

Report on research collaborations and investments in the Netherlands

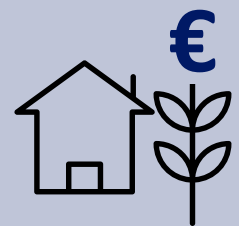
IMPACT

Executive summary

Novo Holdings



Between 2019 and 2023, Novo Holdings invested in 3 companies based in the Netherlands.



In 2023, the Novo Holdings portfolio included 4 companies with a total value of 0.2 billion EUR.

Novo Nordisk Foundation



Between 2019 and 2023, the Novo Nordisk Foundation (NNF) financed 14 projects with Dutch applicants, totaling EUR 33 million.



122 young Dutch researchers have been awarded a grant to attend the Copenhagen Bioscience Conferences.

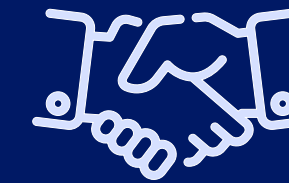


Between 2019 and 2023 the Novo Nordisk Foundation funded 264 PhDs, Postdocs, and other people in science in projects involving Dutch applicants.

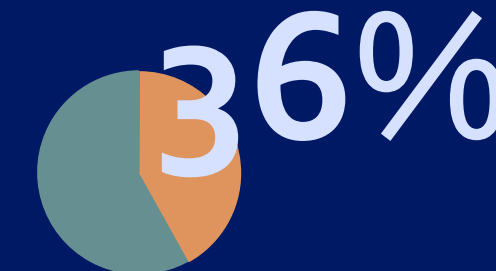
Grant recipients

26

The Foundation's grant recipients collaborates with many international project's partners, including 26 Dutch based universities and university hospitals.



Between 2019 and 2023, the Dutch grant recipients collaborated with 17 unique Dutch companies. 5 are in the biotechnology sector, 1 are in the food & beverages sector, and 8 of the companies have fewer than 200 employees.



Between 2019 and 2023, Dutch grant recipients have published 1223 publications. 36% of these are among the top 10% most cited in their field.

10/10

10 out of 10 top Dutch universities collaborate with NNF grantees

Introduction

This report is presented in two parts;

- Activities that Novo Nordisk Foundation (NNF) grant recipients have with institutions or organisations in the Netherlands.
- An overview of Novo Holdings' investments in the Netherlands.

This report showcases NNF's contribution to the Dutch academic community and industry.

Through figures and case studies, it demonstrates the different kinds of relationships and activities between NNF grant recipients and Dutch academic and industry partners. Data in the presentation are based on activities between 2019 and 2023 (inclusive).



Novo Nordisk Foundation



The history of the Novo Nordisk Foundation



The Novo Nordisk Foundation dates back to 1922, when Nobel laureate August Krogh returned home from the United States and Canada with permission to produce insulin in the Nordic countries. This marked the beginning of the development of world-class diabetes medicine in Denmark and the establishment of several foundations that, many years later, merged into today's Novo Nordisk Foundation.

1952 – the **Novo Foundation** was established as the owner of the Novo Terapeutisk Laboratorium.

1989 – the Novo Foundation and the Nordisk Insulin Foundation were merged into **Novo Nordisk Foundation** as part of the merger between the two firms Novo Terapeutisk Laboratorium and Nordisk Insulinlaboratorium in Novo Nordisk A/S.

In 2023 the **Novo Nordisk Foundation** awarded 751 grants with a total amount of EUR 1.0 billion.

For more information, please see the [Impact Report 2023](#)

1922 – the **Nordisk Insulin Foundation** was established as the owner of the Nordisk Insulinlaboratorium. The founders agreed that the profit from the sale of diabetes medicine should be used for scientific and humanitarian purposes.

