Auditorium B3 001
Thursday 13.00 - 13.30

Tim Hilhorst
Front-end developer
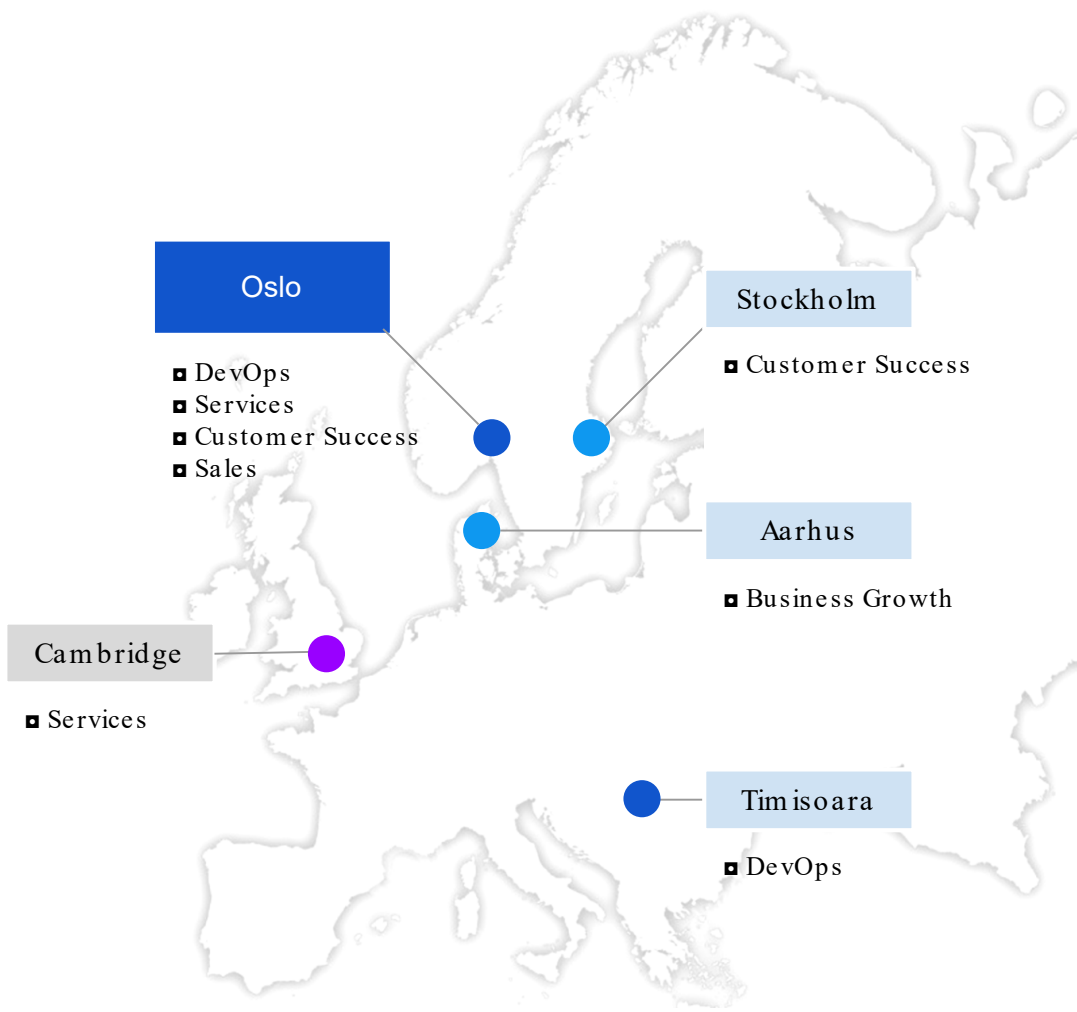
Necessary for a few, beneficial to all

