

# NOVO NORDISK FONDEN

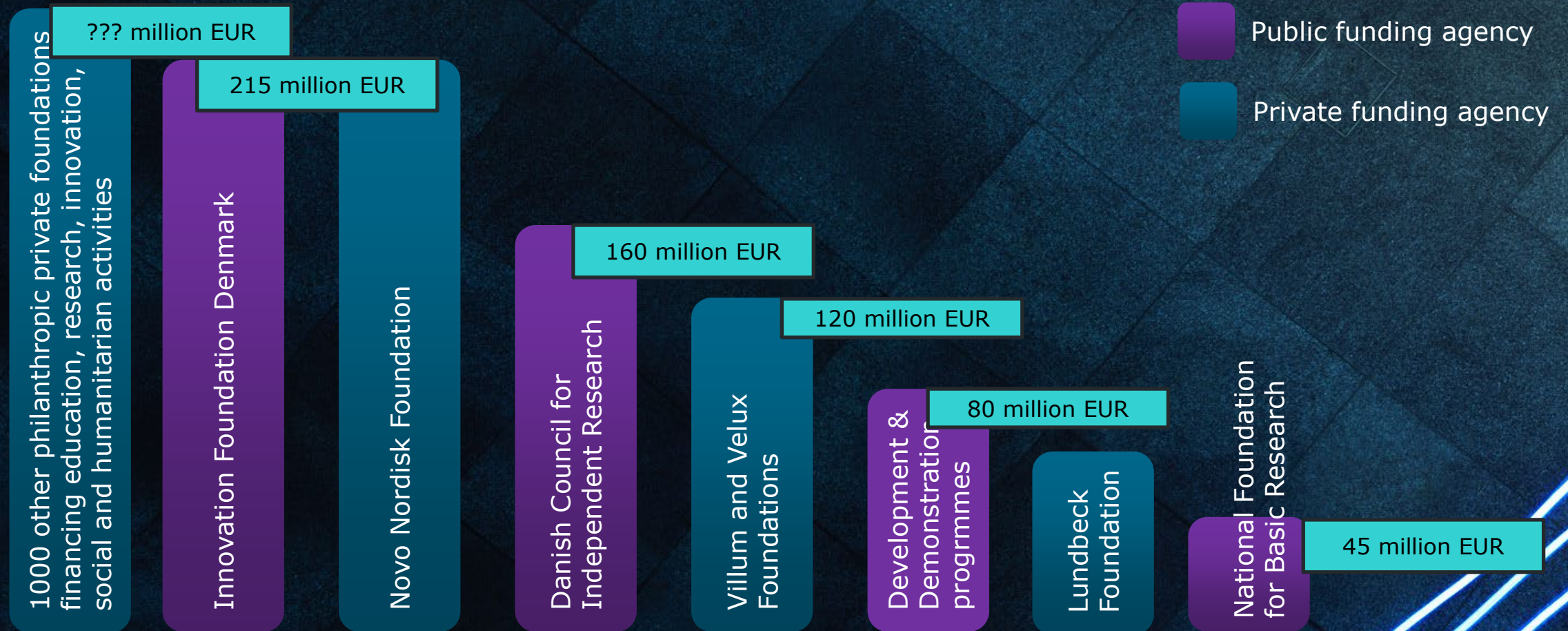
- en vigtig spiller for forskningspolitikken og det offentlige forskningssystem

Thomas Alslev Christensen  
Head of Operations, PhD

Maj 6, 2015



# MAIN BODIES FOR FUNDING PUBLIC RESEARCH, EDUCATION AND INNOVATION in 2015 (budget)

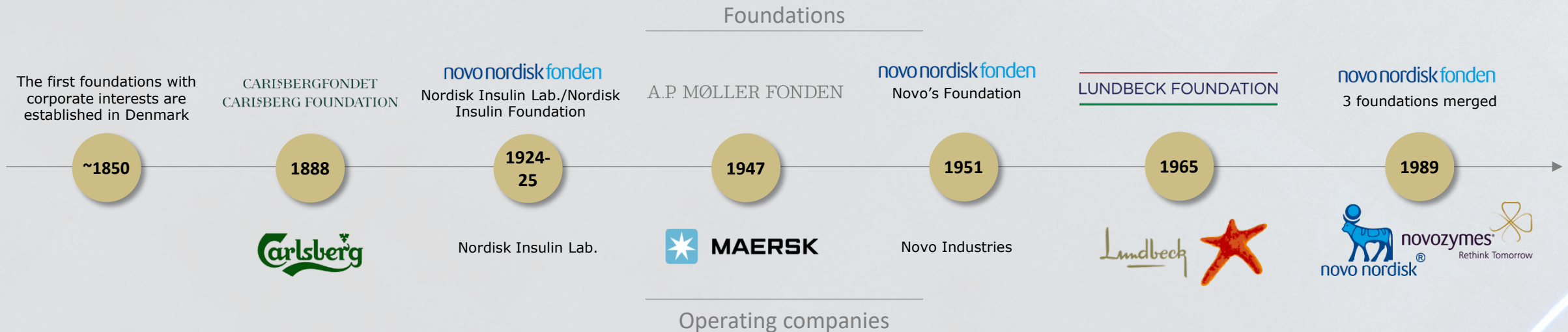


Relative size of research funding agencies in Denmark



# INDEPENDENT FOUNDATIONS WITH CORPORATE INTERESTS

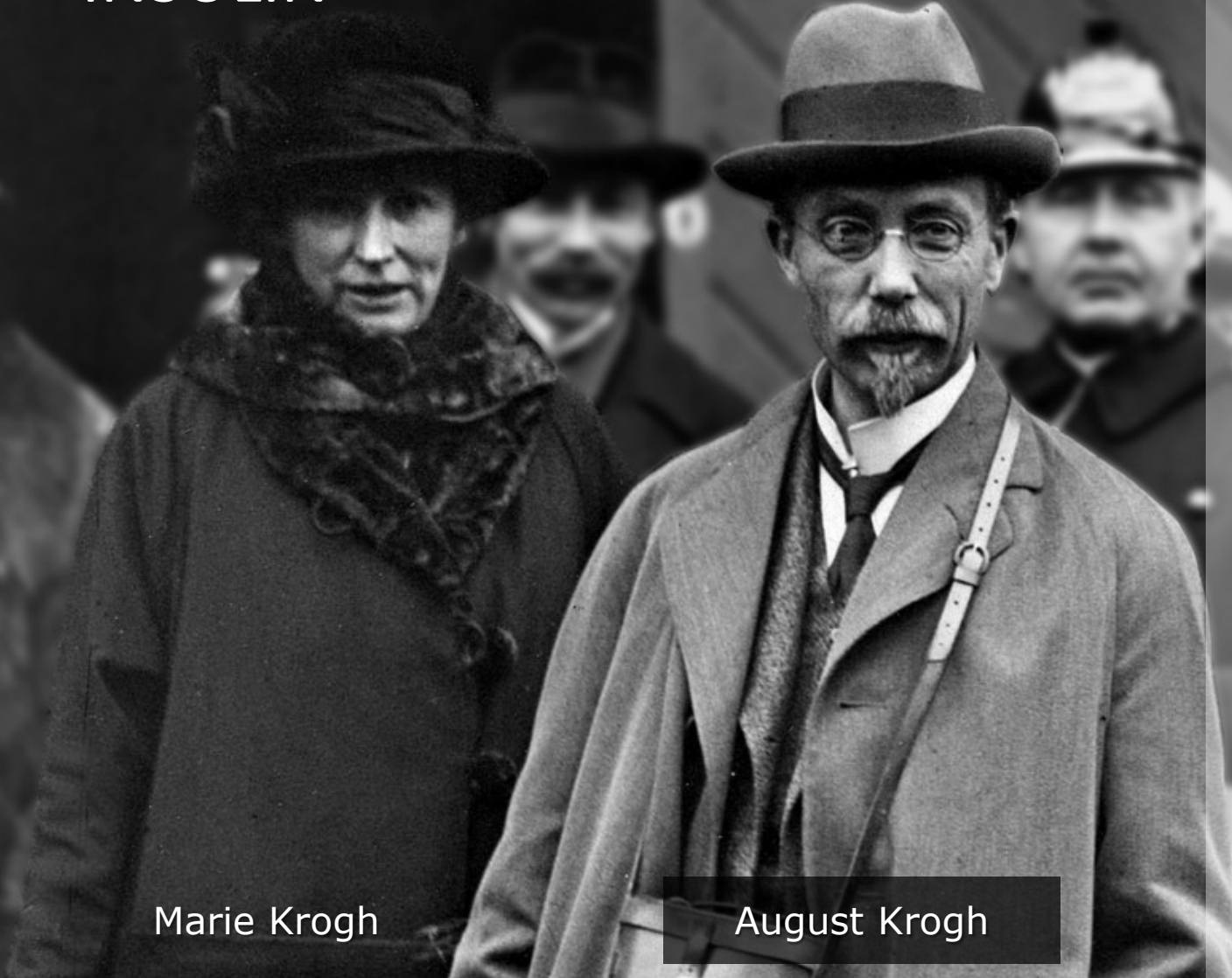
- Articles of association contain both corporate and charitable objectives
- Controlling ownership in companies
- 'A' shares have 10 times voting power per share