The Novo Nordisk Foundation is an independent Danish enterprise foundation

novo nordisk **fonden**

Benefiting people and society

Dividends

100% SHARES

novo **holdings**


Investors in life science

Dividends



novo nordisk®

28.1% shares
76.9% votes



novozymes®

Rethink Tomorrow

25.6% shares
72.7% votes

+ 144 other companies

Grants & Investments

Awarded in 2023:
 DKK 7.7 billion in grants (EUR 1.0 billion)
 DKK 1.4 billion in investments (EUR 0.2 billion)
Projected grants in 2030:
 DKK +10.0 billion

Focus areas

- Health
- Sustainability
- Life Science Ecosystem

Investments

Investment result in 2023:
 DKK 31.4 billion* (EUR 4.2 billion)
Assets under mgmt.:
 EUR ~107 billion

Focus areas

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

* 35% NN/NZ, 65% other investments

Facts about the Novo Nordisk Foundation

3

The world's
third largest
measured in grants

1

The world's
largest
measured in assets:

EUR **107** billion*

2023 in numbers

Awarded DKK
7.7 billion
EUR 1.0 billion

Paid out DKK
5.8 billion
EUR 785 million

751
Grants awarded

3,364
Applications
received

17,3%
Success rate for
research applications
among open calls

Investment result 2023
31.4 DKK billion
EUR 4.2 billion

*Preliminary numbers year-end 2023

Our vision is to improve people's health and the sustainability of society and the planet is pursued through a three-pronged mission

Improving the lives of people by progress research and innovation in prevention and treatment of cardiometabolic and infectious diseases



Theme 1: Preventing and managing cardiometabolic diseases



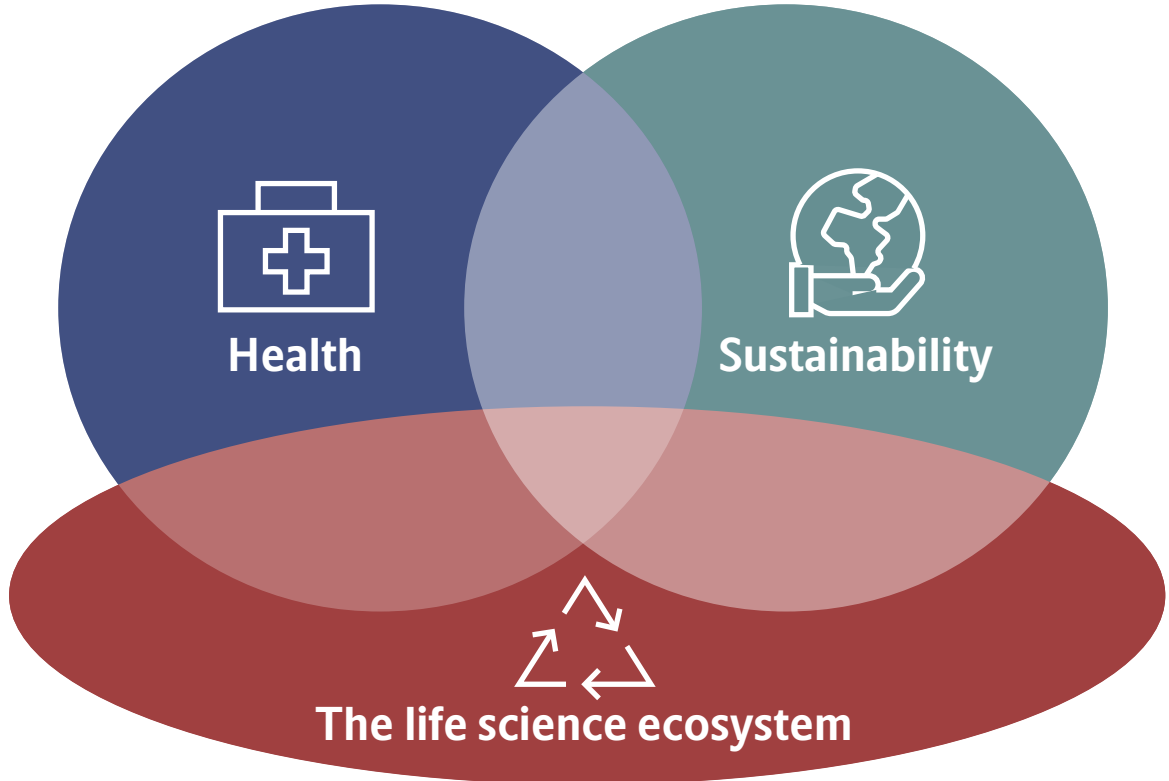
Theme 2: Decreasing the burden and threat of infectious diseases



Theme 3: Advancing and applying regenerative medicine



Theme 4: Reducing inequity in health



Improving the sustainability of society by 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

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



Theme 1: Fundamental research



Theme 3: Translational capacity and societal impact



Theme 2: Enabling research infrastructures and technologies



Theme 4: Education and science capital



Dutch academic and industry collaborations involving NNF grant recipients 2019-2023

14 projects funded by NNF include Dutch researchers as applicants

The Novo Nordisk Foundation has in the last five years (2019-2023) funded 14 projects that have had 2 main applicant and 12 co-applicants from the Netherlands. Co-applicants are members of the international group applying for a NNF grant. The total funding allocated to these projects is EUR 33 million.