Accessibility in Inspera Assessment product design & development
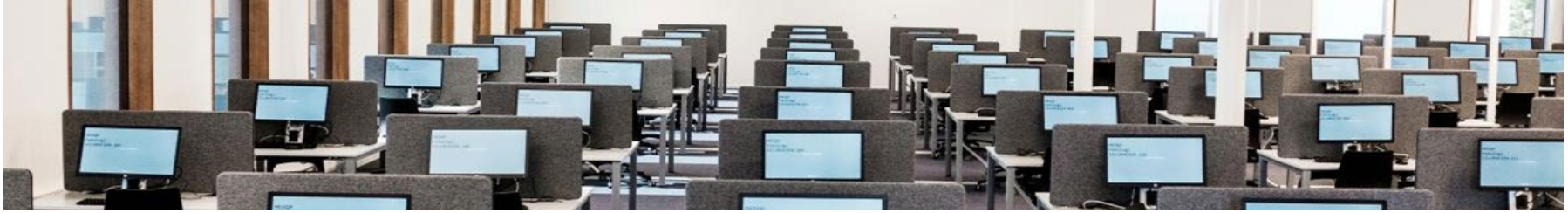
Essentially Scandinavian

Reaching Europe

- 45 employees in Oslo
- 6 employees in Sweden and Denmark
- 8 "employees" in Romania
- 20% (9) recruited in 2017
- 57% (25) non-ethnic Norwegians
- Ambition to open office in Cambridge 2019
- 60+ employees in 2019

Oslo
- ◘ DevOps
- ◘ Services
- ◘ Customer Success
- ◘ Sales

Stockholm
- ◘ Customer Success

Aarhus
- ◘ Business Growth

Cambridge
- ◘ Services

Timisoara
- ◘ DevOps

Platform Modules

Cloud -based. Complete. Modular. Loosely coupled. Platform agnostic.

Authoring	Planning	Test Delivery	Monitoring	Marking	Results
Question Set	Test management	Test Taking	Incident management	Mark schemes	Results determination
Question		Lock-down browser	Central monitoring	Manual assessment	CCT Analytics
Item Banking		Offline Delivery	Invigilation	Automatic scoring	IRT Analytics
Test Construction		Universal Access		Annotation	Archiving
Workflows		Adaptive testing		Learner feedback	
				Appeals	
				Plagiarism checker	

Open, flexible and student -friendly

We believe in more flexibility where students gain more control of their assessments.

- **Paper.** Say goodbye to writer's cramp, illegible handwriting and assessing 20th century writing process (pen & paper)

- **Appealing.** Delight the millennial learners through a user-friendly state of the art, responsive, single-page Javascript front-end

- **Any place, any time.** Deliver exams at test centers with dedicated equipment, or support home exams with bring-your-own-device (BYOD)

