



VII EDYCJA E-LEARNING FUSION
DIGITAL LEARNING & training market
CONFERENCE & EXHIBITION 2023

NEW

14-15 Listopada 2023
WARSAWA

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Zaprezentuję temat:

Leveraging Adaptivity to Decrease Study Time with 30+%

Organizator:

Digital
Learning
Centre



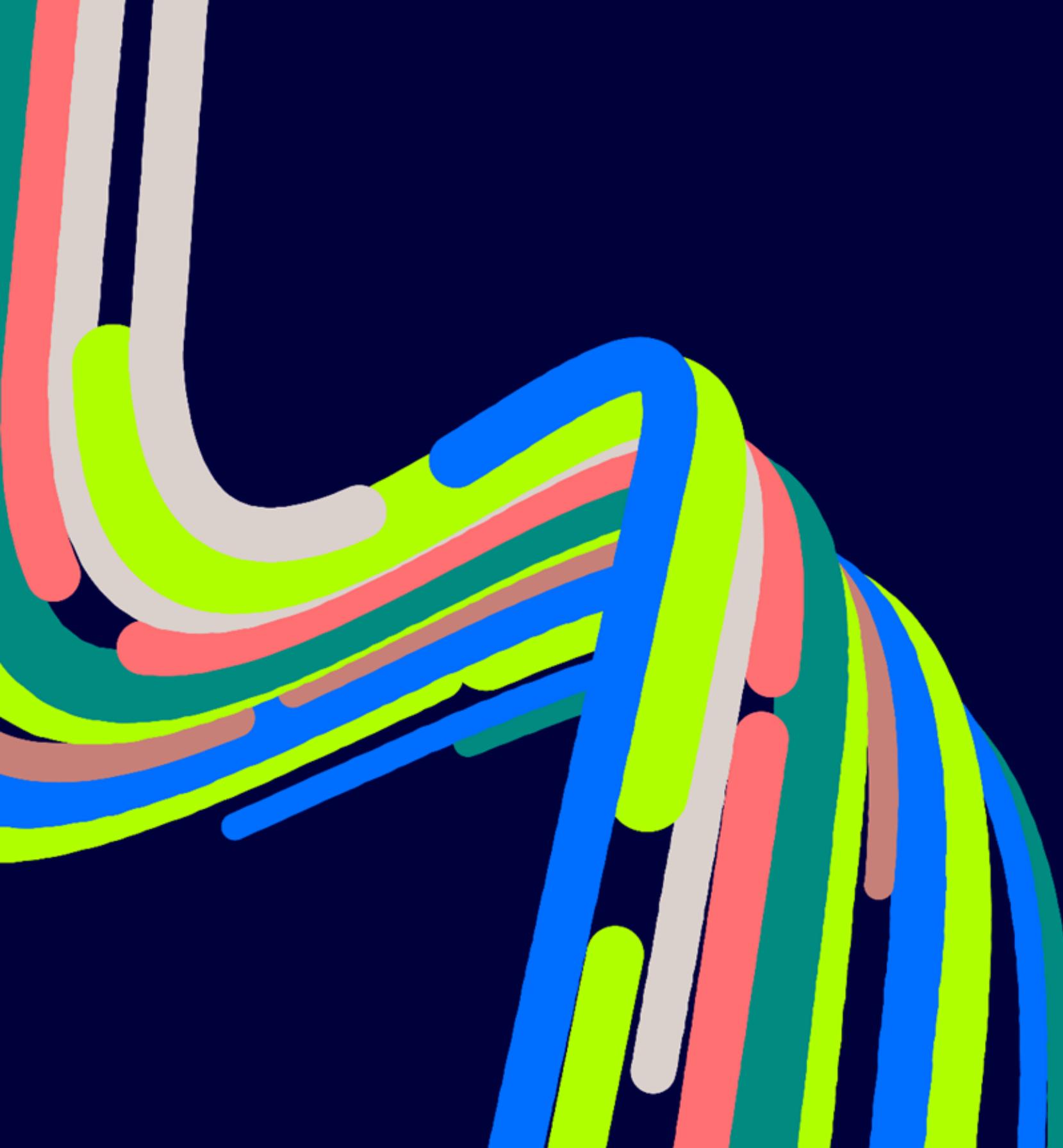


A question for you

*What do you think of
when we talk about
"adaptive learning"?*

Why adaptive medical mathematics?

