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**The IT University of Copenhagen
Strategy 2012-2016**

## 1 Introduction

This draft is written by management on the basis of the Board's strategy seminar in June 2011 and the Board meeting in September 2011. The draft has been revised through an internal hearing process at the university in January and February 2012; see the intranet page (intranet.itu.dk/strategy) for further information about the hearing process. This version is the revision after the second hearing; it will be presented for approval by the Board on April 20, 2012.

This document contains overarching goals for the university; additional goals for research, teaching, globalisation and communication are found in the sub-strategies for these areas, which may be found on ITU's intranet.

Note that the IT strategy is being developed concurrently with this Overarching Strategy. Moreover, a revision of the globalisation strategy is scheduled to take place in 2012. Revisions in the globalisation strategy may be incorporated in the first subsequent yearly revision of the Overarching Strategy. Last, but not least, negotiations about a development contract with the Education Ministry will influence this strategy.

## 2 Summary

The IT University plans to continue increasing the number of students it admits and graduates, as the bachelor programmes that were started in the previous strategy period reach full capacity. MSc study programmes will be revised to provide new opportunities for ITU bachelors as well as bachelors from other universities. All study programmes, part-time as well as full-time, will undergo a transformation which implements student-centred, research-based learning in a structured way and with appropriate use of it-based learning technologies and evaluation tools. See education strategy here.

The IT University plans to move up the reputation spiral; increase externally funded research and research collaboration; contribute with research, which takes on some of the national challenges for Denmark, the Danish economy, and the continued welfare of the Danish population; stimulate growth and development of all faculty, while encouraging a common culture of collaboration and innovation; and strengthen the PhD school. See research strategy here.

The IT University plans to develop 1 to 3 so-called *strategic areas*, each covering both teaching and research, and each aiming at creating extraordinary value by addressing long-term challenges and needs faced by society in a manner which is academically, thematically and financially sustainable.

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The IT University plans to continue to increase the rôle of global interaction in both teaching and research.

Internally, the IT University plans to increase efficiency and quality in work and study processes through standardisation and automation. Moreover, the university wants to improve alignment and increase enthusiasm for and ownership of the shared enterprise and to develop leadership potential from within.

The IT University plans to lead a national effort to elevate IT teaching and IT research to a position within Denmark which reflects the well-documented importance of IT for the creation of wealth, a position which IT already holds at the EU level.

## 3 National and International Developments

Like many other countries in Europe, Denmark faces substantial challenges such as the aging population, the scarcity of energy resources and the need to create growth.

IT can be an extremely powerful enabling technology for tackling these challenges. However, without access to enough relevant IT teaching and research, IT becomes a barrier to progress in Denmark. During the past ten years, IT graduate production has doubled in Denmark, reducing the scarcity of such graduates to around 1.000 to 2.000. The same development has not taken place within IT research, where public IT research in Denmark is a much smaller fraction of total public research in Denmark than it is at EU level, where around 1/3 of the funds are allocated to ICT.

Academically, researchers situated in the US and the rest of the western world still lead the global research community. Commercially, India is rapidly expanding its IT services industry. Financially, China's growth has already changed the financial world order, a change which, in time, may well change the world order within research and teaching as well.

## 4 The Role of the IT University of Copenhagen

Historically, the IT University was created because of a national need. That is clearly reflected in the mission of the university:

> **Mission** The mission of the IT University of Copenhagen is to provide internationally leading teaching and research which will enable Denmark to become exceptionally good at creating value with IT.

Since the mission of the IT University explicitly refers to the Danish context, the university must collaborate closely with Danish stake-holders.

At the same time, the university has a vision which goes far beyond the regional context:

> **Vision** The IT University of Copenhagen is an outstanding example of how a small university can achieve a ranking among the best in the world, both in terms of academic standards and in terms of creating value, by being innovative and globally interactive.

The university sees *global interaction* as both a means to achieving world class and a means to engage a global network into its close collaboration with its Danish stake-holders.

As a consequence of the international developments mentioned in Section 3, the IT University must continue to develop its global network. The network must be truly global, i.e., it must not be limited to the parts of the world that have hitherto set the agenda for IT teaching and research.

One effect of globalisation is that both faculty and graduates of the IT University compete on a global market. To be competitive in the long run, the IT University must therefore develop what we call strategic areas within teaching and research.

