

Service-Learning for Web Technology

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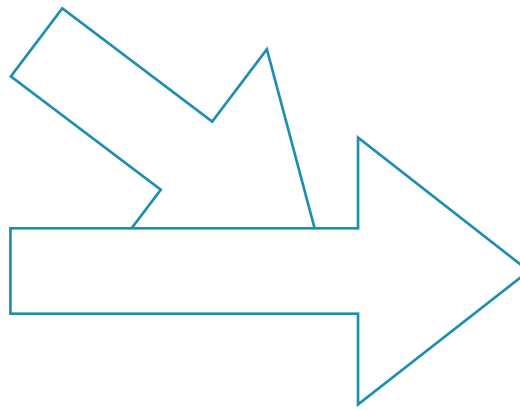


Service Learning

with help of KU Leuven
service learning team



Web Technology



Web Technology 2.0

3Ba Engineering Technology: Electronics-ICT

Service Learning: why?

- Motivation
- Creativity
 - Closed → open assignments
 - Find new solutions that work
- Empathy
 - Software has real impact on people's lives
 - Not everyone is adept with technology



Startpagina



Nieuw



Mijn WAI-NOT



Berichten



Chatten



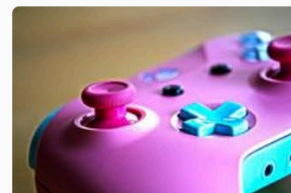
Gastenboek



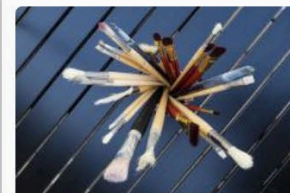
Wedstrijd



Krant



Spelletjes



Vrije tijd



Weten



WAI-NOT+



Naar school

wai-not.be

Assignment

- Design and develop game
- To teach basic computer skills
 - Clicking
 - Double clicking
 - Moving mouse
 - ...

Course setup

- Introductory session
 - Explanation by WAI-NOT and me
- Startup session @ school
 - Some more details
 - Meet **target audience**
- Develop first prototype
- Feedback session @ school
 - Demonstration to **target audience**
 - Individual feedback from WAI-NOT
- Finish game
- Final presentation



Example project



“

In general, I like knowing that your code **makes a difference** [...]. It provides a kind of **satisfaction** that you don't get when writing code that will not **be used** and where you have to work without **feedback**.



“

The biggest challenge in this project was coming up with **simple and fun** games that are very limited in how they are controlled. For this, I looked back at **my childhood**, the things I enjoyed then. Also we **talked to the children** about what they liked about the original games or other games.



“

[...] a **unique experience**, because as a student you rarely work with (social profit) organisations and the special target audience also introduced an additional factor [...]. This caused me to pay more attention to learning how to deal with the **needs of our target audience**.



“

It helped me to see **more than just the code**, which is usually all we see as engineers-in-training.

