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MAKING A STRONG UNIVERSITY STRONGER

Change without a Burning Platform

INTRODUCTION

On an October day in 2010, a professor of economics was lecturing students at the Aarhus School of Business at Aarhus University on labour market dynamics. The professor was Dale T. Mortensen, a Niels Bohr Professor at Aarhus University, who for a number of years had divided his time between Aarhus University and Northwestern University in Chicago, US. Immediately before his lecture, Professor Mortensen received a call with the news that he was to receive the Nobel Prize in Economic Sciences for his ground-breaking research on labour market dynamics. After the lecture, national and international media rushed in, and for a few hours, Aarhus University was turned completely upside down. Once again, the quality of the research performed at Aarhus University had received international acclaim, and the university could now boast of a second contemporary Nobel laureate; the first one being Professor Jens Christian Skou, who in 1997 received the Nobel Prize in Chemistry for his research on the sodium-potassium pump.

In those very same days and weeks, the senior university management team was finalizing a reorganization of the university. Staff, students and researchers had been involved in the design of a new and improved organization and now the process of assessing existing structures and developing a strategy was coming to an end. The result was to become the most comprehensive transformation in the history of Aarhus University. The planned transformation was clearly not designed with a view from a burning platform, for research was successful, Aarhus University was financially strong and ranked among the top 100 in all recognised evaluations of the quality and reputation of the world's universities. Aarhus University was clearly not in a crisis. So why reorganize it completely and risk rocking a very steady and successful boat?

The overarching question that preoccupied Aarhus University's leaders at the time was this: "How do we prepare Aarhus University for the challenges of the future?"

CHANGE IN TIMES OF STRENGTH

The world of higher education is changing, and the role of universities is changing with it. Students and researchers are increasingly mobile and communication and travel across the world have increased significantly over the last two decades. The

balance of power and influence in the world is shifting and many universities feel the pressure of increased competition as other regions move up the value chain. As a consequence, universities are being forced to adopt a perspective that transcends regional and national borders; society demands that they take on new roles and open up to the surrounding world; and Aarhus University must focus on how to maintain its position among the elite universities of the world.

Increasingly, research funding is subject to national and international competition as well as being applied to major strategic research programmes that cut across disciplines and research areas. To be able to perform proactively, flexibly and professionally in order to attract research funding in a situation of global competition, the individual university must enjoy increased strategic freedom to design structures that invite interdisciplinary research and international collaboration (Holm-Nielsen, 2010). In a nutshell, much more autonomy and much higher accountability are needed. Additionally, for a world-class university to ensure the necessary academic continuity and development to be able to attract research funding, it needs to attract the most talented students and researchers. Competition for the best minds is increasingly global and it is therefore crucial for universities to offer attractive and flexible conditions for performing research.

In times of crisis, governments may look towards higher education for easy cutbacks. This is a very short-sighted strategy, for on the contrary, there is a need to improve the framework conditions for universities and to make substantial investments in education and research in order to remain competitive in a globalised world and meet the challenges of tomorrow. However, the solution is not just a matter of allocating more resources to universities. New and improved structures need to be implemented for universities to achieve excellence, and at least four major issues must be addressed: acquiring research funding, attracting talent, meeting the demands of society for knowledge, and improving the quality of education. Moreover, the world is faced with unprecedented challenges of a global nature. Issues such as climate change, limited energy resources, epidemic diseases and food security, cut across borders and scientific and scholarly disciplines. Just as these challenges transcend existing paradigms, so do the solutions and under the right circumstances, universities can contribute substantially to meet these grand challenges of our times.

The academic development process (Aarhus University, 2011), the largest organizational restructuring process in the history of Aarhus University, has the objectives of removing organizational barriers to change and innovation, merging research and teaching cultures that work with related issues, and improving conditions for research that cuts across disciplines and research areas.

