

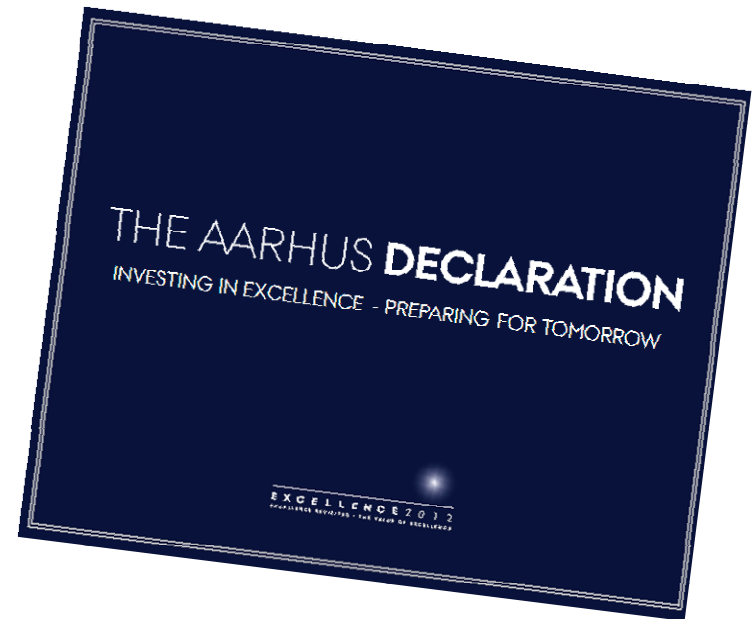
A NEW UNIVERSITY – DEPTH AND COHERENCE

The Case of Aarhus University

III International Conference of the Russian Association of Higher Education Researchers

THE ROAD TO **EXCELLENCE**

- Quality of national framework conditions
 - Institutional autonomy
 - Governance and accountability
 - Adequate and stable financing
- Ability of universities to respond to opportunities in the market for knowledge and talent
 - Favorable internal structures
 - Clear strategy and holistic management
 - Capacity to differentiate and prioritize



NEW **FRAMEWORK CONDITIONS** FOR
HIGHER EDUCATION AND RESEARCH
IN DENMARK

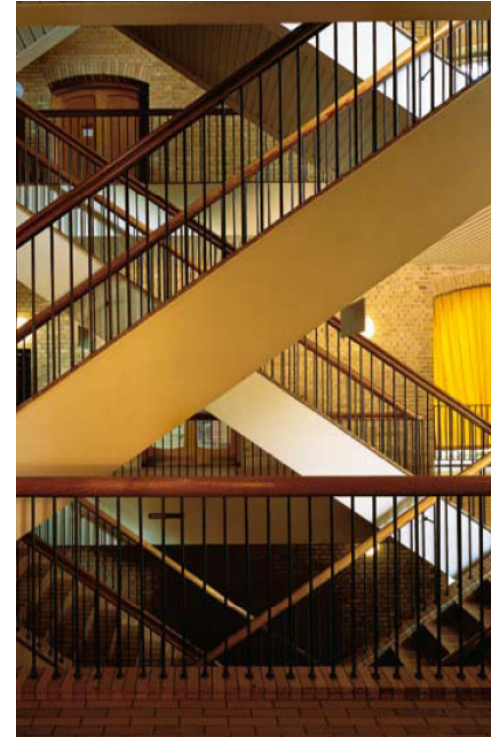
MAJOR **REFORMS** OF HIGHER EDUCATION IN DENMARK

- New university governance (2004)
- Financing reform (2006)
- University mergers (2007)
- Curricular / Bologna reform (1999-2007)



UNIVERSITY GOVERNANCE

- Autonomy – from state institutions to autonomous bodies within the public sector
- Governing boards with a majority of external members
- Appointed leaders in university governance structures (rector, deans and department heads)

