The IT University of Copenhagen
Globalisation strategy

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ITU globalisation strategy 2008-2012

This document presents the suggested globalisation strategy and involved result goals of the IT University of Copenhagen (ITU) for the period 2008 to 2012.

The suggested strategy is based on an open process, which has taken place during 2007/2008 and has involved representatives from the entire ITU organisation including faculty, staff and students. This process will continue and input from staff, students, board and external partners will be incorporated in the strategy as we get a better understanding of globalisation and how it should shape the IT University. One of the next steps will be to discuss, refine and prioritise the result goals outlined in this version of the strategy.

The document contains the following parts:

1 Global interaction

The ITU vision, as contained in the ITU strategy 2006-2010[1], describes global interaction as a means to an end, the end being the achievement of world-class education and research:

> *"The IT University is an outstanding example of how a small university through being innovative and globally interactive can achieve world class, both in terms of academic standards and in terms of value creation."*

In the strategy document, the term "global interaction" is defined thus:

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[1] http://www1.itu.dk/graphics/ITU-library/Internet/Ledelse/Strategidokumenter/strategi%202006-2010/itustrategy2006-2010%202007-06-26.pdf

"The vision implies that ITU becomes globally interactive, i.e. that all of ITU's key business processes will eventually involve interaction with partners world-wide that each adds exceptional value to the process. We believe that global interaction is a key instrument for achieving a ranking among the best universities in the world."

In this section, we explain the concept *global Interaction* in more detail. Global interaction is about work processes (called business processes in the vision), i.e. all work that requires more than a few steps and cannot be done by one person during a limited period of time. The vision of global interaction applies to all work processes of the university, including administration, maintenance, IT support, research, teaching and daily operations. We focus on changes to teaching and research in this document, but we also mention some of the ways in which such changes may be accompanied by changes in other areas.

A central idea in this strategy is to regard education and research as processes, which, like many other processes, are candidates for globalisation. A central idea in the vision of this strategy is that the IT University should become a "knowledge hub", through which students and researchers engage in global processes of exceptionally high quality.

These ideas have emerged from the internal strategy development process at ITU. Among other things, the participants in the strategy process have been inspired by technologies developed for knowledge exchange (yet2.com), exchange of goods (eBay), social networking (Facebook) and mass collaboration (Wikipedia). These technologies are of particular interest, since they seem to be altering traditional work processes in ways that may well be desirable in education and research as well.

1.2 Viewing Teaching and Research as Work Processes

In recent years, the industry has gained considerable experience and success with globalising processes, including production, administration and services. Few examples of similar undertakings in the university sector exist.

In his book "The world is flat"[2], Thomas Friedman describes a number of factors that are catalysers in the process of "flattening" the world. These factors[3] are all dependent on recent developments within IT and include, among others, the new role of the individual in the online connected world and the changes in the market as a result of out/insourcing and offshoring. The flattening factors involve the *specialisation* of individuals, who take part in *globally distributed processes,* which enable them to use each others' *complementary competences* to deliver high quality work at the lowest possible cost.

In the following subsections we describe *distribution* and then, in turn, *specialisation* and *complementary competences*, as these concepts relate to teaching and research.

1.2.1 Distribution of processes

In practice, many academic processes rely on taking place at one location. For example, the life-cycle of an education involves a substantial number of faculty, staff and students having numerous

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[2] Friedman, Thomas L.: The World is Flat – the globalized world in the twenty-first century. Penguin Group, 2006
[3] the power of the individual, connectivity, work flow tools, uploading (wikipedia), out-sourcing, offshoring, supply chaining, in-sourcing, informing, the steroids (IT technology)

interactions with each other through physical meetings, emails and spontaneous corridor talk. Much of the process is tacit knowledge, gained by the people involved through years of practice. Likewise, with regard to research, it is often hard to find out who does what. Things get done, but due to the lack of clarity of the processes, individuals often experience being involved in aspects of the work they feel they should not have to be involved in.

Many of the meetings, emails and corridor discussions are compensation for a lack of clarity of who is supposed to do what. These processes, as we know them at ITU, only work because the physical closeness and responsible conduct of those involved compensate for the lack of clarity in the processes.