- Less time spent in training
- The initial knowledge, training history of nurses in maths shows a great variety
- Nurses experience a skills gap in maths: practising helps them to bridge the gap and gain more confidence
- Market trends
- Development of ID's



Adaptive learning

Medical Mathematics
learning journey

First, our definition of adaptivity

MEMOTRAINING: Increase your retention 6 Questions START X

CONTINUE WITH: Lesson: Everything you need to know about Cacti START X

OBJECTIVE			
Cacti Knowledge	50%	<input type="checkbox"/>	>
The Basics	100%	<input checked="" type="checkbox"/>	>
Advanced	0%	<input type="checkbox"/>	>
Sales Techniques	79%	<input type="checkbox"/>	>
Networking Skills	42%	<input type="checkbox"/>	>
Personal Motivation	95%	<input checked="" type="checkbox"/>	>

Always know the next step towards achieving your learning objectives.



VERVALDATUM: 06-04-23



Demo Basic life support

Deze demo bevat animaties, simulatieoefeningen en een video-eindtoets

NOG NIET GESTART

START

VERVALDATUM: 22-12-22



Medisch rekenen: vaste en vloeibare medicatie

NOG NIET GESTART

START

VERVALDATUM: 14-07-22



Learning journey (adaptive)

bohn staffleu van loghum

HOME MEDISCH REKEN... CATALOGUS BONNY HELP

ACTIVITEITEN 100%
DOELEN 100%

Medisch rekenen: vaste en vloeibare medicatie

Hieronder zie je je voortgang per onderwerp:

DOEL	100%
Vaste medicatie	100%
Benodigde medicatie op voorraad	100%
Dosering per gift berekenen	100%
Hoeveelheid werkzame stof berekenen	100%
Vloeibare medicatie	100%

ZOEKEN

Inleiding

Over deze module [BEKIJK DETAILS](#)

Instaptoets 84%

Vaste medicatie

1 Dosering per gift berekenen [BEKIJK DETAILS](#)

Vloeibare medicatie

1 Verdunnen [BEKIJK DETAILS](#)

Eindtoets 100%

Learning journey (linear)