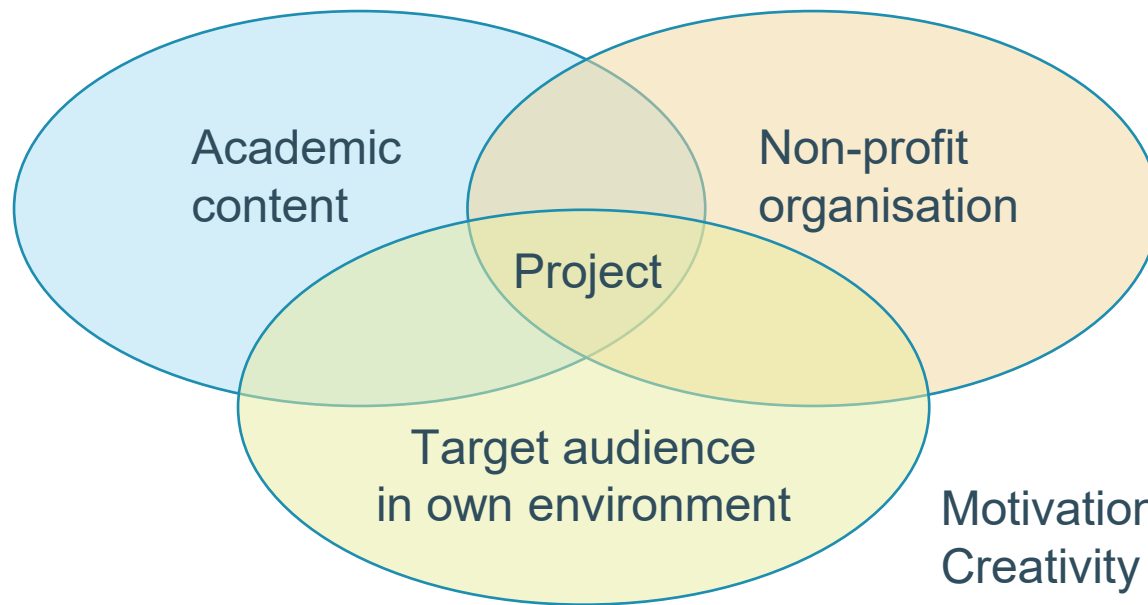
“

[...] **user-friendliness**, the **educational character**, ... These are **skills** that will surely come in useful later on in my career!





Technical
challenge



Guidance
Feedback
Confidence

Motivation
Creativity
Empathy

Lesson learnt

- Sometimes the social profit org is too specific
- Encourage interaction between social profit org and students (agile)
- Reflection: written report → final presentation
- Evaluation: do all student achieve all of the technical learning outcomes?
- Good partner is important
 - Project application for citizen science involving elderly

Conclusion

- Happy students
 - Motivated
 - Learned new skills
- Happy social profit org
- Happy professor
 - SEFI Francesco Maffioli Award of Excellence for Developing Learning and Teaching in Engineering Education





Thanks for listening !

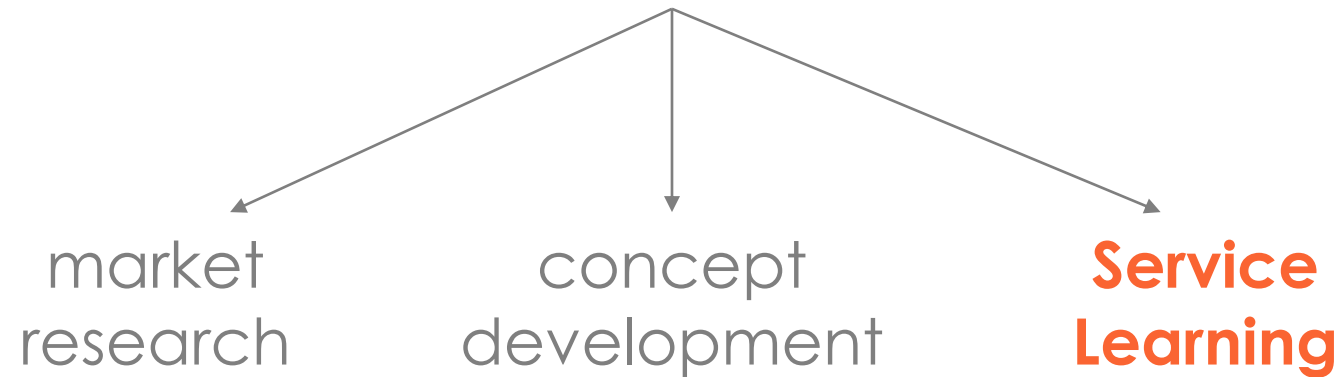
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SERVICE LEARNING & DIGITALIZATION

