The Novo Nordisk Foundation

Strategy within sustainable agriculture - brief overview

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It began with insulin...

...when Nobel laureate physician August Krogh was given a royalty-free license to produce insulin promising to give back the profits to research and development to benefit society ...

THE CLINICIAN
H.C. Hagedorn

THE INVESTOR
August Kongsted

THE SCIENTISTS
Marie Krogh and August Krogh

THE ENTREPRENEUR
Thorvald Pedersen

THE ENTREPRENEUR
Harald Pedersen

Facts about the Novo Nordisk Foundation

03

The world's third largest
measured in grants

01

The world's largest
measured in assets:
EUR ~**92** billion*

2021 in numbers*

Awarded ~DKK **8.8** billion EUR 1.2 billion	Paid out ~DKK **4.8** billion EUR 645 million	**617** Grants awarded	**2,771** Applications received	**~18%** Success rate for research applications among open calls	Investment result 2021 **37** ~DKK billion EUR 5 billion

*Preliminary numbers year-end 2021

The Novo Nordisk Foundation is an independent Danish enterprise foundation

Grants

Awarded in 2021:
DKK 8.8 billion
(EUR 1.2 billion)
Projected grants in 2030:
DKK +10.0 billion

Focus areas

- Scientific research
- Diabetes treatment
- Innovation
- Education & outreach
- Humanitarian and social causes

Investments

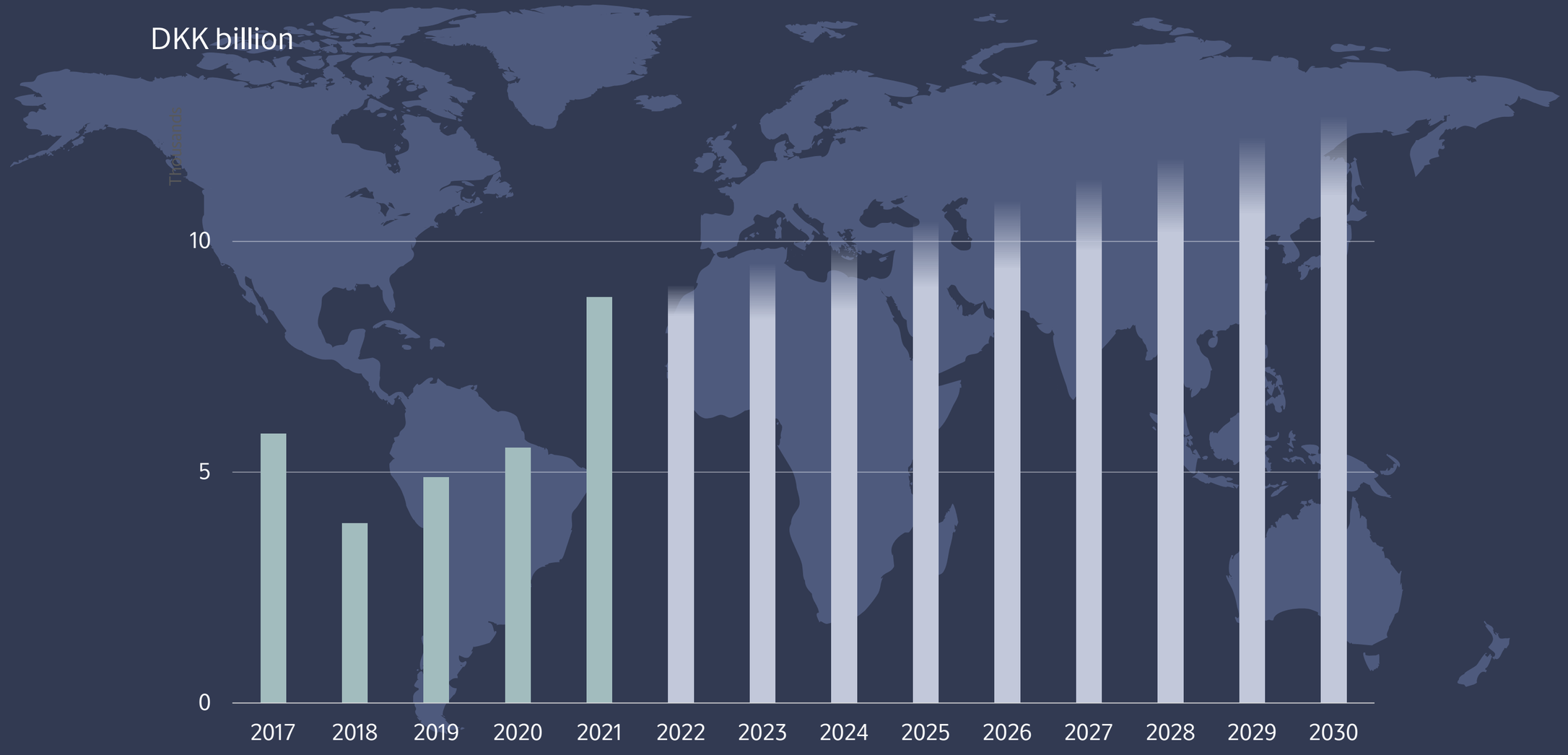
Investment result in 2021:
DKK 37 billion**
(EUR 5 billion)
Assets under mgmt.:
EUR ~90 billion

