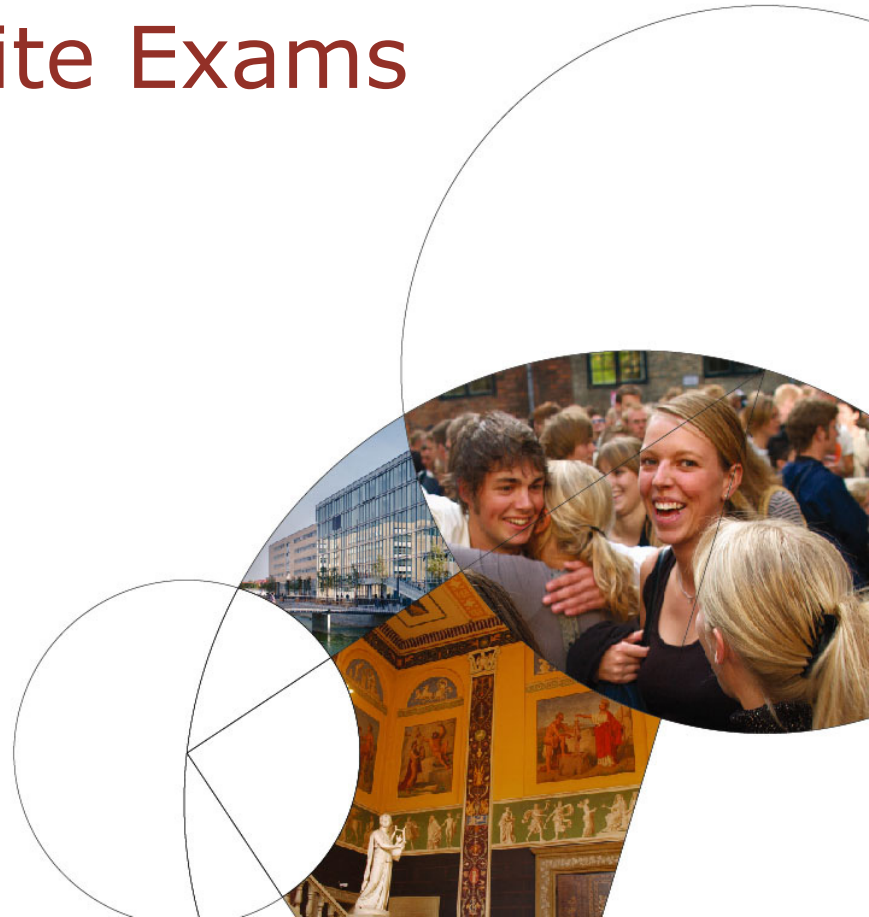# 150.000 Digital On-site Exams

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University of Copenhagen

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Digital On-site Exams

Agenda:

- Scope
- Background
- Capacity
- Exams at Peter Bangsvej
- Changes to ITX
- ITX Infrastructure
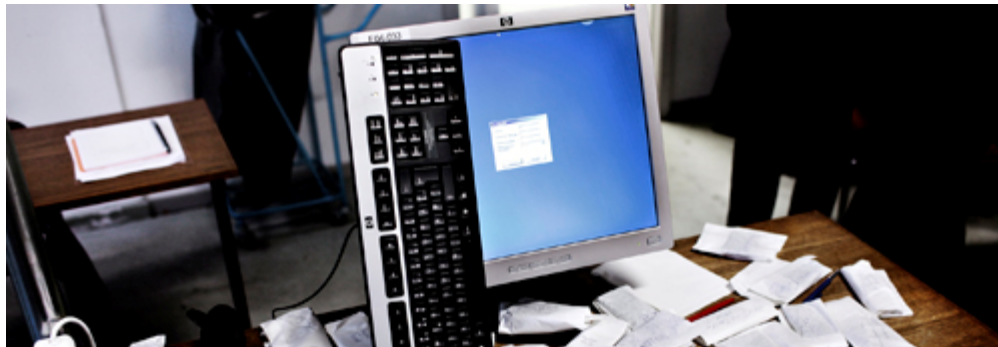- ITX Procedures and Flow Charts
- The Future of ITX

Scope

The scope of the ITX platform is

- To deliver an examination form to the students in the University of Copenhagen on a contemporary examination platform where they can use a computer provided by the University.
- To deliver the results of the examinations to the examiners immediately after completion of the examination.
- To deliver a secure examination platform
- To deliver an efficient and cost effective platform where only few and highly experienced staff are involved.