1.2.2 Specialisation within processes

Each step of a work process adds some value, and this value may be very different for different steps. For example, analysing which topics are needed in a course and giving a lecture add different types of value. Even more important is the fact that very different competences may be required to provide these different types of value. Similarly, in research, constructing the ingenious tool to analyse or prototype an idea adds value that is very different from the value that is added by writing an academic paper that gives the idea academic credibility.

The bulk of knowledge about IT is growing day by day. No individual can be a specialist on everything. Some individuals will have to specialise in very narrow areas, while others specialise in interconnecting these areas and creating new ones.

1.2.3 Complementary competences

Traditionally, research has benefited greatly from global collaboration involving the close cooperation and peer review of globally distributed individuals with specialist knowledge. Researchers have discovered that no matter how many close colleagues they have at their own university, much is gained by collaborating with researchers elsewhere. Only few of today's world-class research communities could exist, if they could not collaborate with researchers at other physical locations.

Section 1.2.2 describes the increasing need for specialisation within processes. However, increased specialisation in research inherently leads to increased separation between research communities. It is evident that extremely specialised research areas in most cases create value for society when used in connection with other areas, such as other academic fields or business. However, for individual researchers, it can be difficult to maintain a focus on both their extreme specialisation as well as the value creation of the interconnectedness to complementary fields.

In most existing global research communities, cooperation takes place between individuals with a similar background and a similar research area. The collaboration across great distances is rarely done in order to combine very different kinds of research expertise which has its strongholds in different parts of the world.

1.3 Globalisation, quality and value creation

In both research and education, quality and value creation are dependent on the contributions of exceptionally talented (and often very specialised) people. In an ideal world ITU could bring together a very large pool of talented people in one place, so that they could benefit from each others competences (both similar and complimentary) working together without the inconveniences

of distributed work. However, in reality, the bulk of exceptionally talented people will remain distributed across the globe, and as such ITU is dependent on identifying and improving means and methods to be globally interactive in order to get access to talent and thereby improve quality and value creation.

In this chapter we have attempted to describe how the improvement of *quality and value creation* is viewed as a positive effect of globalisation (involving distribution, specialisation and complimentarity). This view on globalisation has inspired the above mentioned ITU vision describing global interaction as a means to "*achieve world class, both in terms of academic standards and in terms of value creation*".

Below, you will find a discussion on *how* ITU in practice can improve quality and value creation by taking advantage of the various possibilities arising from globalisation.

2 Global interaction - learning by doing

We believe that students and researchers will increasingly want access to learning and knowledge that is provided by other universities than their own. Universities become access points of distributed networks of learning opportunities and knowledge. Students and researchers will naturally seek to access the learning and research opportunities of highest quality, irrespective of where in the network they are found.

At this point, the challenge is to identify suitable collaboration models and related business models. Collaboration may exist within a *spectrum* of loose-to-tight coupling between the partner institutions and individuals involved. A loose coupling means that partners only coordinate a small part of their joint effort, whereas a tight coupling involves partners working closely together on every aspect of their joint effort.

At one end of the spectrum, partners work with tightly coupled collaboration. This means that they have a strong basis for securing quality control through traditional measures. They also have a strong commitment from both partner institutions. On the other hand, such collaboration projects have a high level of complexity, usually involving a large addition of administrative and planning tasks including preparation of the legal framework, contracting, financial implications etc.

At the other end of the spectrum, partners work with loosely coupled projects. Such projects usually have a low level of complexity and as such have a high scalability, since it can readily be duplicated with other partners. Moreover, loose coupling allow very heterogonous organisations to collaborate since they do not have to agree on as much as in tightly coupled collaboration. On the other hand, it is not possible to use traditional quality control measures and this naturally calls for attention. It is, however, not given that loosely coupled projects lead to low quality. Wikipedia is an outstanding example of the opposite. However, to our knowledte, processes for securing quality of loosely coupled projects in the domain of university teaching and research remain to be developed.

We envisage collaboration within the entire spectrum described above and try to gain experience on various collaboration models through pilot projects. We have already launched a number of pilots including the joint development of an entire degree as well as joint courses/projects where students are required to do project work with students at partner universities. For the near future we envisage a number of other experimental fields; e.g. mandatory courses taught by staff at a partner university, or creative use of online mass-collaboration tools in order to work on specific projects and problems with a multitude of specialist individuals distributed globally.