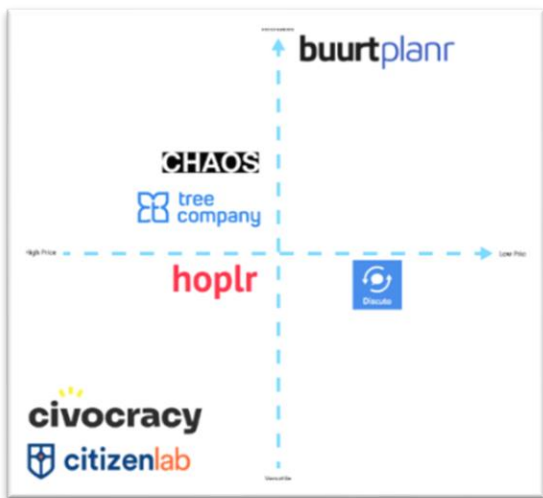
a practice from Thomas More UAS > LAB 1

Filip Burgelman

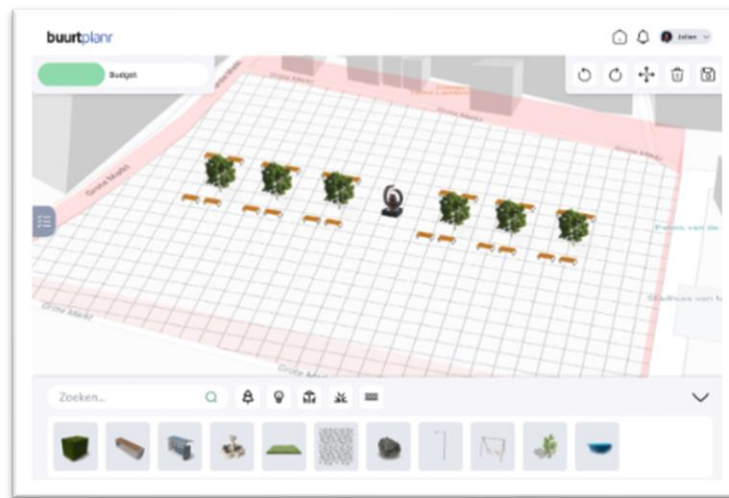
Where > pba DIGITAL EXPERIENCE DESIGN Course > integration course “LAB 1”



