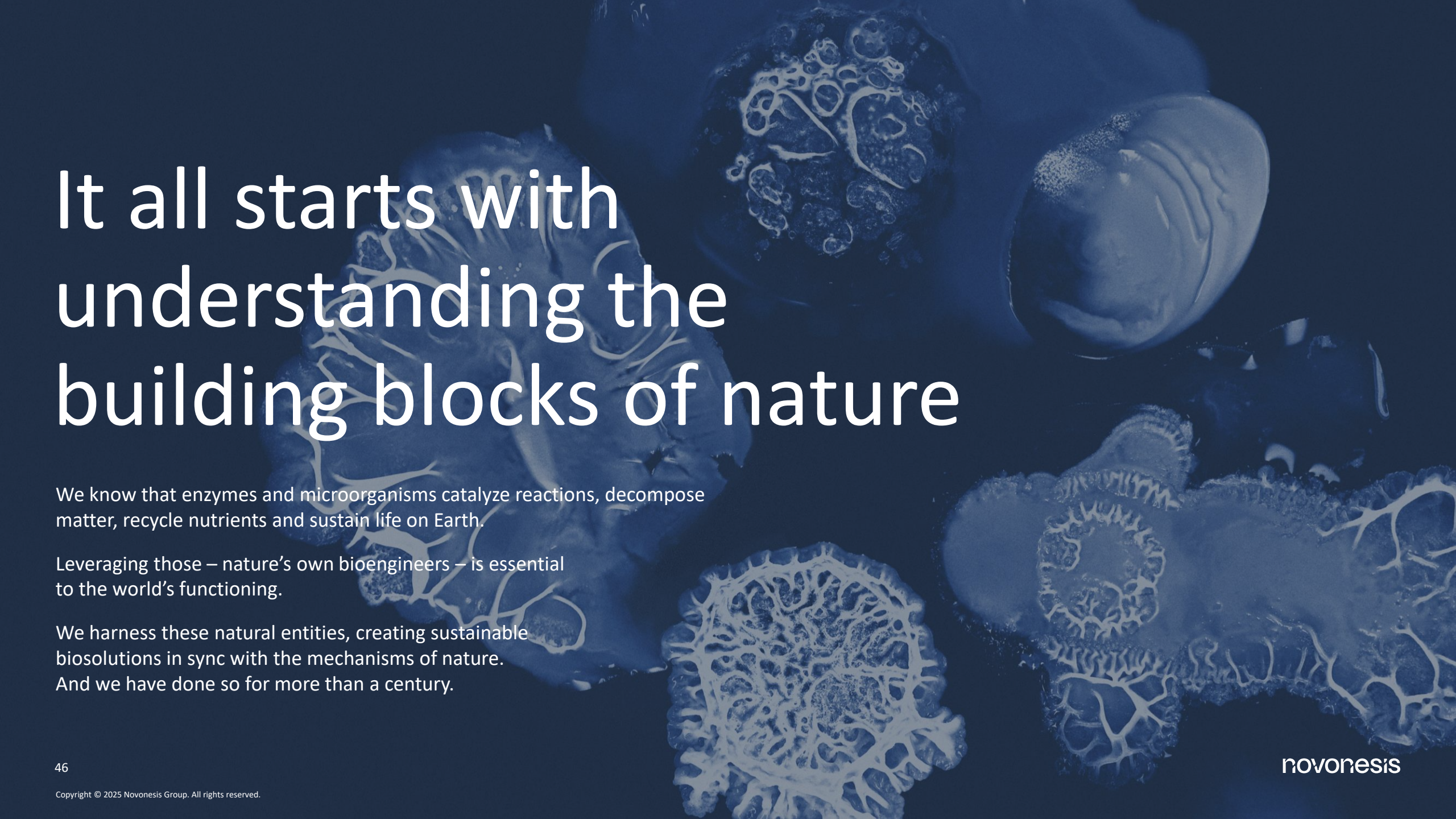
+30

Production sites

A global company with strong regional
presence solving problems by:

- Meeting local needs
- Producing high quality products at scale
- Ensuring a resilient value chain