** 35% NN/NZ, 65% other investments

Focus areas

- Principal Investments
- Growth Investments
- Venture Investments
- Seed Investments
- Capital Investments

2030 grant-awarding outlook



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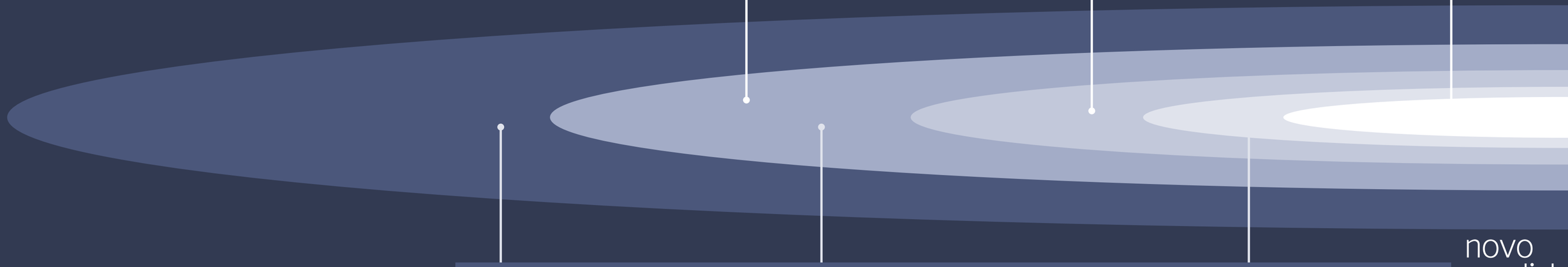
Strategy 2030 – we are strengthening and expanding our relations to key stakeholders groups both nationally and internationally

Danish stakeholders

- Industry
- Unrelated ministries

- Related ministries
- Regions
- Non-research foundations

- Universities
- Hospitals
- Foundations supporting relevant reserarch



International stakeholders

- Universities
- Research institutions
- Foundations supporting relevant research
- Interest groups