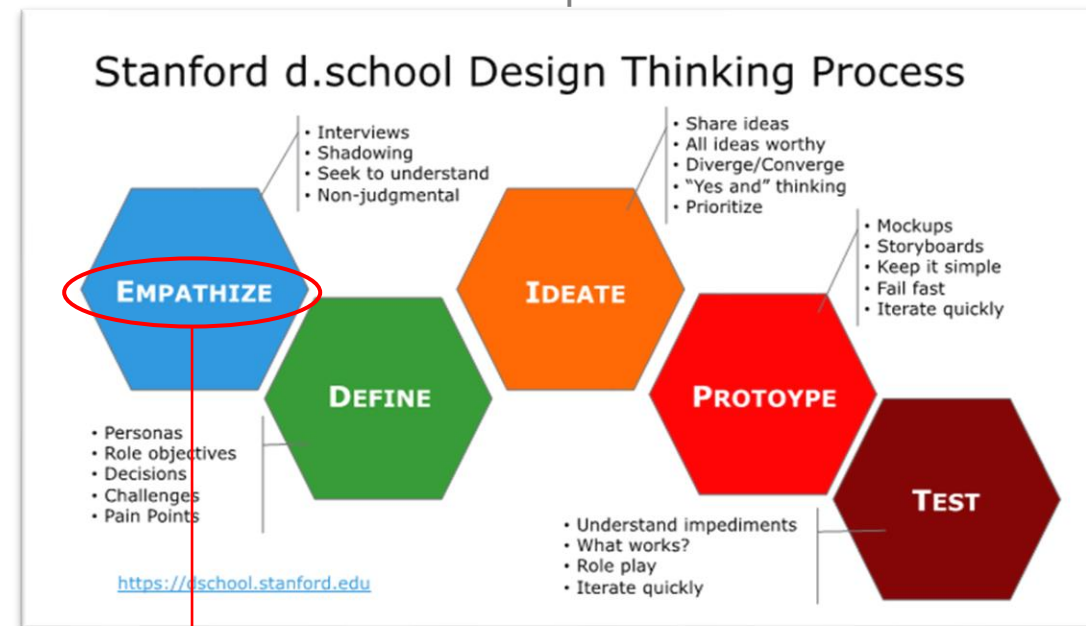
market
research



this example > *buurtplanr*: an online platform for citizen co-creation



concept
development



- usually superficially applied competence, tough crucial
- perhaps Service Learning can help to empower empathy?

WHY SERVICE LEARNING INTEGRATED IN LAB 1?

1. WE WANT TO MASTER EVERYTHING WITH KNOWLEDGE FROM BOOKS/GOOGLE/ACADEMIC CLASSES.

*e.g., a recent study of over 1,000 young people between 12 and 18 shows that social media can also negatively affect their mental well-being. For almost one in four, looking at other people's profiles leads to less self-confidence. > **Does this make us think we know how such a young person really feels? Does data tell everything?***

2. THE 'FINITENESS' OF SCHOOL KNOWLEDGE CONTRASTS WITH THE 'INFINITY' OF ENCOUNTERS, RELATIONSHIPS ... WITH OTHERS.

*compare it to the **empathy phase** in a design thinking cycle: by empathizing with the thoughts and feelings of others, you find out more about how that other thinks, feels, experiences, interprets the world, etc., thus gaining more knowledge/insight about that other. **You put yourself in the other person's head, soul, heart.***

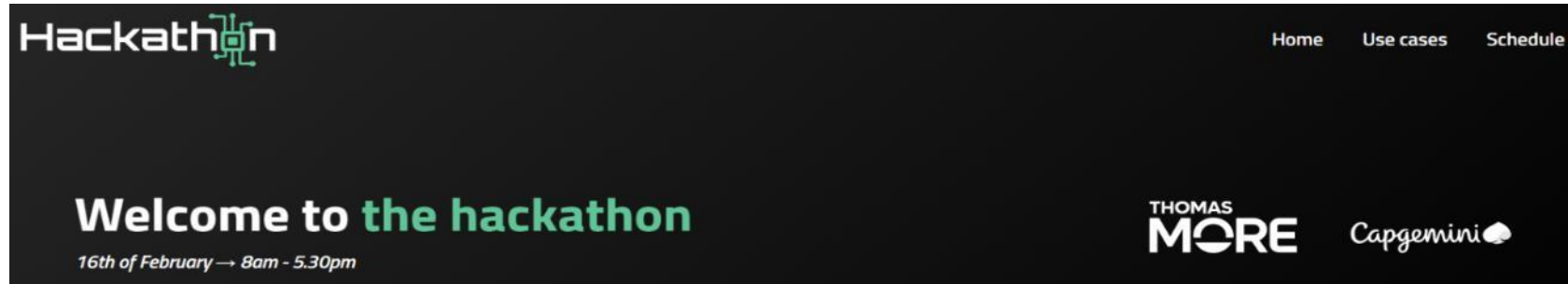
3. WE ARE GOING TO DO THAT WITH SERVICE LEARNING:

"empathize with the thoughts and feelings of others in a given community, serve these others through concrete engagement, reflect on the experience gained in a structured way, and thus learn on a substantive, social and personal level."

LAST ACADEMICAL YEAR OVERALL XD PROBLEM STATEMENT:

“DIGITAL SOCIETY”:

HOW WILL ONGOING DIGITALIZATION EFFECT OUR DAILY LIVES?



<https://hackathon.nickbevers.be/>



TASKS

Service-learning is an experiential education method in which, through service, reflection and academic learning, students grow academically, personally and socially.