- A distinctive feature of Denmark
- Provide a unique opportunity to retain successful companies in the country
- Ensures that important knowledge, technology, production and talented employees continue to contribute to the development of Danish society



# IT BEGAN WITH INSULIN



Marie Krogh

August Krogh



Pedersen brothers



H.C. Hagedorn



August Kongsted



# THE HISTORY OF THE NOVO NORDISK FOUNDATION

December 1922: Maria and August Krogh return to Denmark with insulin rights

1924: The break

1925: Nordisk Insulin Foundation and Nordisk Insulinlaboratorium established

1925: Novo Terapeutisk Laboratorium founded

March 1923: First Danish insulin tested on a patient

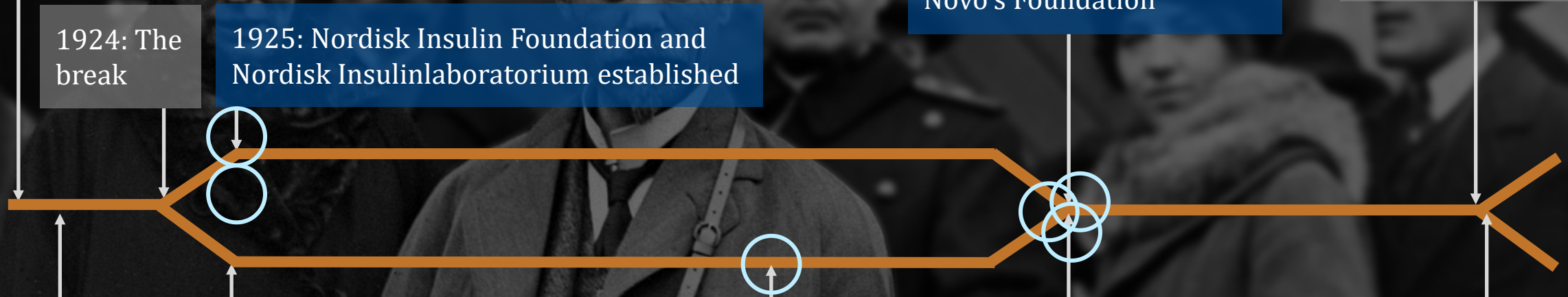
1951: Novo's Foundation established

1989: The **Novo Nordisk Foundation** is established through the **merger** of Nordisk Insulinlaboratorium, Nordisk Insulin Foundation and Novo's Foundation

1989: The **merger** of Nordisk Gentofte and Novo Industri into Novo Nordisk

December 1999: Novo A/S is established

January 2000: The de-merger of Novo Nordisk into Novo Nordisk and Novozymes





### Corporate Objective

- to provide a stable basis for the commercial and research activities of the Novo Group companies

### Grant Objectives

- to support physiological, endocrinological, metabolic and other medical research,
- to contribute to the preservation and operation of Novo Nordisk A/S' research hospital activities,
- to support other scientific purposes,
- to support humanitarian and social purposes

### Vision:

To contribute significantly to research and development that improves the health and welfare of people



# STRATEGIC GOALS

## Societal goal

With Denmark as the Foundation's centre of gravity the prime focus is:

- To promote world-class research and innovation in the medical, biotechnological and natural sciences and help to foster a world-class education system.
- To help to develop a knowledge-based society that contributes to long-term economic activity and job creation for improving general health and welfare.

## Commercial goals

- Be a strong owner of the companies in the Novo Group.
- Generate attractive investment returns for the Foundation on its financial investment portfolio.
- Make investments with the main goal of promoting knowledge and world-class research.

## Grant giving goals

- Strengthen biomedical and biotechnology research in selected fields.
- Fuel cross-disciplinarity.
- Advance individual scientific excellence.
- Spur imagination, inspiration and knowledge about science and technology.
- Build bridges between scientific discoveries and their commercial applications.
- Achieve social and humanitarian impact.



# AN INDEPENDENT FOUNDATION



novonordiskfonden

Grants

Dividends on  
capital invested

NOVO

~25.5% shares  
~72.7% votes

~25.5% shares  
~70.1% votes

Dividends on  
capital invested



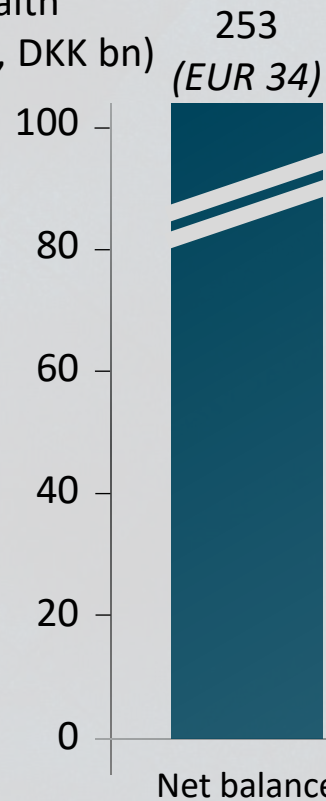
The Novo Group

## WITH CORPORATE INTERESTS



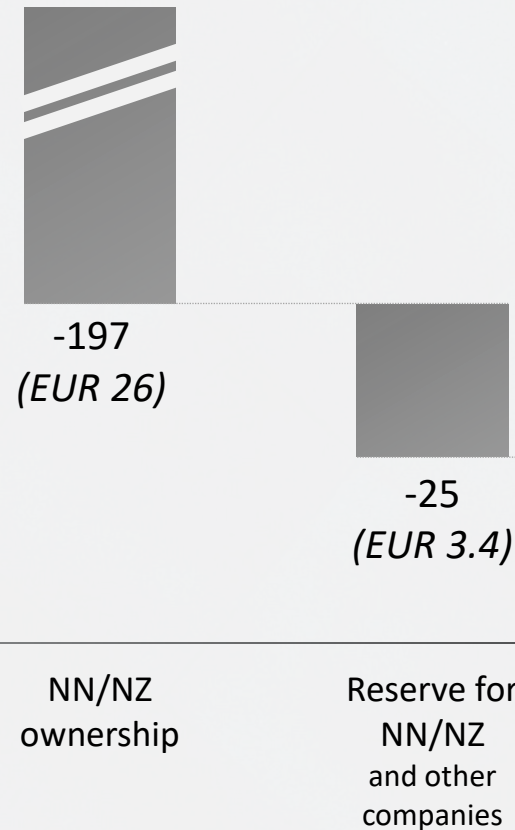
# DISTRIBUTION OF CAPITAL

Foundation wealth  
(Year-end 2014, DKK bn)



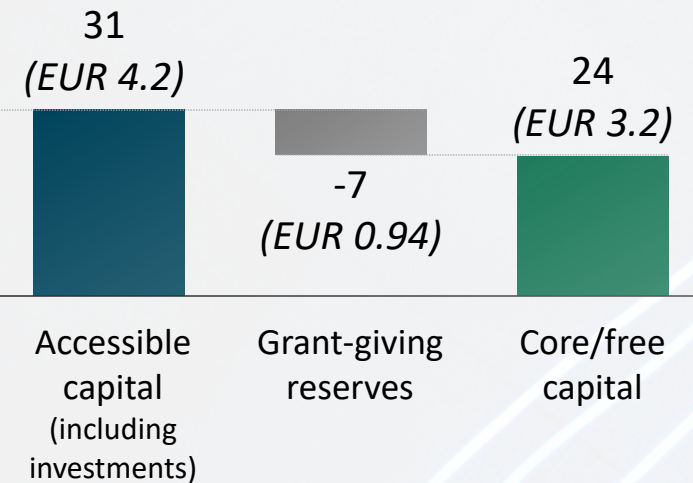
## Tied capital ("Bunden formue")

*Stable basis for the commercial and research activities of Novo Nordisk A/S and Novozymes A/S*