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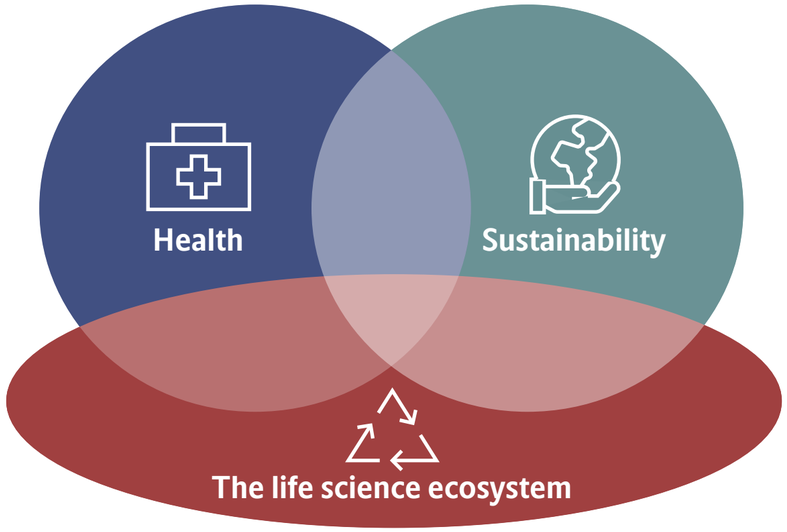
NNF will focus on 12 strategic themes across our 3 focus areas

Mission: Progress research and innovation in prevention and treatment of cardiometabolic and infectious diseases

- **Theme 1: Preventing cardiometabolic disease**
- **Theme 2: Understanding and managing cardiometabolic disease**
- **Theme 3: Fighting inequity in health**
- **Theme 4: Strengthening epidemic preparedness**



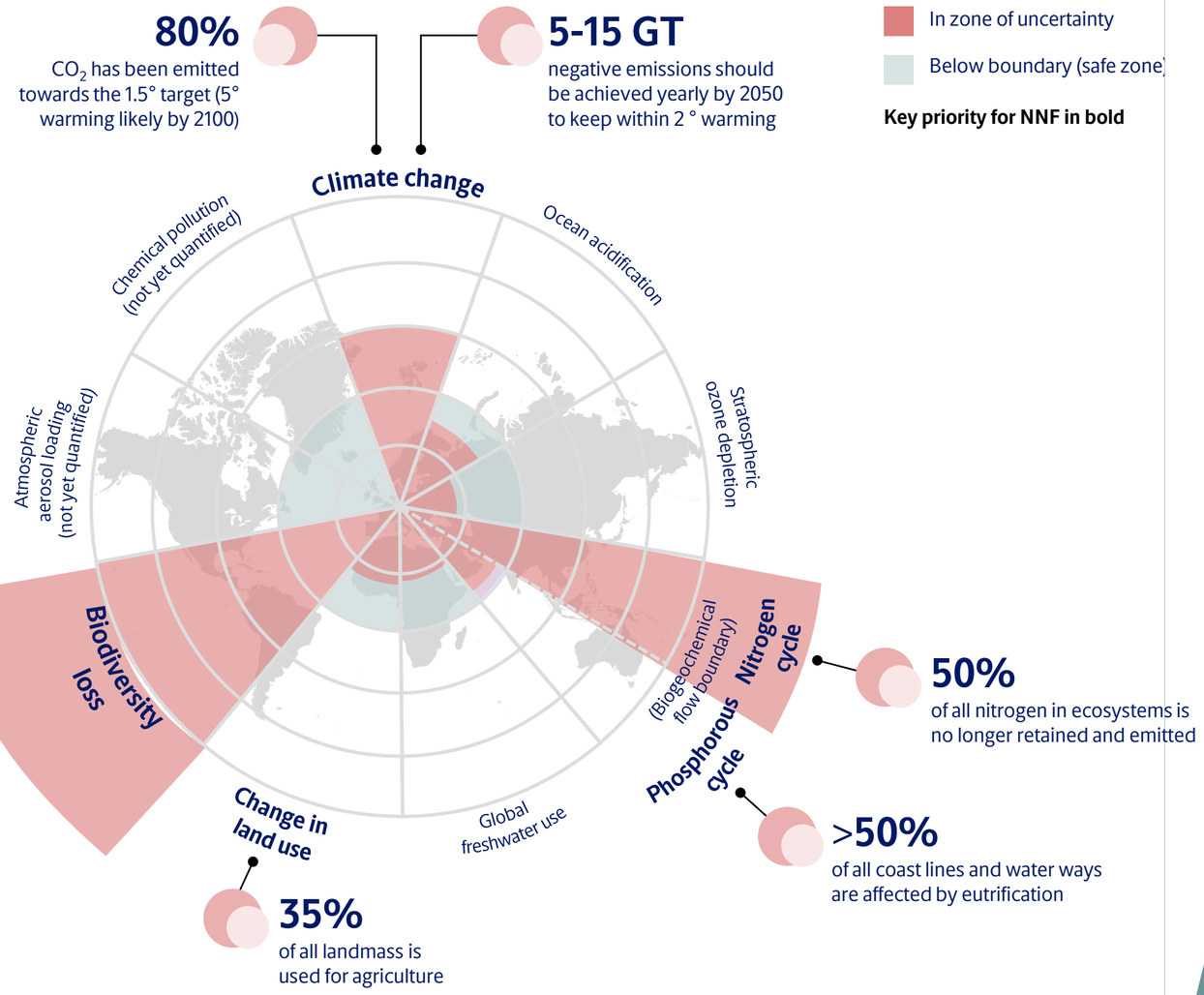
Mission: Advance knowledge and solutions to support the green transition in society