Inspera assessment
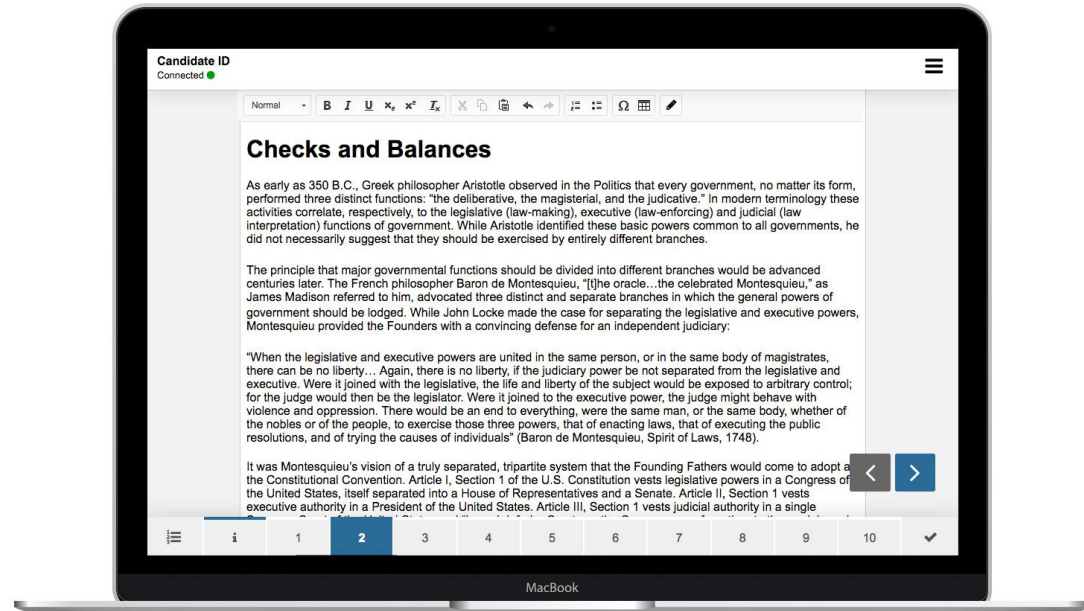
Testing drives learning
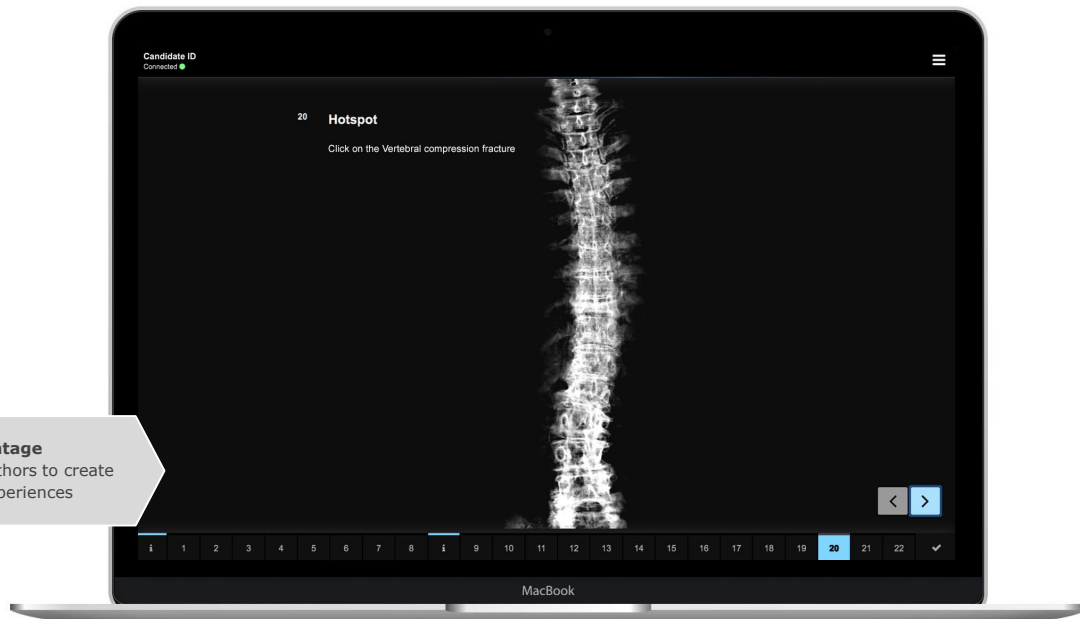
Flexible learning and flexible assessment goes hand in hand.

- **Content.** Connect learning and examination by reusing question and questions sets in both formative and summative assessments

- **Feedback.** Add detailed feedback for formative assessments such as hints, and feedback for each answer alternative

Facilitate Home Field Advantage
Inspera Assessment allows authors to create tests that simulate real-life experiences

