UNIVERSITY REFORMS IN DENMARK
The case of Aarhus University
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• INTERNATIONAL DEMAND
  – Governance reform
  – Changed Landscape – systemic reorganisation
  – New financial compact

• MERGERS
  – The merger wave among Denmark's universities and university colleges

• NEW AARHUS UNIVERSITY
  – Shaping the modern European university

• RESEARCH FOUNDATION FOR ALL AU ACTIVITIES

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

- The world is globalized, with complex interconnected challenges which transgress disciplinary boundaries – with regard to causes, consequences, and solutions

- Food security - Water quality - Energy sustainability - Demography and migration - Public health - Transnational economies - Political stability and security - Climate change
EMERGING GLOBAL MARKET FOR EDUCATION AND R&D

Students enrolled outside their home country, 1975-2011

International co-authorships, 1985-2005

Source: Data from OECD, Education at a Glance

Source: OECD Science, Technology and Industry Outlook 2007
EUROPE DEMANDS
ADVANCED HUMAN CAPITAL

• The challenges of tomorrow are complex, great, and global

• Innovation Union 2020 foresees 1,000,000 new research jobs

• ERAB 2030 recommends:
  • 50% of EC research funding should go to frontier, high-risk R&D
  • 20% of EU doctoral candidates working outside their home country
  • 5% of GDP is spent on R&D. Private investments account for 2/3
  • EU + member states triple spending on higher education to 3.3% of GDP

• Half of the adult population has achieved tertiary education

• Doctoral degrees are passports to the intellectual world, however many PhD graduates will not be employed in academia

• Research staff must be intellectually and internationally mobile
GLOBAL PERSPECTIVE ON CITATION IMPACT

Aarhus University
Danish Technical University
University of Copenhagen
US top universities
European top universities

Total number of publications 2003-07
Relative citation impact as a function of publication volume for Nordic universities

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

1998-99, Intergovernm. agreement: Governmental push for convergence of HE systems by 2010

2000-02, White Paper & OECD Review

2003 – 2007, Danish sector reforms:
• Reorganizing HE&R institutions (2007)
• Modernizing the funding compact

2000, European Research Area:
Cohesion in European research, promoting transnational scientific knowledge flow, competition, collaboration and mobility

2008, Aarhus University’s Strategy:
• Research
• Talent development
• Knowledge exchange
• Education

2010, European Higher Education Area:
10 years after the Bologna process. Adopted by 47 countries, facilitating efforts to enhance European HE comparability, compatibility and coherence

1999, Bologna Declaration:
Key principles adopted by Ministers of Education of 29 European countries

2010, AU Academic Development Process:
• Unified management
• Interdisciplinarity
• Autonomy – going from state institutions to autonomous entities within the public sector

• Accountability through the use of development (performance) contracts, audits and accreditation

• Governing boards with a majority of external members, which safeguard the university’s interests and determine guidelines for its organization, strategy and development. Appoints the rector.

• Appointed leaders in university management structure (rector appoints vice rector, director and deans, deans department heads, director heads of administration etc.)
REASONS FOR REORGANISING THE HE-LANDSCAPE

• Stronger institutions through consolidation of resources
• Increased international competitiveness
• Academic synergies and innovation in education and research
• Cross organizational cost effectiveness
• Obtain larger share of EU-funds
• Committed to the Lisbon and Barcelona targets
• Public investments in research 1 percent of GDP reached by 2010
• University core-funding is based on performance indicators (45% graduation, 10% Ph.D. program efficiency, 25% bibliometry, 20% external funding)
• Study programs are taximeter funded (automatic and follows accumulated completed ECTS)
• 50-60% of research funding through competitive mechanisms e.g. research councils (includes a flat overhead rate of 44%)
HIGHER EDUCATION IN DENMARK

- Signatory to the Bologna process
- Introduced the European qualifications framework
- An independent accreditation board, and works towards a flexible post secondary education system
POLITICAL PLATFORM OF THORNING-SCHMIDT GOVERNMENT 2011

- 95% should complete youth education, 60% higher education
- 25% should complete research based higher education by 2020
- 2.5% in PhD and 1% in post doc programmes
- Strengthen the national innovation strategy: education, research, innovation
- State Education Grant, taximeter for first two cycles
UNIVERSITY MERGERS IN 2007

• 12 universities and 21 sector research institutions became 4 sector research institutions and 8 universities

• 3 large universities:
  – **Copenhagen University**, merged with two universities and increased turnover by 20%
  – **Aarhus University** merged with two universities and two sector research institutions and increased turnover by 40%
  – **Technical University of Denmark** merged only with sector research institutions and increased turnover by 30%
FROM 12+13 TO 8+3 UNIVERSITIES AND GOVERNMENT RESEARCH INSTITUTIONS
UNIVERSITY COLLEGE MERGERS IN 2008

• 24 CVU (University Colleges) merged into 7 University Colleges 1 January 2008

• 2 former CVU institutions are not part of a university college but still independent institutions
  ▪ Copenhagen University College of Engineering
  ▪ Danish School of Media and Journalism (DMJX)
UNIVERSITY COLLEGES IN DENMARK
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MOTIVATION FOR CHANGE

Assuming a new role in society

• Ambition to further improve quality, impact and international reach
• Strong performance in terms of academic and financial results
• Complete the merger process to create one unified university
• Move to tear down internal boundaries and stimulate collaboration across disciplines
• Ensure a more professional and efficient administration
CHANGE PROCESS AT AARHUS UNIVERSITY

Merger with
- Herning Institute of Business Administration and Technology
- Danish School of Education
- Aarhus School of Business
- Danish Agricultural Institute
- National Environmental Research Institute