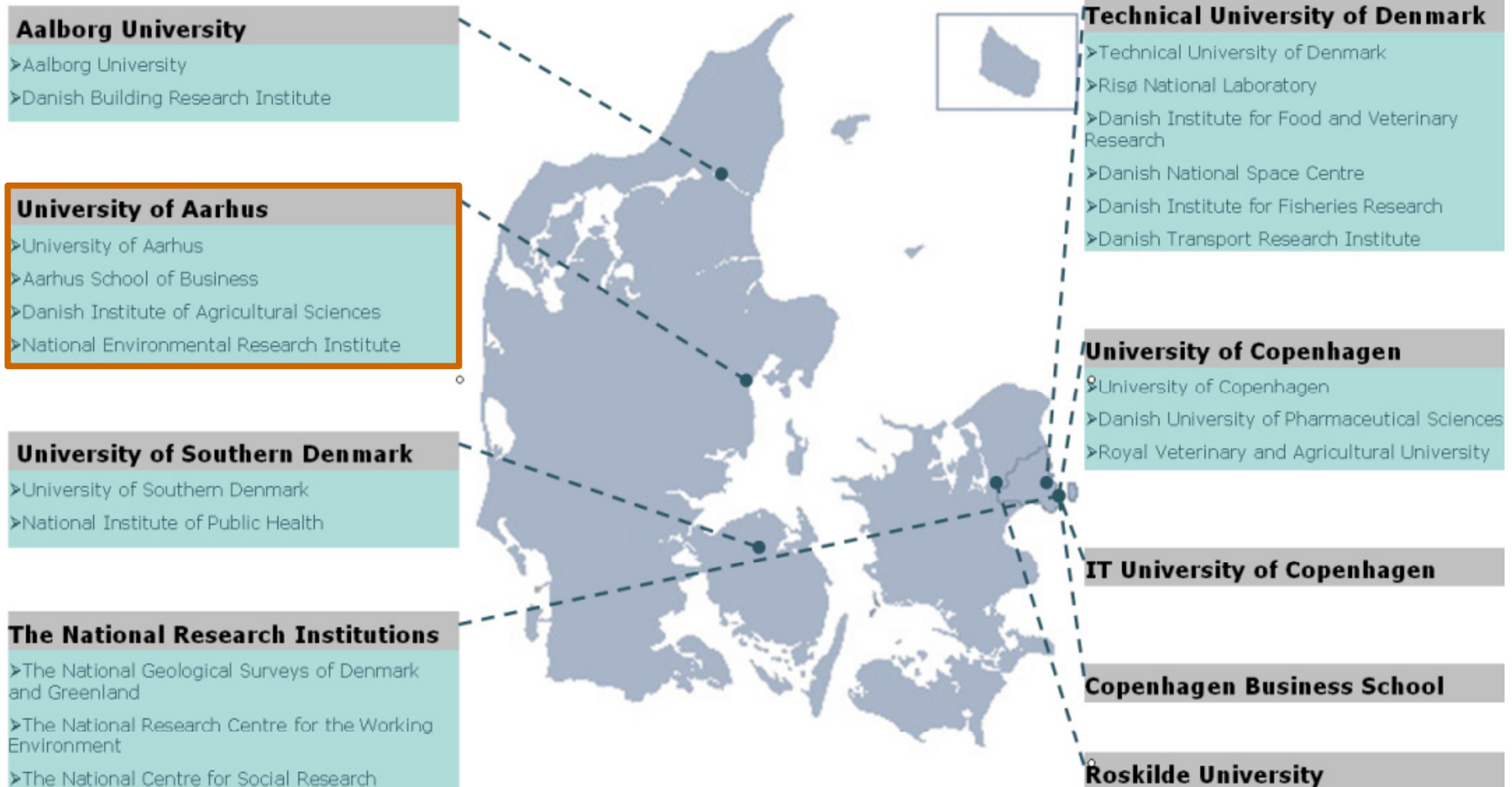


UNIVERSITY FINANCING

- Globalization Council under the leadership of the Prime Minister
- Raise public investments in research to 1 percent of GDP in 2010
- Increase in competitive research funding
- Stability in base funding in exchange for enhanced accountability for results



REORGANIZING HE&R INSTITUTIONS IN 2007



WHY MERGERS?

- Achieving higher quality through disciplinary consolidation and critical mass
- Unleashing the educational potential of public research institutes
- Ensuring that each institution will be able to offer a comprehensive range of offerings
- Rationalization by eliminating duplication in research and education
- Increased international engagement and visibility

AARHUS UNIVERSITY FOLLOWING THE **MERGERS**

STUDENTS

Bachelor	20,104
Master	16,395
Part-time Master etc.	5,176
PhD	2,045
Total no. of students:	43,720

STAFF

Academic staff	4,629
Academic staff (part-time)	2,028
Administrative/technical staff	4,725
Total no. staff members:	11,382

FINANCES

	Annual report 2008	Annual report 2009	Annual report 2010	Annual report 2011	Budget 2012
Million € (2012 level)	693	733	761	803	826

TEAR DOWN **INTERNAL BOUNDARIES**
AND PROMOTING EXCELLENCE BY
STIMULATING **COLLABORATION ACROSS**
DISCIPLINES

CAPACITY TO RESPOND TO NEW SOCIETAL CHALLENGES

”We must organize the Aarhus University of the future to enable us to contribute even more to meeting our society's challenges”

- Climate change
- Food supply
- Mass migration
- Health
- Security
- Energy
- Access to Water

A complex world with interconnected challenges which transgress disciplinary boundaries – with regard to causes, consequences and solutions

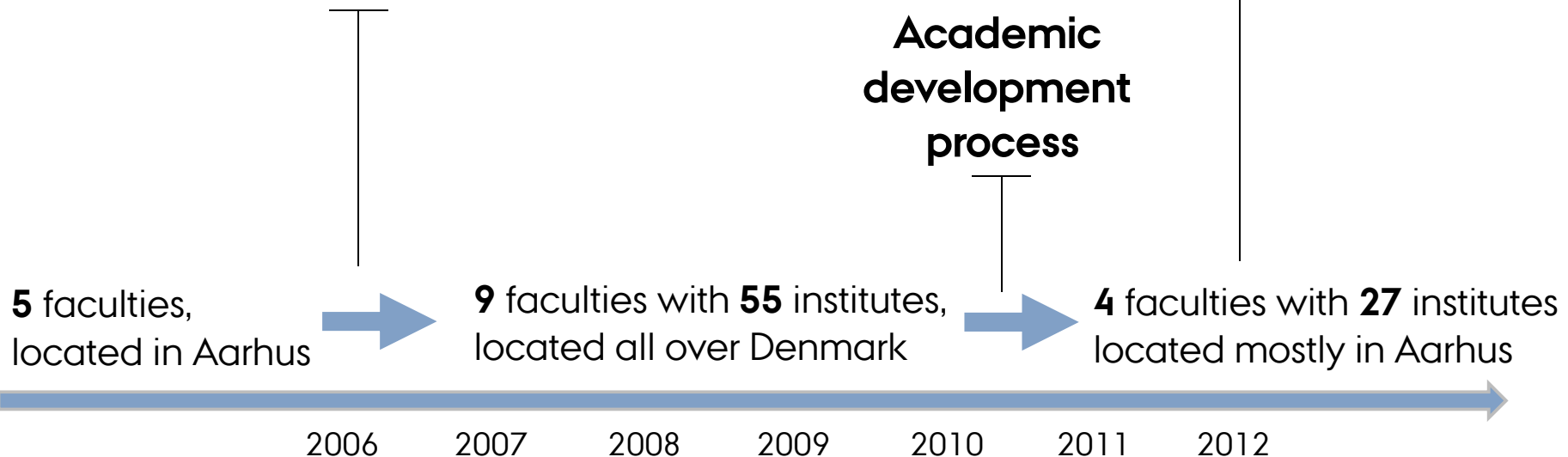
DESIRE TO REMOVE **INTERNAL** BOUNDARIES