HTML 5

React + Redux

PUSHER
POWERING REALTIME

Candidate ID
Connected

20 **Hotspot**

Click on the Vertebral compression fracture

i 1 2 3 4 5 6 7 8 i 9 10 11 12 13 14 15 16 17 18 19 **20** 21 22 ✓

MacBook

Common Assessment Formats

High Stakes Exam as core

- Closed book exams
- High-stakes, qualification tests
- Thesis submissions
- Open book exams
- Progression tests
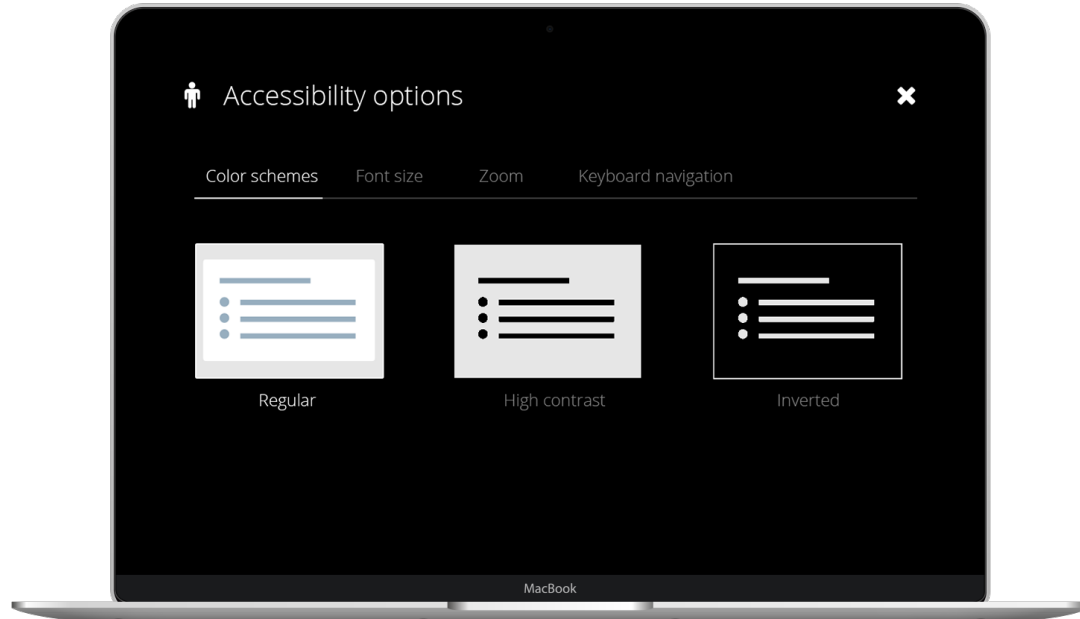- Formative Tests
- Standardized tests
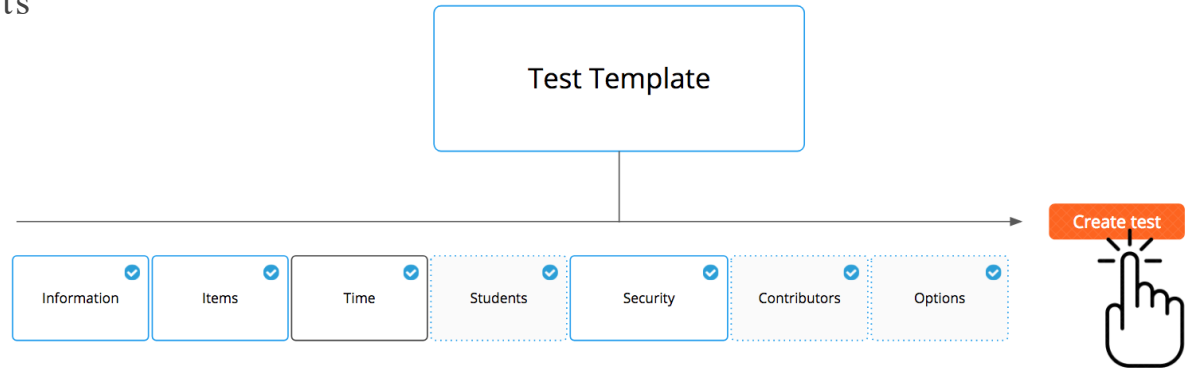
Inclusive assessment

All students should have a fair, supported assessment experience.

WCAG Compliance

- **Responsive.** Fit all screens and form factors through responsive design, and preview the tests for different screens during authoring

- **Individual.** Differentiate exams for individuals, add extra time, spellchecker or turn off the lock-down browser

- **Accessible.** Fully accessible delivery player by supporting keyboard navigation, zooming, screen reading, colour inversion and more

- **Flexible.** Allow test candidates to change the locale of the test (each test can be available in multiple locales)