5 faculties, located in Aarhus
2006

Common Strategy
9 faculties with 55 institutes, located all over Denmark
2007

Academic development process
4 faculties with 27 institutes located mostly in Aarhus
2008

Implementation
2009

2010

2011

2012
AU QUADRUPLE HELIX – A MODERN UNIVERSITY

EDUCATION

STUDY PROGRAMMES

STUDENTS

LIFELONG LEARNING

TALENT DEVELOPMENT

PHDS

KNOWLEDGE EXCHANGE

CONTRACTS

POST DOCS

RESEARCH PROGRAMMES

RESEARCH

RESEARCH PROJECTS

ELITE RESEARCHERS
TALENT DEVELOPMENT

TALENT DEVELOPMENT

PHDS

POST DOCS

STUDENTS

RESEARCH

RESEARCH PROJECTS

RESEARCH PROGRAMMES

LIFELONG LEARNING

EDUCATION

STUDY PROGRAMMES

CONTRACTS

KNOWLEDGE EXCHANGE

AARHUS UNIVERSITY

RECTOR LAURITZ B. HOLM-NIELSEN

25. juni 2013
CHANGE PROCESS AND EMPOWERMENT AT AU

- **Academic organization**: A unified university with *fewer internal boundaries* From nine to four main academic areas, from 55 to 26 departments,

- **Governance**: Management with *appointed leaders and joint responsibility* for the entire university. From ten management units to *a senior leadership team* with cross-cutting responsibility for strategic management and quality assurance

- **Administration and finance**: A single university with *an integrated administration* A common financial model, standardised quality service for the whole university; from three to *one (two) levels of administration* – front office and back office philosophy

- **Academic cheques and balances**: *one academic council per faculty* (main academic area), and 4 *AU Fora*, one for each core activity: research, talent development, knowledge exchange and education
CHECQUES AND BALANCES IN THE GOVERNANCE STRUCTURE

- AU Board
- AU Management
- External
  - Advisory Boards
  - Employer Panels
  - Advisory Committees
- Internal
  - AU Forums
  - Academic Councils
  - Departmental Forums
A UNIFIED MANAGEMENT AND DEANS WITH DOUBLE RESPONSIBILITIES
STATUS OF THE ACADEMIC STRUCTURE

• New deans appointed as of 1 November; assume responsibility for new main academic areas on 1 January 2011

• Appointment of vice deans early 2011

• Proposals on new departmental structure in December; approval in January 2011, implementation in July 2011 (55 to 26)

• Proposals on new administrative structure in December 2010; approval in February 2011, implementation in August 2011

• All new leaders appointed August 2011
AARHUS UNIVERSITY - A UNIVERSITY GROWING STRONGER

- 43,000 students (52% graduate level students)
- 3,000 PhD students and early career researchers
- 4,400 international students of 103 nationalities
- 7,200 employees (FTE) 79 nationalities
- 11,731 publications in 2010

Expenditures (EUR million)

- 392
- 643
- 693
- 733
- 761
- 803
- 826

2006 2007 2008 2009 2010 2011 2012
## RESULTS, PROGRESS IN **COMPETITIVENESS**

<table>
<thead>
<tr>
<th>RANKINGS</th>
<th>AARHUS UNIVERSITY RANK</th>
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<tbody>
<tr>
<td>Leiden*</td>
<td>-</td>
</tr>
<tr>
<td>Shanghai</td>
<td>86</td>
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<tr>
<td>QS</td>
<td>89</td>
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<tr>
<td>THE</td>
<td>116</td>
</tr>
<tr>
<td>Taiwan</td>
<td>-</td>
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</tbody>
</table>

*among the 100 largest universities in the world*
AARHUS UNIVERSITY IN THE Rankings

Line graph showing rankings over time for various institutions.

- Times Higher
- Taiwan
- QS
- Shanghai
- Leiden (100 largest universities)


Graphical data visualization.
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INTERDISCIPLINARY SOLUTIONS TO COMPLEX CHALLENGES

Interdisciplinary centers (10)
- iNANO
- MINDlab
- EMBLnode - Neurocampus
- Centre for iSequencing (iSEQ)
- Centre for integrated Registerbased Research
- Arctic Research Centre (ARC)
- Interacting Minds Centre (IMC)
- Participatory Information Technology Centre (PIT)
- ...

National Centers of Excellence
- 14 National Research Foundation centers
- 5 Lundbeck Foundation and VKR Foundation Centers
AU CONTRIBUTIONS TO GLOBAL RESEARCH INFRASTRUCTURE

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

Research facilities (10)

- ASTRID-2
- Research vessel
- Danish center for NMR
- Databases (environment and population)
- State Library (Aarhus University Library)
- Zackenberg High Artic Research Station
- ...

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RESEARCH INFRASTRUCTURE - IN THE ARCTIC

- Three locations in the Arctic: NERO, ZERO and Station Nord
- Collaboration with international partners in the Arctic and Asia
- Arctic Research Centre: 250 researchers and students across disciplines
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OPPORTUNITIES AND LESSONS

• Reason for mergers vary depending on country, but the solution should be rooted in society's demand

• Mergers are a unique opportunity to shape the organisation and management structure for the new demands set by society

• Mergers present an opportunity to combine new areas within research and education

• The process should be transparent, open and inclusive and demands leadership

• Stronger university, both financially and academically over time
CONCLUSION

• In knowledge economies universities are expected to contribute to economic development and competitiveness

• A strong research base is the foundation in education, innovation and entrepreneurship the tools

• Universities can only do their part within a framework of autonomy, and they must show accountability

• At Aarhus University we have responded to by embarking on the most comprehensive reform to date of any of Denmark’s universities
Thank you

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