

CASE STUDY

The University of Oslo

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Introduction

About this document

The purpose of this document is to document Inspera's capabilities in delivering digital examinations software and support for Higher Education institutions and to document university customer's approaches to implementing Inspera Assessment at the institution.

Who should use this document?

This document should be used by:

- Sales at Inspera
- Customers

Summary of change

This section records the history of significant changes to this document. Only the most significant changes are described here.

Version	Date	Author	Description of change
1.0	26.11.2018	Anja Sisarica, Marian Slettebakken	Initial release

Where significant changes are made to this document, the version number will be incremented by 1.0. Where changes are made for clarity and reading ease only and no change is made to the meaning or intention of this document, the version number will be increased by 0.1.

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1 The University of Oslo

The University of Oslo (UiO), founded in 1811, is one of the largest universities in Norway with 53,000 students and 8 faculties covering Theology, Law, Medicine, Arts and Humanities, Math and Science, Odontology, Social Science and Education.

The university began implementing Inspera Assessment (IA) for digital examinations in 2014. Since then, a dedicated exam centre at Silurveien was built, where the numbers for digital examinations have been continuously increasing, in addition to support for Home Exams conducted in IA platform:

- **2014:** 6,000
- **2016:** 30,000
- **2018:** 55,000 (i.e. 75-80% of total exams submissions)

The University of Oslo has been very ambitious in rolling out IA, and has driven many initiatives in relation to aligning digital tools and new assessment and examination types.

2 Objectives

UiO's main goal has been to conduct paperless examinations, in order to benefit its Learners, Planners, Markers, and Invigilators. The project conducted with IA has helped UiO achieve this goal by delivering digital exam service to UiO's faculties.

Objective 1: Benefits for the Learners

- The exam day will be more similar to the study / working days;
- Learners will have a better opportunity to answer the question in an exam as they can better concentrate on the academic content they are inputting in a digital editor than on multiple paper drafts;
- It will be time-saving for Learners to write on computers;
- Equality for candidates as (undeclared) handwriting will not affect the grade.

Objective 2: Benefits for the Markers

- Markers will be able to access the responses wherever they are, as the submission will be online;
- Faster and easier for the Markers to get to the answers, as well as time-saving compared to the entire marking and grading processes as postal mail coordination ceases;
- Markers will have the opportunity to comment on the answers digitally, which means that they do not need to have their own archive system'
- It will be easier for Markers to read machine-displayed text instead of handwriting.

Objective 3: Benefits for the Planners

- Applications for appeals will probably be greatly reduced;
- Costs associated with paper / sheet / printing will be greatly reduced;

- Costs associated with the distribution of exam answers to Markers will decrease;
- Technical solution for the digital exams can be performed on the existing technical equipment.

3 Planning and development

The first pilot of digital examinations at UiO was conducted in 2012 with an internally developed system, involving about 200 students. This was followed by the initiation of the project "UiO digital examinations" in 2013, with direct support from university's top management, establishing the foundation for the university-wide administrative decisions that introduced the following policy acts into university's annual plans: i) **innovation in teaching and learning**; ii) **administrative change**. Therefore, the adoption of digital exams became an important priority at the overall level.

Three universities, University of Bergen, University of Oslo, and University of Agder, formed a consortium to collaboratively procure a commercial solution in 2014. The project was shaped as a gradual development project, with iterative trialing and development. A central project team ensured collaboration between the three universities, while project teams at each university ensure initial requirement clarification across all faculties and disciplines. After preliminary requirements were collated, a vendor was selected through tender. Inspera offered the best solution at the tender, measured by its capacity to support development that was relevant and important for the sector and the objectives of this project.

*"Our experience with the introduction of digital examinations has been a success. This may be because **it was neither a so-called top-down or bottom-up process, but the result of the simultaneous coming together of wishes from various partners**,"* says section manager Anne-Lise Lande of the Office for Administrative IT Systems, Department of Academic Administration at UiO.