Accessibility options

Color schemes   Font size   Zoom   Keyboard navigation

Regular   High contrast   Inverted

MacBook

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Accessibility compliance

Accessibility options and interactions

Accessibility standards at Inspera

Internal awareness and education

Perceivable

- Options to set alternatives to images, videos
- Distinguishing visual elements

Operable

- Keyboard accessible
- Extra time
- Clear navigation

Understandable

- Readable and understandable (R&D)
- Spell-checker and validity checker

Robust

- Browser and device compatibility
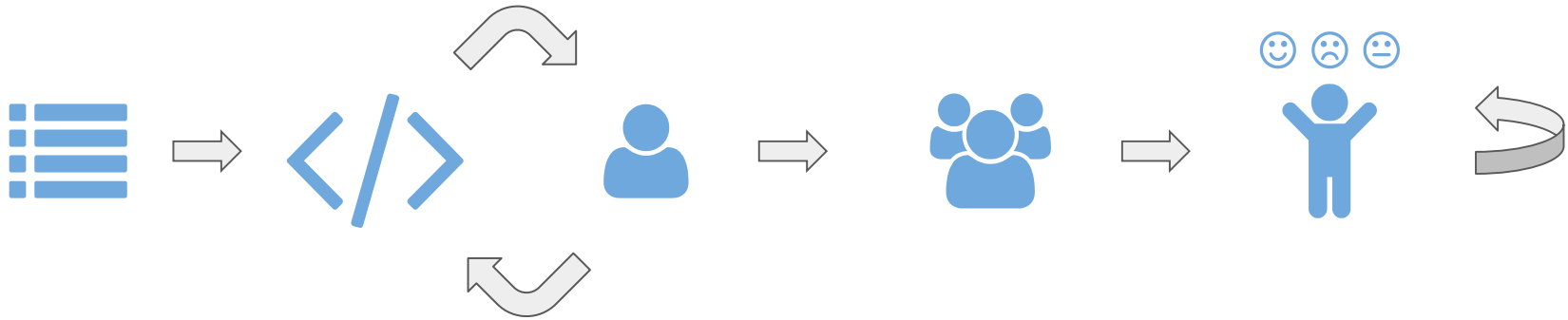- Lock-down browser with a11y settings

Testing throughout development

Specification
Confluence, JIRA
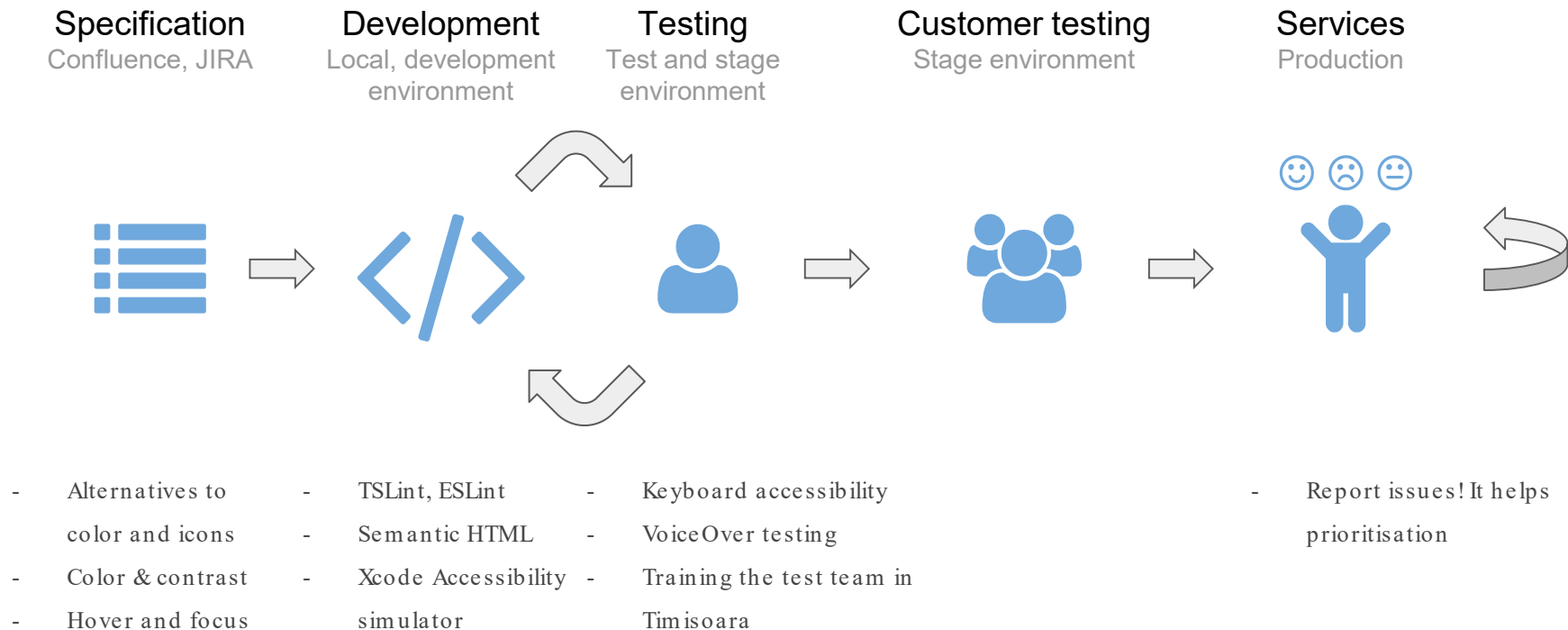
Development
Local, development environment