Regional Developments: The Lisbon Strategy, the European Research Area and the European Higher Education Area

The European Union acknowledges that universities and other institutions of knowledge and education have a central role to play in the future development of Europe. In order to strengthen economic growth, in 2011 the European Council

adopted the *Europe 2020 Strategy,* an update of the renowned Lisbon Strategy from 2000, which maintains and reinforces Europe's commitment to: research, innovation and education. The European Research Area was also established in 2000, with aim of fostering robust ground-breaking research through collaborations across the region. From this time onwards, investment in research increased substantially with the allocation of more funding to the European framework programmes for research. In parallel, the European Union has worked to establish a European Higher Education Area (EHEA) (EHEA, 2012) on the foundations of the process which began with the Bologna Declaration of June 1999. In addition, the European Union Commission adopted the Higher Education Modernisation Agenda in 2006. The agenda is a strategic framework for co-operation in education and training in Europe that identifies several areas in need of reform, including a need to develop the three-cycle system (bachelor – master – doctor), which is also a goal of the Bologna process (Commission of European Communities, 2006). This reform is aimed at improving student mobility within the European education area, by establishing shared standards for quality assurance and the structure of degree programmes and thus, increasing the possibilities for cooperation across borders among European educational institutions (European University Association, 2011), following the principles in the European "Magna Charta" declaration.[1] The modernisation agenda also identifies a need to bring the governance structures of European universities up to date, while at the same time guaranteeing their autonomy and freedom of research (European Commission, 2011).

NATIONAL DEVELOPMENTS: THE DANISH GLOBALISATION STRATEGY

At the turn of the century,[2] it became clear that it was necessary for Danish society to reorganize and strengthen its research and education activities in the light of the opportunities and threats represented by global economic developments. Moreover, Denmark, like most other Western countries, must meet the challenge of an ageing population and the fact that the government's profits from the North Sea oil fields are expected to dry up within one or two generations. Therefore, the Danish government adopted a national globalisation strategy[3] in 2006, based on an extensive analysis of the nation's strengths and weaknesses in the global economy. The strategy is aimed at ensuring that Denmark will continue to be one of the world's best countries to live and work in in the coming decades. It has a strong focus on education and research and introduces a number of higher education policy goals, the most significant of which are (Ministry of Science, Technology and Innovation, 2003):
– to increase public investment in research from 0.75% to 1% of the Danish gross domestic product (GDP) by 2010 (meeting the Barcelona target);
– to link the basic public funding of universities more directly to the quality of their activities (aligning outputs and inputs);
– to integrate the government research institutions into the universities (increasing higher education and research system internal efficiency);

- to double the number of PhD students (assuring high quality research staff for expanding the sector);
- to introduce a system of accreditation of all university degree programmes (assuring quality);
- to increase the higher education participation rate from 45% to 50% (extending coverage);
- to stimulate a more rapid throughput of students in tertiary education (rapid increase of labour force qualifications);
- to introduce better and more structured options for Danish students for studying abroad (proactive internationalization).

To realise these policy goals, two major university reforms were necessary: a new University Act to modify the governance structure at Danish universities, in order to grant senior university management more autonomy, and a process to invite universities and sector research institutions to merge in order to produce larger and more powerful institutions.

The first major reform   A new University Act, was introduced in 2003 (Aarhus University, 2003) and modified in 2011. It focused on establishing university autonomy, while at the same time ensuring accountability. The universities were converted into self-governing institutions with university boards, where external stakeholders make up the majority. The board is responsible for appointing the rector and deciding the university budget and annual statement of accounts, as well as other matters of a strategic nature. The rector is responsible for the day-to-day management and leadership of the university under the university board's supervision and represents it to the outside world. The rector appoints deans of the university's main academic areas, who manage their units under the authority of the rector. In short, the reform has contributed to more professional leadership, where the decision-making capacity and the conditions for strategic prioritisation have been significantly improved.

Furthermore, the Danish system for public financing of research was restructured as part of the university reform. Regarding this, an increasing proportion of public research funding has since been provided as competitive grants, and core funding is based on output indicators related to both the quality and quantity of research. Moreover, study programmes are financed by the state through an output based taximeter system (activity level-determined grants based on the calculation of completed student credits).

