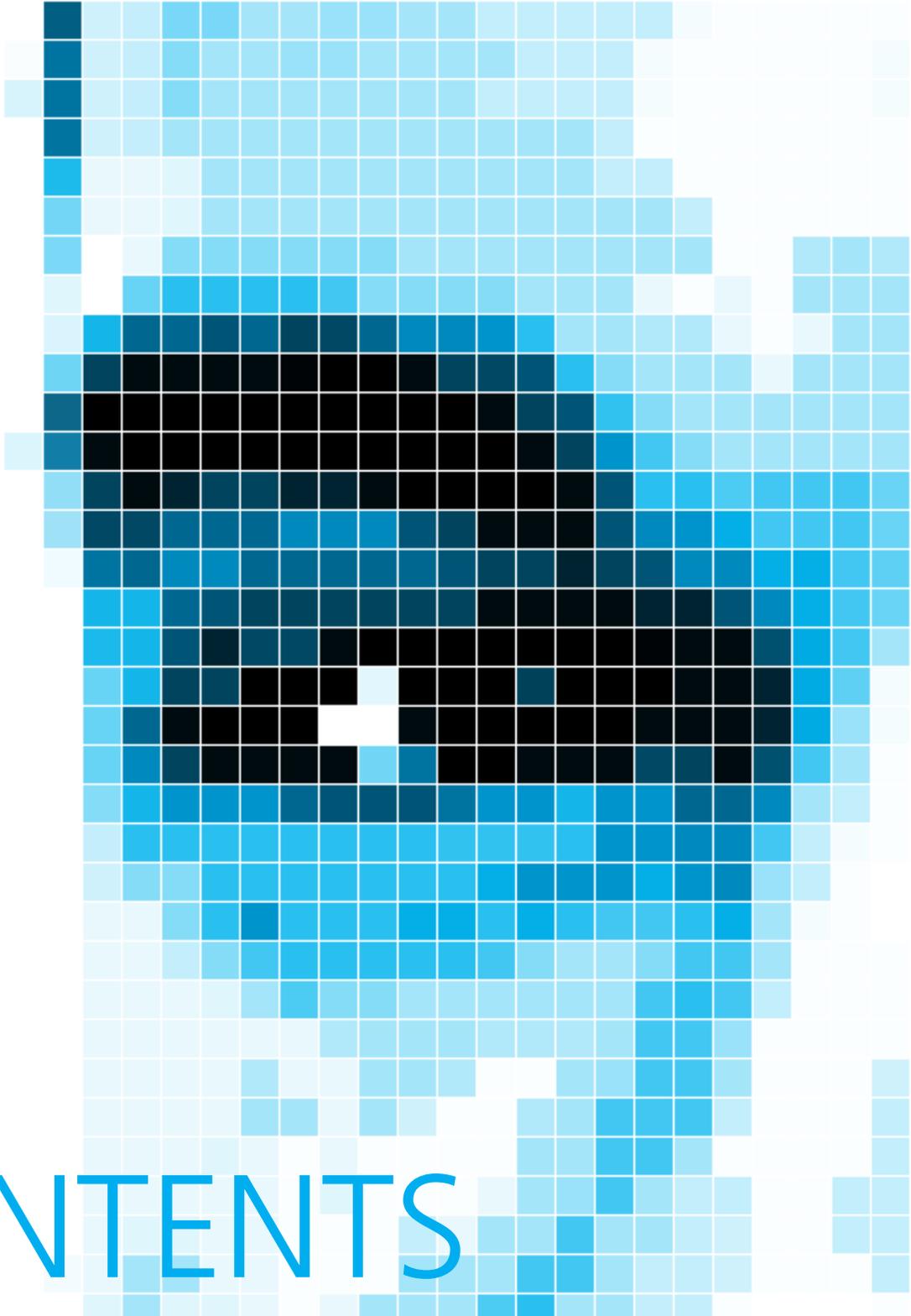


IT UNIVERSITY OF COPENHAGEN

IT STRATEGY

2012 - 2016



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OUTLINE OF THE STRATEGY

THIS STRATEGY BEGINS WITH A SUMMARY, IN WHICH THE MOST IMPORTANT ASPECTS OF THE STRATEGY ARE PRESENTED IN A CONDENSED FORM. FOLLOWING THE SUMMARY, THE MOST IMPORTANT POINTS ARE PRESENTED FOR EACH OF THE UNIVERSITY'S PRIMARY INTEREST GROUPS: ADMINISTRATION, RESEARCH, AND EDUCATION.





INTRODUCTION

This strategy is the result of gathering visions and input from the various departments of the IT University.

The development of the strategy has been led by the IT Group, which consists of representatives from each major interest group (that is, Research, Education, Administration and the students). While the head of IT department provided the overall outline of the strategy, each interest group has contributed input from their particular corner of the organization. The intention has been to keep the strategy as brief as possible in order to facilitate its future communication and to help it become anchored within the organization.