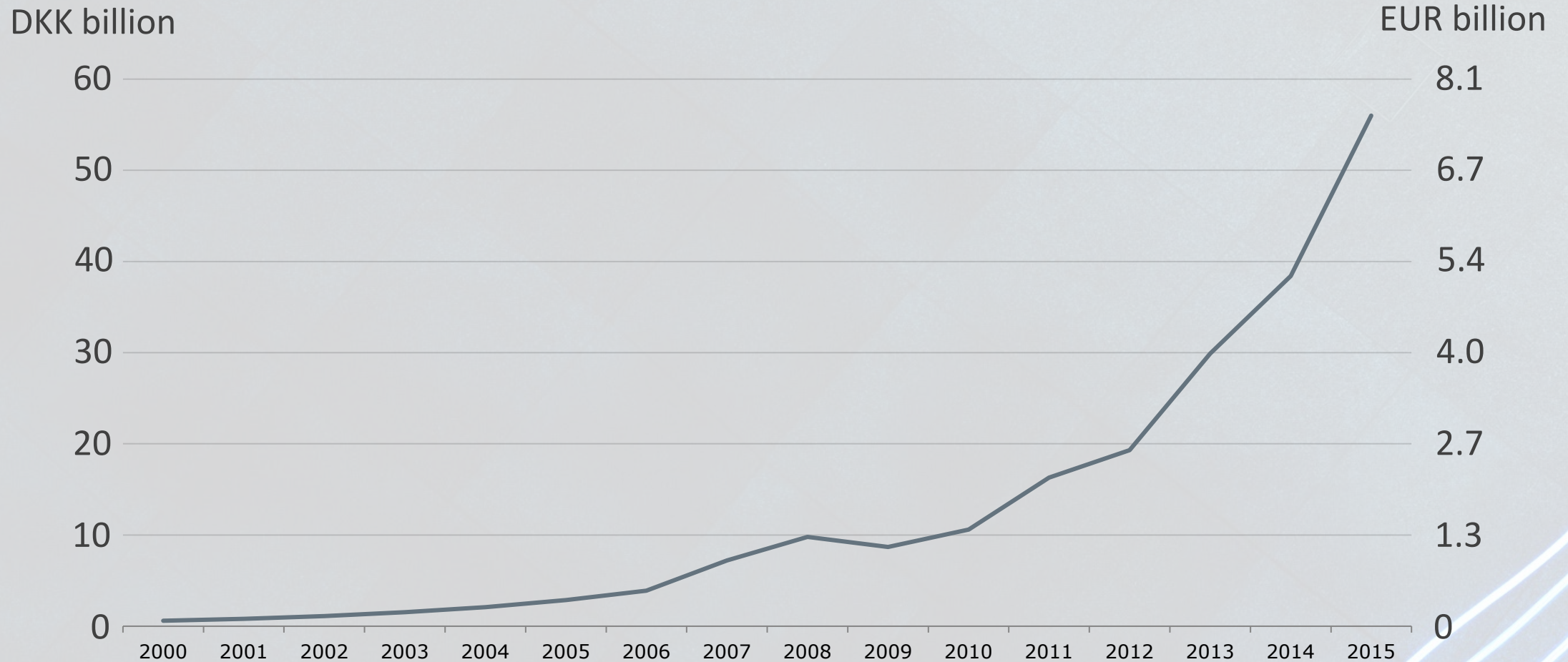
## Accessible capital ("Ikke-bunden formue")

*Basis for the Foundation's grant giving activities and long-term independence*



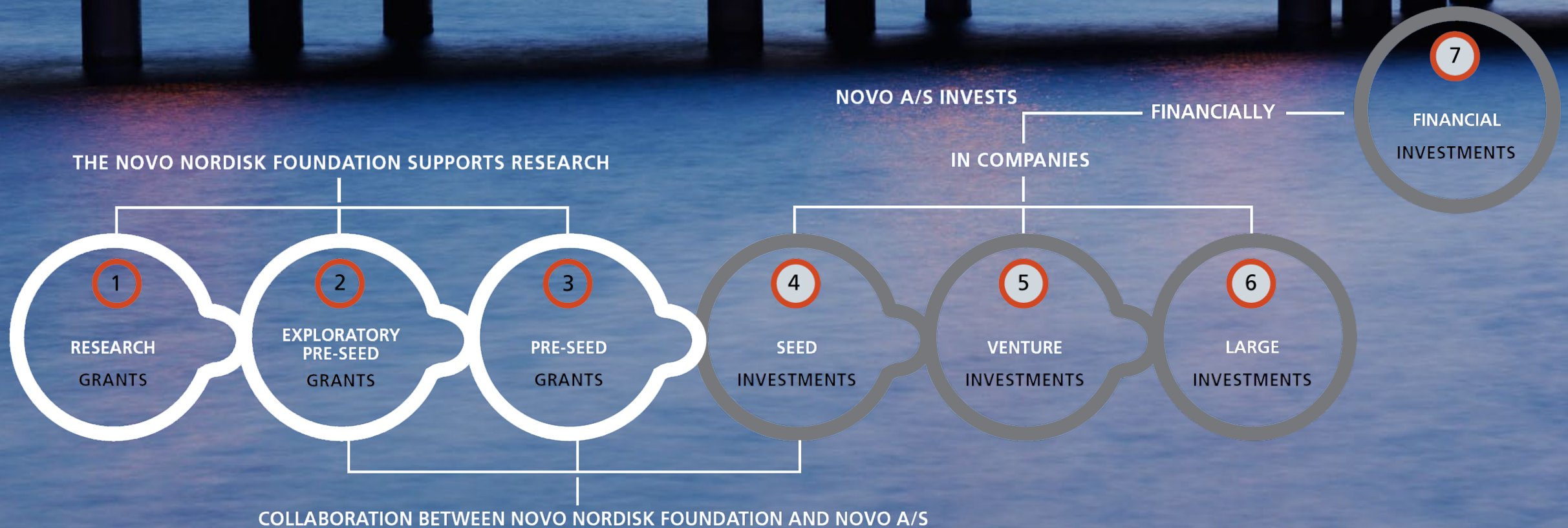


# GROWTH IN CAPITAL NOT BOUND IN NN and NZ SHARES





# THE VALUE CHAIN





# FOUR GRANT CATEGORIES

*Open  
competition  
grants*

Centre Cluster

Social and  
humanitarian  
causes

Stand-alone  
grants

Bottom-up

Top-down

Top-down and  
bottom-up

Top-down





# The four NNF granting categories

	Research centre cluster	Open competition grants	Stand-alone grants	Social and humanitarian causes
Purpose	Support for establishing, maintaining and expanding NNF's research centres.	Support for individual researchers or research teams awarded by NNF's expert committees in open competition.	Support for a broad range of individual projects to support NNF strategy.	Support to Steno Diabetes Center (primarily) and humanitarian organizations in Denmark and abroad.
Activities	<ul style="list-style-type: none"> <li>The Novo Nordisk Foundation research centres</li> <li>The Danish National Biobank</li> </ul>	<ul style="list-style-type: none"> <li>Project grants</li> <li>Scholarships/fellowships</li> <li>Investigator programmes</li> <li>Pre-seed/innovation</li> <li>Prizes</li> </ul>	<ul style="list-style-type: none"> <li>Education and public outreach programmes</li> <li>Health promotion and primary health care sector programmes</li> <li>Special programmes</li> </ul>	<ul style="list-style-type: none"> <li>Operation of Steno Diabetes Center and related programmes</li> <li>Humanitarian causes</li> </ul>