Merger with

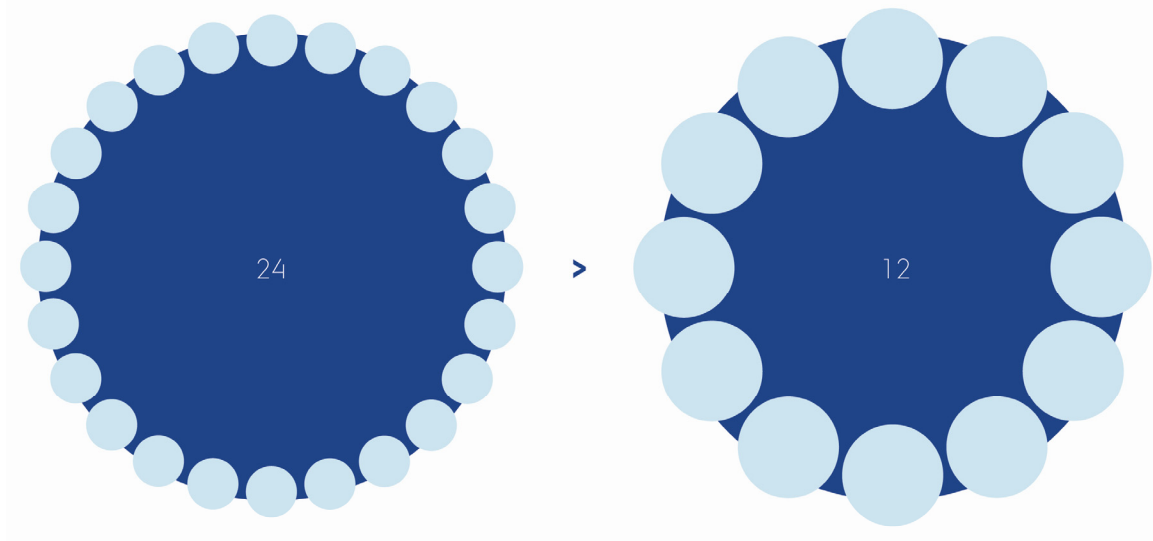
- Danish School of Education
- Aarhus School of Business
- Danish Agricultural Institute
- National Environmental Research Institute