- **Theme 1: Sustainable and high-yield agriculture**
- **Theme 2: Sustainable food for healthy diets**
- **Theme 3: High-impact climate change mitigation technologies**
- **Theme 4: Supporting society in the green transition**

Mission: Invest in scientific research, education and innovation to enable a world class life science ecosystem

- **Theme 1: Fundamental research**
- **Theme 2: Enabling research infrastructures and technologies**
- **Theme 3: Translational capacity and societal impact**
- **Theme 4: Education and science capital**

There is an urgent need to for change
-a society inside Earth's planetary boundaries



80%
CO_2 has been emitted towards the 1.5° target (5° warming likely by 2100)

5-15 GT
negative emissions should be achieved yearly by 2050 to keep within 2 ° warming

In zone of uncertainty

Below boundary (safe zone)

Key priority for NNF in bold

50%
of all nitrogen in ecosystems is no longer retained and emitted

>50%
of all coast lines and water ways are affected by eutrification

35%
of all landmass is used for agriculture

80%
of biodiversity loss is caused by agriculture

Higher
rate of change to ecosystems than ever experienced in history of humanity

How do we change to keep us inside the planetary boundaries while allowing for a prosperous society?

Our food systems are a main driver for transgressing the planetary boundaries

There is an urgent need to tackle climate change and unsustainable food production

- We will tackle this complex global challenge through strategic partnerships and collaboration

Sustainability mission

Advance knowledge and solutions to support the green transition in society

Agricultural share of GHG emissions will continue to grow in a BAU scenario

-

Very timely conference

A strategic theme for NNF is **sustainable and high-yield agriculture**

Ambition: Advance research and innovation for agricultural production within planetary boundaries by understanding, controlling, and utilising agricultural ecosystems.

Three levels – similar focal points

Landscape → **Field** → **Plant**

Minimize GHG emissions and other environmental effects

Crop resilience and resource utilization

High productivity for the green transition

Regeneration of ecosystem functions

Guiding mindset

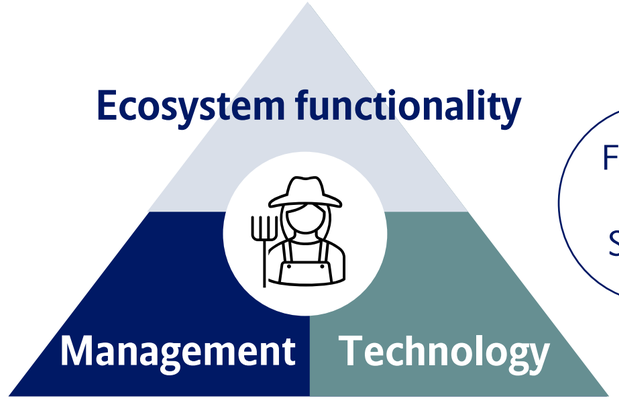
Ecosystem-centric

Ecosystem functionalities are leveraged by technology and biology-based solutions to determine agricultural management practices.