It all starts with understanding the building blocks of nature

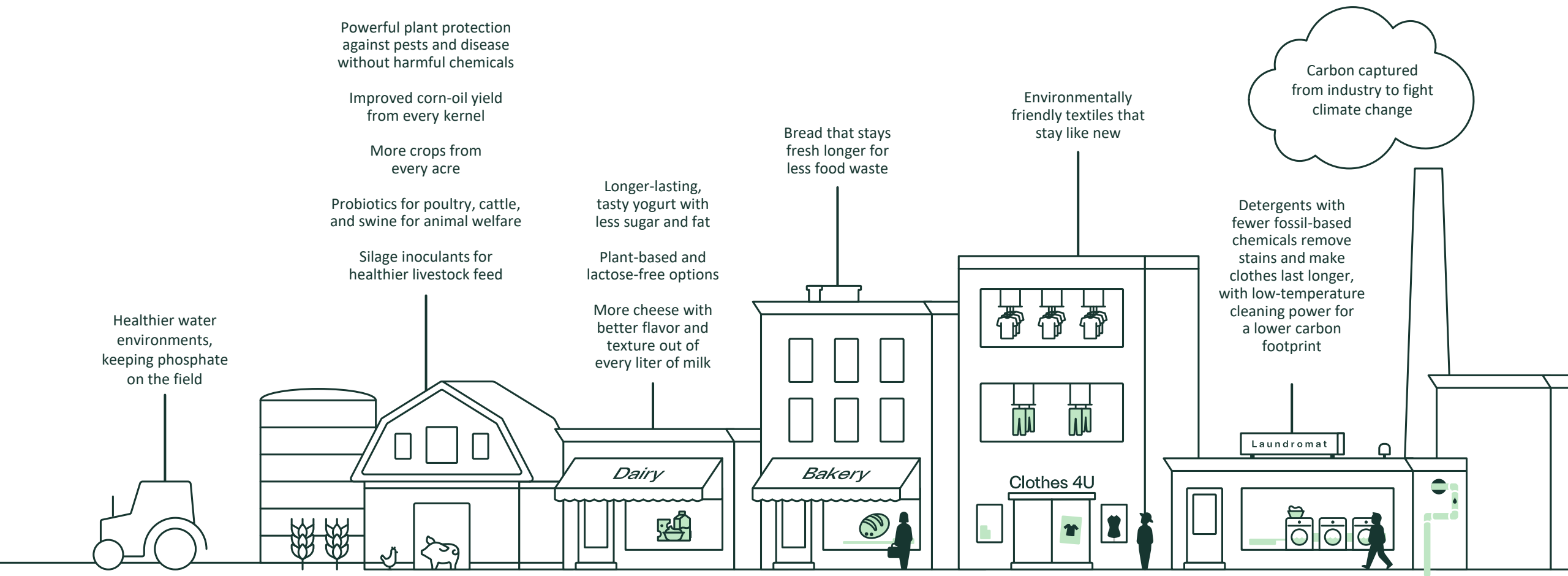
We know that enzymes and microorganisms catalyze reactions, decompose matter, recycle nutrients and sustain life on Earth.

Leveraging those – nature's own bioengineers – is essential to the world's functioning.

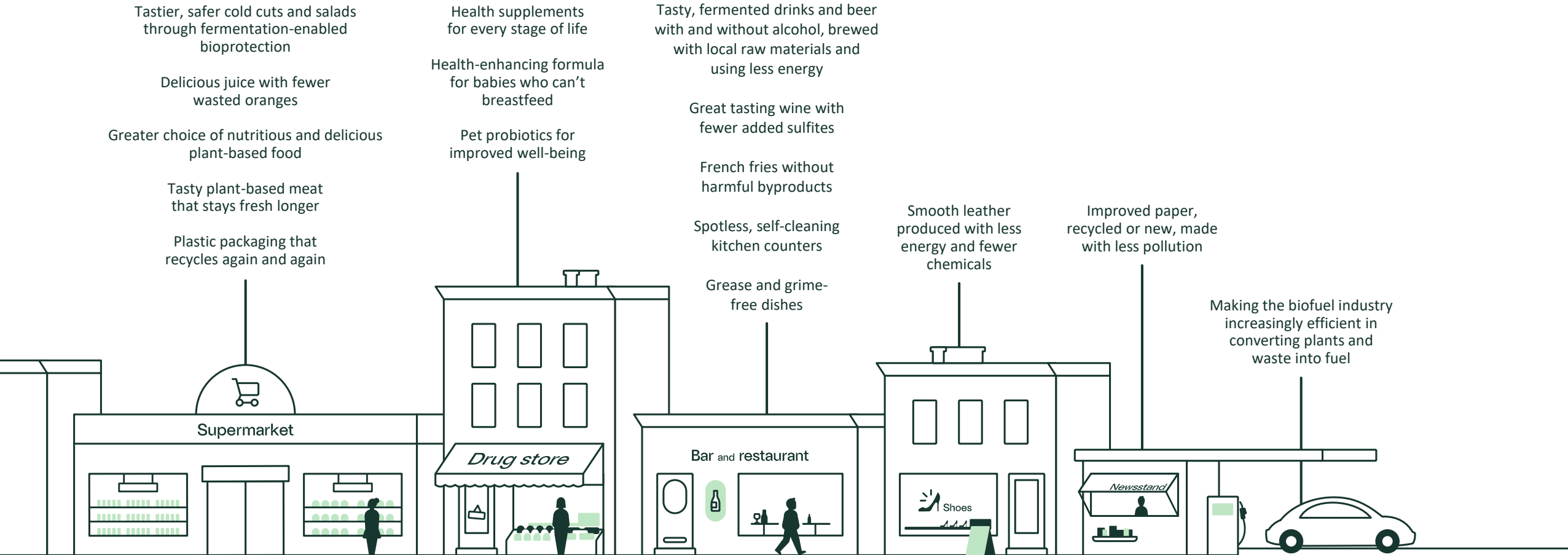
We harness these natural entities, creating sustainable biosolutions in sync with the mechanisms of nature. And we have done so for more than a century.