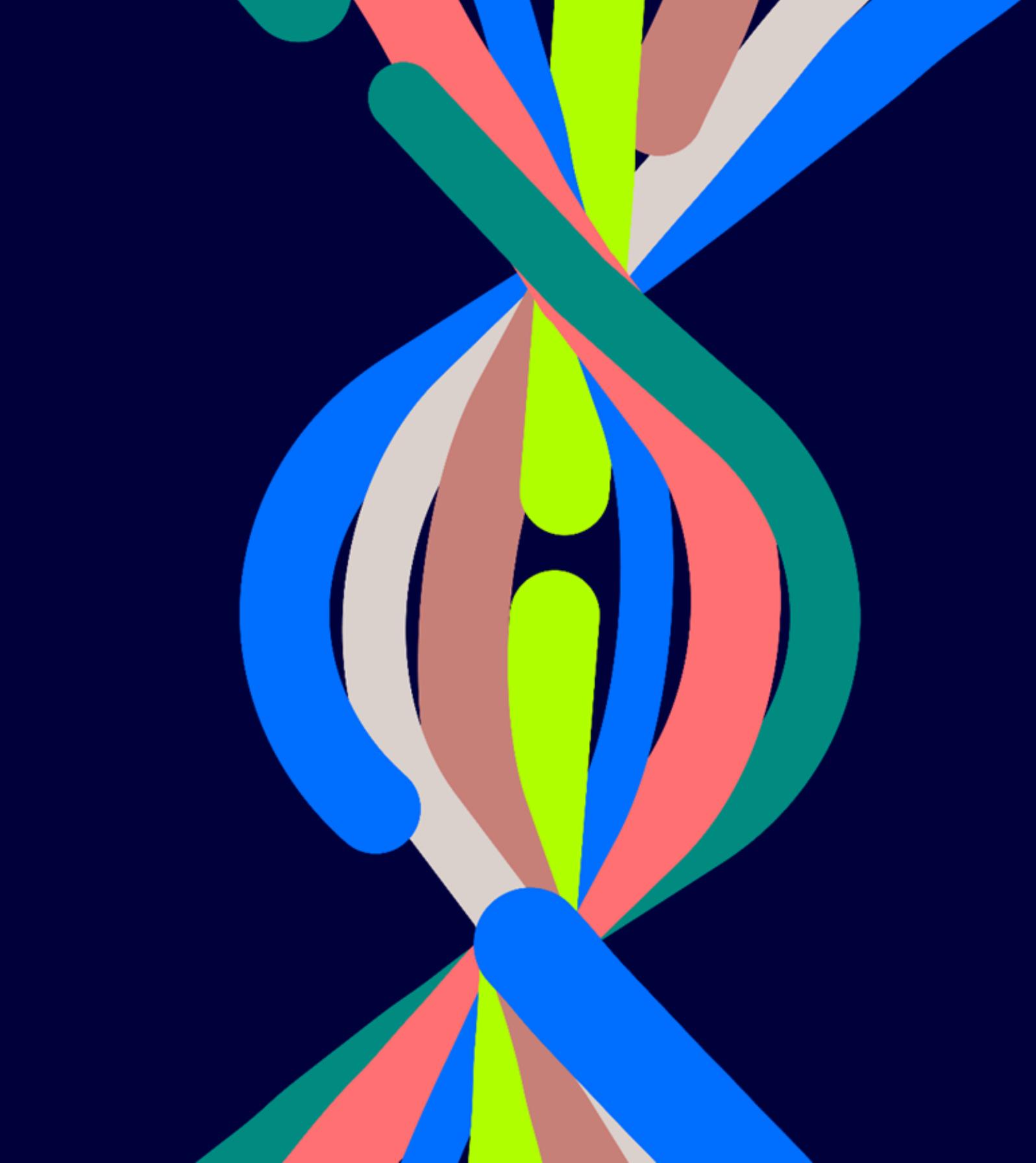
The screenshot shows a user interface for a learning journey. At the top, there is a navigation bar with 'HOME', 'MEDISCH REKEN...', 'CATALOGUS', and a user profile 'CATHARINA'. The main content is organized into sections. The first section is 'Instaptoets', which includes a progress bar and a card for 'Instaptoets vaste en vloeibare medicatie' with a 69% completion rate. The second section is 'Vaste medicatie', which includes three cards: 'Hoeveelheid werkzame stof berekenen', 'Dosering per gift berekenen', and 'Benodigde medicatie op voorraad', each with a 'BEKIJK DETAILS' button. The third section is 'Vloeibare medicatie', which includes one card: 'Concentraties uitrekenen' with a 'BEKIJK DETAILS' button.

The screenshot shows a user interface for a learning journey. At the top, there is a navigation bar with 'HOME', 'MEDISCH REKEN...', 'CATALOGUS', and a user profile 'CATHARINA'. The main content is organized into sections. The first section is 'Vloeibare medicatie', which includes five cards: 'Concentraties uitrekenen', 'Dosering in %-variant', 'Dosering in mg-variant', 'Dosering in (I)E-variant', and 'Verdunnen', each with a 'BEKIJK DETAILS' button. The second section is 'Eindtoets', which includes one card: 'Eindtoets' with a 97% completion rate.