This strategy should not be construed as an exhaustive account of the activities of the IT Department in the coming years. There are, for instance, a number of goals derived from various parts of ITU along with a host of other tasks that the IT Department is working on that do not merit mention in a strategy, due to their either local or short-term nature.



ORGANIZATIONAL CONTEXT

It is important to stress that ITU's core deliverables are within Education and Research. However, these two areas will not be able to function without a solid layer of Administration. This layer of Administration should deliver services and continuity in a cost-efficient and effective way. Also, ITU must comply with political, governmental and legal requirements affecting areas as diverse as acquisition of equipment, budgeting of internal resources, and processing of personal data. As a result, there exist a number of rules, regulations, policies and other constraints that all IT users at ITU must adhere to. Hence, we must strive towards an optimal balance, where we support Research and Education as much as possible within the existing boundaries and limitations.

IT security is an area of growing interest and importance. ITU have come a long way the last 2 years, but we still have some important issues to solve before we deem us at a satisfying level. Hence, all IT activities must be aligned with rules and regulations from this area. Also, it must be stressed that IT security is everybody's task. Of course the IT department will take care of all the centralized activities and drive the overall development, but the organization at ITU must allocate and use resources in order to fulfill our goals within IT security.

Students, all members of the Research department, the Education department and TAP employees have been asked to express their wishes and ideas for the future of IT at the IT University, and all inputs were gathered by members of the IT Group. This was done to ensure that the visions and initiatives stated in the IT Strategy are closely related to the challenges and goals for the organization - by researchers, teachers, students and administrative staff - and that the need for support and development is closely connected to this. The IT group analyzed these inputs to find convergent focus areas across all areas to identify, shape and prioritize the visions that should be part of the IT Strategy. The IT group has also taken into account the necessary connections between the IT strategy and the other strategies for ITU.



SUMMARY

In general, there is a need to both improve the quality level of existing IT services and to extend the types of services offered by the IT Dept. towards stakeholders in all three areas: Administration, Research and Education. However, the specific nature of the needs sometimes varies greatly between the areas, necessitating a variety of approaches in order effectively serve the whole organization.

The wishes expressed in the three areas points both towards a need for modernizing existing systems and for implementing new solutions in order to increase efficiency, effectiveness, flexibility and job satisfaction. Some improvements could clearly be achieved through training and adaptation of existing solutions, thereby getting a better and broader utilization of our investments.

Research has expressed a high, unmet need for service and support of hardware and software, which at least partially could be met by the introduction of a new organizational entity tentatively called ResearchIT. Administration highlights the potential gain in automating some current manual work processes. Both Research and Education wishes to have better support for mobile work scenarios through greater device independence (“Bring Your Own Device”) and through easy yet secure access to ITU administrative systems also from outside the ITU premises.

Traditionally, the IT department has focused on creating a stable IT environment, focusing on the operation of standard, everyday services such as email, file hosting, and printing, including the operation and configuration of servers and clients as well as user support. In the future, we plan to free up IT department resources through outsourcing these standard services to enable ITU’s internal resources to focus on the more specialized IT services required by the organization. These resources should also be used to create improvements in work processes and other areas of organizational development, including extended support for Research, within the bounds of what can be achieved in a cost-efficient manner. Also retiring of old systems may be a way forward in releasing workforces.

The IT Group believes that Virtual Desktop Infrastructure (VDI) technologies will benefit all three interest groups. These technologies can create efficiency, effectiveness and flexibility within the Administration and Education areas, as the need for maintaining a large software/hardware platform dedicated towards the courses would be minimized. We also see benefits in becoming more agile in where we conducting the courses, thereby being able to optimize the utilization of rooms, labs etc. Today the planning is cast in stone for a full semester. The students could benefit from these technologies by being able to utilize the course related software tools at any time, potentially also from their home. These technologies can also support the emerging trend of BYOD (Bring Your Own Device) and thereby support the wishes from Research of a more liberal policy regarding support for desktop and laptop computers. Implementing VDI comes at a significant cost. However, it is anticipated that this investment will be of critical strategic importance for ITU. Hence, we will investigate in how this technology could be deployed at ITU.

Finally, the process of developing the IT strategy has revealed that there are widespread misunderstandings as to the specific role that the IT department has at ITU. The IT Department will dedicate resources to communicating this role so that users know what to expect. Additionally, the IT department will institute a regular evaluation mechanism, similar to course evaluations, to ensure that the changing needs of ITU can best be met over time.

The key proposals for improvements are of such nature that they will require extra funding, reallocation of funds, and/or reorganization of the IT Department. As the higher education sector holds various favorable agreements with SW vendors etc., outsourcing of services may very well come at an extra cost.

The approval of the strategy will start a process where all the initiatives will be incorporated into a project pipeline. These projects will be part of ITUs normal governance and project process, with approval of scope, business case, funding etc.