Background

The ITX platform:

- Developed in cooperation between 3 of the faculties within the University of Copenhagen: The Faculty of Law, The Faculty of Social Sciences and the Faculty of Health.

- The initial version of the platform was developed in 2006 – 2007, and the first exam took place in December 2007.

- The execution of the examination is completely digitalized. This includes distribution, solving and handling of the examination documents and the programmes and web-sites the students are allowed to use.
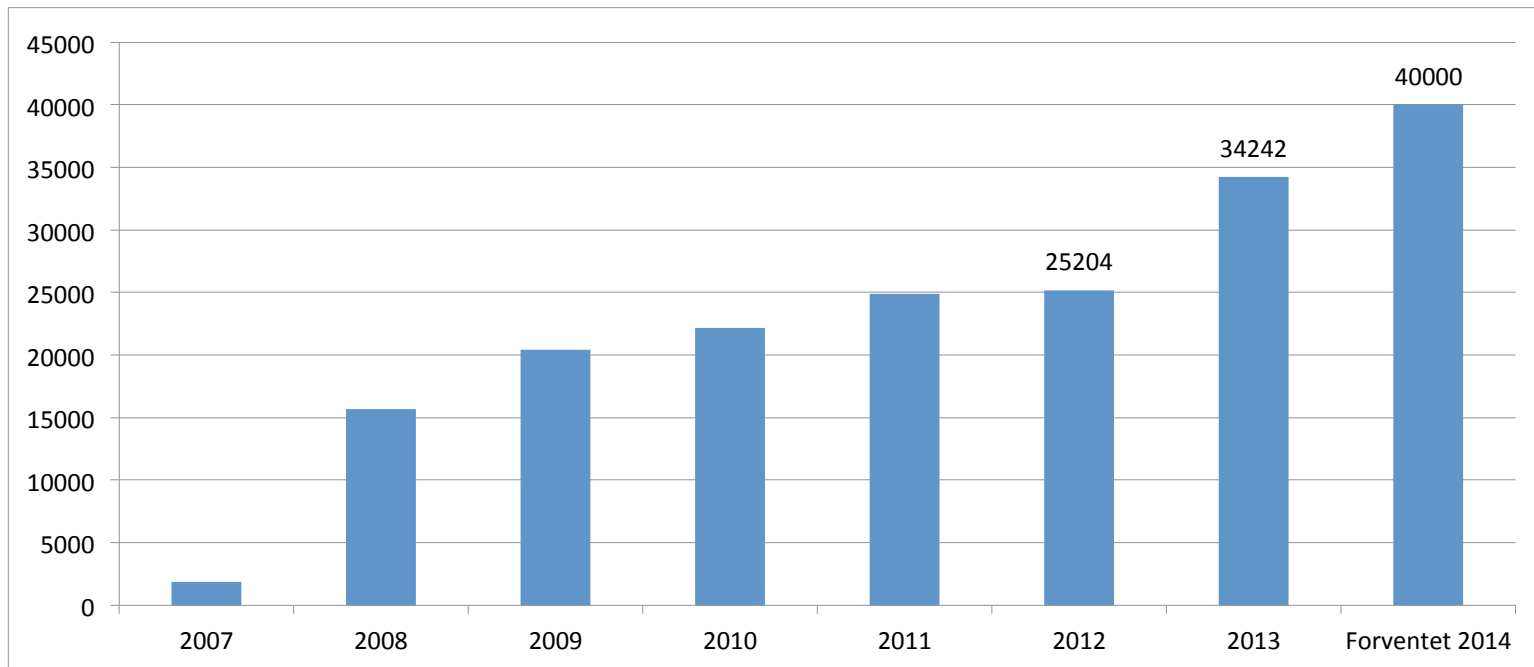
Capacity

The 'Examination factory' has

- 425 (525) computers in 4 (5) floors.
- Every floor has 2 rooms.
- The first examination starts every day at 9.00 am.
- The students must show up at least half an hour before the start of the examination
- Students with dyslexia, physical handicaps or other disabilities have an extended examination period of 25%.
- In busy examination periods we are not permitted to start a new exam until one hour has passed after the completion of the previous exam.
- In busy periods (June and January), two or three exams are held every day and sometimes also on Saturdays and Sundays.
-

Statistics from "the Examination Factory" – number of student

Growth of 59 % since 2012

Expected growth rate +17 %

Two new faculties

Exams at Peter Bangsvej, Frederiksberg

Before the exam:

- You can find more information about the examination process here: http://pc-eksamen.ku.dk or http://pc-eksamen.ku.dk/pc_exam
- All students can attend an open house event, where they can try a test exam.
- The teacher who is responsible for the exam must deliver the assignment at least 2 weeks in advance. The assignment has to be delivered in a specific template to the Student Service, where a member of the exam staff will upload the assignment to the ITX platform.