Creating the content

- Developed with SMEs
(1 maths teacher and 3 nurses)
- Prototype tested with target group:
 - 4 nurses in the office
 - 22 nurses from home
- Adaptive versus linear





Our research

What did we look for, and
what did we find?

Designing and conducting the research

- “What effect does adaptivity have on the results of the e-learning Medical Math, in comparison to a linear version?”
- Participants are all healthcare professionals
- Selection of learning objectives
- Pre-test and post-test
- Questionnaire on motivation and self-efficacy
- Analysis: independent T-tests and Pearson correlation coefficient



Recap of the results

 **614** healthcare workers

348
Traditional
e-learning

266
Adaptive
e-learning

Learning Results

Scores on the final exam

89%  **90%**

Time

Average to completion

02^h 09^m
20 sec



01^h 25^m
54 sec



Self-Efficacy

Confidence on the subject after completion

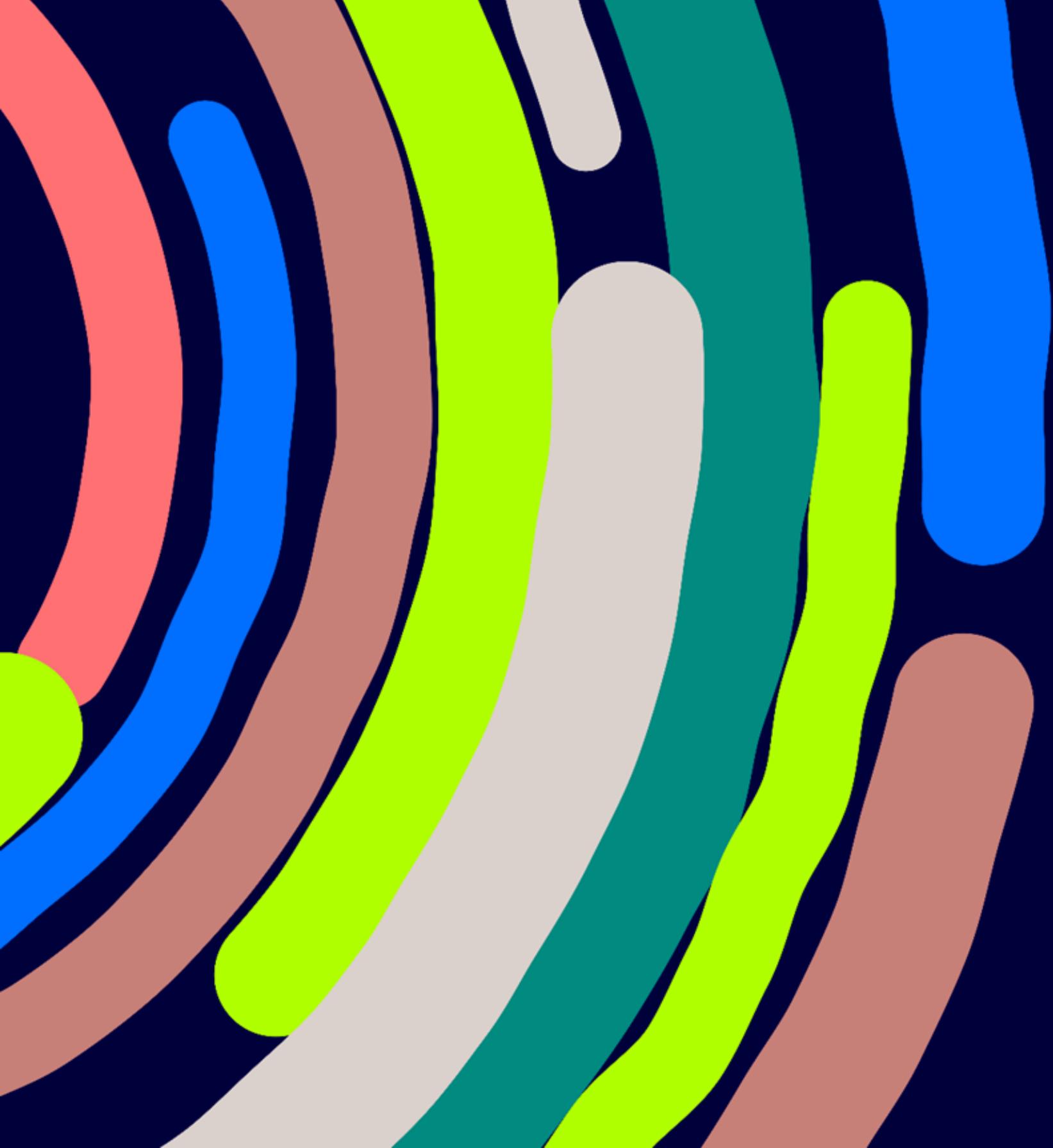
14,4% improved  **15.3%** improved

Overall Satisfaction

After completion of the learning journey

4.34 out of 5  **4.39** out of 5





Impact

Adaptive learning in
healthcare

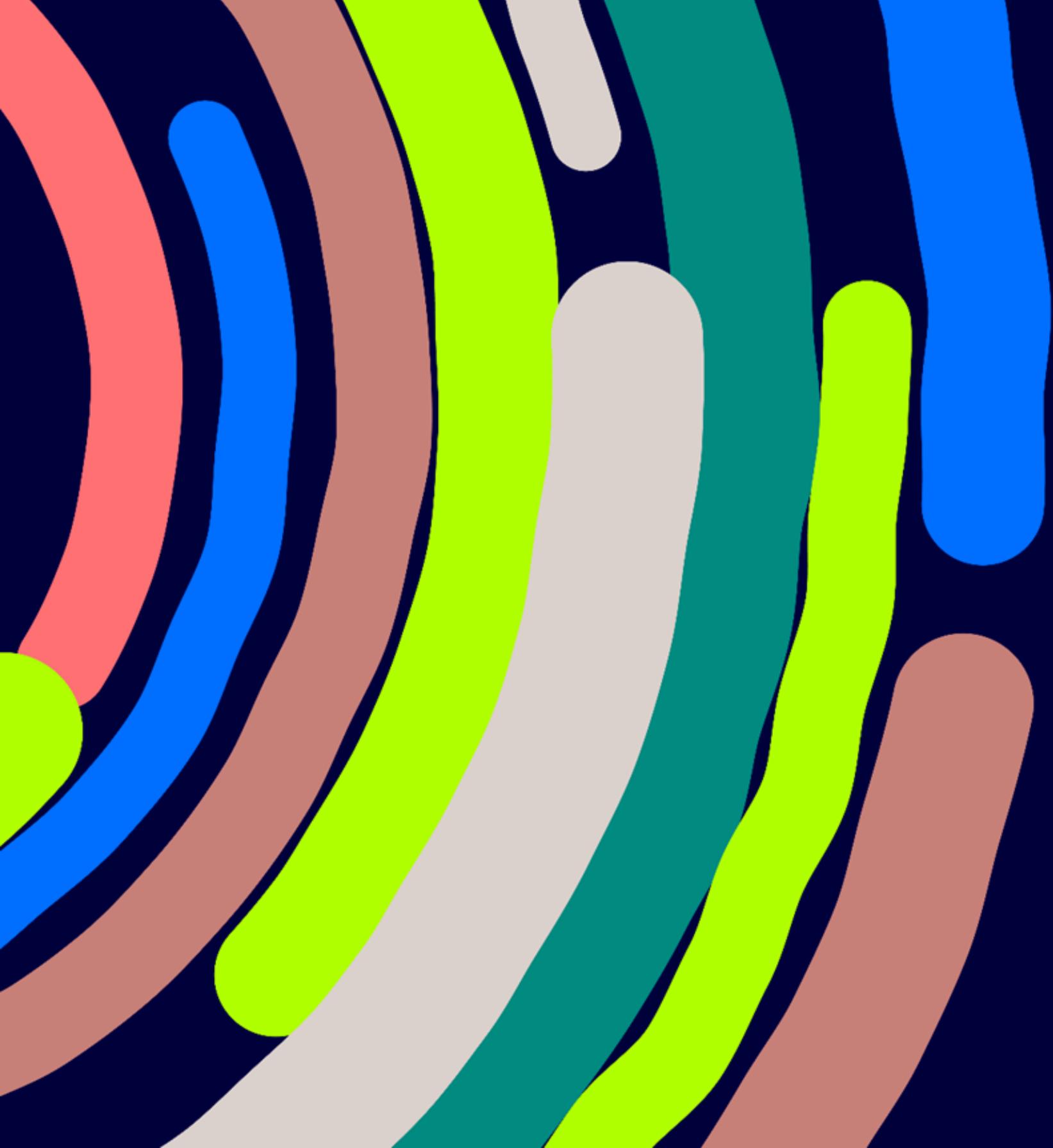
Impact of adaptive learning in healthcare