> **Goal** At the end of 2010, at least two major study programmes have incorporated the results of pilot studies of globally interactive education, for example in the form of globally interactive study activities.

We acknowledge that not all collaboration models will prove successful and sustainable over time. As a result our current focus should be on experiments and not on implementation of large scale solutions. Apart from pilot projects, we aim to establish organisational support for global interaction in general, since we believe that global interaction skills such as IT-support, pedagogical support, administrative support and project management support, will be needed in almost every imaginable future scenario. The result goals of this strategy are thought to support this process of organisation preparation and pilot experiments.

3 Scenario

This section describes a possible scenario for what ITU could develop into as a result of globalisation. The scenario has emerged as a result of a series of future workshops at ITU involving faculty, staff, and students[4]. Keep in mind that creating a future scenario is an attempt to look into the future. No one knows what the future will bring and below scenario is not an established goal. It should be perceived as a loose sketch of our collective imagination at this given point in time.

3.1 Background
The traditional university offers students and researchers access to knowledge resources accumulated in the form of people and books at one physical location.

The future university offers students and researchers access to knowledge through facilitation of network access and virtual communities at several physical locations and/or online.

The change from physical accumulation of knowledge towards virtual distribution of knowledge is a natural consequence of the possibilities brought about by the development of ICT technologies making global interaction possible. As an IT university we should not just adapt to this development, but aim to lead it.

3.2 The student perspective
For students accepted at ITU; 1st semester consists of mandatory courses. Apart from the courses on subject knowledge of your study area, the 1st semester includes modules on;
- Global interaction (methods, tools)
- Online communities/resources (how to connect with people relevant to you learning process)
- Personal global network creation
- Local social and professional networks (how to use you local study environment)

The 1st semester is a gateway to further global education. In subsequent semesters, all students are expected to do 1 or more of the following;
- Spend a semester abroad
- Take part in online courses offered from abroad (with a local facilitator)
- Take part in project collaboration with students located abroad
- Write the thesis abroad with co-supervision

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[4] http://www1.itu.dk/sw83962.asp

3.3 The researcher/teacher perspective

The researchers/teachers are affiliated with ITU in 4 different ways. Below is a description of the scenario impact on those groups:

- Faculty experience a larger degree of specialisation and are able to focus on core tasks related to course development/teaching and research. They experience increased support from administrative staff; e.g. access to technological/pedagogical support for course planning and execution

- Local external lecturers receive support for continuous development of the courses they teach. They have access to subject specialist, either among ITU faculty or other affiliated researchers/teachers located at partner institutions. They also have access to technological/pedagogical support for course planning and execution.

- Distance external lecturers are employed at partner universities abroad but teach one or more courses offered to ITU students online. Business models for sharing teaching resources among universities with complimentary competences will need to be developed

- Distance research partners are employed elsewhere, but participate in research projects together with ITU researchers. Compared to the current situation, they receive more support from ITU admin staff in facilitating distance communication and collaboration (technically, and administratively). They also experience ITU as culturally accessible/transparent, and they are offered support from ITU's communication department for co-branding efforts related to the joint research projects.

> **Goal** In 2009, at least four researchers at the IT University will participate in formalised globally interactive cooperation (with at least four participant collaborators). In 2010, the number will be redoubled to eight (and eight participant collaborators).

> **Goal** The share of researchers and ph.d. students at the IT University who are not Danish citizens should be at least 20 % in 2009 as well as 2010.

> **Goal** The IT University will host at least two international conferences during the two-year period 2009-1010.

3.4 The organisation perspective

The organisation is able to facilitate that students/researchers receive/carry out exceptionally good teaching and research within ITU's specialist areas, while at the same time having access to exceptionally good teaching and research outside ITU's specialist areas through global networks.

3.4.1 Specialisation

ITU focuses on core competence areas and "outsources" other parts of the education through "packages" at other universities or through online courses offered from other universities. ITU offers fewer courses, but is able to guarantee a high quality, since courses are only developed and taught by specialists.

3.4.2 Study programme structures

In addition to ITU's own study programmes, students have access to a global network of partner institutions. Ideally students have access to as many learning modules at partner universities as possible. In reality, however, the network access is limited to the amount of partners with which ITU can set up, manage and maintain relationships.