Merger with

- Aarhus Engineering School



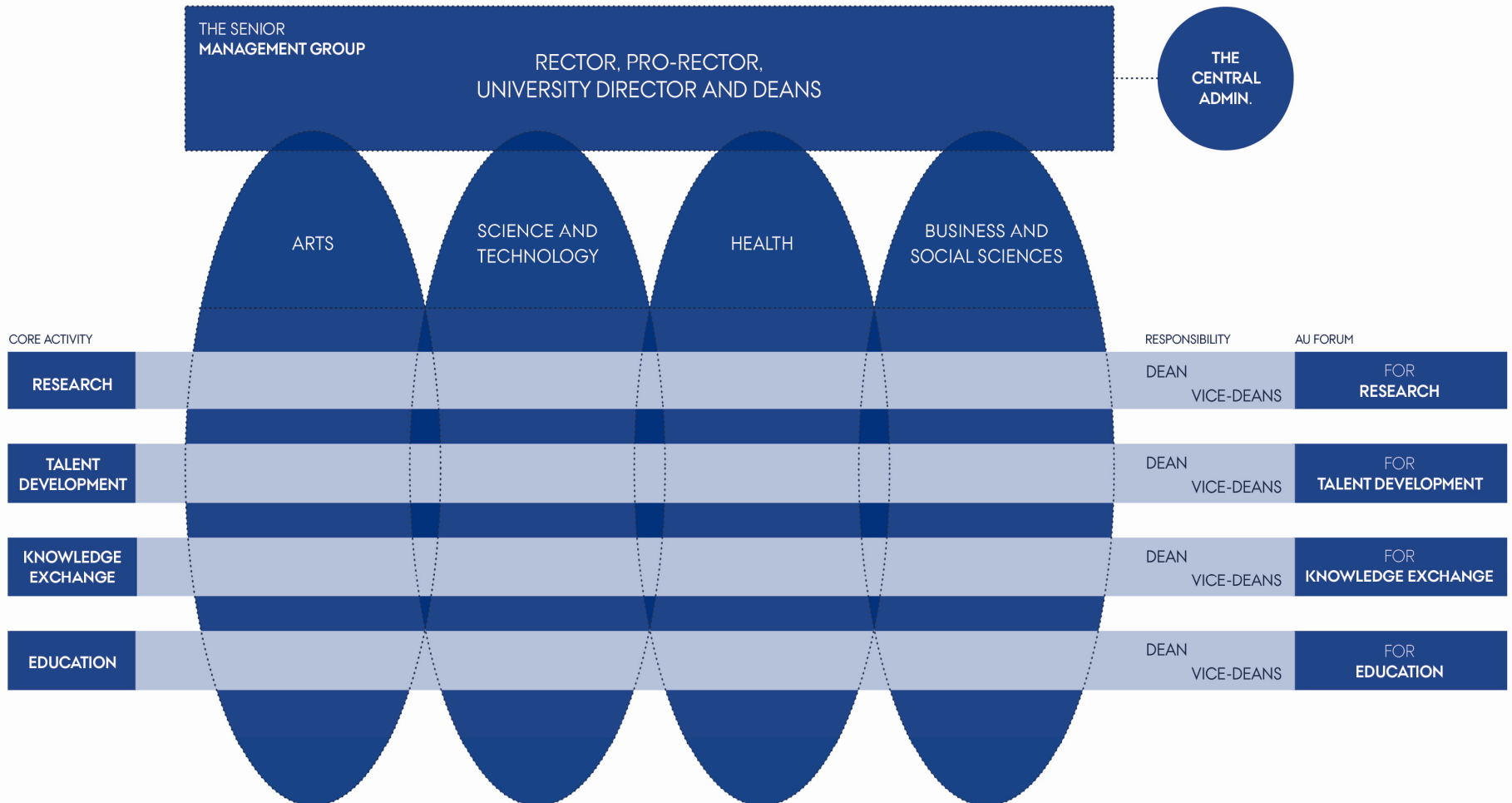
EXAMPLE: FACULTY OF SCIENCE & TECHNOLOGY



Today:

- Department of Animal Science
- Department of Bioscience
- Department of Environmental Science
- Department of Geoscience
- Department of Engineering
- Department of Agroecology
- Department of Food Science
- Department of Molecular Biology and Genetics
- Department of Physics and Astronomy
- Department of Mathematics
- Department of Chemistry
- Department of Computer Science

A SINGLE UNIFIED MANAGEMENT WHERE DEANS HAVE **THREE** RESPONSIBILITIES



NEW SOLUTIONS TO COMPLEX SOCIETAL CHALLENGES

INTERDISCIPLINARY CENTERS AT AARHUS UNIVERSITY

- MINDlab
- iNANO
- Neurocampus
- Food, Nutrition and Health
- Global Change and Development
- Integrated Register-based Research
- Arctic Research
- ...



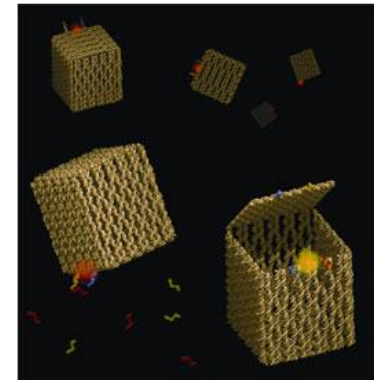
DNA twisted into boxes

Molecular keys can open tiny containers.

Geoff Brumfiel

A multidisciplinary team of researchers has created tiny DNA strongboxes measuring just 30 nanometres on each side¹. The boxes, which can be unlocked with a gene 'key', could be used for drug delivery or as sensors.

The boxes are the latest novelty to emerge from 'DNA origami', the technique by which researchers build structures out of DNA. They use oligonucleotides, short snippets of nucleic acid bearing genetic information, to fold longer strands of DNA into a complex structure. Each box is large enough to hold a single ribosome — the cell's machine for making proteins. Previously, researchers have built tubes and even a map of the Americas using the technique^{2,3}.