3.1 Stakeholder management

Adviser Aleksander Lorentzen reports that the project for digital examination has met very little resistance ever since its inception in 2011. *"Communication and institutional support probably account for the positive support the project has received,"* he explains. Lorentzen adds that the team working on the project has made a conscious effort to **secure support both vertically and horizontally**. *"Horizontal support is about engaging in genuine dialogue with system users. We have worked together to set up a good practice."* Throughout, the project has involved close communication with the faculties, which is also being maintained now that the project has moved into its operational phase. **Every week the faculties hold meetings where upscaling and development of technical solutions are on the agenda.**

Anne-Lise Lande believes that **giving priority to dialogue** has been an important factor in securing the success achieved so far. She also adds that the absence of opposition reflects the fact that **participation in the project has been voluntary**. The university management has not drafted specific policies for required adoption rates and the faculty deans have taken the role of enthusiastic

promoters. *“The deans have been eager, as they can see the benefits. And once the users have transitioned to digital examination, they would not go back to the old system – there is no question of that. The use of digital examination has risen steadily; there has been no need to follow a hard line.”*

Inspera Assessment team was one of the stakeholders mapped out within UiO’s communications plan, which defined the distribution of information about the system among representatives of different user roles at UiO. It was important to manage user expectations of the system during the course of its functionality development. Therefore, IA was involved in the delivery of the communications plan, so that the information flow among stakeholders was managed effectively.

3.2 Roadmap management

The project has been divided into three phases, with the focus on **establishing a framework** in order for the digital exams to be able to be operated in a safe and responsible way throughout, and among other things to have done the following **set of key tasks**:

- Compiled a requirement specification of UiO's needs: technical, professional and administrative;
- Acquired technical solution (i.e. IA) through the tender process and supplier selection;
- Established infrastructure: Silurveien exam centre, as well as power and networks in suitable campus premises;
- Tested, piloted and rolled out chosen solution at all faculties.
- Prepared model for management organization with roles and responsibilities: central, local and in Silurveien. Including centralisation of exam- and IT-Invigilators;
- Standardised existing procedures for exams and developed new procedures for digital exams;
- Facilitate user training and documentation;
- Coordinated and implemented routines for exam planning using IA;
- Routines for the use of digital exam space on campus;
- Placed system ownership, and completed transfer of responsibility;
- Made legal arrangements;
- Established different forums for interaction between Professional Support, USIT (i.e. university's IT management department), faculties, Inspera, and cooperation partners, the Universities of Agder and Bergen, and Oslo Metropolitan.

Local project teams have been established at the individual faculties, and each faculty determines how long they want to maintain their participation in the project.

PRINCE2 project methodology was used by the UiO’s project team to shape and deliver the roadmap. There was a close cooperation between IA’s team and the project team in this period, establishing together what should be prioritised when. To this end, there were weekly meetings between UiO and Inspera to ensure quick resolution of any arising issues. This process also involved stepwise revision of the original requirements and adjusting the scope of the project to best meet its objectives,

outlined in Section 2. Most importantly, Inspera's team showed flexibility in this process, creating alternative ways to solve challenges along the way.

4 Method and strategy

For Anne-Lise Lande, the strategy of the project has been grounded in the increased quality it brings, for UiO's students, academic employees and administration. *"We should not digitise for the sake of it; our overriding aim in all we do is to add value."* Lorentzen adds: *"And **even though our primary focus isn't to reduce costs, digital examination leads to a definite positive reallocation of what we spend our time on.**"* As an example, he mentions that the four hours it used to take faculty employees to sort out exam papers can now be spent on planning and quality-assurance purposes.

*"Needless to say, the steering group for the project has also had their eyes on the money. And it goes without saying that **not having to physically cart bundles of paper from one place to another brings savings.** Besides, digital examinations lead to fewer mistakes, which is an important factor. **Dedicated exam centre at Silurveien was not the cheapest solution on the table. But in the long run we believe that this initiative can bring financial gain**",* adds Anne-Lise Lande.

5 Implementation

Today at UiO 75-80% of all examinations are conducted digitally via Inspera Assessment. Even the term "digital exam" in UiO's branding strategy has now been replaced with simply the term "exam", given the high adoption rate, as stated by adviser Aleksander Lorentzen.

Dedicated examination building opened in Silurveien in autumn 2016 and in the first semester no less than 24,000 students sat their exams here. The premises accommodate 680 students at a time, distributed into two shifts per day. In the autumn term 2017, 43,000 students will conduct exams at UiO, 31,500 of them in Silurveien. There is now also a collaboration with Oslo Metropolitan University in sharing the examination facilities, raising the availability today to 1300 seats per shift.

6 Outcomes and deliverables

The project has achieved all its objectives (i.e. aimed benefits) described in Section 2 through successful execution of all deliverables as described in the roadmap, outlined in the Section 3.2. As said in Section 5, the implementation resulted in 75-80% of all exams in 2018 at UiO being delivered in IA.

Surveys completed at the faculties show that most students are extremely satisfied or satisfied with the digital examination format. No centrally organised, qualitative survey has been done. Digital

examinations have been discussed on several occasions in the UiO Committee for Student Affairs and the feedback has been positive.