Biosolutions are already part of your everyday life.

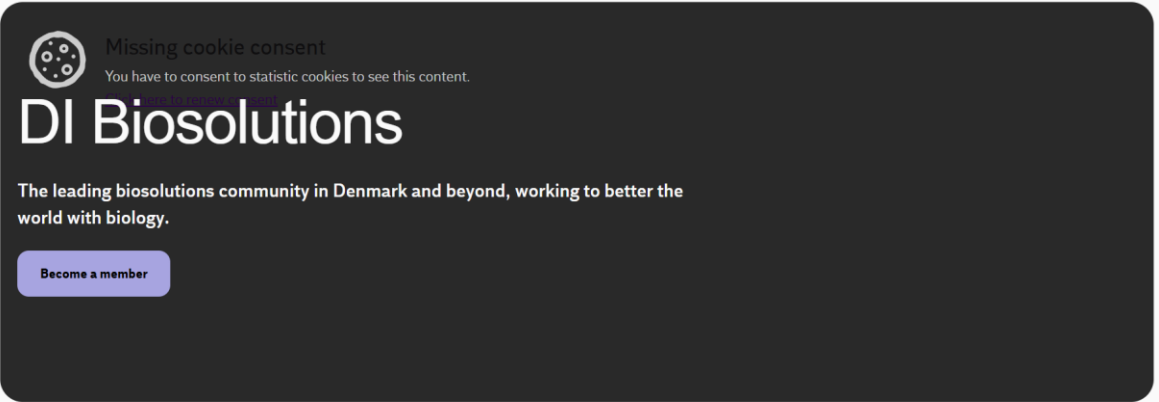
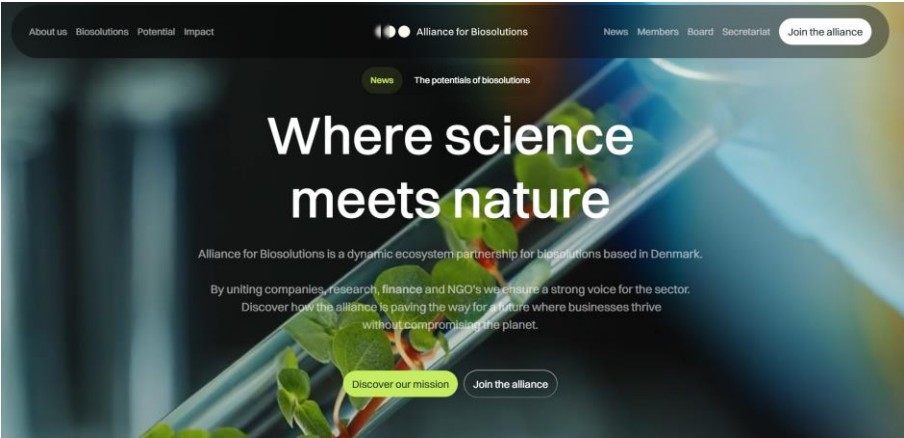
They solve problems enabling...



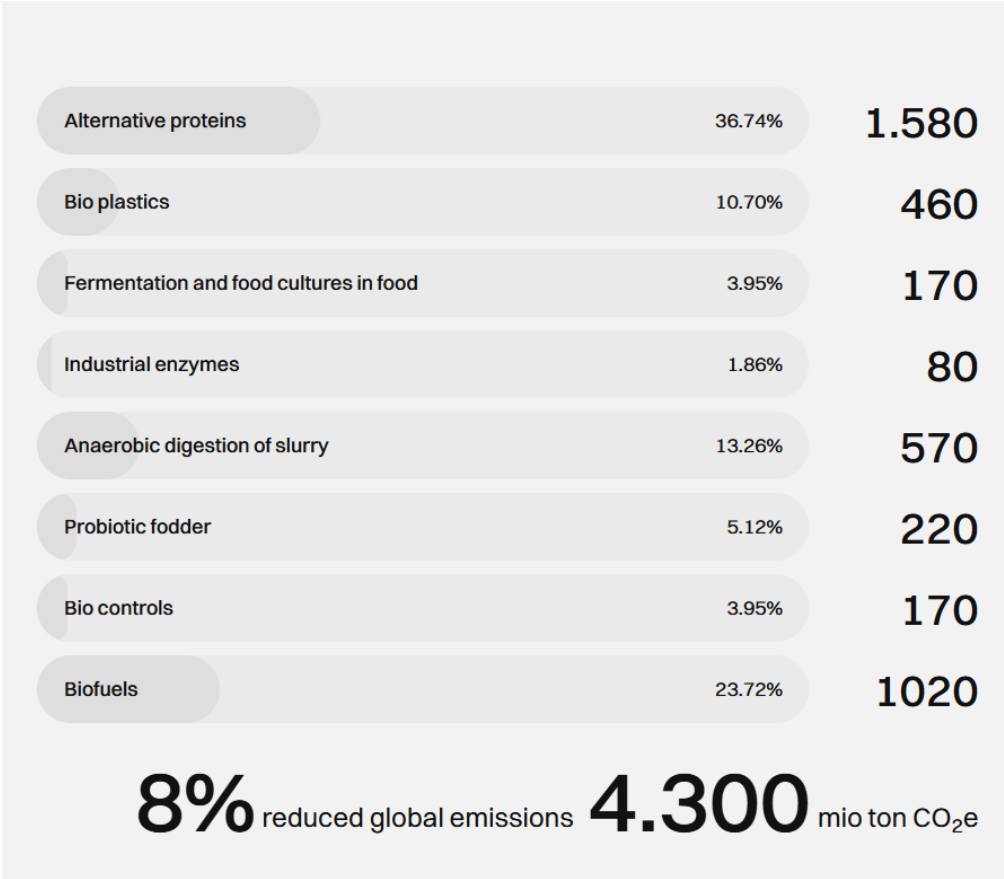
Biosolutions are already part of your everyday life. They solve problems enabling...