HIGHLIGHTS AND CONCLUSION

We found three areas of key importance for administrative staff:

- Mobility
- Knowledge sharing: for servicing and for supporting of administrative processes
- Efficiency/effectiveness

Mobility is high on the agenda for administrative staff (as well as the scientific staff and students). This covers better availability of solutions, better VPN connection, and access from various platforms from anywhere in order to support a more flexible and efficient way of solving the increasing working tasks. Knowledge sharing is also of key importance. To improve efficiency, the administrative staff would like a better overview of the different available sources of information and potentially one common portal to share/get updated information. However, this finding may very well find its root cause in lack of process knowledge and maintenance. Also lack of competences with the tools we use could be part of the root cause. Hence, we must examine closer what the underlying problems are before concrete initiatives are started.

In general, there exist a high demand for getting more efficient and effective. This is mainly due to our high growth, leaving a lot of work processes unsupported or manually handled. Hence, the organization expresses a need for new IT systems or updated versions of the existing to support their work. Optimization of work processes is in high demand among the administrative staff.

REQUIREMENTS

- If the IT department is to deliver with in these areas and at a higher speed than before, then things must change. As the department is limited to the FTE level at present, outsourcing will be a means to release resources and get at higher throughput within these areas. Also funding to conduct projects and to run the operation afterwards must be supplied. In general, the IT department must change from an operational body to a more project- and process-oriented department.
- The various departments at ITU must allocate resources in order to work with process documentation and optimization, system implementations, systems optimization and potentially systems retirement.



RESEARCH

HIGHLIGHTS AND CONCLUSION

Standardized IT systems are part of the daily administrative operation of research and to some extent also part of doing research. However, some research activities do not fit well into a standardized world. This could be exploring new hardware and software, utilizing beta versions of products etc. As the faculty resources are not well spent on IT administration, the existing IT department will be extended with a subgroup that specifically focuses on IT support for such research activities, called ResearchIT. Initially, the group will be staffed using research funding with the existing Lab Manager as head of group. ResearchIT will act as a bridge between on the one hand the IT Department, which continues to focus on ITU-wide standardization, optimization and security while primarily targeting administrative work-flows across the organization, and on the other hand researchers and PhD students whose research needs (according to themselves) have been under-prioritized by IT Dept. Additionally, ResearchIT will enable more effective coordination of the IT services that research groups already provide for themselves, increasing the efficiency of these services. The IT Group also predicts that research employee satisfaction will increase when they use less time on administering research IT systems.

ITU will investigate the possibility for equipment, space, and expertise to carry out hardware design and prototyping spanning from electronics soldering to 3D printing. As the IT department moves towards outsourcing of standardized solutions to external vendors, it will free up internal IT resources to more effectively coordinate with researchers and the ResearchIT unit. In the long term, this will also enable improved support for IT in research projects.

REQUIREMENTS

- At the time of writing it is hard to estimate the exact amount of extra funding necessary for meeting the strategic suggestions from research personnel at ITU. Measures have been taken as part of the discussions in the IT group to focus on changes which have a positive impact through reorganization rather than through allocation of more resources. There may be extra costs involved to implement some of the proposed changes, but it is our belief that these costs will generate qualitative gains, which in the long run will be of benefit to ITU economically through better research and education.





EDUCATION

HIGHLIGHTS AND CONCLUSION

The educational area would like a strategic change with regards to students' equipment. First of all, it should be mandatory for students to have their own equipment, i.e. PC/Mac etc. Students should be able to access various resources such as library, software and services from ITU through their own equipment, even from their home. Course requirements such as software and tools should be covered as well. Virtualization of the desktop infrastructure (VDI) is of vital importance here.

ITU should be able to supply high-end computational power and special capabilities, such as powerful desktops for games and graphical operations, but also larger servers for some computing extensive topics. In particular, such access should be available for both classroom/lab situations, as well as for individual preparation for classes. Also, access should be catered for to student projects, in particular bachelor and MSc thesis work. The solutions could be cloud-based and/or as an internal ITU Cloud.

Education would like to have significant more support related to tools for IT based learning. Most important are tools for discussion fora, pod casting and digital solutions for hand-ins and feedback. Solid solutions to cover this need must be implemented and supported.

ITU should expand its capabilities of supplying services for collaboration across students from other locations outside our control. Collaboration services include access to shared data, possibilities to use shared databases etc.

Students should be given access to ITU's calendar functionality, hereby leverage benefits in coordinating courses and room allocations. It would generate a more smooth, effective and flexible way of handling courses.

The IT University should strive to provide open read-access to all non-personal data to allow students to work on innovating the services of ITU. Part of this is also, that Education would like a higher degree of student involvement in the University as such. It is anticipated that the benefits within this area are significant.

REQUIREMENTS

- In order to implement the VDI solutions drafted above, ITU needs to invest in these technologies. First step is to investigate what would be an appropriate way forward for ITU.
- ITU needs to create the infrastructure that would support student's own equipment. This covers more power outlets all over the building and effort to expand the WiFi coverage and increase WiFi quality even further
- The need for new solutions and extension of existing ones will require resources to implement and run these services. A discussion of the IT services offered is evident along with funding of these.