ITU has pre-established a small amount of "packages" allowing students to take whole semesters/specialisations at universities abroad particularly within fields that are mandatory, but outside the scope of ITU's own specialist areas. ITU has an established practise for evaluating new "course/semester package" suggestions from students (who will automatically seek the best of the best), adding to the pool of packages offered. Such a practise is naturally limited to the administrative resources available at ITU. The amount of packages offered is expected to be very small in the beginning, and it is also expected to grow slowly but continuously. The other way around ITU offers packages of specialisation modules (within own core competence areas) to students from partner universities.

In addition to physical exchange of students, ITU exchanges online courses with a number of partner institutions. ITU offers students to sign up for online courses taught at partner institutions within their core specialist areas and offers to students from partner institutions to sign up for online courses taught at ITU. Through dedicated courses and online project exchanges ITU also provides students with the possibility to work together on projects with students at partner institutions.

ITU continuously evaluates whether open course ware from other places (e.g. MIT) can be used with advantage. ITU likewise evaluates whether own course material should be published as open courseware. In addition ITU develops both old and new courses/curricula in cooperation with leading specialist from partner institutions (possibly as open courseware).

> **Goal** The volume of study activities passed by students who are not Danish citizens should be at least 3500 ECTS for each of the years 2009 and 2010.

3.4.3 Physical study/research environment

Since teaching/learning has become increasingly distributed, ITU has established physical surroundings suitable for network activities encouraging local students to meet. In addition ITU has staff facilitating networking event (invitations, practical arrangements, moderation etc.)

3.4.4 Virtual study/research environment and network (expert/dating portal)

Apart from the physical study/research environment, ITU has established a virtual study environment to compensate for the distribution of students and teachers.

Both with regard to establishing a virtual study/research environment and possibly related network databases, ITU has been inspired by social web-sites, such as eksperten.dk, dating portals, Facebook as well as how global interaction already happens successfully in research communities (e.g. open source development). Key issues are; how to get people to want to use the platforms, and how to create trust in both systems and in the institutions and individuals taking part in the networks. The ITU platform enables students, researchers, companies etc. to contribute with their competences, supporting the learning of the individual. The online environment is linked to ITU's alumni-database/network, as well as industry networks and a project/job exchange.

[ITU also possibly uses its network systems allowing researchers to gain access to research partners as well as paid labour (e.g. PhD students from other institutions, who carry out limited development tasks against payment)]

> Goal By the end of 2010, the IT University will have an experimental online infrastructure, which supports students and researchers in global interaction, up and running.

3.4.5 ICT/pedagogical support of local and global online interaction
ITU has established a support center for technical and pedagogical issues related to online teaching/learning and collaboration; including support of the above mentioned virtual study environment/online networking facilities.

The support center assists ITU teachers/researchers/student on issues such as; which online tools/systems to use and for what pedagogical benefit, how to use online student-to-student and teacher-to-student interaction in education, how to include global interaction in teaching/studies/research, how to use systems to invite guests from outside to collaborate, how to get access to resources and networks, and the center assist with production; e.g. podcasts, learning environment setup etc.

> Goal By the end of 2010, at least 90 % of all courses at the IT University will have learning objectives stated in terms of the SOLO taxonomy.

3.4.6 Student/researcher exchange support
In order to better support student/researcher exchange, ITU has either a local or an affiliated travel organiser available to students and researchers. ITU will also have a housing-service for exchange students/lectures. Moreover, ITU has established a well-functioning "buddy" service and related cultural training for incoming students.

3.4.7 Marketing/communication
In order to be visible as a global partner, ITU has developed excellent English language material on ITU – both printed and digital. The marketing effort shows ITU's qualities from a global perspective, and ITU appears culturally accessible, transparent and searchable for people abroad (USA, China etc). ITU offers partners assistance in co-branding (e.g. of research/education projects).

3.4.8 Language
ITU works on a gradual transition towards more English language courses and activities at ITU – particularly where this is necessary to support global interaction.

> Goal Before 2012, the IT University aims at developing and implementing a language policy to strengthen the English language at the IT University and offering access to extracurricular language courses (English, Danish, and possibly Chinese, and Spanish).