

EUNIS 2019

# Digital assessment

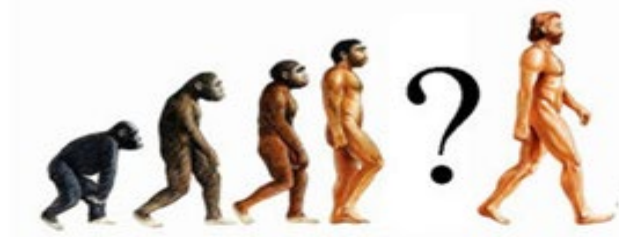
Where we are, how we got here and a sneak peek into the future

Truls Bøhm

**It's widespread**



# The missing link



# Cambridge considers typed exams as handwriting worsens

University launches consultation over concerns students reliant on computers are losing the ability to write by hand

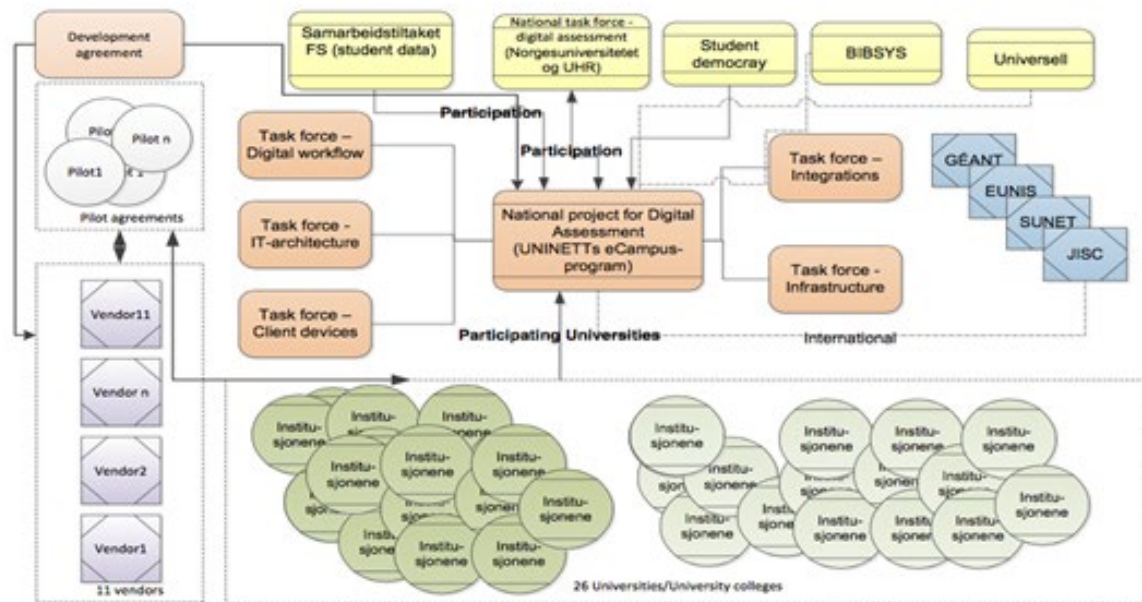


**i** Students have been taking handwritten exams at the university for 800 years. Photograph: Gareth Fuller/PA

2013-2019

# Digital exams in Scandinavia Higher Ed

# UNINETT Project plan 2013 -16



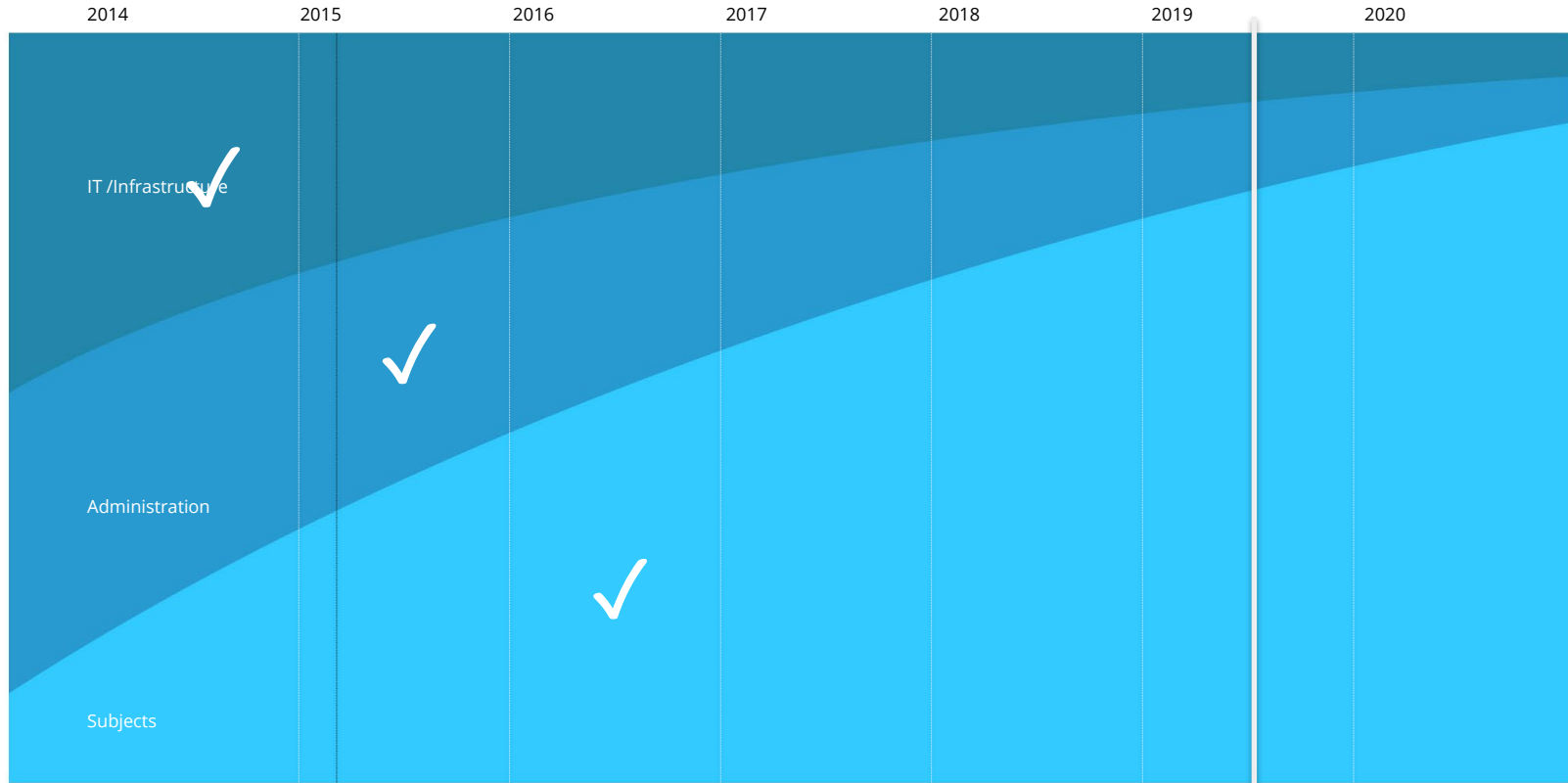
# Trusted partner in high-stakes e-assessment

Over a decade of leadership in supporting transition from pen-and-paper to digital examinations

- **Privacy** by design, while still benefiting from a **scalable** SaaS. **GDPR** compliant
- Ensuring **accessibility, equality** and **fairness** for all learners. **Cheat prevention.**
- **Reliability** and fairness in **marking**
- Complying with **psychometric standards** for educational test construction
- **Integrates** with local LMS / VLE / SIS
- 30+ **native question types** to match diverse curriculum needs



# From a software point of view





# Implementation pattern

## Adoption degree

**Quick wins**      **35-50%**

Administrative exam management

Essay submissions

Multiple choice submissions

Open book exams onsite and home

Automarking

**Second phase**      **50-85%**

Collaborative human marking

File submissions

Programming code submission

Simple STEM submissions

Closed book exams (SEB)

**Third phase**      **85-100%**

Complex STEM submissions

Sketching & scanning, CAS tools

Oral examinations

Exam process audit & revision

Assessment type audit & innovation

# Examples of adoption strategies

## Big bang top down approach

### University of Oslo



- Digital exams are mandatory
- Uses Inpera scanning solution to meet goals
- **75% adoption 2018. Aims for 100% adoption by end 2019**

### NTNU



- **2016:** 300 tests, 10 000 assignments
- **2017:** 1300 tests, 37 500 assignments
- **2018:** 3300 tests, 85 000 assignments
- **2019: estimated** 4500 tests and 125 000 assignments

## Voluntary, gradual roll-out

### University of Gothenburg



- Digital exam is an offer to academics
- Offers test locations and BYOD
- **10% adoption. Expects 30% by end 2019**