Bringing the ecosystem together



Climate change



Growth and jobs

The value of
biosolutions

Contact

Download reports

Growth and Prosperity to 2035

The biosolutions sector is on the rise. This comprehensive report documents the momentum, showing how biosolutions drive job growth, competitiveness and economic resilience for countries across the globe.

Explore the potential



The Value of Biosolutions:
Growth and Prosperity to 2035
- Europe edition



June, 2025

This report has been prepared by ADC (Amsterdam Data Collective) and was commissioned by Novonesis.



Dragoman

novonesis



European Bioeconomy Coalition

SZPIRT & COMPANY

Download now!



www.thevalueofbiosolutions.com



Leaders for European Growth and Competitiveness

The World Economic Forum's multistakeholder leadership group for European growth and competitiveness, made up of key leaders from public, private, civil society and expert organizations.

[Get involved](#)

Case: Novel proteins

From CO₂ to protein

How biosolutions could potentially transform emissions into nutrition



Potential to feed
billions of people



Zero agricultural
land needed



Significant
emissions reduction

Thank
you



PAUSE

Vi starter op igen
kl. 15.50

DS BIOSOLUTIONSDAG

Vejen til skalering – Visibuilt's erfaringer fra idé til vækst

v/ Line Kloster Pedersen, CEO & Founder,
Visibuilt

DS BIOSOLUTIONSDAG

REINVENTING ROAD CONSTRUCTION

INSPIRED BY NATURE



Highlights

The binders we depend on for road construction are sensitive to geopolitical instability - new locally produced alternatives are needed in an uncertain world

Increasing **societal and economic challenges**



Opportunity for Visibuilt



Highlights

Fungi are waiting to be explored for sustainable road construction



Mycelium is our silent master in resilient design.

The rootlike-net structure of fungi, mycelium, is the natural binder of soil that recycles waste from the forest (e.g., fallen trees, leaves, etc.).



Visibuilt is pioneering the first industrial application of fungal binders in pavements.

Mycelium is being used by an increasing number of architects and entrepreneurs to revolutionize the material production for construction.

