

Strategy for 2008-2013

PREFACE

DTU's strategy serves as a basis for the long-term development of the University. The strategy comprises general goals and instruments but no specific policies, procedures, projects or allocation of money.

The strategy has a time horizon of 6 years during which the conditions for DTU's activities are not static. The strategy must therefore be designed to be robust so that it does not become obsolete when challenges or opportunities arise. When such events occur - expected in scope but unpredictable in nature - they should be addressed strategically and not be considered as impeding the implementation of a specific operational plan. This can enable DTU to make use of unexpected events to promote the long-term development of DTU.

The goals of DTU's strategy comprise:

The mission the essential purpose of the University;

The vision the University's image of its desired future; and

Strategic objectives the University's overall development objectives for the strategic horizon of 6 years.

The instruments of DTU's strategy are:

Values the University's desired norms related to behavior and attitudes;

Organization the University's overall organizational division of labour with the concomitant delegation of responsibility and competence; and

The strategic plan the general instruments the University uses to achieve the strategic objectives and that serve to realize the vision and fulfill the mission together with the other instruments.

Lars Pallesen, President

MISSION

DTU will develop and create value using the natural sciences and the technical sciences to benefit society.

The mission

archetypically expresses the essential purpose of a technical university as the polytechnic idea was created in the first half of the 19th century and has essentially characterized technical universities since then.

The purpose of the University is to create value and promote welfare by exploiting the close and fruitful interaction between the technical sciences and the natural sciences to benefit society. Value is created through application in the industrial, business and commercial sectors and within the educational, health and public sectors. This also means that the University delimits its disciplines by balancing costs and benefits. Specifically for DTU, social science disciplines must be included, especially quantitative fields related to the economics and planning of technology.

VISION

DTU is globally recognized as a leading technical university with roots in Denmark but international in scope and standard.

DTU is known for active and close interaction between the technical sciences and the natural sciences, between theoretical and empirical research, between scholars and students and between the University and the surrounding society.

The vision

is a university that recognizes its role as a locomotive in the technical and natural sciences for Denmark - which also funds most University activities - and also recognizes that it can only fulfill its mission in a globalized competition-driven world by being of the same caliber as the leading technical universities: that is, being a world-class university.

This cannot be achieved by developing the University "optimally" with no strong profile but instead by actively promoting the promising interactions with which DTU has especially good potential to achieve success: the intellectual and physical proximity of the technical sciences and the natural sciences; the development of abstract (and complex) mathematical models in interactive collaboration with the use of modern (and expensive) experimental facilities; open collaboration between the University and the surrounding society, including private industrial companies and other businesses, research institutes and public authorities; and the close collaboration between researchers with diverse disciplines, experience and backgrounds and especially between researchers and students.

STRATEGIC OBJECTIVES

General

DTU will be recognized and respected globally as a leading technical university because of the quality of its research, its alumni, its values and its university culture.

DTU will be among the 10 leading technical universities in Europe.

DTU will safeguard academic freedom and scientific independence.

Education

DTU will offer degree programs in engineering within the entire spectrum of the technical and the natural sciences - including the life sciences - and allied fields in the social sciences through its own programs or in collaboration with other internationally leading partner universities.

DTU's academic degrees at the bachelor, master and PhD levels will have a high international standard and will be among the most highly rated in Europe.

DTU will have many qualified applicants from Denmark seeking admission to its degree programs and an increasing proportion of graduates who have carried out part of their studies at recognized universities outside Denmark.

STRATEGIC OBJECTIVES

Research

DTU will be among the world's leading research centers, including private and public centers, within three to five well-defined fields.

DTU will conduct excellent research broadly within the technical and the natural sciences, based on a strong foundation of the basic disciplines.

DTU's research will interact internationally with leading private and public research centers and especially with leading technical universities.

Public sector consultancy

DTU will supply research-based emergency preparedness, analysis and consulting services to public authorities in Denmark that assures the quality and timeliness of the services provided and that makes the University Denmark's leading supplier of consulting services to the public sector within DTU's fields of competence.

DTU will offer international organizations and authorities research-based preparedness, analysis and consulting services that continually increase the demand for the University as an international supplier of consulting services.

Innovation

DTU will expand and optimize its integrated system of innovation that includes research, education, patenting, licensing, industrial cooperation, business incubation and operating science parks.

DTU will offer a wide-ranging program of continuing and further education that disseminates the newest knowledge and expertise in the technical and the natural sciences to companies, business sectors, professions and individuals.

Support functions

DTU's policy on human resources will support education, research, public sector consultancy and innovation by:

- attracting and developing skilled employees who live up to the values of the University; and
- establishing a framework for making DTU a challenging and innovative workplace.

DTU's infrastructure will support education, research, public sector consultancy and innovation by:

- having modern and competitive infrastructure; and
- establishing world-class research facilities in fields in which a special competitive advantage can be created.