What is the impact of 33 % less time to competence in hospitals in The Netherlands?

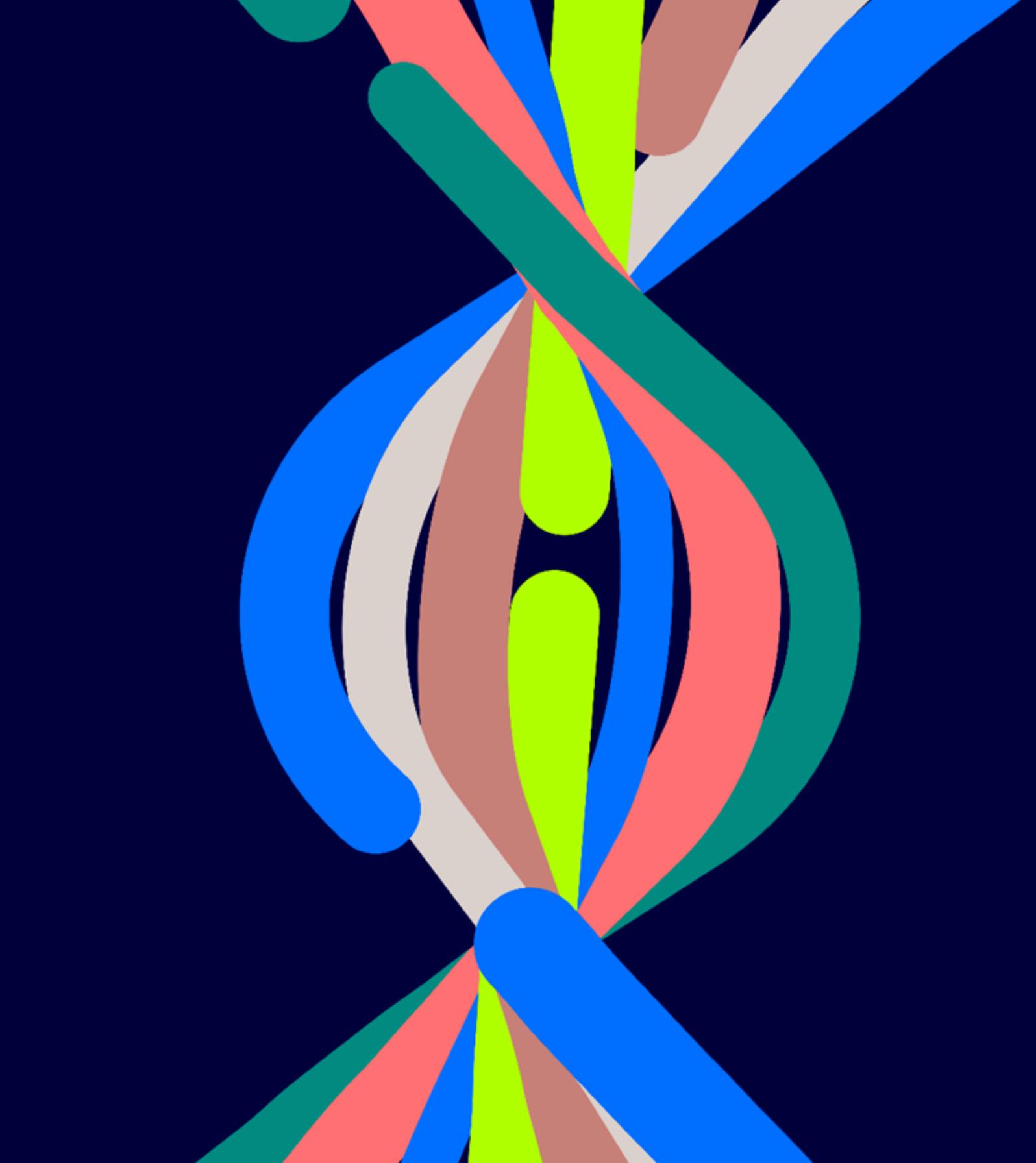
- In 2021 **74.400** nurses employed in **82** hospitals
- Once in every 2 years each nurse follows a medical math training of **2 hours**
- Average salary is **€68,- p/hour**
- Cost spent on training: **€136,-**
- Cost saved on training: **33 % of € 136,- = € 44,88**
- For hospitals in The Netherlands this means a saving of
- **$74.400 * 44,48 = €3.339,072$ every 2 years**