Testing
Test and stage environment

Customer testing
Stage environment

Services
Production

Testing throughout development

Specification	Development	Testing	Customer testing	Services
Confluence, JIRA	Local, development environment	Test and stage environment	Stage environment	Production

- Alternatives to color and icons	- TSLint, ESLint	- Keyboard accessibility
- Color & contrast	- Semantic HTML	- VoiceOver testing
- Hover and focus	- Xcode Accessibility simulator	- Training the test team in Timisoara

- Report issues! It helps prioritisation

User Testing with NTNU and Funka

**Development and testing experience
with the test player**

- Testing with a visually
  impaired user
- Tweaking the student
  experience on the fly
- Iterate improvements
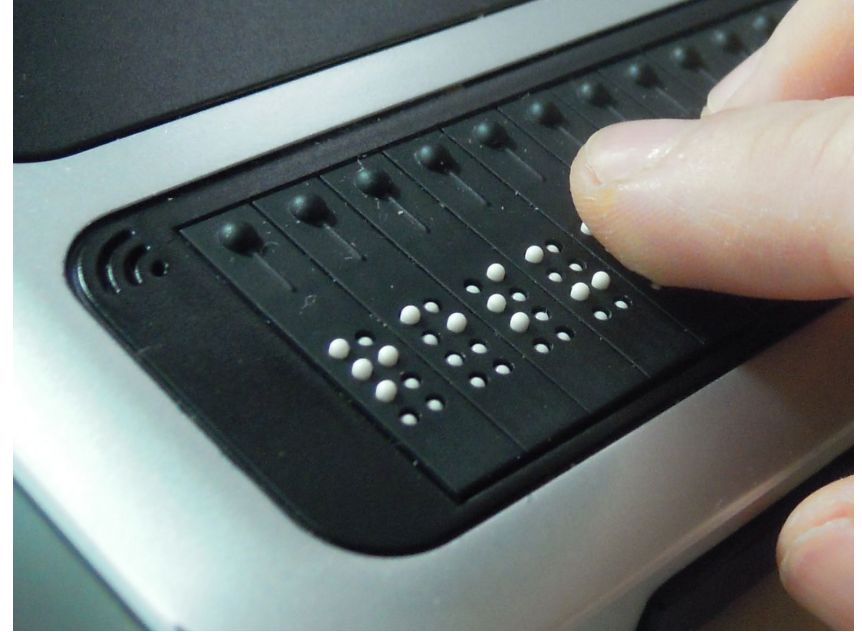
Challenges

Improving the status quo, setting standards for the future

- Knowing what's important

- High (a11y) code standards with legacy projects

- Internal knowledge of TTS applications such as Jaws, VoiceOver, TalkBack

- Providing TTS services for multiple languages in lock-down browsers (Amazon Polly, Chromebook app)

- Implementing and prioritising accessibility testing routines, measuring compliance

Amazon Polly

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Demo time

Showcasing some of the accessibility options and interactions

Planning WCAG compliance

Raising awareness amongst a growing team, building new tools and features

- Educating a growing team

- Enforcing code standards (linting & reviewing code)

- Periodical E2E testing

- Full-scale test with Funka on the roadmap

- Implementing good standards for new repositories and gradually fixing known missing compliance (/admin)

Let's work together

How do you facilitate students with disabilities or administrators

- Please share your use cases

- How can we facilitate users with disabilities better?

- Report bugs, suggest improvements

Meet me later, or get in touch:
tim.hilhorst@inspera.no

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Thank you

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