nature biotechnology

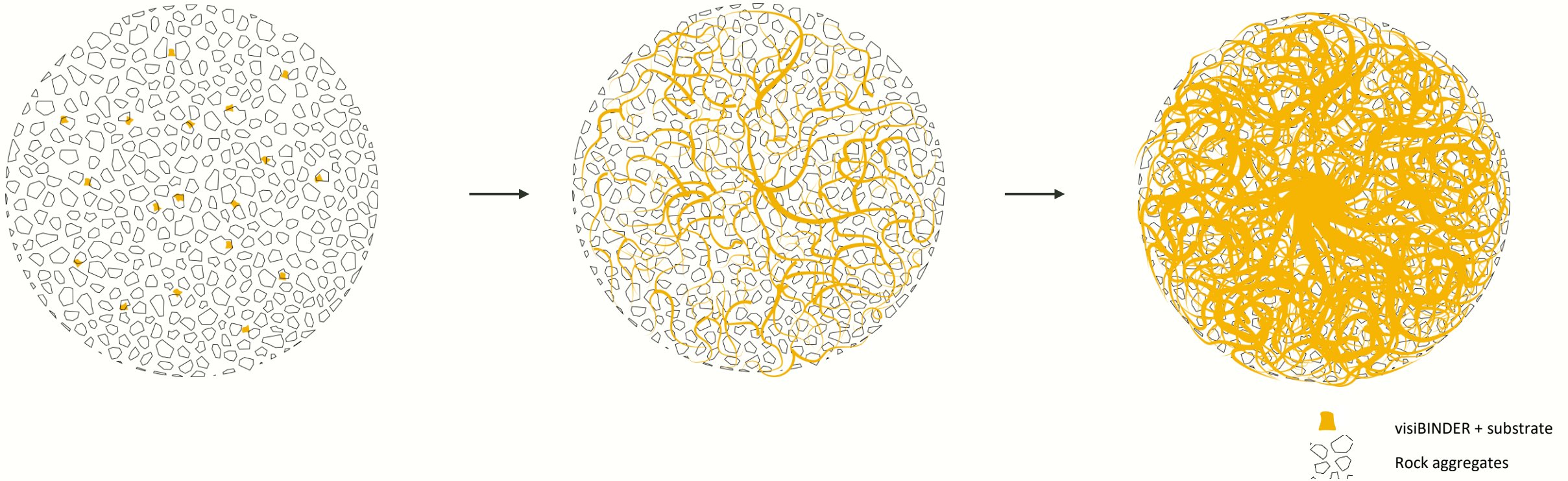


The Future is Fungi
Award 2023



How visiBINDER works

visiBINDER binds rocks by growing in between voids,
creating a new class of binders with mycelium



What makes visiBINDER stand out

Market traction for visiBINDER applications in key markets

THE CEMENT ALTERNATIVE FOR CONCRETE PAVERS

visiPAVER

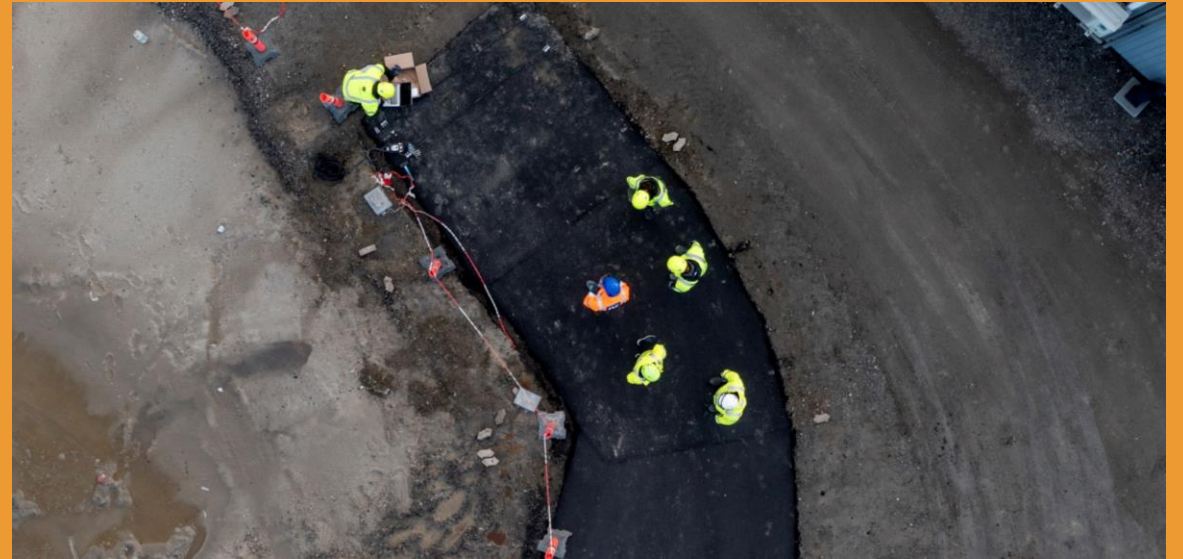


→ 40 m2 bicycle parking area established at Fælledby (Copenhagen)



THE BITUMEN ALTERNATIVE FOR ASPHALT

visiBIT



→ Implementation at NCC factory tested and field test completed at the Fehmarn Belt Tunnel



What makes visiBINDER stand out

Unique value proposition: health benefits

RISKS OF CEMENT

Prolonged or unprotected exposure to cement can result in severe skin damage, allergic reactions, and respiratory illness.



Eye
injuries



Skin irritation &
burns



Respiratory
Issues

RISKS OF BITUMEN

Bitumen's high temperature and reactivity make it hazardous to handle, with potential for burns, toxic vapors, and violent water reactions.



High
temperatures



Fumes



Reactive with water

BENEFITS OF VISIBINDER

With visiBINDER, several of the risks of cement and bitumen are not present as mycelium is used at low temperatures and mild conditions.



Lower
temperatures



100x less
PAH



Non-reactive



Safe to touch

SAFE AND NATURAL

By using the roots of the mushroom, no spore forming will occur. The use of local, non-GMO strains provides a product that can be used safely.