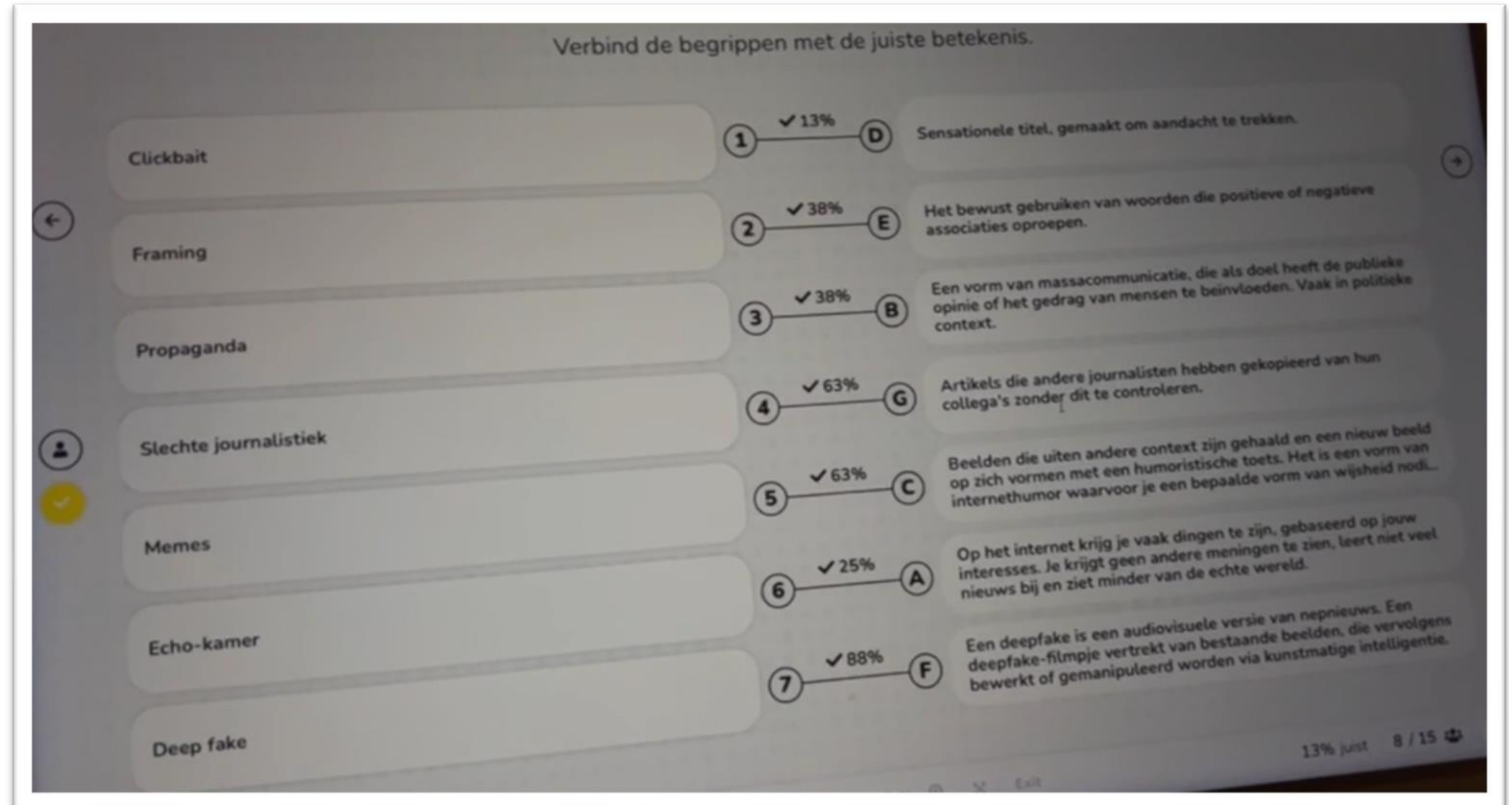
HOW:

- 1. You are going to empathize/engage substantively with the 'issues' of your target audience of your use case and report on them by writing **a paper** of max. 2A4 > you prove that you know something about the topic.*
- 2. You are going to do 'something' for that other(s) who has a particular need/need/shortage/question/etc. linked to your use case. **Your role as a service provider can be consultant - observer - guide**. You will test the theory of your content research against practice, in the context of an internship of at least 4 hours spent with that other(s).*
- 3. You reflect on your overall experience gained through **a filmed report/vlog**.*

Paper Service Learning Stage

Digital Society & Democracy

Inleiding	2
De begrippen democratie & digitale samenleving	2
Het gevaar	2
De gevolgen van fake news	2
Veiligheid op internet	3
Sensibiliseren door mediawijsheid	3
Storytelling	4
Conclusie	4
Bronnen	5



theme -----> 1. learning > paper -----> 2. serving > consultant, guide, observer, -----> 3. reflection > filmed report/vlog

<https://lars.rmksr.be/xd/lab1/service-learning/storytelling-filmpje>

TIP: USE THIS CHECKLIST

1. **The engagement provides a response to a real need**
2. **Students are leaders in every phase of the project (motivation to evaluation, active co-creative role)**
3. **There is high integration between service and learning (service goals and learning goals)**
4. **The SL project is embedded in the curriculum, link to learning**
5. Project is multi- or interdisciplinary
6. The target group has an active role in the project
7. There is strong cooperation with the partner organization
8. **The course of the project is tracked and documented**
9. **Critical reflection is carried out structurally during the project**
10. The project is evaluated

SERVICE LEARNING: THE WORLD AROUND US IS AN INFINITE LEARNING SPACE

thank you!

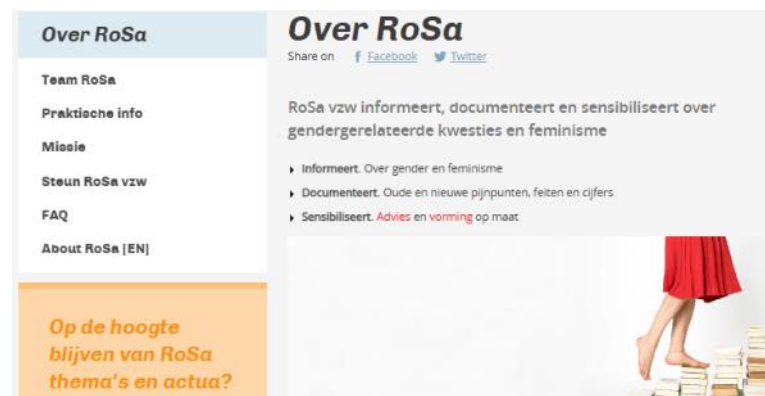
VOORBEELDEN VORIGE SCHOOLJAREN:



<https://www.youtube.com/watch?v=w04cYQFpm6k&feature=youtu.be>



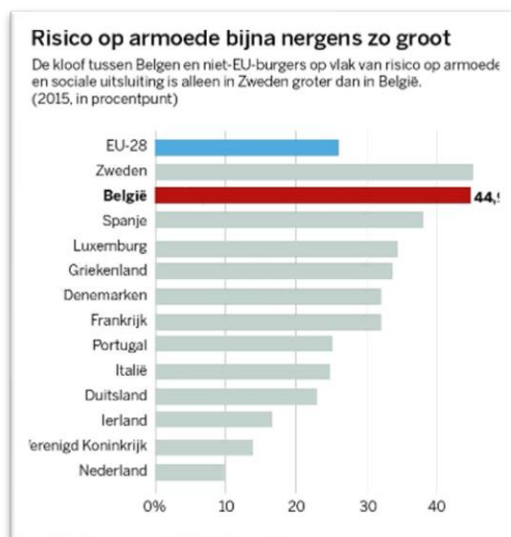
thema -----> 1. leren > paper -----> 2. dienen > service-learning stage -----> 3. reflectie > story telling filmpje