6.1 Support and maintenance

First of all, **the implementation must be strategic and backed by both management and across the organisation**, and especially among the people who would be working with digital examination on a daily basis. Aleksander Lorentzen reports that the project team dedicated adequate time to risk management planning.

In addition, **each faculty prepared plans for digital examination in the period leading up to 2019**. *“A long-term perspective is essential when working on projects of this type”*, explains Lorentzen. A further key factor has been ensuring that the **organisation in charge is robust**. Five employees work with Silurveien within both IT and administration.

Lorentzen further adds that **quality assurance, quarantining new functions and ensuring proper testing before they are rolled out** are important lessons learned. Adviser Aleksander Lorentzen also emphasises strict deadlines for submitting requirements and wishes along with clearly communicating priorities and testing. *“User wishes never end. Therefore, it is critical to have the infrastructure and organisation in place that make it possible to meet demands realistically.”*

Inspera’s team has been offering support throughout the project delivery. Apart from weekly meetings with UiO’s project group, Inspera provided hands-on support to identify best ways of executing the user workflows in the system, according to the mapped requirements. Furthermore, a series of training workshops were conducted at UiO’s campus by Inspera with the UiO’s project group, and representative administrative users from the individual faculties. Inspera’s Service Desk (i.e. second-line support) was at all times available to the UiO’s project group to report issues, as well as a dedicated UiO’s account project manager at Inspera to contribute in leading the cooperation, and the implementation of the system.

7. Reflections

The most important success factors that have been crucial to the project group's ability to meet the described goals and deliveries in collaboration with the system supplier, Inspera Assessment, are as follows.

Clear goals and roadmap

The project has had clear goals and deliveries that should be delivered in each of the phases. The roadmap as described in Section 3.2 has given the project clear guidance and contributed to the project resources being concentrated on the points that were in the delivery requirement, as defined in Section 2.

Flexible approach

The project has had a pragmatic and flexible approach with continuous assessments and risk analysis of the deliveries. There has been ROI analyses and phase-end assessments in each of the three project phases, in parallel with the ongoing deliveries. This has helped the project group to adapt to any arising changes by appropriately adapting the delivery strategy as the new factors were introduced. An example of this is the transition from BYOD on campus to desktop computers in Silurveien that led to the construction of designated premises on campus for digital examinations.

Management support

The project has been clearly rooted in senior management support at UiO, as well as at the faculty level. This has contributed to the project's impact on routine changes across UiO. Having a dedicated management team at the UiO level has contributed strongly to the project being prioritised across UiO.

Dedicated resources

The project group has been a good composite group consisting of participants from individual faculties, USIT and Department of Professional Support who have had good interdisciplinary expertise both from assessment and technical background. At the beginning, the project group consisted of more members than today, but after an evaluation early in the project phase, the number of members was reduced, but the remaining members were allocated more time for the project. In result, there have now been project group members who have dedicated nearly a hundred percent of their working hours to the project.

Collaboration and involvement across UiO

The project has focused a lot on attracting the right skills at the right times of the project, in order to get the deliverables in place according to the set schedule. Following the acquisition of Silurveien building, there was a close cooperation with the university's property department. This ensured the physical requirements of the digital examinations have been appropriately met.

Communications work

Good communication and involvement of faculties from an early phase of the project has been important for the project to be able to receive important input in the right stages of the development process. This has helped to anchor the project at the faculties, and at the same time, the project group has been able to adapt the solution to the user needs. In the communication work it is important to focus on change communication. Any change triggers questions and often also uncertainty. It is therefore important to have a good single communication plan that focuses on the involvement of key people, creating a common understanding of how this will affect the employees and a clear message.

Organisational impact

This has been a project that has involved large parts of the organisation - faculties, administration, and USIT. The focus of this work has been on involving the right resources in the right points of the project. It has been important to have a good dialogue and experience-sharing with the stakeholders at all times.

The important learning points from this success story are good involvement, focus on change communication and the development of common goals. Anne-Lise Lande says that the project has had dedicated resources and people who have allocated time to work with it both centrally and at all the faculties. In addition, the programme has shown how important it is not to underestimate the transition from project to operational phase, as this is a phase that must not be treated lightly.

“We haven’t reached the finishing line yet, we have challenges going forward as we are looking at additional examinations forms. At the same time, it is great fun to talk about our experience because this project has been so successful and has gone so well!” remarks section manager Lande.