Non-spore
forming



Non-invasive
local strains



Non-GMO

visiBINDER is a complete replacement of cement for a new generation of concrete pavers
– introducing the visiPAVER

OLD WAY



+



+



+



=



Aggregates

Cement

Sand

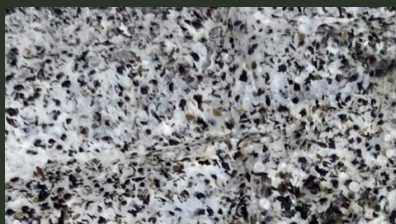
Water

Concrete

NEW WAY



+



+



+



=



Aggregates

visiBINDER

Sand

Water

visiPAVER

visiPAVER is revolutionary – and therefore does not fall under any EU standards today



Barriers for innovative products



Both **EN 1338** and **EN 1339** define the product as “*cement-bound unreinforced concrete*” (materials, properties, requirements, and tests are written for cement-bound concrete).

visiPAVER is revolutionary – and therefore does not fall under any EU standards today



Barriers for innovative products

- ➔ Both **EN 1338** and **EN 1339** define the product as “*cement-bound unreinforced concrete*” (materials, properties, requirements, and tests are written for cement-bound concrete).
- ➔ That definition sits right in the **scope clauses**, so a unit that has no cement at all falls outside the scope of those standards - even if it could pass every test inside them.

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- ➔ You can still place the product on the EU market with a CE mark based on an ETA (European Technical Assessment) under the Construction Products Regulation (CPR).
- ➔ That’s the route for innovative/out-of-scope products. **But it puts the workload on start-ups to handle many years of bureaucracy before reaching the market!**

Biobased construction materials have a way into the harmonized standards through ETA

Case example: Biomason

The ETA process is a fix – but not a total solution

Biomason has filed an ETA for concrete without cement and show a possible route to market with a regulatory process fitted to new products.

Biomason's BioLITH "biocement" tiles obtained ETA 22/0684 ("Tiles made of aggregate blends and microorganisms"), then issued a **Declaration of Performance (DoP)** declaring characteristics like freeze-thaw and flexural strength.

This is a concrete precedent for bio-bound masonry/paving-type units reaching EU markets without EN 1338/1339. But this ETA needs to be specified in the tenders along with other standards to conform.

BIOMASON.DK

**Biolith® Tile
Declaration of
Performance**

220926 - BMDK - Biolith Tiles

Manufacturer: BioMASON Denmark ApS
c/o Gorrisen Federspiel
Axeltorv 2
DK-1609 København V
Denmark
www.biomason.com

Unique ID: BL-400x200

Intended Use: The tiles are intended to be used as cladding on exterior facades and interior walls, as well as interior and exterior flooring applications.

AVCP System: 3

EAD: EAD 210207-00-0404: Tiles made of aggregate blends and microorganisms

Notified body: Refer to ETA-22/0684



Declared Performance:

Covering a range of product types under the Biolith product line

Characteristic / Data Submitted	Assessment Method	Assessment of Characteristic
Safety in case of fire (BWR 2)		
Reaction to fire	2.2.1	The product has an organic content of less than 1% and therefore classified as class A1 in accordance with EN 13501-1 and Delegated regulation 2016/364
Facade fire performance	2.2.2	NPD
Hygiene, health and the environment (BWR 3)		
Content, emission and/or release of dangerous substances*	2.2.3	NPD
Safety and accessibility in use (BWR 4)		
Density	2.2.4	The average apparent density is 2144 kg/m³ with a tolerance of $\pm 30\%$
Configuration	2.2.5	Length, average: 445,5 mm Width, average: 193,2 mm Thickness, average: 19,8 mm Straightness, average: 0,22 mm , max. deviation 0,21 %

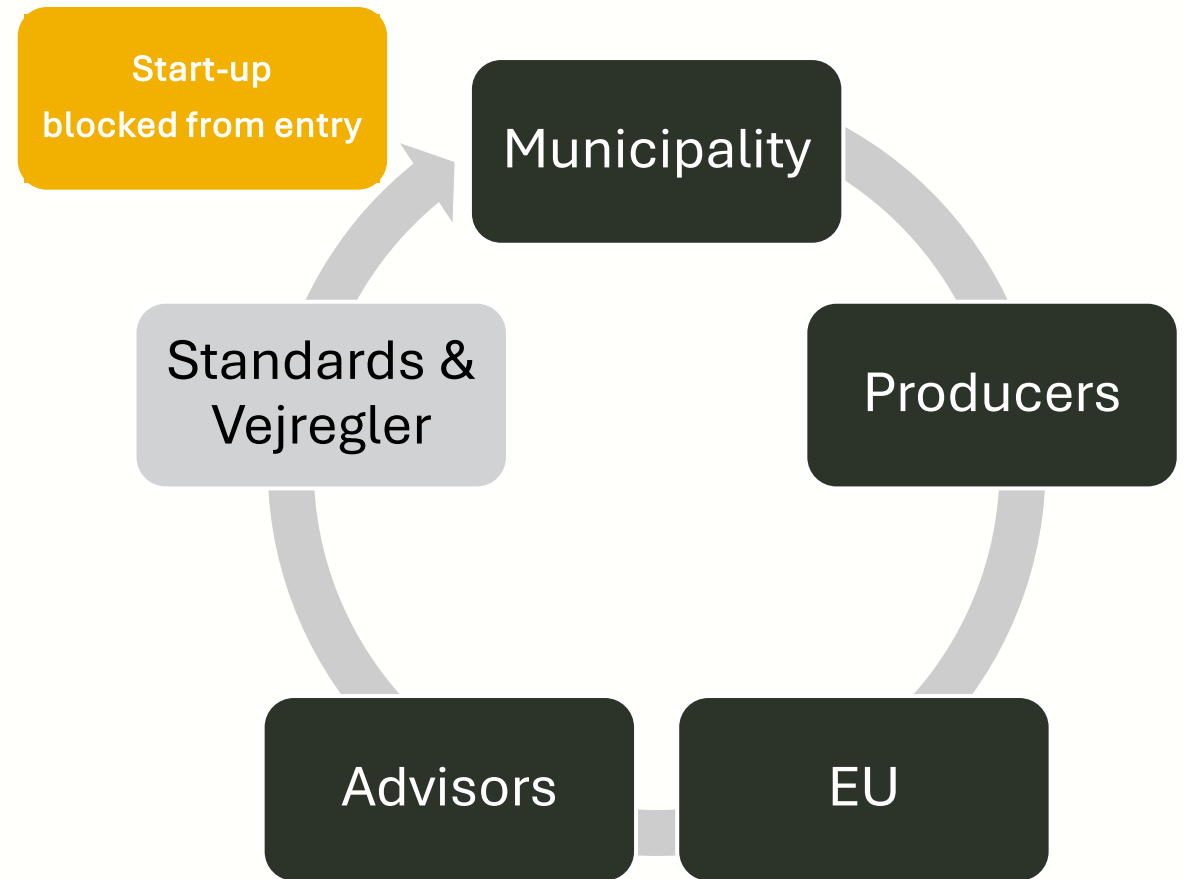
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Finsensvej 1F, DK-7430 Ikast CVR nr. 29 80 07 58 | www.biomason.com