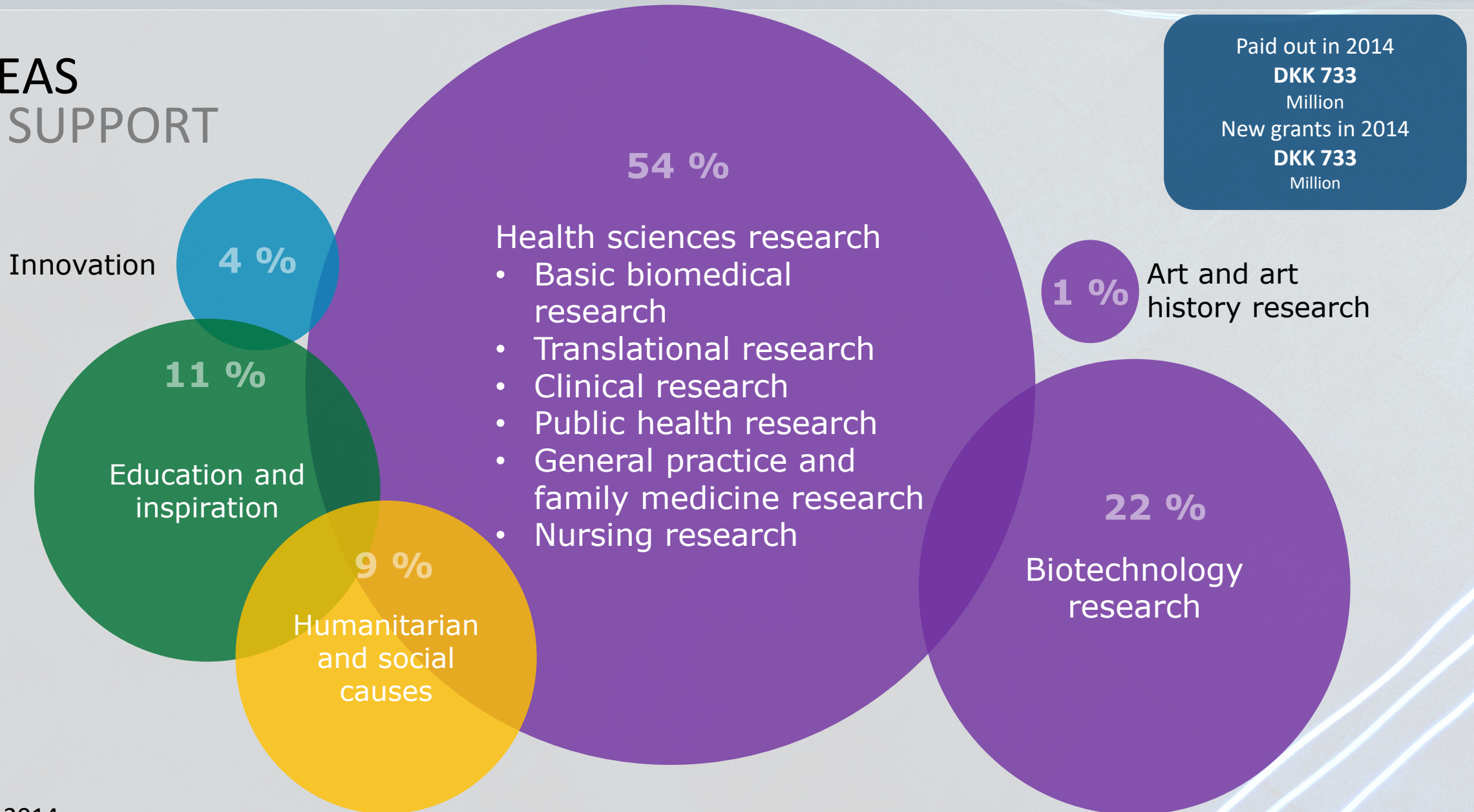


## Grant activities

- 1500 applications per year
- 250-300 new grants per year
- Grants:
  - DKK ½-3 million DKK (research projects),
  - 3-5 millions (PhD and postdoc scholarships & prices),
  - 11-70 million (research programmes)
  - 0.4-1.3 billion DKK (centres)



# AREAS OF SUPPORT







## 6 strategic goals

- ☐ Spur imagination, inspiration and knowledge about science and technology
- ☐ Fuel cross-disciplinarity
- ☐ Advance individual scientific excellence
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- ☐ Build bridges between scientific discoveries and commercial applications
- ☐ Achieve social & humanitarian impact



# INSPIRATION AND EDUCATION PARK

ESOF  
2014

BioPro World  
Talent Campus

Virtual  
Laboratory

The Danish  
Diabetes  
Academy

Copenhagen International  
School

Nobel Lectures

Museum of Natural History

SPUR IMAGINATION, INSPIRATION AND KNOWLEDGE  
ABOUT SCIENCE AND TECHNOLOGY

Highschool Teaching Prize

Young Investigators







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# FIELD OF 1000 FLOWERS

# PROJECT GRANTS





# Tradition for use of expert committees

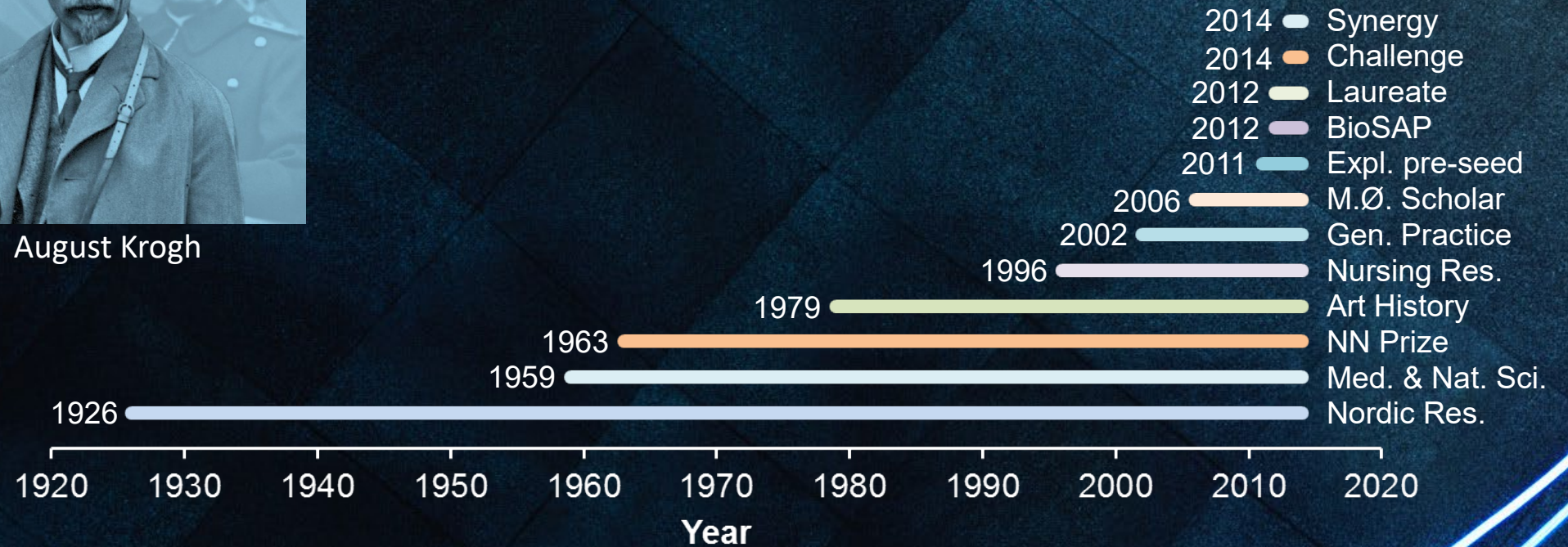
Nobel prize – Physiology and Medicine (1920)



Marie Krogh

August Krogh

## The Novo Nordisk Foundation committees





# OPEN COMPETITION GRANTS

- Project grants
  - Grant period: 1-3 years
- Investigator grants
  - Investigator programmes
  - Fellowships for PostDocs
  - Scholarships for PhD students