The funded projects span research areas including Innovation, Medical Science, Biotechnology, Education & Outreach, and Natural- & Technical Science. 10 projects were awarded in open competition, while 4 were awarded as a standalone grant.

- In **2023**, **Copenhagen University Hospital** and **University of Groningen** received funding for the project titled: The Intensive Care Platform Trial (INCEPT). The project has received a grant of **29.98** million EUR.
- In **2023**, **University of Copenhagen** and **Leiden University** received funding for the project titled: Software for Quantum Design and Control (SQuaD). The project has received a grant of **0.99** million EUR



Fostering the development of research talent at all levels

In 2023 the Novo Nordisk foundation supported 36 PhDs, 24 Postdoc positions, and 40 other people in science at Dutch based research institutions through projects involving Dutch applicants.

The Copenhagen Bioscience Conferences are a series of scientific conferences within biomedicine and biotechnology. They bring together some of the world's top researchers and young talent to discuss the latest scientific results and topics within their field. The purpose of the conferences is to enable participants to build an international network and to exchange knowledge and ideas.



Since 2019 **122** young Dutch researchers have been awarded a grant to attend the Copenhagen Bioscience Conferences for young research talent.

“An opportunity that facilitate high level training for PhD students and postdocs”

NNF applicant, 2015

NNF Grant recipients' project collaborations with Dutch partners

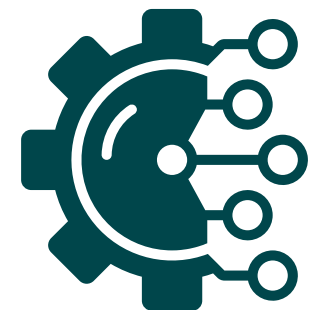
Between 2019 & 2023...



The Foundation's grant recipients have collaborated with many international project's partners on projects, including **190** collaborations between Danish and Dutch partners.



164 of those partners are universities and university hospitals.



17 Dutch companies co-authored at least one scientific article with grant recipients from the Novo Nordisk Foundation.

Case stories

University and university hospital collaborations

In 2023, Copenhagen University Hospital and University of Groningen received funding for the project titled: The Intensive Care Platform Trial (INCEPT). The project has received a grant of 29.98 million EUR and has the following description:

Many intensive care unit (ICU) patients have chronic and/or acute cardiovascular and metabolic diseases and failures, for which they receive various prophylactic and therapeutic interventions. These are administered despite uncertain evidence for most indications and unfavorable outcomes when such interventions have been tested in randomized trials.

To improve learning and evidence, we will implement an innovative and sustainable randomized, embedded, multifactorial, adaptive platform (REMAP) trial in many ICUs, involving patients and clinicians and a software system for live, automatic data capture from electronic patient records.

In 2023, University of Copenhagen and Leiden University received funding for the project titled: Software for Quantum Design and Control (SQuaD). The project has received a grant of 0.99 million EUR and has the following description:

Quantum technology is a rapidly developing and commercializing sector, with breakthrough applications in harnessing energy sources, materials and fundamental science underpinning a sustainable future. The acceleration of quantum processor size has led to a bottleneck in the operation of hardware because of the lack of intelligent control software. Our project and spin-out activities will bring together quantum physicists and experts in machine learning and algorithms to develop precise and scalable control software for quantum processors. The target group ranges from university research groups and students working with quantum technology, to the vast ecosystem of established companies and VC-funded startups in the quantum ecosystem.