1

Performance to EN-style levels does not change anything
– compliance is only achieved through cement

Catch22 –
“An ETA is not a
carte blanche to
enter the
market”



Excluded on **wording** – not performance

Barriers	Mitigation
Specs that name the standard: Many public works and private tenders literally say “units shall comply with EN 1338/EN 1339.” Products are excluded on wording, and not performance.	Provide an ETA + a cross-reference matrix that maps ETA characteristics to EN test outcomes and ask clients to accept “ETA-assessed equivalents” (CPR treats ETA-based CE marks as valid). Include independent test reports on the same EN methods.
Procurement conservatism / liability: Asset owners and insurers are used to “concrete to EN 1338/1339.”	Offer field pilots and support in establishing test zones for new pavements. Open the tenders for the use of alternative binders in lower-traffic load applications (like pedestrian walkways, bicycle lanes, and suburban roads).
National guidance & roads authorities: Some road/airport specs hard-code EN references or cement content.	Allow materials that are not yet “proven-concept” with e.g. 5 years of use data yet but instead can document laboratory data on durability in the first years of new binder’s market introduction.

Regulatory barriers: field tests

Public entities can shape the requirements and open the door for new materials

City of Copenhagen: Selinevej 15.

Test of visiPAVER , ongoing



Regulators require “Best practice” with the product being established in the market - but to have best practice you first need to have customers who are willing to do the test with you.

City of Copenhagen is testing 5 m2 of visiPAVER to learn about the revolutionary pavement, thereby leading the way to new biobased standards in road construction in the public sector.



Render of visiPAVER outdoors

Regulatory barriers: field tests

Key performance metrics across design, sustainability, and production of visiPAVER are being tested with customers



GREEN

Pavements of new urban areas are increasingly focused on reducing CO2 emissions. The regulatory pressure on buildings to limit CO2 emissions of materials is incentivizing pavement producers to find green alternatives.

Case: Fælledby mobility center

A 40 m2 pavement was constructed using visiPAVER for a bicycle parking area at Fælledby, Copenhagen. The customer Fælledby is a joint venture between PensionDanmark and By & Havn.



Traction

Support and acclaim for Visibuilt in total 4,700,000€



Winner

Danish Design Award Young Ideas 2024



ASFALT – Vore Veje

Danish magazine cover story 2023



NVF presentation

Nordic Asphalt Research and Development
2025

Sustainability

Mushroom makes tasty eco-asphalt

Bicycle lanes, car parks and roads in Denmark will soon sport earth-friendly mushrooms underfoot. Danish biotech startup Visibuilt is making a fossil-free bitumen substitute with fungi. The Copenhagen-based company has just been awarded €1.3 million (\$1.36 million) from the BioInnovation Institute in Denmark to create a fermentation-based, biorenewable binder for pavement.