Committee on Medical and Natural Sciences Research

Nordic Research Committee

Committee on Art History Research

Novo Nordisk Prize Committee

Novozymes Prize Committee

Committee on Nursing Research

Committee on General Practice and Family Medicine Research

Committee on Mads Øvlisen Art Fellowships

Committee on Novo Nordisk Foundation Laureate Research Grants

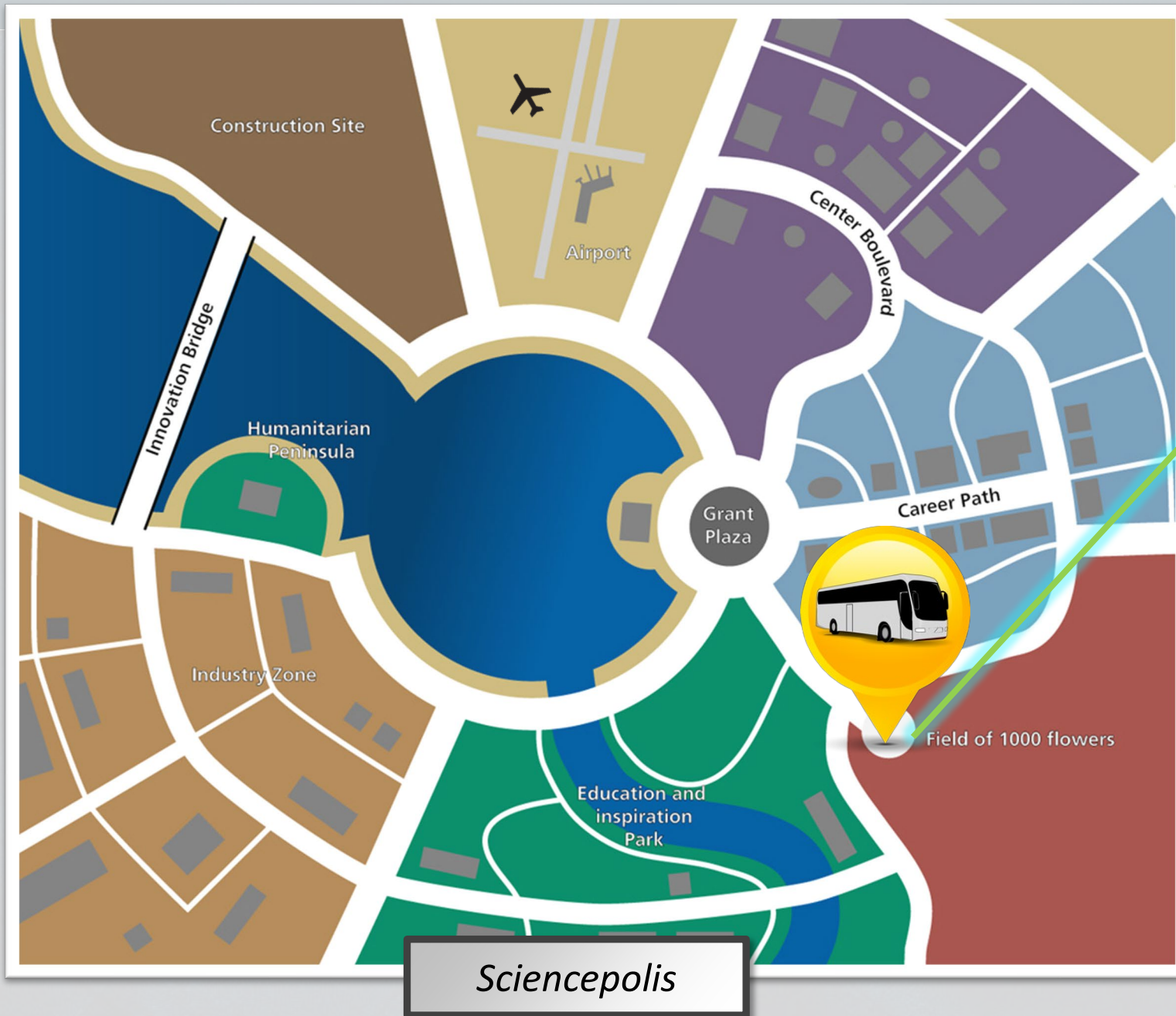
Committee on Exploratory Pre-seed Grants

Committee on Biotechnology-based Synthesis and Production Research

Committee on the Novo Nordisk Foundation Interdisciplinary Synergy Programme

Committee on the Novo Nordisk Foundation Challenge Programme





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# CAREER PATH

NNF Laureate  
Research Grant  
Excellence project  
Hallas-Møller  
Fellowship  
National Research  
Fellowship



Ph.d.- og  
post.doc.-  
fellowships

Research  
Leader  
Programs



Hall of Fame



Prizes





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Metabolic Research

Stemcell Research

Protein Research

Biosustainability

Biobank

RESEARCH CENTRE  
CLUSTER

Center Boulevard



# NOVO NORDISK FOUNDATION'S FIVE Research Centres

**DANISH  
NATIONAL  
BIOBANK**

Capital Region

750 employees

54 per cent foreign researchers

Attractive for international top  
researchers

Educate people and researchers  
who are attractive for public and  
private research

Novo Nordisk Foundation  
Center for Biosustainability

500 million euro  
10 years



The Novo Nordisk Foundation  
Center for Basic Metabolic Research



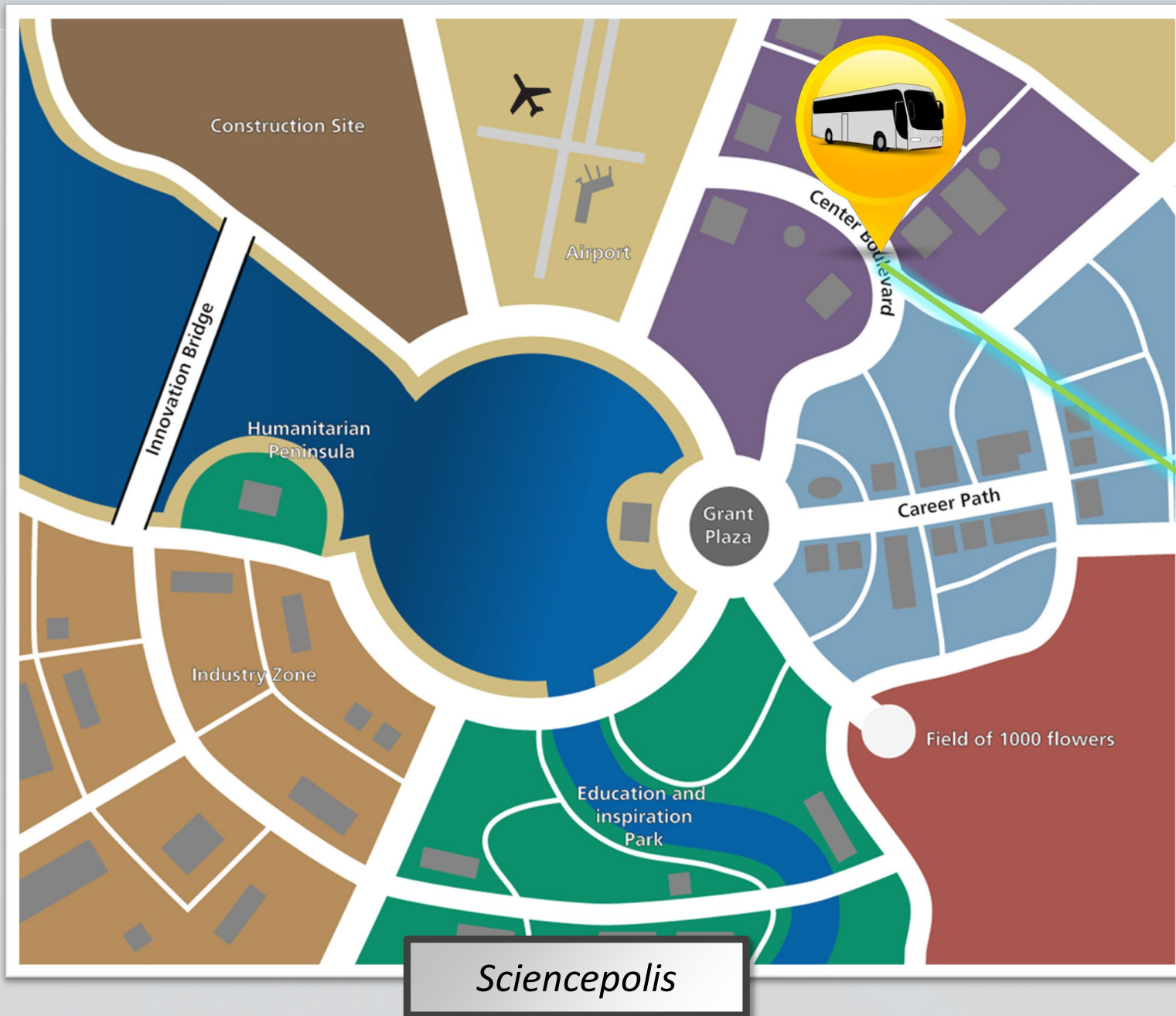
The Novo Nordisk Foundation  
Center for Protein Research



DanStem

The Novo Nordisk Foundation Section for  
Basic Stem Cell Biology





## 6 strategic goals

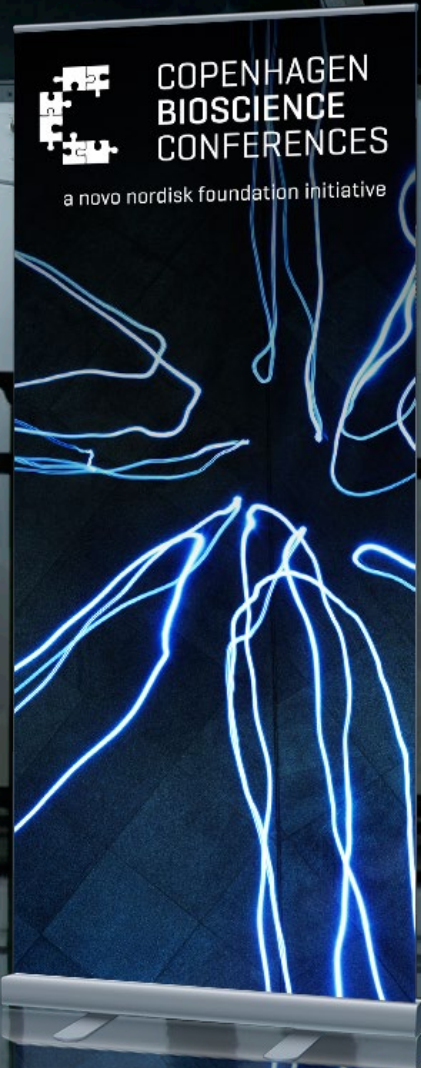
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## Arrivals