Strategic areas are strong, recognisable research initiatives that aim at creating extraordinary value by addressing long-term challenges faced by society. They must have significant impact, for example, by addressing areas with high-risk and a large potential for value creation. They must be academically, thematically, and financially sustainable (a variable factor based on the specificities and needs of any given project). Because of need for sustainability, strategic areas must include a sufficient number and mix of competencies to address the challenges of the area and they must attract a substantial part of their own funding. Because of the very nature of strategic areas, they will serve as showcases for the IT University and must strengthen its position to a point where key stakeholders (from Danish to strong international actors) consider them indispensable. Furthermore, strategic areas must have an exceptionally high academic level in terms of publications, PhD graduates, and peer recognition. Strategic areas must be reflected in the educational programs of the IT University and hence be attractive to a significant number of students. Strategic areas will be an integral part of the IT University's future and will play a role in resource allocation (for example, on research and administrative staff) and development.

As a consequence of the importance of IT teaching and research for progress in Denmark mentioned in Section 3, the IT University of Copenhagen must endeavour to supply IT teaching and research of a kind and in a manner which creates progress in the country outside the university sector.

Such national value creation does not come from strategic areas alone. Breadth and basic, solid quality are equally important. Therefore, the IT University must to perform well in areas that are not candidates to become strategic areas.

During the strategy period, the IT University wants to give special attention to supporting student-led innovation, helping students who want to become effective innovators. The essence of *student-led innovation* is that students decide in what respect they want to be innovators, while employees endeavour to support groups of students who team up to lead innovation, for example innovation concerning entrepreneurship or the on-going changes of the IT infrastructure of the university.

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To sum up, the overall change in the role of the IT University for the strategy period of 2012-2016 is an ambitious, yet realistic, increase of the impact and reputation of the university, consistent with the mission and vision of the university.

To be concrete, we set the following goals for 2016:

1. The IT University is poised to become, in the long term, the most important university for creation of value with IT in Denmark. For 2016, we take this to mean that the university is leading in one of two parameters concerning research in IT (external research funding; bibliometric points) and that the university is leading in one of two parameters concerning IT education (number of graduates; number of PhDs);
2. The university has successfully developed one to three strategic areas in teaching and research
3. The average course evaluation response of students to the quantitative questions should be at least 4.75 on a scale from 1 to 6[1]; moreover, all bachelor and MSc programmes from the IT University must lead to graduate employment rates that are at least as good as are the employment rates of bachelor and MSc graduates nationally.
4. The university's research publication output (measured in bibliometric points) has increased to 1 % of the total output from Danish universities in 2010.[2]
5. A systematic continuous evaluation of graduates' career start has been developed
6. The university delivers at least 1300 full-time student equivalents of teaching[3]. The corresponding number for 2010 was 835.
7. The university admits at least 22 PhD's per year (in 2016).

**5 Organisational Changes**

The university must increase in the VIP/DVIP-ratio, in order to strengthen research-based teaching.

The teaching productivity should be at least as good as the average for the Danish university sector.

Given those two constraints, the output goals for teaching are so high, that meeting them will require an increase in the number of VIP and DVIP. We propose that the majority of the extension in teaching capacity come from VIP, so as to increase the VIP/DVIP ratio. More precisely, we propose an increase in the number of VIP (assistant professors, associate professors and full professors) of 18 compared to 2010

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[1] By "the quantitative questions" we mean questions number 1,2,3,4 and 6 of the six course evaluation systems (as of Spring 2012). If a different method of continuous evaluation is introduced, the goal has to be re-stated.
[2] Absolute numbers are detailed in the yearly goal documents.
[3] That is, the sum of STÅ and "årselever" must be at least 1300. This is what one will achieve, if one continues with the 2011-level of admission on the bachelor programmes and increases the MSc admissions corresponding to an assumption that half the ITU bachelors will choose to continue at ITU and should be able to do so without reducing the number of students admitted from other universities. The detailed assumptions about admissions may be found in the budget for 2012, approved by the Board on Nov. 25, 2011 (enclosure 10). The effect is expected to by graduating approximately 175 bachelors and 300 MSc students in 2016 plus part-time education at about the level of 2011.

(corresponding to approx. 9 teaching FTE) and an increase in DVIP corresponding to 2 teaching FTE. This is a relatively expensive split, but it increases the VIP/DVIP ratio.

The external research funding should double over the strategy period from around 25 million DKK in 2011 to 50 million DKK in 2016. Although some increase in external research funding can be expected from the planned increase in VIP, the majority of the increase is expected to come from faculty already employed.

The university will continuously strive to increase efficiency and quality of work and study processes, for example through automation, standardisation and evaluation. The university will continue to strive to provide students and staff with IT tools that improve collaboration and day-to-day operations.