NNF Grant recipients' collaboration with top Dutch universities

10 out of 10 top Dutch universities collaborate with NNF grant recipients

		Project collaborations	Publication collaborations
1	Erasmus University Rotterdam	0	14
2	University of Amsterdam	4	101
3	Utrecht University	1	116
4	Wageningen University & Research	0	83
5	Leiden University	2	41
6	Vrije Universiteit Amsterdam	0	122
7	Radboud University Nijmegen	0	38
8	University of Groningen	3	81
9	Maastricht University	0	177
10	Delft University of Technology	3	25



Source: Novo Nordisk Foundation, CWTS Leiden Ranking 2023

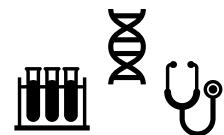
Publication collaborations between NNF grant recipients and Dutch partners



Between 2019 and 2023, NNF grant recipients have co-authored **1223** publications with researchers located in the Netherlands.



The highest number of Dutch partners come from Maastricht University with 177 publications, followed by Vrije Universiteit Amsterdam with 122 publications, and Utrecht University with 116 publications.



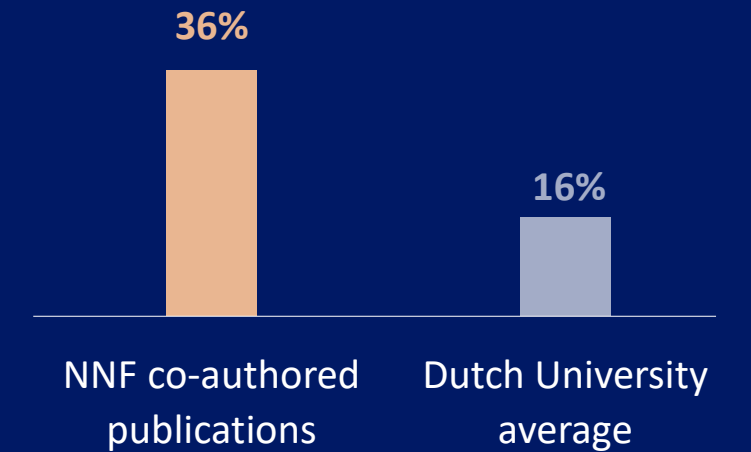
13% of the co-authored publications are within the research areas *Medicine and Biochemistry, Genetics & Molecular Biology*.



36% of the co-authored publications are within the top 10% most cited publication in their research field. The national average among the top Dutch universities is 16%.

NNF grants contribute to research excellence

Share of co-authored publications among the top 10% most cited worldwide in the same research field and year