TIME	FROM	FLIGHT	STATUS
09:00	UNIV. ROCHESTER	DG290	NNF LAUREATE RESEARCH G
09:10	UNIV. ROCHESTER	CL332	NNF LAUREATE RESEARCH G
09:30	SYDNEY	RD90	NNF LAUREATE RESEARCH G
10:00	SINGAPORE	FL667	NNF LAUREATE RESEARCH G
10:45	UNIV. NEWCASTLE	RD88	NNF LAUREATE RESEARCH G
11:00	UNIV. STRASBOURG	DR105	HALLAS-MØLLER FELLOWS
11:05	BROWN UNIVERSITY	GD22	HALLAS-MØLLER FELLOWS
11:20	FRANCE	FL525	CPH BIOSCIENCE CONFERE.
11:50	USA	DR223	CPH BIOSCIENCE CONFERE.
12:30	JAPAN	NL448	CPH BIOSCIENCE CONFERE.
13:50	UK	MR510	CPH BIOSCIENCE CONFERE.





# Example

The Novo Nordisk Foundation  
Laureate Research Grant

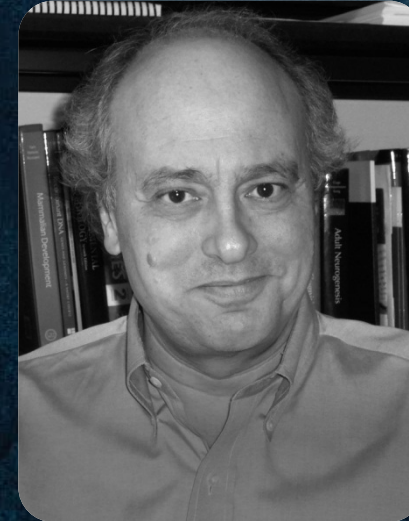
DKK 40 million

novo nordisk fonden



Maiken Nedergaard  
MD, DMSc

Research:  
Glial cell communication,  
removal of waste products  
from the brain



Steven A. Goldman  
MD, PhD

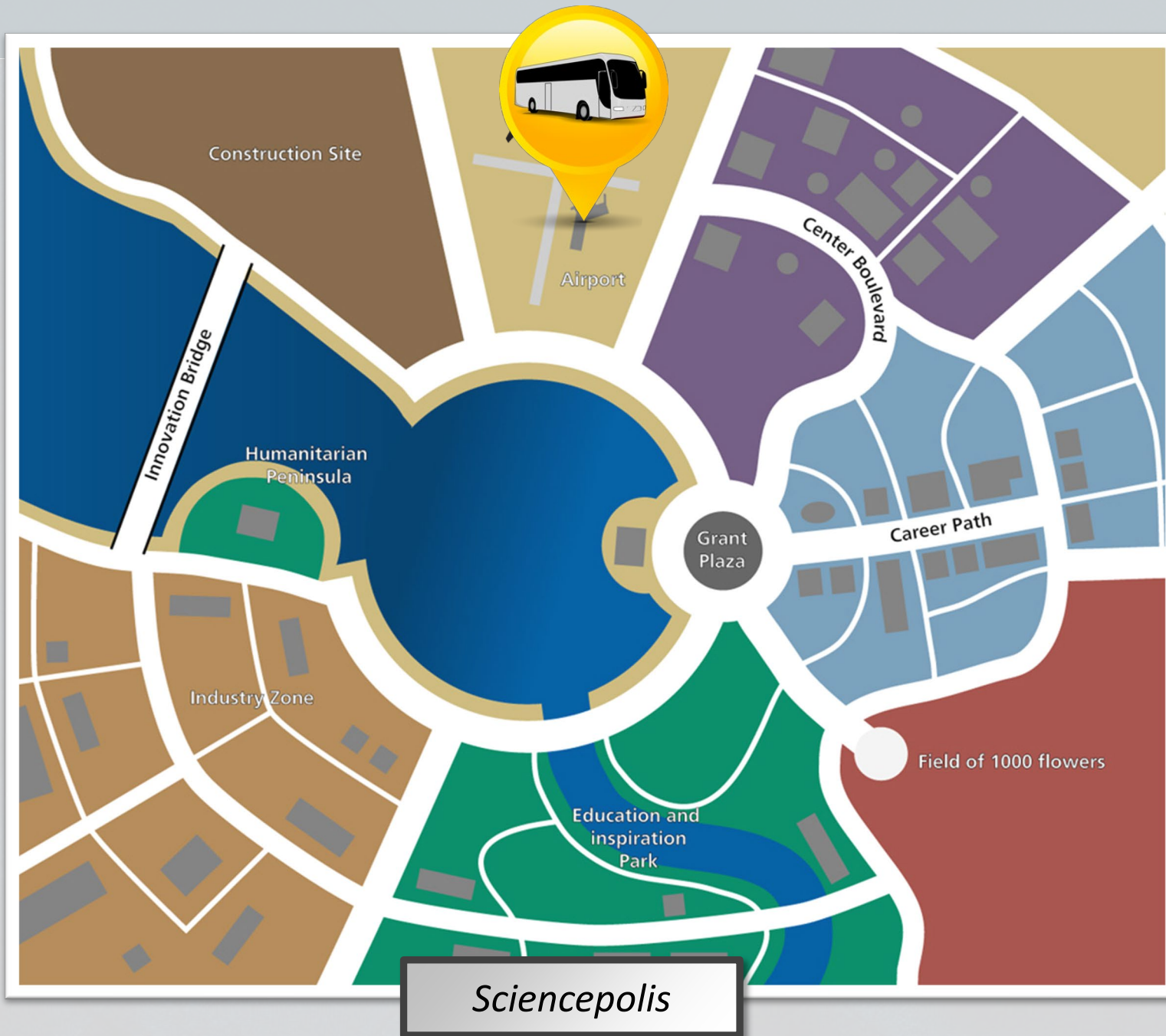
Research:  
Progenitor cells for  
modeling and treating  
neurological disease



Michael J. Davies  
D.Phil

Research:  
Mechanisms and  
significance of protein  
oxidation





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BIOPro World Talent Campus



Natural History Museum



## GRANTS

## FOR EDUCATION AND OUTREACH



Copenhagen International  
School Nordhavn

PULSE





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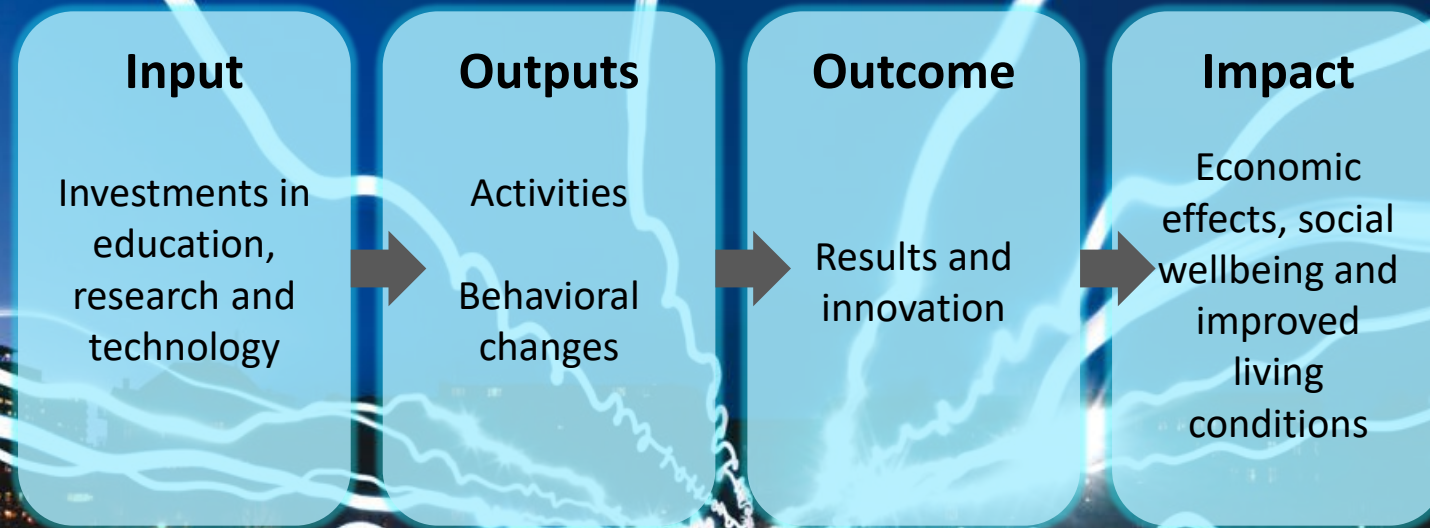


