

Visma Optimization Technologies

How to succeed with AI products

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The software landscape is changing

Cloud

Enables SaaS-solutions with continuous delivery

Increased computing power

Apple M1 flops:
2.600.000.000.000

What's next?

How can we turn this into something useful - and why should we?

Serverless architecture

Unlimited scalability while only paying for what you use

Increased AI usability

Neural networks, MIP solvers etc.
explore large spaces in little time

Users are starting to **expect** smartness



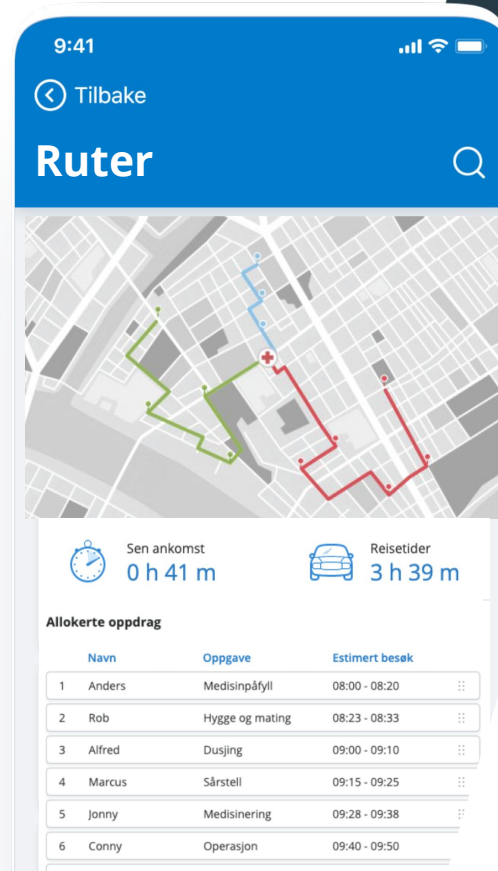
Optimization

Users spend large amounts of time on complex optimization tasks



Predictions

Users require smart predictions to assist their workflow



Quick facts

18,675 M



Revenue 2020

1M

Customers contracts

12,500

Employees

-  Headquarters
-  Other locations

Visma InSchool

Key information

355

Schools

High schools

Vocational schools

Adult education

11

Counties

8,000

School admins

35,000

Teachers

190,000

Students

Requirements

1200 Functional

100 Technical

Cloud-based

Continuous
delivery

Timetabling

Optimization Technologies InSchool

Automated allocation of:

- Teachers
- Time slots
- Rooms

These are all time-consuming tasks

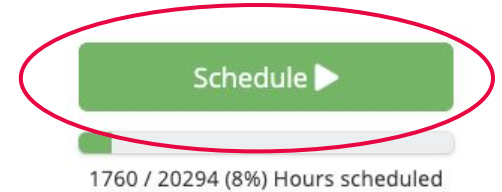
The screenshot displays a web-based timetabling application. At the top, there is a 'Publish timetable' button and a 'Year Overview' button. A 'Schedule' button is visible on the right, with a progress indicator below it showing '1760 / 20294 (8%) Hours scheduled'. Below these are filters for 'Filter by base class', 'Highlight room', 'Highlight teacher', and 'Highlight teaching group'. There are also dropdown menus for 'Base Class', 'Room', 'Teacher', and 'Teaching Group', along with 'Break periods: 1' and 'Rows: base clas'. A 'Select Optio' dropdown and an 'Actions' button are also present. The main area is a grid with columns representing time slots (1, 2, 3, 4) and rows representing classes (1STA to 2STA). Each cell in the grid contains a small orange icon with a number, likely representing a teacher or room assignment. At the bottom, there is an 'Items per page' dropdown and a page indicator '1 - 10 of 26'.

	1				2				3				4																
Base classes	08:20	09:05	10:00	10:45	12:10	12:55	13:50	14:35	08:20	09:05	10:00	10:45	12:10	12:55	13:50	14:35	10:00	10:45	12:10	12:55	13:50	14:35	08:20	09:05	10:00	10:45	12:10	12:55	
1STA 108/1411																													
1STB 143/2273																													
1STC 152/2273																													
1STD 143/2273																													
1STE 152/2273																													
1STF 149/2273																													
1STG 157/2639																													
1STM 5/149																													
1STX 5/840																													
2STA 240/6318																													

AI is not magic

The challenge:

- How do we make users *trust* the automation?
- How do we make users, UX/UI devs and backend devs *understand* it well enough to work together?