Traditionally bitumen, which is made by crude oil distillation, has been used to bind gravel and



Featured News

Nature Biotechnology, January 2025

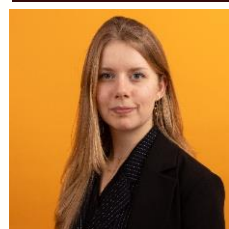


King Frederik X of Denmark

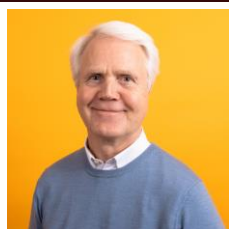
Presentation of visiBIT at BII

Meet our team

Sales, Financing & Marketing

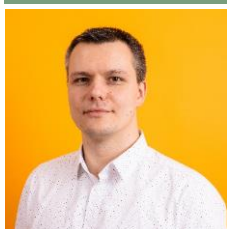


**Line
Kloster
Pedersen**
Founder & CEO
*Co-Founder of
fungi food start-up*

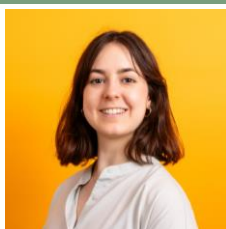


**Kresten
Kloch**
CFO
*Chairman and
20 years of CFO
experience*

Research & Development



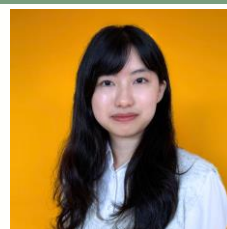
**Oleksii
Rebrov, PhD**
Co-Founder & CSO
*IP author, start-up
experience, and applied
physics background*



**Anna
Guitó
Vilardell**
Research & IP
Manager
*Biotechnology and
intellectual property*

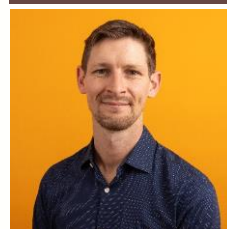


**Caroline
Thyssen
Petersen**
Research Scientist
*Protein engineering
and biotechnology*

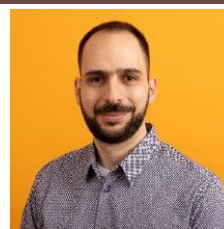


**Tzu Yin
Chen**
Scientist
*Diverse bio-
applications and
fungal biomaterial
experience*

Technology & Engineering



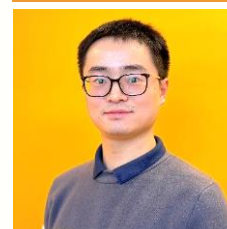
**Sam
Garrett**
CTO
*Engineer with 10+
years leading up to
€100M projects at GEA
& Tesla*



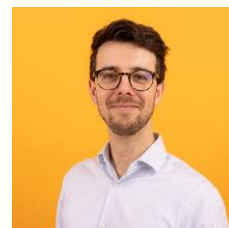
Tarek Khoury
Production &
scale-up specialist
*Vertical-farming
entrepreneur*



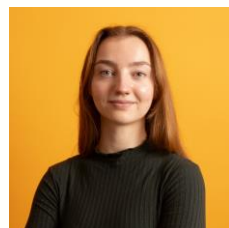
Mohan Babu
Lead Scientist -
Fermentation
Engineering
*Track-record of scaling
fermentation*



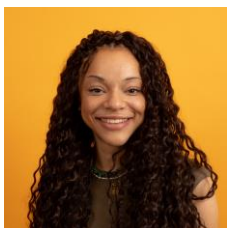
**Yike
Yin**
Industrial PhD,
LOOPER project
*Pavement engineering
materials, Chang'an
University*



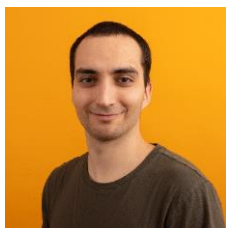
**Max van 't
Hof, PhD**
Business
Developer
*Biotech venture
development and BD
coach for 45+ start-ups*



**Cecilie
Håkansson**
Communications
Manager
*SoMe, journalism,
event planning, and
media management*



Sara Ozochi
Scientist
*Microbiology and
fungal biotechnology*



Michal Rečlo
Junior Scientist
*Biochemistry and
biowaste conversion*



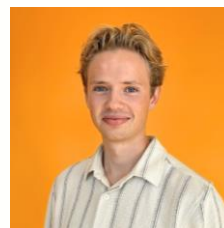
**Maria
Kristoffersen**
Junior Scientist
*Architecture and
biotechnology*



**Elisa
Pioger**
Junior Scientist
*Mycelium composite
material and
sustainable energy*



**Hannes
Norrman**
Manufacturing
Engineer
*Nanotechnology and
material engineering*



**Oliver
Lindeløv**
Production &
Design Assistant
Architecture

Debat: Sammen skaber vi standarderne

- Sofie Carsten Nielsen, Director, DI Biosolutions & European Biosolutions Coalition
- Marie-Louise Boisen Lendal, direktør, Tænk tanken Frej
- Anne Lerche, chef for biosolutions, Dansk Erhverv
- Niels Peter Nørring, klimadirektør i Landbrug og Fødevarer
- Maibritt Agger, afdelingschef, Dansk Standard

Opsamling og tak for i dag

v/ Tina Helsted Vengsgaard, direktør,
Dansk Standard

DS BIOSOLUTIONSDAG

TAK FOR I DAG!

Networking og forfriskninger i foyeren

**Kontakt os, hvis du vil høre mere
om vores udvalg for Biosolutions:**



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