# INNOVATION BRIDGE





# CREATING VALUE IN SOCIETY







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# HUMANITARIAN/SOCIAL GRANT ACTIVITIES

Research hospital  
and health promotion

## Not-for-profit organisations

Dansk Flygtningehjælp  
Læger uden Grænser  
Red Barnet  
Dansk Røde Kors  
Soldaterlegatet

Ingeniører uden grænser  
Maternity World Wide  
Tandsundhed uden grænser  
Børns Vilkår  
KFUMs Soldatermission i  
Danmark  
UNICEF Danmark  
BØRNEfonden

Education and outreach

STAR

REACH







## 6 strategic goals

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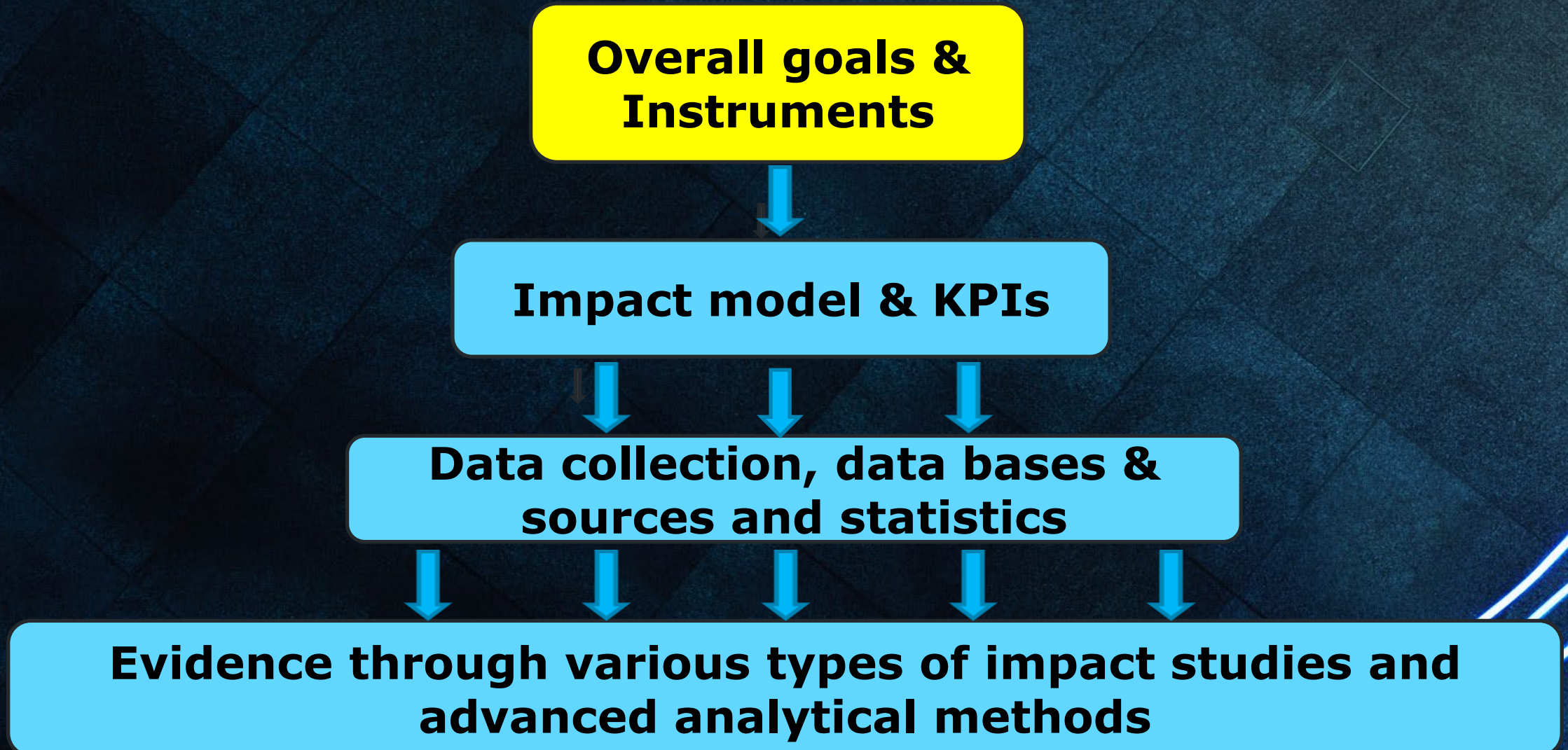


HOW DO WE KNOW  
IF IT WORKS?