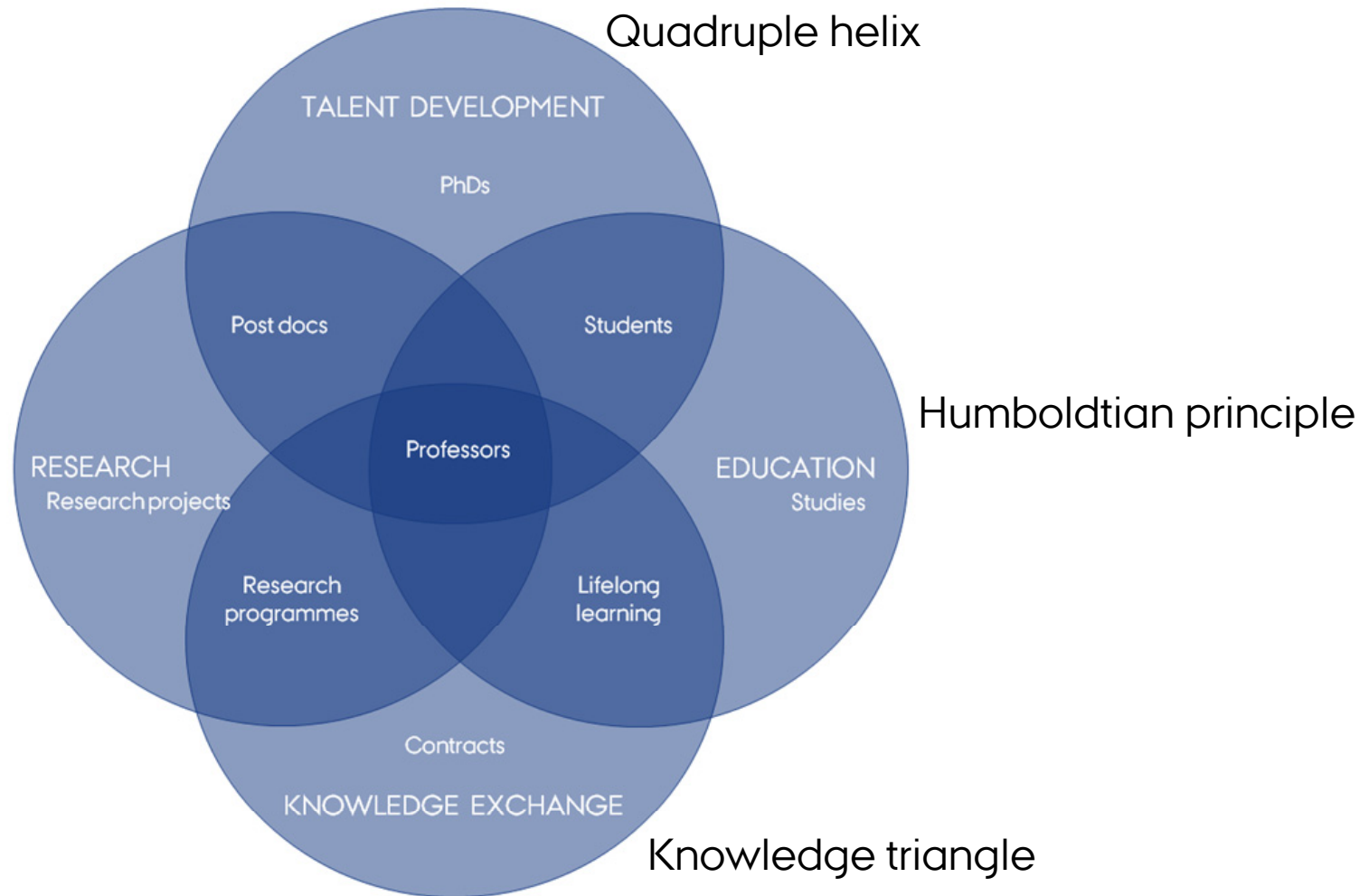
The boxes are formed from a single strand of DNA.

Ebbe Sloth Andersen

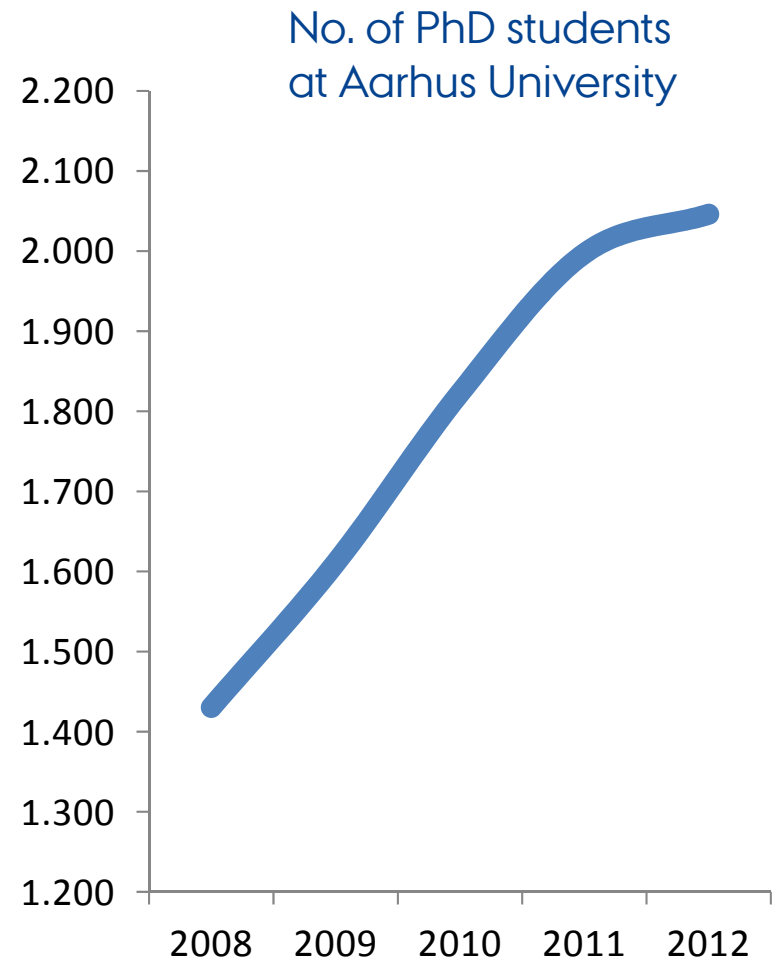