The Examination

- A monitor displays all the exams of the day
- The student has to present a student identity card, a student number to get access to the examination room

- The assignment is delivered electronically in a folder from exam start – but not earlier. The document is named 'ExaminationDocument'.

- During the examination, examinees can create multiple documents/drafts, but only one Word document can be delivered as the final 'ExaminationDocument

- The ITX solution has 100% availability

- We create an backup every five minutes of the student share

- A completion confirmation is received, and the examinee receive a link for their exam answer electronically (KU-mail)

Exam Execution

Different kinds of examinations allows different tools

- Word, Excel and Powerpoint
- Viseord (application for dyslexic)
- Gyldendal – A dictionary collection
- SAS, R, SPSS – Statistic tool
- Adobe Reader
- IO2 – A Digital Pen
- Multiple Choice Module
- Read only access to USB dongles
- Access to dedicated websites like the Legal Law Collection

ITX Infrastructure

500 computer at Peter Bangs Vej

- All computers are configures automatically from a predefined standard.

- We use Microsoft SCCM solution and packages for the tools (eg. Msi)

- All computers are completely locked down in order to secure the examination operation and integrity. We use an app to set up the computers with the right tools for every exam.

- All computers are reinstalled every three months, by SCCM multicast

- All floors in the building have printer facilities, but the students nowadays hardly ever use the printer.

ITX-Infrastructure

- The IT-supporters are located in the examination rooms. We use approximately one supporter (students) per 50 students and we have 1 it-manager and 2 half time assistant managers.

- If a faculty requires a new tool or facility we have a documented process with a change request board and a steering committee

- Last year we changed and implemented pc workstations instead of Neoware clients. The result is a much better setup with much better performance and it is easier to support

- The University of Copenhagen has established 2 hosting centers. The plan is to move the ITX servers to the hosting centers within 1 – 2 years

- The Digital Pen is a rather old version and unsupported. We are looking for a new solution, but until now it has been hard to find a good and not too expensive replacement

ITX Procedures and Flow Charts

- All planned exams are automatically downloaded from the Student Information System STADS.

- The Examination Officers use a web portal to configure the examination activities. If special materials are permitted the configuration can be changed for specific exams. The examination material for the examinee can be uploaded at the web portal, and it is possible to create a multiple choice assignment

- The proctors will assign a computer to the examinee, and the examinee will logon. The system recognizes the student, and dynamically allocates access to the relevant software and tools. The examination assignments will automatically be filled with locked identification information

- The IT-support is able to monitor all activities and logs. The supporter can restore deleted data and solve administrative changes connected to technical or physical problems

ITX Procedures and Flow Charts

- At the end of the examination, the examinee has to follow a procedure where the ExaminationDocument is converted to pdf, and a receipt is dropped in the examinees mailbox.

- The Examination Administration receives a ITX-package per exam activity. This package contains key figures about attendance etc.

- The ITX package also contains all the exam answers. Now they are ready to be forwarded for assessment.

- In case of an examination appeal a full log can easily be provided.

The Future of ITX

Key figures:

- 500 computers
- 150.000 exams totally – we expect 40.000 next year
- High success rate – almost no exams have been missed
- Budget in 2014: 600.000 Euro
- Price per examination: 21 Euro
- High quality, Low costs in administration

The Future of ITX

- The Danish Governmental Strategy For Digitalizing requires all exams to be digitalized

- EU Public Procurement including 5 danish universities with 120.000 students. Contract concluded late 2013

- A digital platfom to handle all written exams: submission, distribution, assessment and storing

- Pilotproject Winterexams 2014. Full implementation Summerexams 2015

- ITX will be integrated into the new solution. The new digital platform will make it easier to plan the examination and to support the assessment of the exams.

Questions and Answers

Questions for you

- Good ideas
- Feedback