The second major reform   A few universities and government research institutions were merged in 2007, with the aim being to strengthen and concentrate elite research. That is, these mergers consisted of integration of government research institutions into the university sector and mergers between existing universities, a process through which Denmark went from having 12 to eight universities. The mergers were voluntary; forced mergers would only have been possible through a change in the existing University Act – a change for which there was no majority in Parliament. The mergers were not decided overnight, for comprehensive analyses had to be

conducted in 2006 in order to identify complementary research areas and the best opportunities for achieving research synergies. Moreover extensive negotiations involving senior management and the boards of the universities and research institutions were carried out before the final decision of the future Danish landscape of higher education was taken in 2007 (Holm-Nielsen, 2009a).

THE CASE OF AARHUS UNIVERSITY

Aarhus University underwent significant changes in 2006–07 as a result of the merger (Aarhus University, 2008a). More specifically, the university integrated two hitherto independent universities in January 2007 (the Aarhus School of Business and Danish School of Education) as well as the two national government research institutions for the environment and agriculture. With these mergers, Aarhus University grew by 40% overnight and was transformed from a one-campus institution to a nation-wide university with multiple locations and a wider range of research and degree programmes. In addition, the annual budget almost doubled, to approximately EUR 800 million (US$1.05 billion) in 2010, while the number of students increased to about 38,000. The mergers created a much broader scientific and academic resource base, and the addition of new disciplines brought with it a number of promising opportunities for new synergies.

First, a number of obvious possibilities for new collaboration arose among the university's many strong research cultures. Aarhus University, like all research universities, faces the challenge of developing increased interdisciplinary collaboration, in light of the fact that the technological breakthroughs of the future will most probably take place at the intersection of traditional fields of inquiry. That world-class research on neuroscience – as exemplified in the interdisciplinary research framework MINDLab^4 – is taking place at the university is due to the fact that the university has succeeded in bringing researchers together from completely different areas: medicine, computer science, music, psychology, linguistics, physics and many other fields. In sum, the expansion of the university to cover the full range of academic fields has paved the way for similar interdisciplinary research collaborations in a number of areas.

Second, the mergers presented new possibilities for developing new degree programmes and making existing ones more flexible. Moreover, after the mergers the main academic areas of the university spanned the entire research spectrum – basic research, applied research, strategic research and research-based knowledge transfer to public and private sectors. This also meant an increase in the university's interaction with the surrounding society, which in turn has provided even better opportunities for making its intellectual resources available to government, businesses and the population in general.

Whilst the merger strengthened the university considerably, it has also posed a series of new challenges, with, for instance, the increase from five to nine main academic areas creating a range of new internal organizational barriers. There was also overlap between a number of the old and new main academic areas. For example, there were biologists at the "old" Faculty of Natural Sciences and at the

"new" National Environmental Research Institute, just as teaching and research on economics took place at both the "old" Faculty of Social Sciences and the "new" Aarhus School of Business.

To sum up, in 2010 Aarhus University was in a new and stronger position as well as a new national, regional and global reality – a reality that both opened up new possibilities and meant increasing competition for research funding and researchers. The scope and impact of the research being performed was greater than ever before, and the university's competitiveness had increased. The challenge was to find a new model for the university which would enable it to exploit the new possibilities and potential to the full, whilst meeting both internal and external challenges. In a few words, the university decided to simplify internal structures, merge academic areas and invest strategically.

THE QUADRUPLE HELIX OF A MODERN UNIVERSITY

Many world-class universities in Europe are built on the Humboldtian tradition of education and research supplemented by a third guiding mission of knowledge exchange.