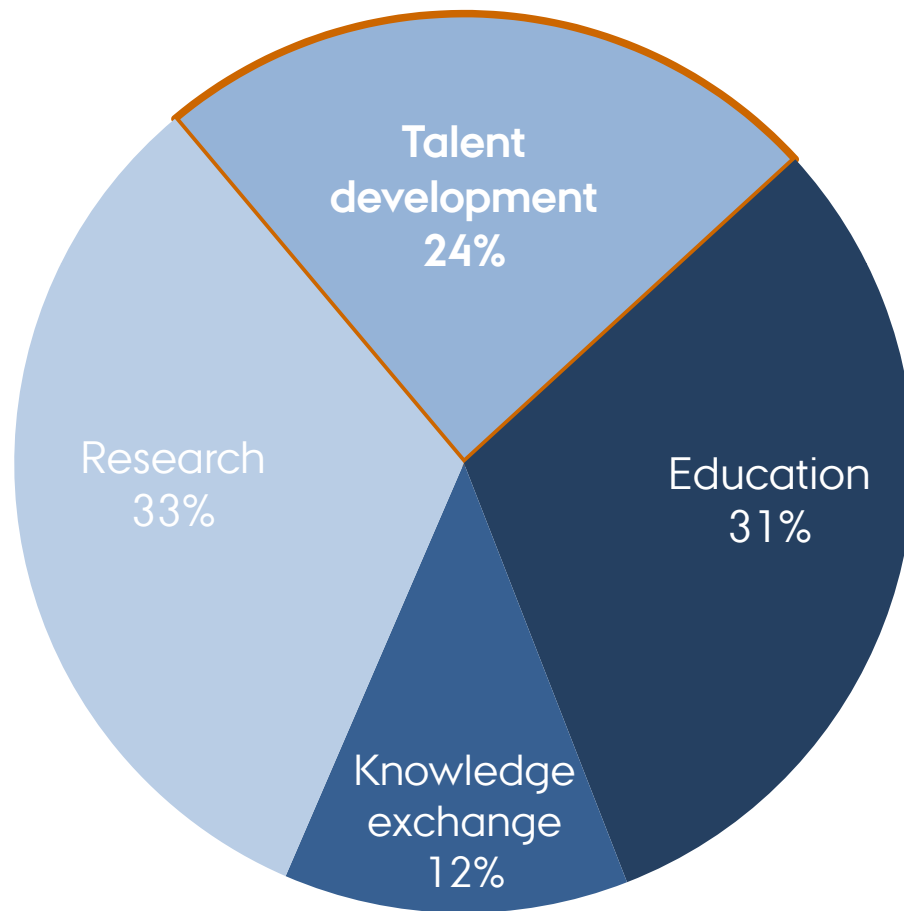
DEVELOPING A **CLEAR STRATEGY** THAT
REINFORCES STRENGTHS
AND SUPPORTS DIFFERENTIATION