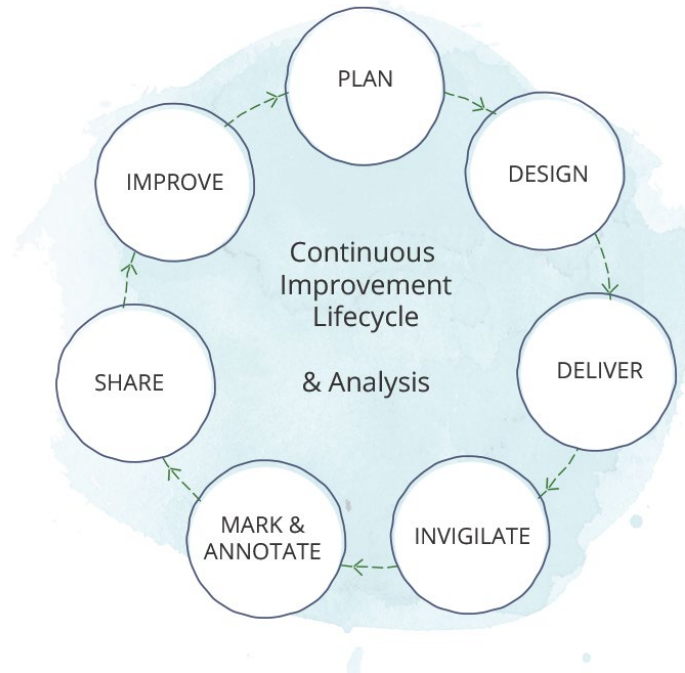
### General situation (Prediction)

- Digital exam is an offer to the student (paper or digital)
- Test location and BYOD
- **30% adoption year 1, 50% year 2**

Where do we go from here?  
More than paper on screen

# Assessment is not a project, it's a continuous process

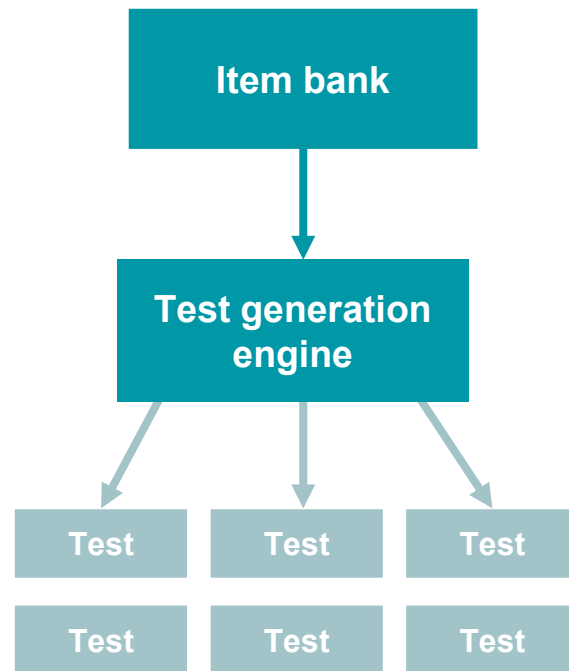
**End-to-end assessment process supports blended learning & 21st-century classroom**



# Test construction

## Linear-On-the-Fly Tests (LOFT)

- Item bank with **calibrated items**
- **Generate** fixed form tests *ex ante*, based on a number of criteria
- Different but “equivalent” test forms



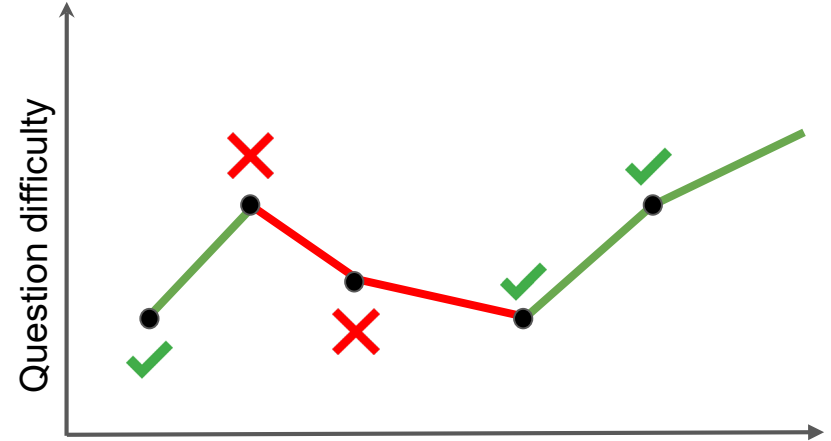
# Test construction

## Computerised Adaptive Tests (CAT)

Construct a test live, based on previous answers by the student

Important advantages over “linear” test forms:

- Personalised learning
- Enhanced motivation
- Security of assessment material
- Resources (shorter tests)



# Research & development

The vast volumes of data that are produced by the digital assessment workflow present a number of exciting opportunities for Educators and Learners alike.

Please reach out to our team if you want to learn more about how we use **machine learning and AI in digital assessment**, or explore options for collaboration:

[RnD@inspera.com](mailto:RnD@inspera.com)



# Thank you !

- Pay a visit to our stand outside R1
- Come listen to our product manager Lisa Long at 12.00, room R9
- Meet our project managers for a live demo Friday at 9.30 - 11am. Room R93
- Register for a visit to the NTNU exam factory This afternoon at 4pm.