DTU's finances will support education, research, public sector consultancy and innovation within the potential of financial autonomy by:

- ensuring sustainable pricing of services that minimizes cross-subsidization;
- ensuring sound operations, which allows operational flexibility;
- maintaining good liquidity, which ensures that attention is not diverted from operations;
- ensuring solid financial performance, which bolsters financial autonomy and ensures stability; and
- a long-term development of assets that supports the integrity of the University.

Innovative thinking

Innovative thinking means creatively promoting ideas that can create new value but also balanced assessment of the effects of carrying out these ideas.

DTU will therefore:

- *create space for unleashing creativity;*
- *encourage the generation of ideas; and*
- *positively welcome different and new ideas.*

Further, DTU will:

- *respect the contemplation that can emerge from reflection;*
- *encourage critical analysis of alternatives to the ideas generated; and*
- *recognize the need for the temporary conclusions expressed by all knowledge.*

Credibility

Credibility means possessing knowledge and insight and properly communicating this but also includes recognizing when knowledge and insight are inadequate and the ability to communicate based on the prerequisites of the recipient.

DTU will therefore:

- *possess state-of-the-art knowledge and insight within the technical and the natural sciences and the allied social sciences;*
- *acquire new scientific and technological knowledge and competencies through research of the highest international quality; and*
- *gather results and add expertise from other leading knowledge institutions and companies engaged in substantial research through research collaboration and exchange of competencies.*

Further, DTU will:

- *be honest as a matter of principle in its communication: communicating both solid knowledge and the existing uncertainty and inadequacy of the current stage of science;*
- *be consciously frank in its communication: communicating in a way that does not allow misinterpretation and is adapted to the recipients' background and need for information; and*
- *be purposefully useful in its communication: communicating so that the recipient can use the communicated knowledge directly and effectively.*

Commitment

Commitment means both approaching work with enthusiasm and recognizing one's responsibility as a staff member in a collective effort.

DTU will therefore:

- *offer positions that are professionally and socially attractive in all categories of staff;*
- *achieve respect in society as a challenging and stimulating workplace; and*
- *provide space for great diversity in its workforce, including supporting loyal, talented individualists, colourful, energetic personalities and solid employees that can make special contributions to the collective efforts in professional, cultural or collegial terms.*

Further, DTU will:

- *require mutual commitment in carrying out the University's tasks of a quality similar to that of the best technical universities in the world;*
- *demand relentless striving individually and collectively towards achieving the University's ambitious goals and objectives; and*
- *expect that each staff member contribute actively to the mental, social and productive working environment as an important part of the work culture at DTU.*

DTU is a financially autonomous university with a Board of Governors as its highest authority. The Academic Council decides certain academic matters. The President (Rector), who is appointed by the Board of Governors, is responsible for the daily management of the University.

DTU is organized as a corporate entity with an Executive Board comprising the President, Provost (Vice-Rector), University Director (CFO) and a number of deans. The Board of Governors appoints the Provost and the University Director based on the recommendation of the President. The President appoints the remaining staff of the Executive Board.

DTU is managed in a line and staff organization with an unbroken chain of command and in which managers have personal management responsibility for each organizational unit. This means that the principle of a single point of responsibility is upheld throughout the organization and that all employees clearly have an immediate supervisor.

The University's main activities are located in line units: departments, centers and institutes; a national laboratory for sustainable energy; and subsidiaries when activities are appropriately organized using the arms-length principle. Support activities are organized in staff units.

The structure creates coherence between responsibility and authority, so that the management processes are clear and consistent. DTU's advisory, consultation and communication system ensures quality and insight into the decisions of the management system.

DTU being a managed university throughout the organization means enabling action and taking responsibility at all levels. This also creates a corporate culture that prefers situation-specific and considered - but also personal and subjective - management decisions instead of rigid and bureaucratic - but also predictable and objective - management by rules.

STRATEGIC PLAN

General

DTU will maintain its polytechnic, single-faculty nature.

DTU will strengthen the life sciences as an increasing share of the technical and the natural sciences that are especially relevant to engineers.

DTU will collaborate with other universities and research institutions in Denmark with the aim of taking advantage of complementary fields of excellence.

DTU will establish mutually binding international alliances with leading technical universities and research institutions with the aim of creating synergy and effectiveness.

DTU will enter into binding agreements with research-driven companies to exchange knowledge and create value.

DTU will be a reliable partner in its external agreements, such that its partners can confidently expect the University to deliver what it has promised.

DTU will give priority to a beautiful and functional campus with visible and comprehensive social activities, including an attractive student environment.

DTU will promote internationalization through a culturally inclusive, secular and cosmopolitan campus life.

Education

DTU will offer degree programs in engineering that meet the future-oriented needs of business for proficient university-educated employees and otherwise offer education in fields in which society requires DTU's competencies.