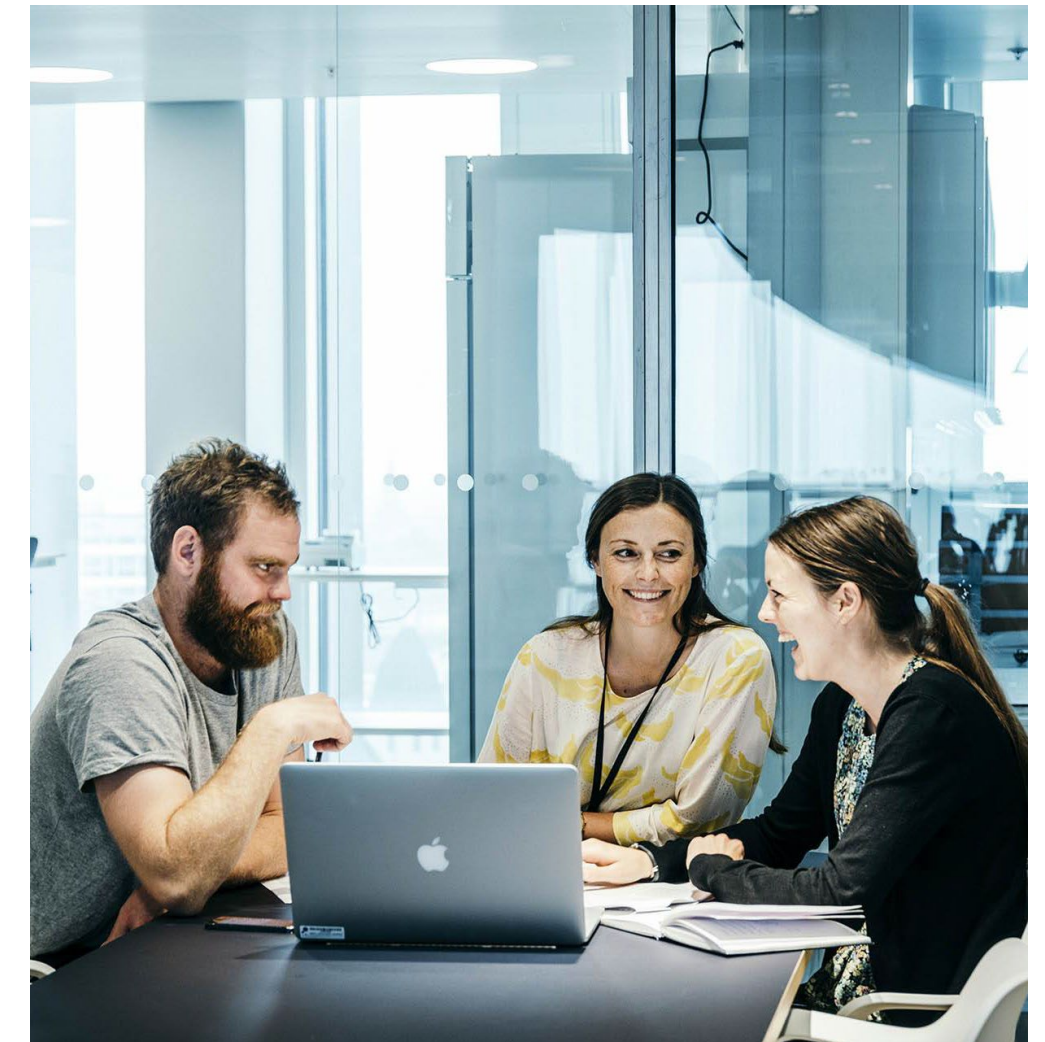
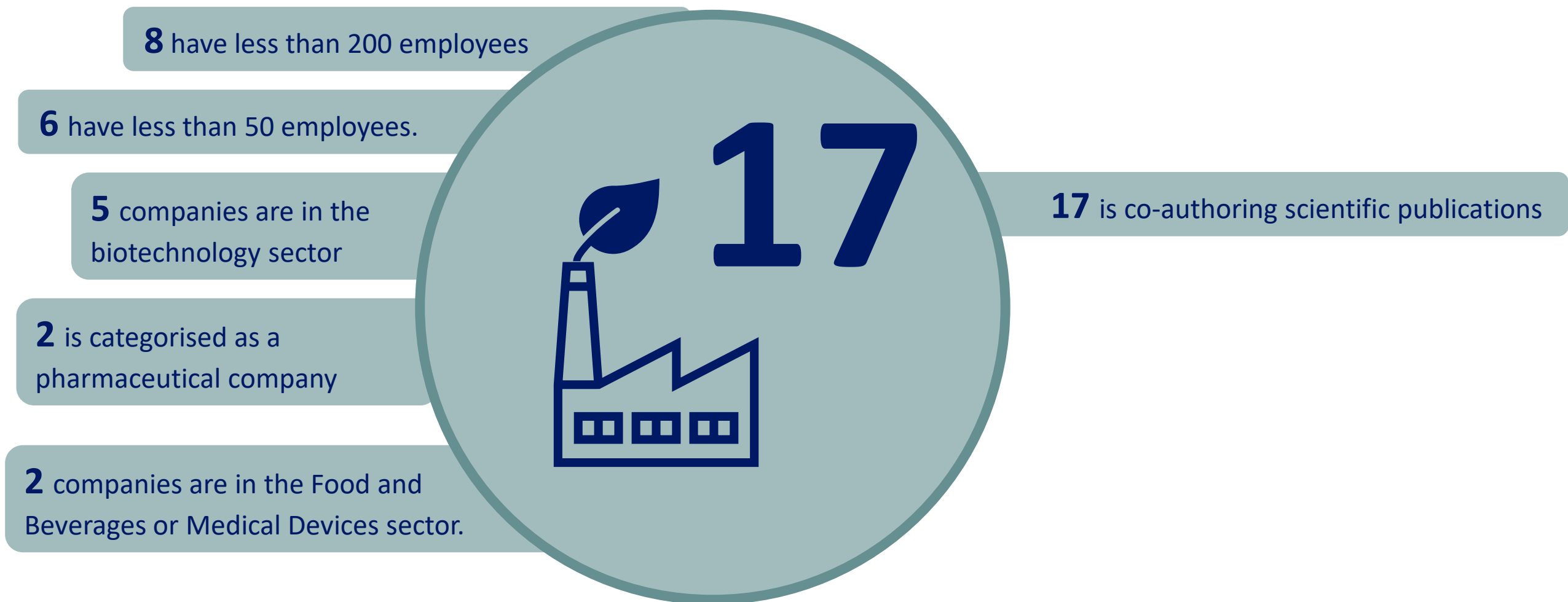
In 2023, Mark van Loosdrecht was awarded the Novozymes Prize