Aarhus University's strategy, however, consists of four equally important missions on which the organization is built:
– Education
– Research
– Talent development
– Knowledge exchange

Figure 1. The quadruple helix – the four missions of Aarhus University

It believes that this four-pronged mission, which has been labelled the quadruple helix, to be the answer to the challenges described above. That is, the classical Humboldtian interaction between education and research is here combined with the contemporary emphasis on knowledge exchange and a consistent focus on talent development as a new and fourth dimension, thus making it feasible to combine the quality mass and elite university. In fact, the university considers talent development as the key to university development, for talented young researchers bring new ideas and innovation to the university; they influence education, achieve research results and, when they leave Aarhus University, contribute to the development of an important international network both inside and outside academia. The university has included these four core activities in its strategy since 2008, but with the recent academic development process initiative, it is now fully implementing a management model that puts as much focus on these as on its four faculties.

Education

In an international context, Aarhus University is a large and distinctive educational institution. It constantly assesses and further develops its range of degree programmes in order to meet the requirements of the outside world and the university's own standards of excellence. This academic diversity offers unique opportunities for innovative multidisciplinary degree programmes; however, the internal structures of the organization must also be geared towards promoting this flexibility. One example of the university's active promotion of flexible degree programmes is ECTS Label certification, which few large universities have achieved[5]. The changes being introduced through the academic development process will allow for an even stronger and more flexible inner education market at Aarhus University, which result in it being easier to share and develop degree programmes, courses and teaching resources across the main academic areas, departments and centres.

Research

The expansion through the mergers has enriched Aarhus University by providing it with a wider range of disciplines, and today its activities span the broadest range of research fields of any university in Denmark, which include four faculties: Science and Technology, Business and Social Sciences, Health, and Arts, as well as 26 departments. Moreover, the university's broad academic competences enable it to reach out to all sectors of society and offer a unique opportunity to combine existing academic strengths in new interdisciplinary forms of collaboration in order to create ground-breaking new research results and degree programmes. An important objective in the academic development process at the university is to develop more interdisciplinary research projects and research centres that combine expertise from different fields. That is, interdisciplinarity is what is needed to solve the grand challenges that cannot be solved from the perspective of a single discipline. Two major new initiatives have been designed to further promote

interdisciplinary visionary ideas and to support research at Aarhus University, which have been founded through the core budget thanks to internal efficiency gains.

Interdisciplinary centres   Aarhus University is already home to a number of world-class research centres, fifteen of which are basic research centres supported by the Danish National Research Foundation. Several centres are interdisciplinary and have obtained significant research results across traditional research disciplines.[6]To promote further the establishment of interdisciplinary research, the university has allocated resources to support the development of up to ten additional interdisciplinary research centres. These new interdisciplinary centres must span at least two main academic areas and must be based on a strong international academic profile. Besides having two well established interdisciplinary centres in nanoscience (iNano)[7] and brain research (Mindlab),[8] Aarhus University is currently assessing the feasibility of establishing centres in: genome research, neuroscience, register-based research, food, nutrition and health, Arctic research, global change and development.

"Aarhus University Ideas"   For the university, it is paramount that a more strategic use of resources for research does not impede the possibility to pursue the unexpected and for young researchers to establish themselves based on independent research. However, as competition for research funding increases at the national and European level, it becomes increasingly difficult for young researchers without a long track record and just a good idea to win funding. For this reason, Aarhus University has reserved substantial funding for an initiative labelled "Aarhus University Ideas". The aim of the programme is to help visionary and unique ideas towards full implementation though a Research Seed Programme, through which small grants are awarded to young researchers and larger grants are given to projects that hold potential for pushing the knowledge frontier forward in new ways.

Talent Development

As part of its fourth mission Aarhus University strives to offer talented young researchers the best possible conditions for interdisciplinary research and collaboration with leading researchers in relevant fields. The ambition is to support a new generation of researchers born into an interdisciplinary philosophy and practice in relation to research. In fact, in the course of the last five years Aarhus University has doubled the intake of doctoral students and this expansion has included a significant increase in the number of international PhD students at the university. Today, one in five PhD students is of a non-Danish origin and in some disciplines more than 50% of the doctoral students are recruited internationally. This, of course, accentuates the need for services for international researchers and to create optimal conditions for young researchers.