STRATEGY

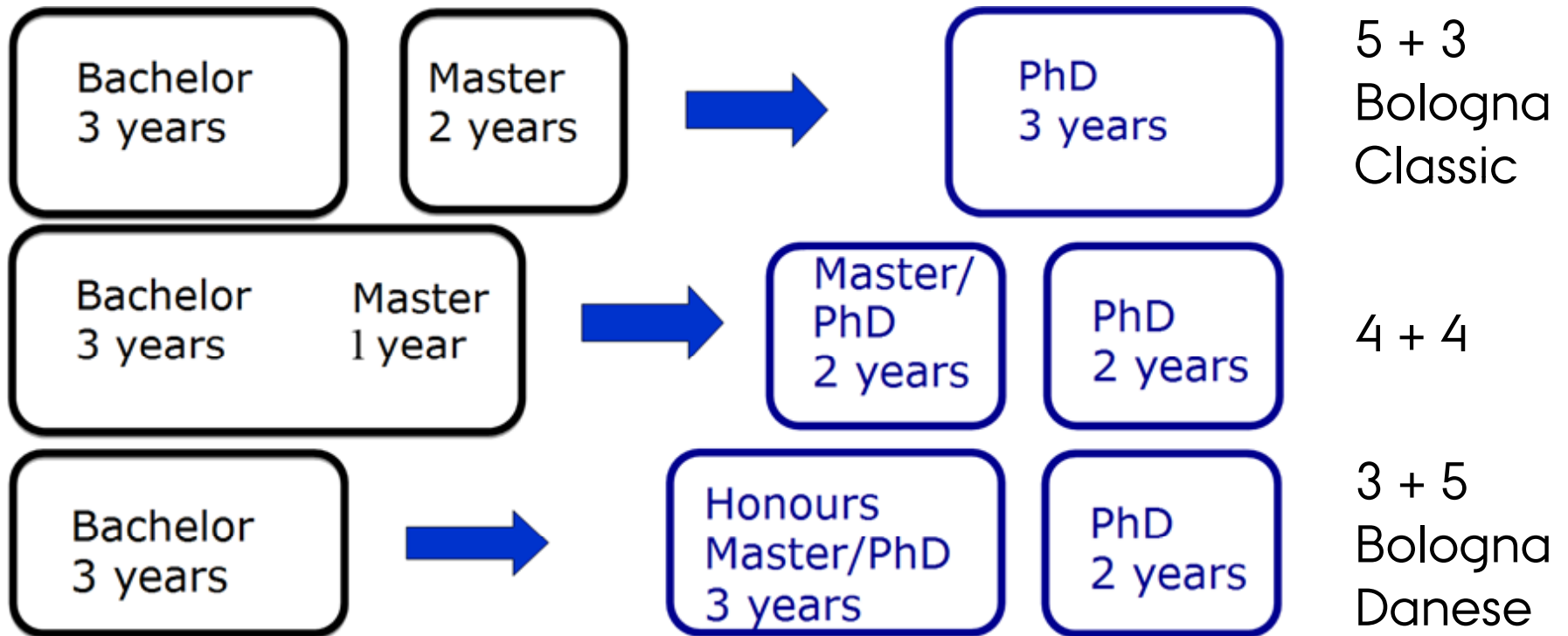
THE QUADRUPLE HELIX



EXPENDITURES AT AARHUS UNIVERSITY



EARLY IDENTIFICATION OF RESEARCH TALENT



NEW **CROSS-CUTTING INITIATIVES** FOR TALENT DEVELOPMENT

- **AU IDEAS** (visionary and original project ideas)
 - Project Development (1-2 yrs. with up to € 67,000 per applicant)
 - Pilot Centers (3-5 yrs. with up to € 0.4-1 million)
- **Aarhus Institute of Advanced Studies**
 - Exceptionally talented younger researchers from all over the world
 - Stimulating, international and interdisciplinary environment
 - Opportunity to pursue own research interests for a 2-3 year period
 - Independent managerial structure with international advisory board
 - Seed grant of € 1.5 million annually for five years

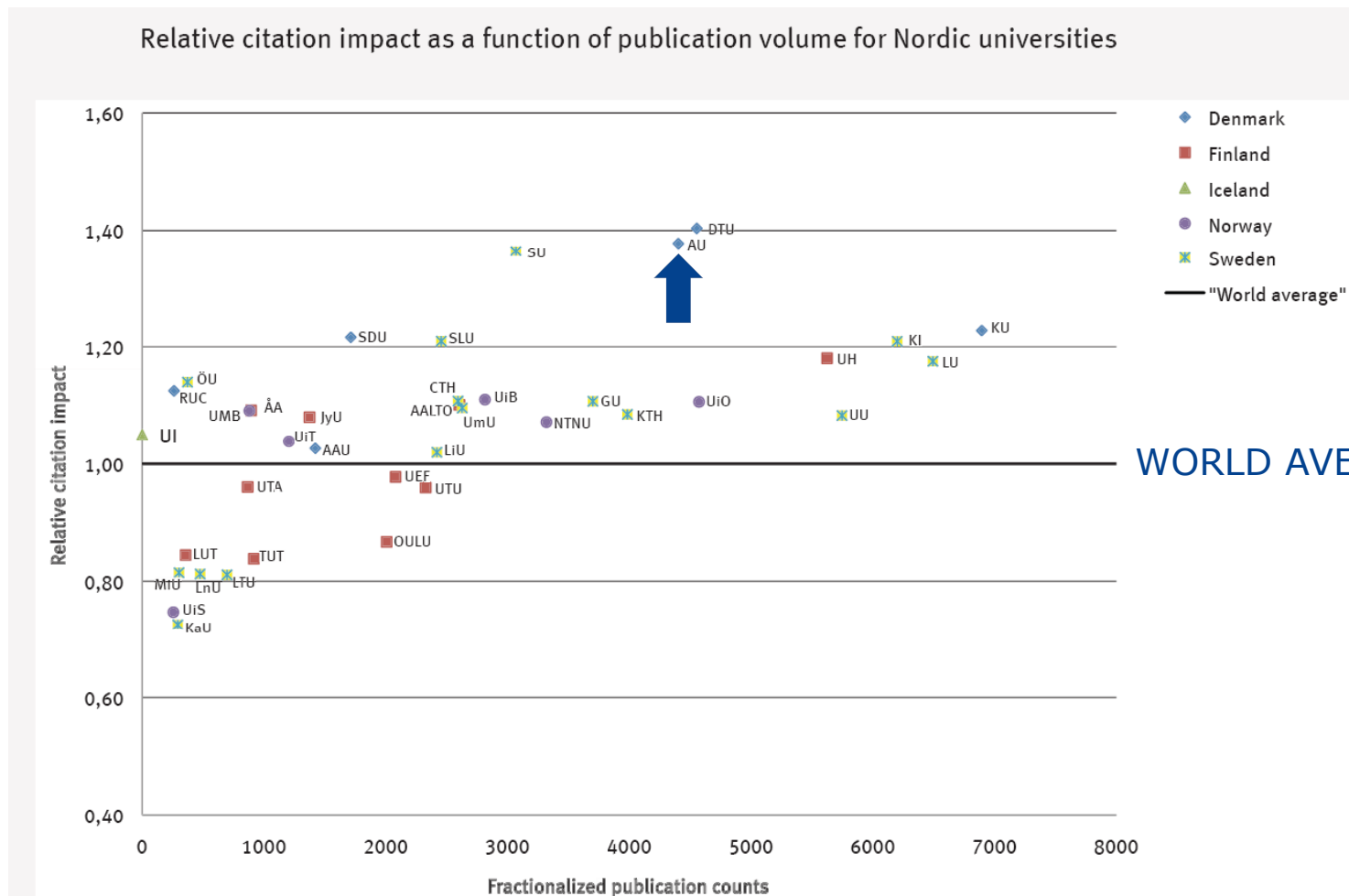
WHAT IS THE **NET IMPACT** OF IMPROVED
FRAMEWORK CONDITIONS AND
INTERNAL REFORM?