Professor in Environmental Biotechnology at Delft University of Technology, Mark van Loosdrecht has been awarded the 2023 Novozymes Prize. He received the prize in recognition of his 25-year dedication to creating healthier water ecosystems and a more sustainable circular economy by developing a series of wastewater treatment processes, taking advantage of nature's own principles for wastewater treatment and resource recovery.

The Novozymes Prize is awarded to outstanding research or technology contributions that benefit the development of biotechnological science for innovative solutions.

Researchers receiving grants from the Novo Nordisk Foundation collaborate with Dutch companies

In total 17 companies collaborate with NNF grant recipients





Novo Holdings A/S in the Netherlands

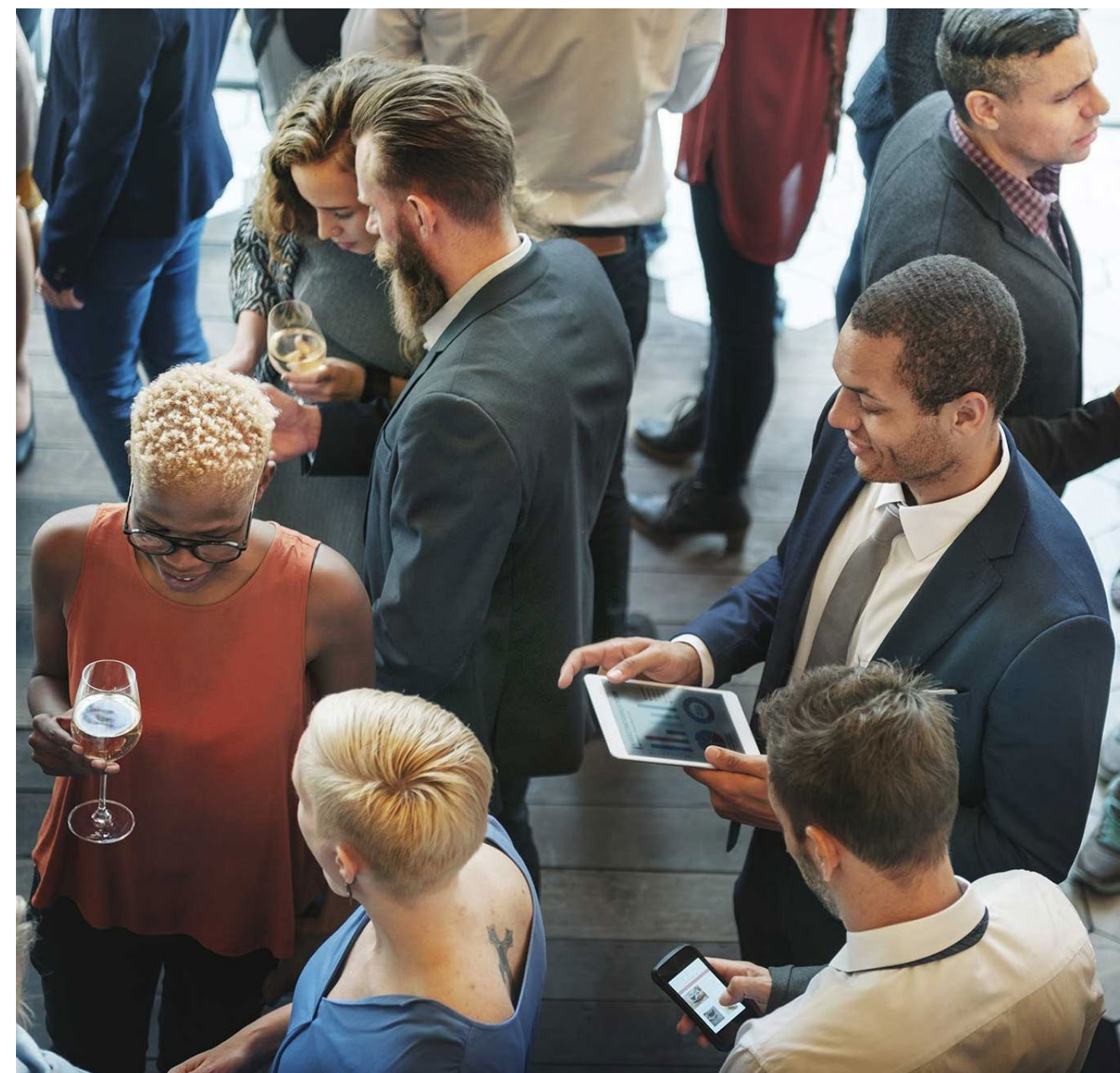
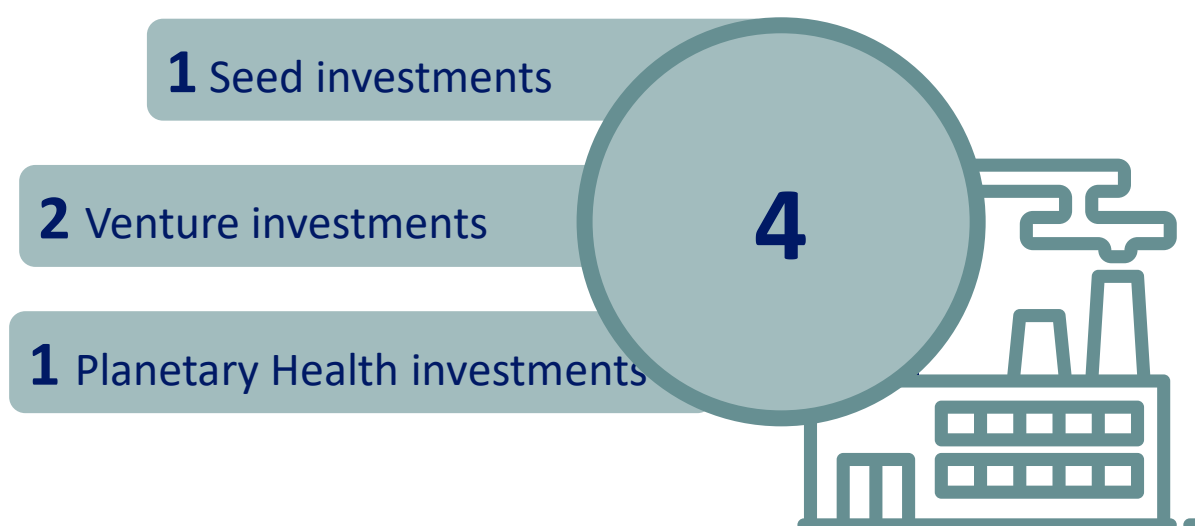
Our mission