Early recruitment of talent   The four graduate schools at the university all offer talent development of an international standard, as PhD programmes are considered an essential element of the university's ambition to achieve excellence (Aarhus University, 2008b). To ensure flexibility in the recruitment of talent and to support young, ambitious potential researchers, it allows admission to its PhD programmes at three different stages.

Table 1. PhD models at Aarhus University

PhD model	Explanation
5 (3+2) + 3 track	In the traditional Bologna model, the PhD student is admitted to three years of PhD studies after completing a master's degree.
4 + 4 track	The 4+4 track allows for early recruitment of students during their master's degree. A 4+4 PhD student has the opportunity to begin research during a master's programme, by combining the research work with a PhD project.
3 + 5 track	On the 3+5 track, the student commences a PhD programme immediately after completing a bachelor's degree.

Aarhus Institute of Advanced Studies   Aarhus University has reserved funding to establish the Aarhus Institute of Advanced Studies (AIAS). AIAS will create an inspiring, international environment for exceptionally talented young researchers (junior fellows), guided by world-class professors (senior fellows). Here, they will be exposed to an international and interdisciplinary stimulating environment at an early stage in their careers without the limitation of formal and academic obligations. AIAS junior fellows will cover the entire academic spectrum and bring together academic disciplines and the institute will be located on campus in a dedicated building. In general, this initiative is expected to enable the university to strengthen its international reputation further and to form a strong network of international researchers.

Knowledge Exchange

Services to society are an important responsibility for institutions of higher education and hence, knowledge exchange has been a core mission for a number of years. The changes introduced by the academic development process at Aarhus University will provide the university greater flexibility and capacity to meet better the concrete needs of external stakeholders for knowledge-based solutions. The university has placed the entire breadth of its expertise at the disposal of government, industry and citizens, and offers its external partners clear, easily accessible forms of collaboration and points of contact. This more coherent approach will mean that in the future Aarhus University will be able to deliver more flexible and carefully tailored contributions to all parts of society across the university's four core activities and in particular with respect to complex inquiries related to the grand challenges.

NEW ORGANIZATIONAL STRUCTURE: UNIFIED EXECUTIVE MANAGEMENT
AND NEW UNIVERSITY-WIDE RESPONSIBILITIES

As explained above, Aarhus University has recently undergone a major academic reorganization, with its nine faculties having been reduced to four as well as the number of academic departments cut from fifty-five to twenty-six. The primary objective of this restructuring has been to create larger academic environments that can more easily achieve critical mass and thus make possible more academic specialisation. At the same time, internal barriers that hinder collaboration across academic boundaries have been greatly reduced, creating the right conditions for more interdisciplinary research. The university also wishes to encourage inter-faculty collaboration within the other three of its four core activities: talent development, knowledge exchange and education. All in all the new organizational structure, with fewer and larger units, offers great potential, but also presents a range of possible challenges.

One of the dangers is the possibility of the four faculties developing into four autonomous "universities within the university". The Faculty of Science and Technology, for example, has a turnover so large that if it was an independent university, it would be ranked among the four largest in Denmark and the Faculty of Arts conducts almost 45% of the country's research in arts and humanities. In addition, there is a real risk that management will become isolated from other staff in such large units. In order to fully exploit the potential of the new structure and to overcome the challenges it poses, the university has adopted a new management model, the goals of which are to ensure:

– that there are close links between the senior university management and the management teams in the four faculties, so that the latter work in harmony with the overall strategies of the university, so that these strategies and action plans are based on the strengths of the faculties;
– that there is an increase in the amount of interdisciplinary collaboration, at both the academic and administrative levels;
– that the knowledge and competencies of the staff are taken into account in the overall decision-making and strategic planning of the university as well as during the implementation phase.