Organisational goals (2016)
1. Student-led innovation has resulted in at least two significant changes in the day-to-day operation of the university.
2. The university has improved alignment and increased enthusiasm for and ownership of the shared enterprise and developed leadership at ITU further.[4]
3. The IT University is among the best four Danish universities in terms of efficiency, measured by key figures for research, teaching and administration[5].
4. The university has increased the proportion of its activities within research, teaching and administration that are globally interactive.[6]

Financial goals: (2016)
1. Increase external research funding even more than we already have (measure: funding spent, target 50 million DKK in 2016, compared to approx. 25 million DKK in 2011).
2. Increase equity to (at least) 18 % of expenditures.

## 6 Draft Budget

To check the consistency of the goals with the assumptions listed above, we have made a draft budget for 2012-2016 which takes into account the increase in staffing, productivity and output, see Table 1. The budget also allows for a pool of 1 % of the total turnover to be spent on organisational development.

The uncertainties underlying the draft budget are considerable, it should be noted. However, with the information currently available, the budget will result in the equity of the IT University growing to about 15 % of the total revenue in 2016 (not quite 18 %, as stated in financial goals).

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[4] The way this is measured is detailed in the development contract and/or the yearly goal documents.
[5] More precisely, the IT University will be among the four universities that have the highest production of STÅ+årselever pr. kr. base funding; the IT University will be among the four universities that have the highest production of bibliometric points pr. kr. base funding; and the university will be among the four universities with the lowest costs of general administration ("statistisk beredskab").
[6] The way this is measured is detailed in the development contract and/or the yearly goal documents.

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## 7 Revision

This document is considered for revision once a year.

## *Table 1: Framework for budgets 2012-2016*

| (DKK 1.000) | Forecast 3 2011 | Budget 2012 | Budget 2013 | Budget 2014 | Budget 2015 | Budget 2016 |
|---|---|---|---|---|---|---|
| Government Grants (basic funding) Directly to IT-U | 84,750 | 80,000 | 57,798 | 58,607 | 58,385 | 59,202 |
| Tuition | 111,463 | 126,385 | 134,548 | 137,432 | 138,042 | 141,043 |
| Government, Globalisation * | 500 | *1,000* | *3,000* | *3,000* | *3,000* | *3,000* |
| Grants to undergraduate prog. FL ** | - | - | *20,000* | *20,000* | *20,000* | *20,000* |
| Grants Applied for Against Competition (Public) | 17,179 | 24,000 | 28,000 | 32,000 | 36,000 | 40,000 |
| Grants, Private and other Non-Government Bodies | 5,085 | 6,000 | 7,000 | 8,000 | 9,000 | 10,000 |
| Capital | - | - | - | - | - | |
| Rental income | 650 | 659 | 668 | 678 | 687 | 697 |
| Other income | 6,566 | 7,575 | 6,992 | 7,090 | 7,189 | 7,290 |
| Extraordinary income | 2,372 | | | | | |
| Savings on Administration and purchasing | - | (1,683) | (3,159) | (3,171) | (3,166) | (3,166) |
| **Total Revenue** | **228,565** | **24,936** | **254,847** | **263,636** | **269,137** | **278,065** |
| Wages/salaries – forecast based on 2011 | 135,044 | 145,348 | 151,921 | 153,770 | 155,795 | 160,091 |
| Other operating expenses – based on 2011 | 91,897 | 95,133 | 92,549 | 95,676 | 98,645 | 101,694 |
| Other expenses – takeover 5th floor | | | 7,753 | 6,326 | 6,453 | 6,582 |
| Strategic research areas | - | - | 1,551 | 1,582 | 1,613 | 1,645 |
| Strategic investments | - | - | 1,034 | 1,054 | 1,075 | 1,097 |
| Depreciations | 1,864 | 2,165 | 2,700 | 3,100 | 3,500 | 3,900 |
| **Total Costs** | **228,805** | **242,626** | **257,506** | **261,509** | **267,080** | **275,009** |
| **Result of the year (net profit)** | **(240)** | **1,310** | **(2,659)** | **2,127** | **2,057** | **3,056** |
| **Equity** | **36,611** | **37,920** | **35,261** | **37,388** | **39,445** | **42,501** |

* Forecast of ITU-part of globalisation funds to launch new research initiatives 2013-2016.
** 20 million DKK. Grants due to intake of 180 undergraduates per year, is not in the government Budget Forecast from 2013.