Novo Holdings is to be a supportive owner of the Novo Group companies and to make a growing and positive impact on health, science and society by generating attractive long-term returns on the assets of the Novo Nordisk Foundation.

Novo Holdings A/S Investments in the Netherlands

Novo Holdings A/S has in the period 2019-2023 invested in **3 Dutch companies**. In 2023, the portfolio included 4 companies with a total value of 0.2 billion EUR.

Companies in the current portfolio





Appendix and additional slides

Methods and sources

Methods:

- Collaborations were defined as either a project collaboration or a publication collaboration funded by NNF with at least one Dutch collaborator/Dutch institute
- University ranking was based on the time period 2019-2023, across all sciences, with institutions with at least 100 publications, and based on the PP(top10%)
- Publications were defined as publications with at least one Dutch and one Danish author
- Dutch industry collaborators were defined as collaborations with companies registered in the Netherlands
- Dutch research partners were defined as successful NNF grant applications with at least one Dutch co-applicant
- The number of Dutch attendees at the Copenhagen Bioscience Conference series were defined as applicants and attendees registered to a Dutch research institute
- Novo Holdings A/S investments in the Netherlands were defined as investments in companies with their headquarter located in the Netherlands

Sources:

- Researchfish (NNF grant data)
 - Research publication collaborations
 - Company project collaborations
 - Publications
- Data Warehouse, NORMA and OMADA (NNF grant application data)
 - Co-applicants
 - Copenhagen Bioscience PhD programme applicants
- The Leiden Ranking 2023
 - University rankings
 - Publication impact data
- Novo Holdings A/S
 - Investment data