<https://www.youtube.com/watch?v=xuLvlO15Efk&t=160s>

thema -----> 1. leren > paper -----> 2. dienen > service-learning stage -----> 3. reflectie > story telling filmpje

VOORBEELDEN VORIGE SCHOOLJAREN:



thema -----> 1. leren > paper -----> 2. dienen > service-learning stage -----> 3. reflectie > story telling filmpje
<https://vimeo.com/335249513>



UC Leuven
Limburg
MOVING MINDS

IT students &
Digital inclusion



- Program Bachelor Applied Computer Science
 - Dutch program
- New course in renewed program: *IT & Society*
 - 2nd year in program – 150 students
- *Start 19 September 2023*



UC Leuven
Limburg
MOVING MINDS

Training on Service Learning

- Our course is supported by KU Leuven
 - Multiple days with intense workshops
- Support to apply Service Learning to our specific course *IT & Society*
 - I.e. Questions for reflection process of student
 - Reflection before, during and after Service Learning





Course *IT & Society*

- Two parts to the course:
 1. IT & Law:
 - Privacy
 - Ethical hacking
 - Intellectual Property
 - ...
 2. IT & Sustainability:
 - Ethics
 - Energy
 - Digital Inclusion



Made by me with my prompt using Midjourney



What is digital inclusion?

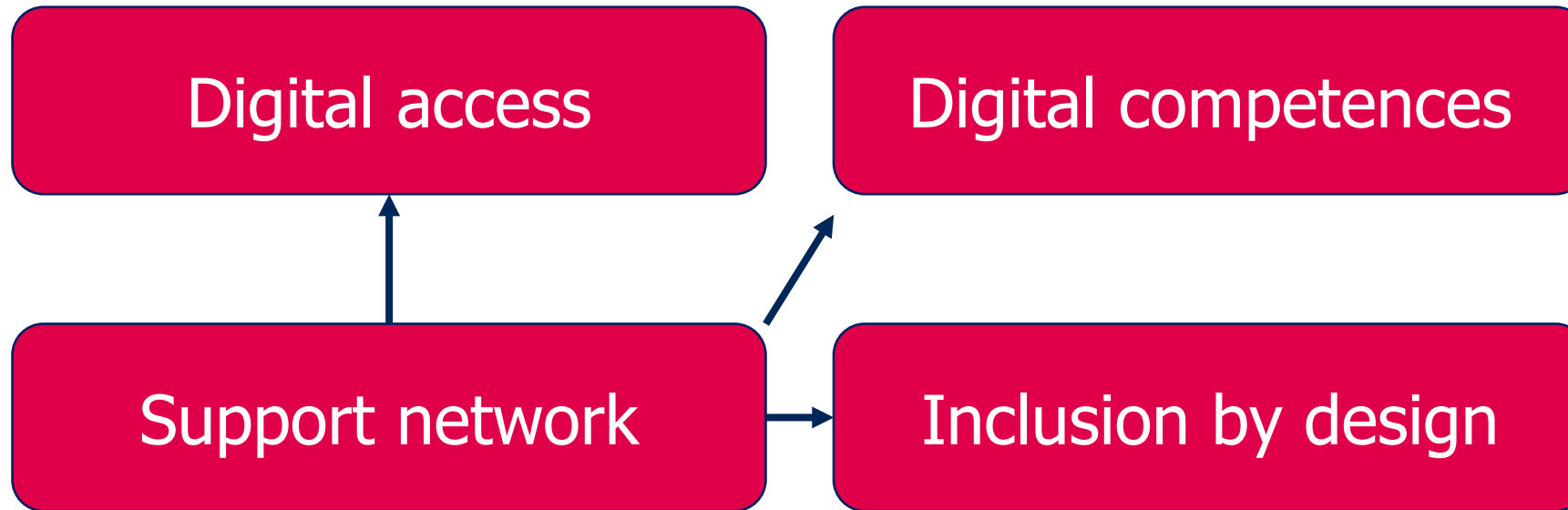
The term "digital inclusion" refers to all the actions and solutions needed to ensure that everyone is digitally included.