In order to achieve these strategic goals, the university has changed its system of governance in a number of ways. First, the senior management team now consists of the Rector's Office (Rector, Pro-Rector and University Director) and the deans of the four faculties. The latter thus participate in the day-to-day management of the university at the highest level, which is a new feature of this system. This ensures that the leadership of the faculties is based on the university's overall strategies and planning, and also that the senior management team is closely linked to academic activities and viewpoints. In order to strengthen the unified nature of the senior management team, the group meets every week, and the deans and their secretariats have now been gathered in the same building as the Rector's Office and its secretariat.

Second, each of the deans has been given responsibility for one of the four core activities, i.e. research, talent development, knowledge exchange or education. This

is to ensure that there is more collaborative work and better coordination of activities across the entire university within, for example, research. Each dean discusses strategic initiatives within their specific core activity with a committee consisting of the vice-deans responsible for that activity from each of the four faculties. For example, the Research Committee has responsibility for establishing interdisciplinary research centres and networks at the university, for coordinating large applications for funding to foundations and research councils, and for developing general strategies and plans for joint activities in recruiting, publication, research management, etc. In addition to their responsibilities for joint activities and plans across the university within the four core activities, the four committees are also valuable management forums for discussion, exchange of experiences, and the generation of new ideas and proposals. The Deans will rotate their responsibilities for the core activities on an annual basis, thereby guaranteeing that each acquires great insight into all four core activities, and also that the faculties do not gain "monopolies" over any of these university-wide core activities.

Third, four employee forums have been established, one for each core activity, to warrant that employees' knowledge and skills are brought into play when decisions with significance across the university are made. Each forum has twenty members, consisting of the dean in charge of the core activity, the vice-deans from the four faculties, eight members appointed by the academic councils (two from each council), and seven members appointed by the senior university management. The four forums have quarterly meetings to discuss matters of principle, share experiences with the senior management team as well as to receive advice from the latter and each serves as a university think tank within its field.

From the above it can be seen that the four deans, along with the vice-deans, hold key positions in this new managerial structure. As well as being part of the senior management team, the deans are responsible for the "vertical" management of the four faculties, which includes overall responsibility for its academic and financial administration. At the same time, the four deans are responsible for a long range of cross-cutting activities in the "horizontal bonds" (consisting of managerial committees and employee forums) across the university (see Figure 2).

The new structure has already proved effective in ensuring that the activities of the four faculties are better coordinated, and that cooperation across the faculties is increased.

One important precondition for the reform was the passing in 2003 of the amendment to the *Danish University Act,* which required that university boards should be set up with external members in the majority, and that there should be professional leadership at all levels of the institution (Aarhus University, 2007). This governance model has meant that the university board at Aarhus University is in a position to adopt a clear strategy, in that the rector and other senior managers are selected from the global pool of university leaders, and that the management team has a clear mandate to implement the strategies of the board. As such, the university's academic reorganization is a good example of how the new model
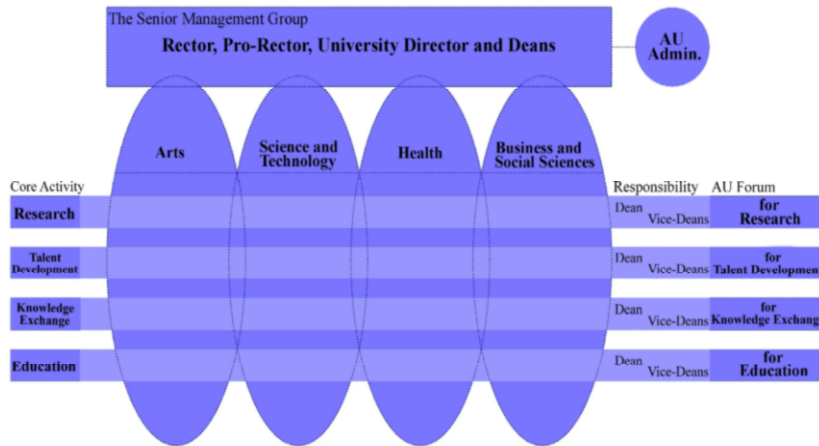
Figure 2. Organigram of Aarhus University. Source: Aarhus University (2011)

initiated by the Danish government can be rolled out in practice in a way that ensures strong leadership governed by a clear mandate.