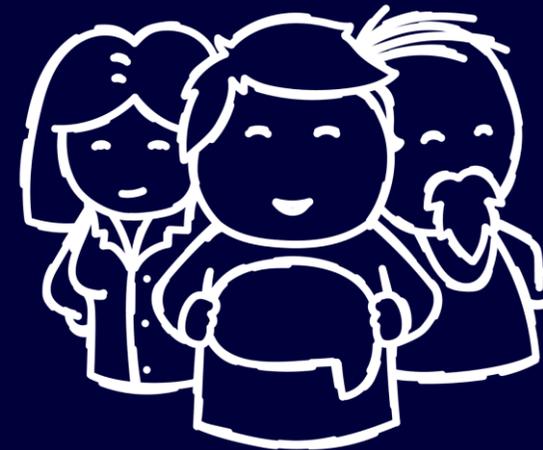


Four criteria for a promising adaptive course



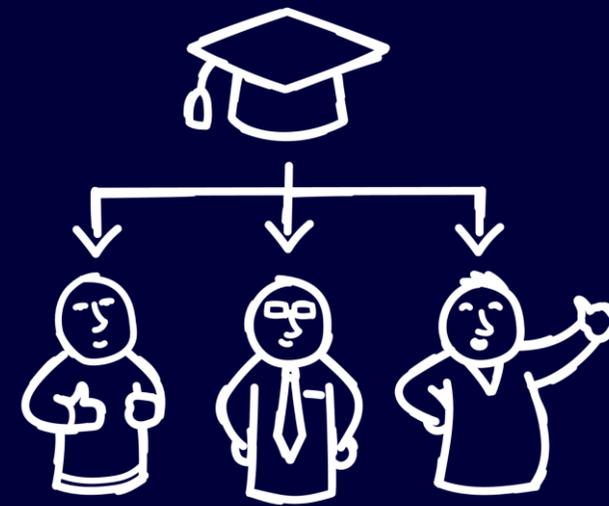
Four criteria for a promising adaptive course

1. You're targeting a large group of learners



Four criteria for a promising adaptive course

2. Variety among learners



Four criteria for a promising adaptive course

3. Clear standards of “good” or “capable”



Four criteria for a promising adaptive course

4. Expertise available on writing good learning objectives





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Organizator:

Digital Learning Centre



Let's Fintech