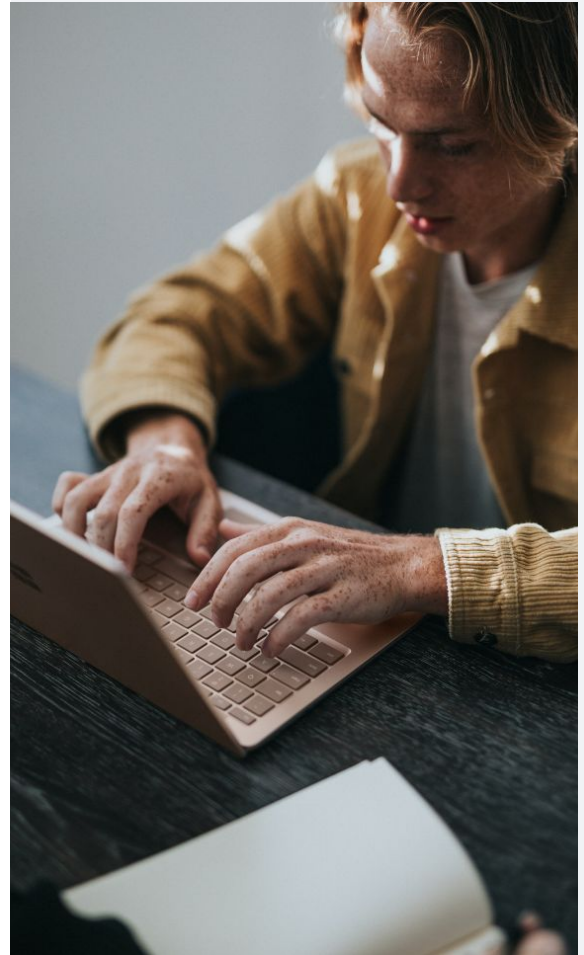
periods: I ▾ Rows: base clas ▾ Select Optio ▾ Actions ▾

	3						4					
9:35	10:00	10:45	12:10	12:55	13:50	14:35	08:20	09:05	10:00	10:45	12:10	12:55
9:20	10:45	11:30	12:55	13:40	14:35	15:20	09:05	09:50	10:45	11:30	12:55	13:40

Demystifying the AI

The solution:

- Start with what the users want - not the other way around
- Work with UX-experts from the outset
- Transparency - make sure the users understand *why* the AI makes the choices it does
- The timetabling algorithm searches for solutions much like a human!

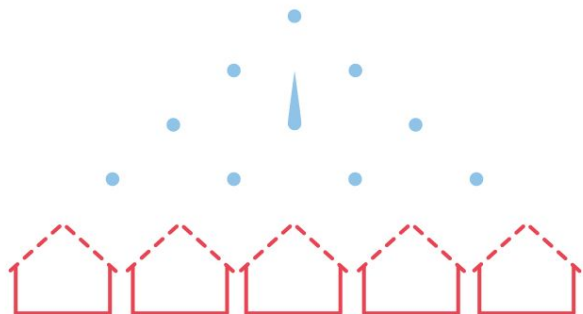




If you don't have a question, I
don't have an answer.

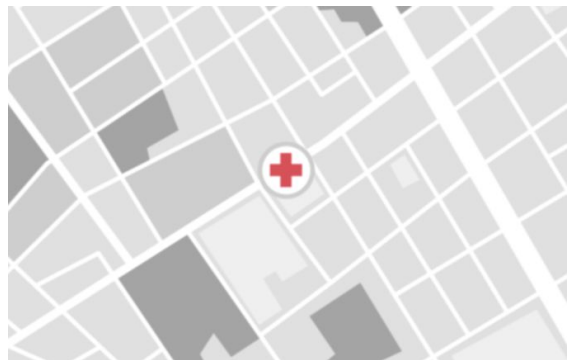
Name Lastname

Title, Company



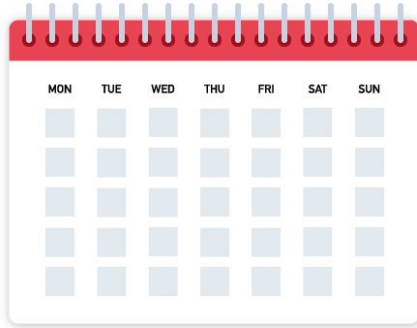
✓ **Kindergarten optimization**

Improving the admission process for kindergartens





✓ **Home nursing care route plans**

Optimizes allocation of workers to tasks and determines driving routes



Work calendar

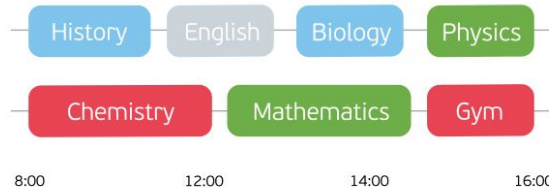
-  Shift days
-  Shift violation
-  Vacation days

✓ Workforce management

Assisting schedulers in creating fair and efficient schedules adhering to laws

✓ Timetabling for schools

Automating the timetabling process for schools





Questions?



Entrepreneurial
Responsible
Dedicated
Inclusive

Make progress happen