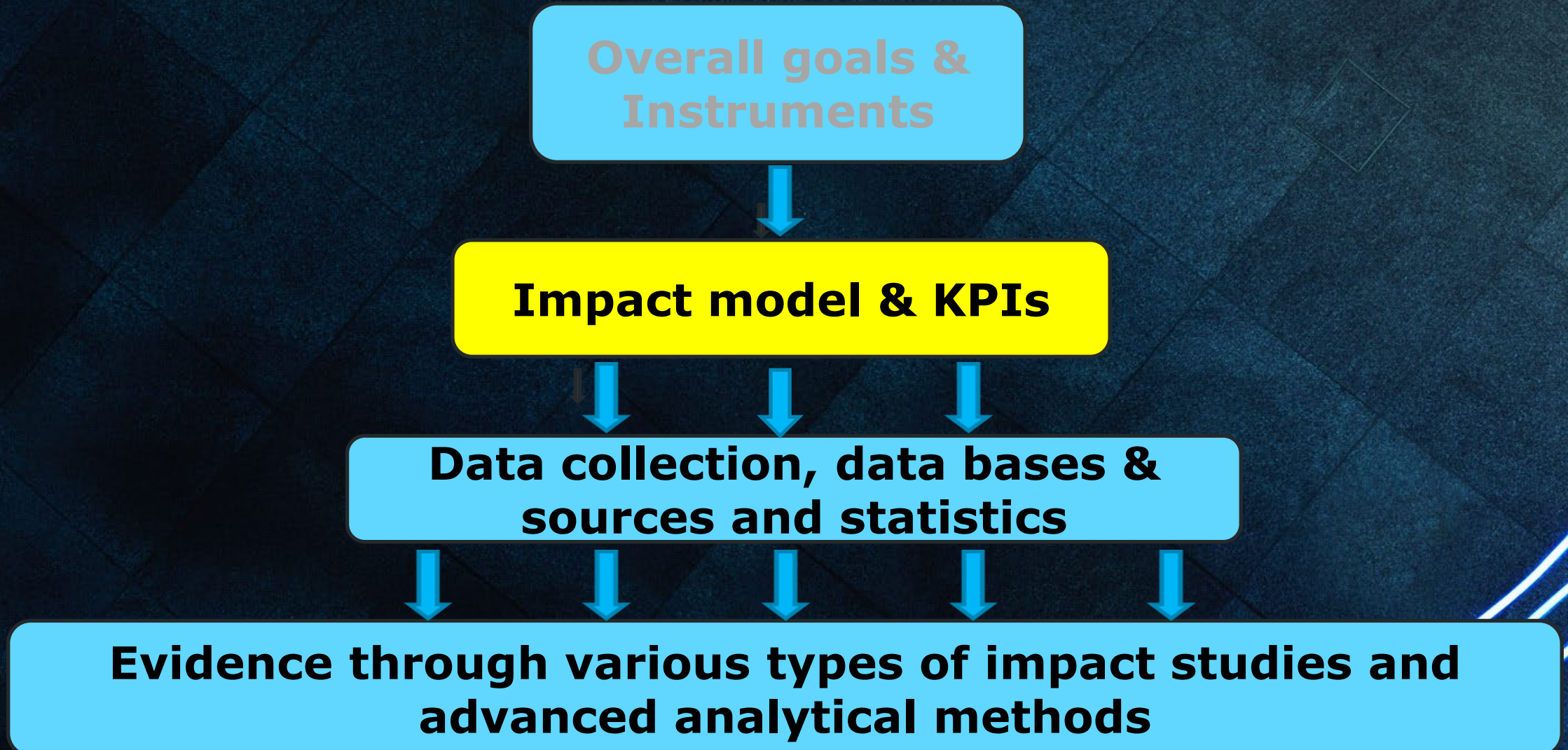


# THE NNF ASSESSMENT STRATEGY



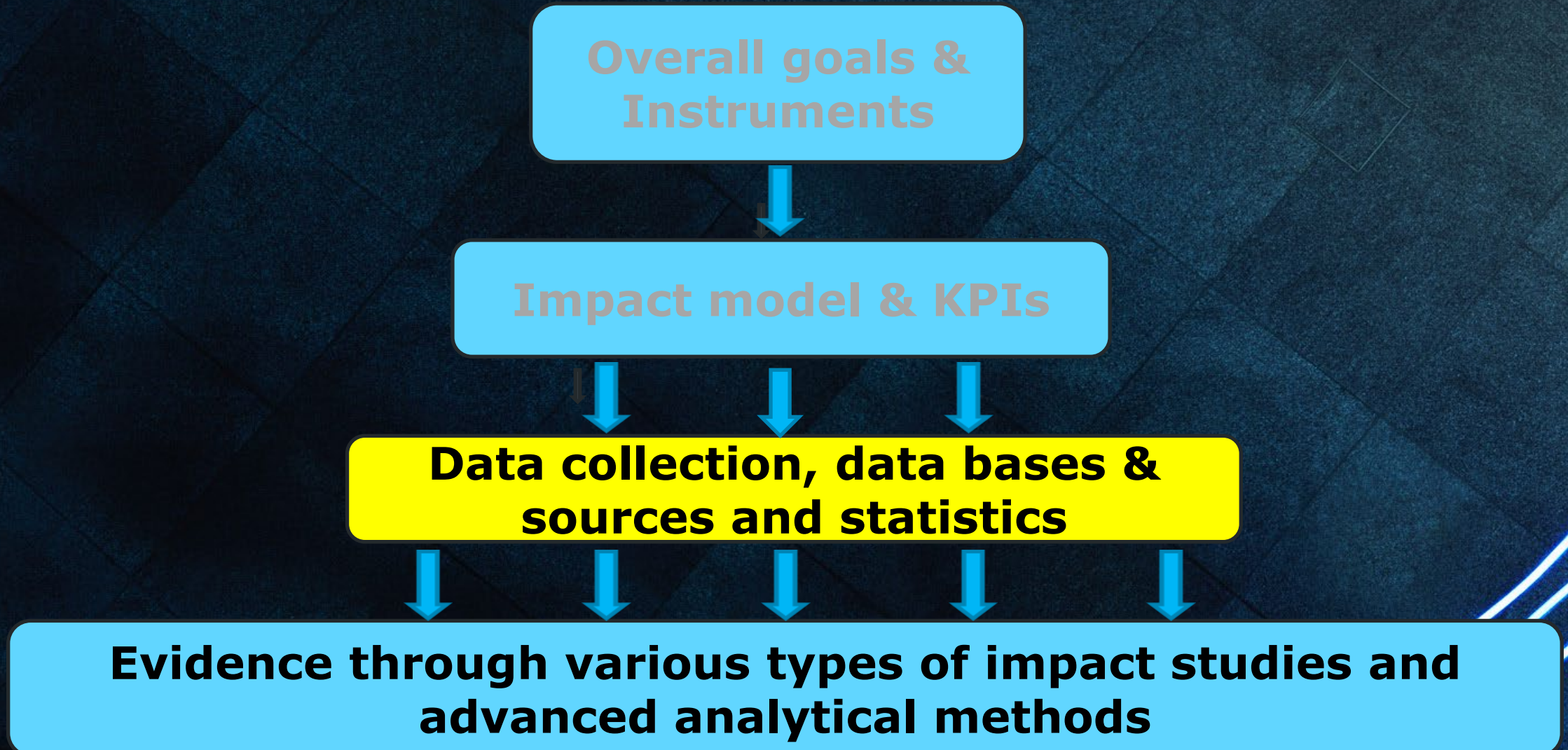


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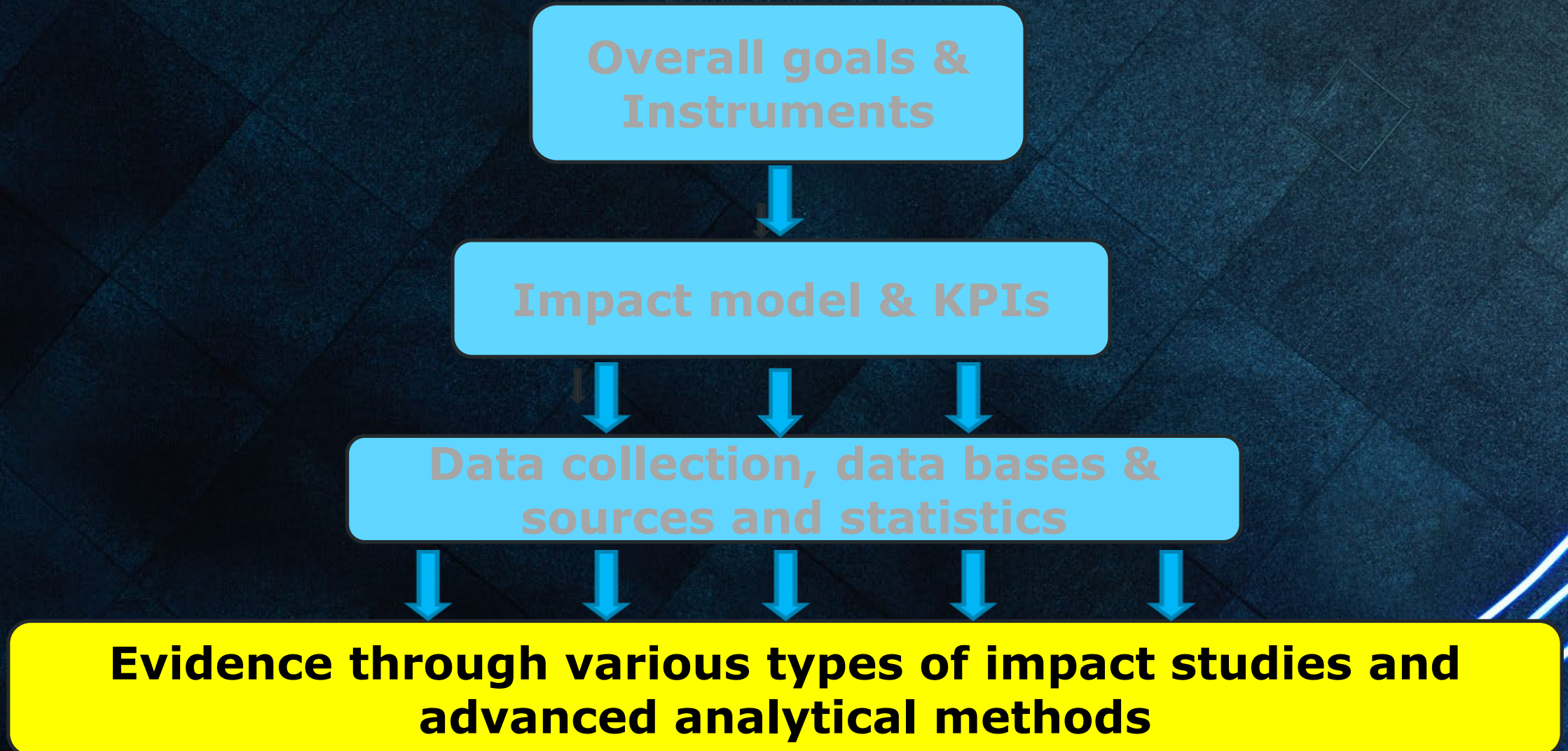


# THE NNF ASSESSMENT STRATEGY





# THE NNF ASSESSMENT STRATEGY





# IMPACT OF RESEARCH AND DEVELOPMENT IN DENMARK

34 % marginal  
return of private  
research

9 % higher labour  
productivity from  
public-private  
research  
collaboration

Denmark in world  
top 3 w.r.t.  
publications per  
inhabitant

Denmark in world  
top 3 w.r.t. citations  
per publication


3½ % increase in  
private productivity  
from research  
collaboration

Investments in  
public research  
exceeds 1 % of GDP

Patent activities  
double in enterprises  
with industrial PhD  
projects

Clusters increase  
innovations with 300  
%

20-40 % economic  
return of public  
research



NNF support