.... As opposed to...

“Transformation as usual”

Technology developments drives agricultural management practices which in turn determines ecosystem functionality.



Farmers & Society

A strategic theme for NNF is **sustainable and high-yield agriculture**

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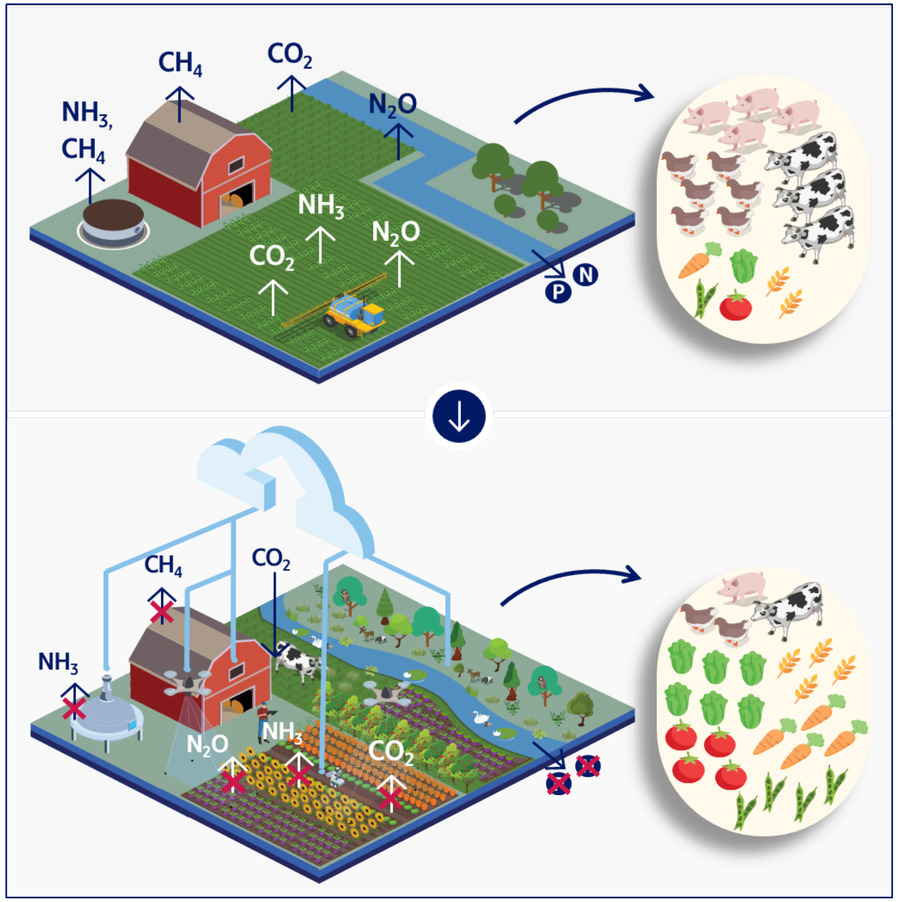

Key objectives

Landscape
Climate smart land-use that benefits biodiversity and has minimal environmental impact
- Measurement, reporting, and verification (MRV) for farmers and legislators
- Landscape planning and monitoring for biodiversity and climate

Field
Cropping systems that are environmentally benign, resilient, and high yielding
- High diversity in genetics, over time, and in space for resource efficiency and ecosystem services
- Digital agriculture, field sensing, and robotics for management and decision (support) systems
- Blue sky cropping systems

Plant
Resilient crops supporting the green transition
- Exploration of genetic diversity for plant-based foods and sustainability traits
- Plant science and plant breeding
- Biosolutions and new technologies for improved crop performance

Strategic choice not to support livestock research

Translation and innovation
Accelerate adoption of sustainable agricultural practices
- Demonstration of best-practices and new technologies
- Understand barriers for adoption by farmers and legislators

Thank you for the attention!

On behalf of the Novo Nordisk Foundation,
I wish you all a fruitful conference

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