A TOP 100 UNIVERSITY

RANKINGS	AARHUS UNIVERSITY					
	2007	2008	2009	2010	2011	2012
Leiden*	-	-	-	55	51	-
Shanghai	102	93	97	98	86	86
QS	114	81	63	84	79	89
THE	-	-	-	167	125	116
Taiwan	132	118	101	105	96	82

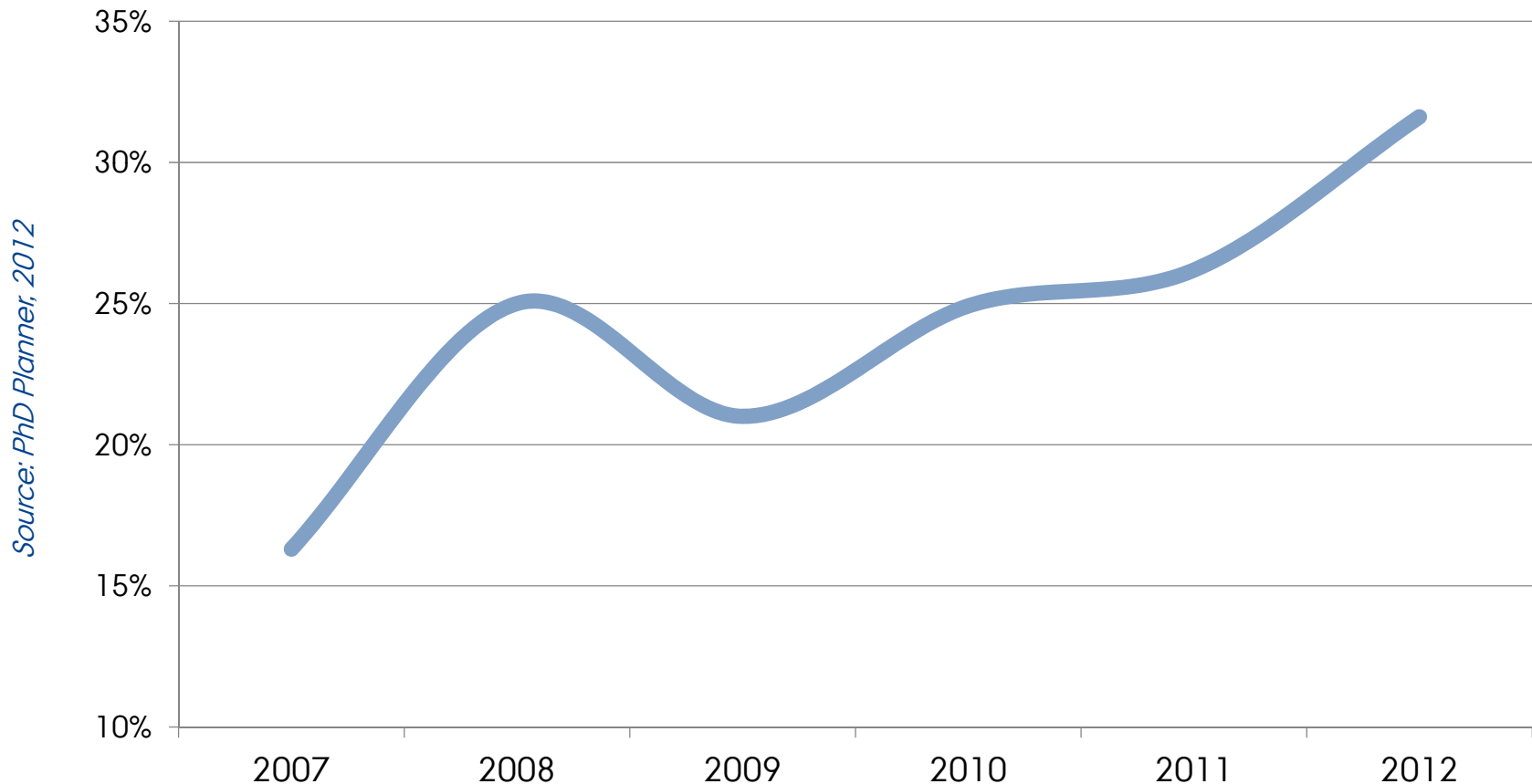
RESEARCH VOLUME AND IMPACT

Source: Comparing Research at Nordic Universities using Bibliometric Indicators, A publication from the NORIA Net, NordForsk 2011, p. 61



PARTICIPATION IN INTERNATIONAL **BRAIN CIRCULATION**

Proportion of international PhD Students at Aarhus University



WHAT CAN BE **LEARNED** FROM THE CASE OF AARHUS UNIVERSITY?

CONCLUSION: NATIONAL FRAMEWORK CONDITIONS

- Adequate framework as necessary but not sufficient condition
- Mergers can be an opportunity to shape the institutional landscape according to new demands
- University governance is important for the ability develop unique Institutional profiles



Aarhus Universitet Campus

CONCLUSION: INSTITUTIONAL RESPONSE

- Successful institutions challenge existing structures and historical “truths”
- Use autonomy to its fullest – Institutions needs to develop a clear sense of (i) who and where they are and (ii) where they would like to go
- Important to differentiate university missions in terms of disciplinary focus, core activities and how knowledge is produced

Freedom to seek
deeper connections – greater coherence

Kristian Thorn
Deputy University Director
AU Research and Talent

E-mail: krth@adm.au.dk



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