DTU will structure its degree programs and degrees in accordance with the Bologna Declaration on the European space for higher education, such that the students obtain optimal opportunities to compose degree programs, including master programs, in an international network of leading universities.

DTU's BEng program will be developed further as a practically oriented bachelor degree emphasizing basic technical disciplines, strong application-oriented specialization and training in using new research results with a comprehensive approach to carrying out tasks. The program will be organized with a coherent structure comprising conceiving, designing, implementing and operating (CDIO).

DTU's BSc and MSc programs will be developed further based on the Bologna process, emphasizing basic disciplines in the technical and the natural sciences, excellence in research-related specialization, training within theoretical modelling, experimental analysis and creative synthesis and a comprehensive polytechnic approach. The programs will be organized with structured flexibility and substantial choice.

DTU's PhD program will be developed further, focusing on promising research projects with dedicated courses, emphasizing quantitative coherence between theory and practice and active guidance from productive and experienced researchers.

DTU will further develop and adapt forms of teaching that, in addition to developing academic skills, develop students' personal and social competencies. DTU will use forms of examination that individually document the proficiency obtained and support learning by providing feedback during the course of study.

STRATEGIC PLAN

Research

DTU will promote promising fields of research within the technical and the natural sciences, especially based on usefulness to society, relevance to business and sustainability.

DTU will encourage original basic and applied research within the technical and the natural sciences, especially based on innovation, the power of fascination, promoting talent and addressing the interfaces between research disciplines and fields of interest.

DTU will systematically develop its experimental facilities as a parameter in international competition.

DTU will ensure a broad foundation for research, which is imperative given the University's role as a national center for knowledge and as an international node within the technical and the natural sciences and on the requirements posed by research-based teaching.

Public sector consultancy

DTU will establish a model for agreements for public sector consultancy that specifies the division of responsibility and tasks and that assures the client in the execution of the task.

DTU will establish a model for quality in public sector consultancy that ensures that the client's needs are met and that documents the extent of the task and the level at which the task is to be carried out.

DTU will analyze technology-driven business sectors and exploit the University's opportunities for actively contributing to their development.

DTU will proactively assess and pursue international consultancy assignments in fields in which the University's competencies are especially competitive.

Innovation

DTU will further develop its capacity for transferring technology through agreements with companies, for patenting and licensing activities, for starting up companies and for expanding activities related to science parks.

DTU will engage in active mutual dialogue with business at all levels.

DTU will market seminar, conference, course and program activities related to continuing and further education in which the competencies of DTU meet the needs of society.

Support functions

DTU will develop a cogent policy on human resources that implements the values of DTU and that selectively appeals to the various employee types and individual employees the University needs.

DTU will develop the administration of its activities as a financially autonomous institution into a model of efficient university operations.

DTU's finances will be transparent and demonstrate correspondence between the resources used and the results obtained.

STRATEGIC PLAN

DTU will maximize its funding of the activities within its academic scope by:

- obtaining competitive research grants;
- engaging in professional fundraising that respects the interests of the sponsor;
- supplying continuing and further education;
- commercializing intellectual property rights and innovative expertise on market terms;
- engaging in active dialogue that supports the political allocation of public funds through earmarked programs, special allocations, contracts and basic allocations; and
- engaging in international outreach activities, including lobbying and creating alliances.

DTU will develop and fine-tune a common IT-supported administrative system that ensures efficient administration and creates the basis for purposeful management implementation of the strategy.

OPERATIONS

DTU's strategy for 2008-2013 will be carried out through the following operational activities:

Structure

Policies based on the strategy will establish a unified position on key DTU activities; these include educational policy, research policy, human resources policy and others.

Delegation will operationalize the organizational principles of the strategy and clarify fields of responsibility and authority.

Operational objectives concretize the strategic objectives for DTU's organizational units. This will take place in the form of development objectives and instruments revised annually that establish the management mandate for departments, including the national laboratory, and for central university offices.

Implementation

Procedures are typically based on policies and describe the processes and methods of work intended to ensure appropriate administration and effective management.

Projects comprise special management initiatives for the University as a whole that are typically limited in time, such as implementing the coherent program structure comprising conceiving, designing, implementing and operating (CDIO) for DTU's BEng program and such as implementing an information technology-based management information system.

Budgets and action plans are the ultimate concretization of the activities to be carried out in the coming years subject to the approval of the Board of Governors.

STRATEGY		OPERATIONS	
GOALS AND OBJECTIVES	INSTRUMENTS	STRUCTURE	IMPLEMENTATION
MISSION	VALUES	POLICIES	PROCEDURES
VISION	ORGANIZATION	DELEGATION	PROJECTS
STRATEGIC OBJECTIVES	STRATEGIC PLAN	OPERATIONAL OBJECTIVES	BUDGETS AND ACTION PLANS

Model of the coherence between the concepts of the strategy and how they are related to operations

The Board of Governors approved DTU's strategy for 2008-2013 during its meeting on 23 April 2008.

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