The rationale for a system of elected managers, which was required until 2003 under the previous *Danish University Act* and which is practised in a number of countries, is that the management is regarded by the rest of the staff as having a high degree of legitimacy. To ensure a continuation of this legitimacy, and also guarantee that the senior management team has access to the best possible advisory support, the four aforementioned four advisory forums have been established, one for each core activity (Holm-Nielsen, 2009b). In addition, the importance of the Academic Councils has been increased. Each of these elects a chair, and together they make up a joint team which can enter directly into discussion with the senior management team, which strengthens the involvement and the influence of the Academic Councils within the university.

CONCLUSION

Denmark has the most satisfied researchers in the world (Russo, 2010), Danish researchers have the world's highest citation rates, and Aarhus University is placed among the world top 100 in most league tables (Times Higher Education, 2010). Thus, the university's situation can in no way be described as a burning platform. However, the demands on universities are increasing, and at Aarhus University we firmly believe that we need to examine our own way of doing our business and organizing ourselves, by designing new and flexible structures that can meet the challenges of the future. The framework conditions resulting from national reforms in Denmark and those at the European level made it possible for the university to act to meet the new challenges and opportunities facing us. In particular, the institutional reforms of Danish universities implemented since 2001 have

positively affected their capacity to stave off the financial crisis. That is, by the time the financial crisis erupted, these institutions were strong and independent, which is one reason why, so far, the university sector in Denmark has fared relatively well compared to other European countries. However, if its universities are to maintain this position they will need to be continuously reformed (Milthers, 2011).

Aarhus University's aim with the academic development process is not an attempt to create final optimal structures, for this cannot be achieved once and for all. What is possible and more relevant is to create a modern university that is flexible enough to manoeuvre effectively in a world of change. This perspective will allow the university to remain in the worldwide elite in the years to come. The guiding principles behind the changes are interdisciplinarity, flexibility and interaction with the world based on profound research quality. The lattermost will be achieved owing to fewer and stronger departments and the flexibility will be supported by lean management structures as well as an increased weight being placed on interdisciplinary and university-wide activities. Moreover, Aarhus University expects that these changes will make the university more competitive and attractive to both international and Danish students, international partners, government, industry and organizations, but first of all to new talented people wishing to pursue a career. In sum, the Aarhus University leadership are confident that the university is prepared to meet the global challenges facing the higher education sector and that the process adopted to meet these challenges will actually make us even stronger.[9]

NOTES

[1] Bologna Declaration, please see http://www.magna-charta.org/library/userfiles/file/bologna_declaration.pdf

[2] In 2001 a government commission issued a report sketching the future terms for Danish research and the challenges Denmark faced. It presented a strategy for the development for Danish research. Please see http://vtu.dk/nyheder/pressemeddelelser/2001/forskningskommissionens-betaenkning/ (in Danish).

[3] The strategy was named *Progress, Innovation and Cohesion Strategy for Denmark in the Global Economy*. Please see http://www.globalisering.dk/page.dsp?area=52.

[4] For more information visit http://www.mindlab.au.dk/.

[5] Aarhus University and 28 other European universities have been awarded the ECTS Label by the European Commission in 2009 and 2010 http://eacea.ec.europa.eu/llp/support_measures_and_network/ects_dsl_en.php.

[6] For more information visit http://www.au.dk/en/research/research centres/.

[7] For more information visit http://inano.au.dk/research/annual-reports/.

[8] For more information visit http://www.mindlab.au.dk/.

[9] For more information on of the strategic thinking behind the changes made at Aarhus University, please see Warming, K. C., & Holm-Nielsen, L. B.; (2009). Designing institutional internationalisation policies and strategies. In Internationalisation of European Higher Education Supplement, No.2, Berlin: Raabe.

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