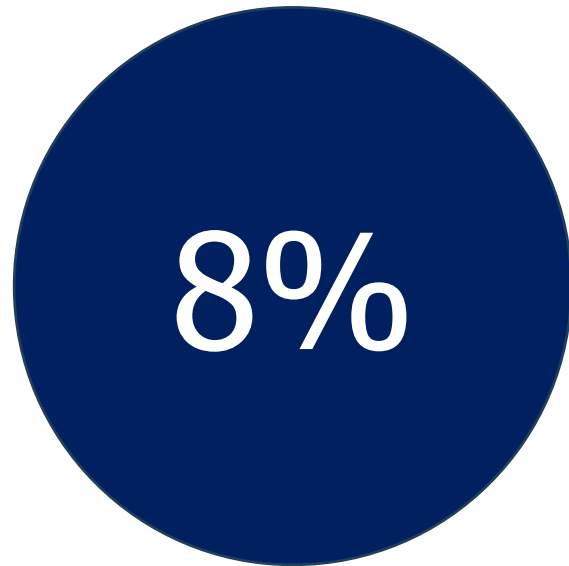
Examples include:

- handing out laptops to school-age youth,
- a point of contact in the library for those who need help with their online administration,
- or specific standards to make web applications user-friendly and inclusive.



4 preconditions for digital inclusion



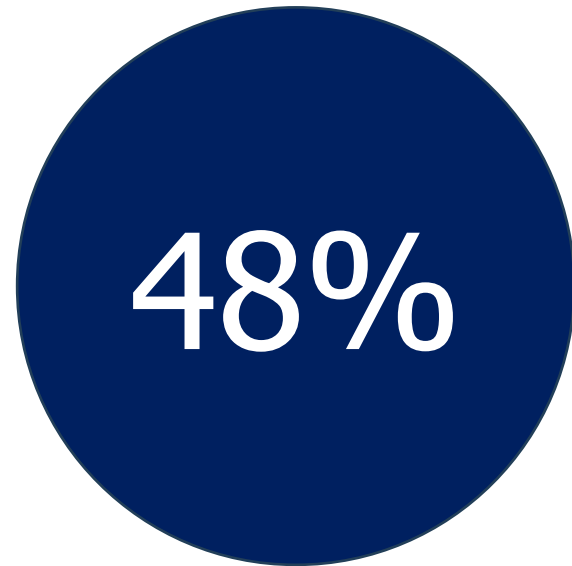


of Belgians do not have
an Internet connection at home.

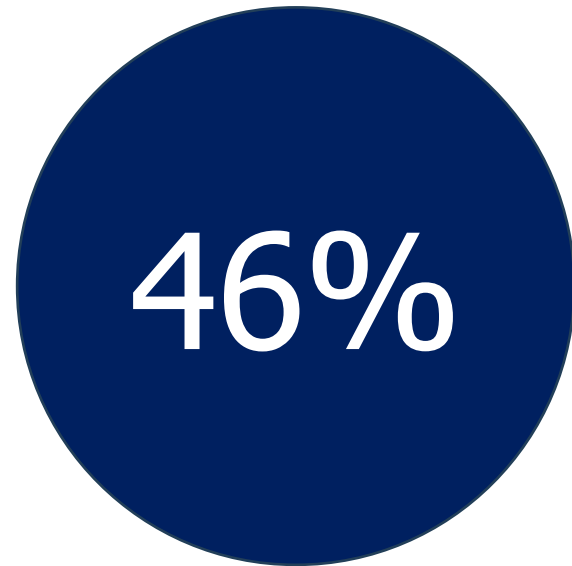


13%

of young people in secondary education never used a laptop, tablet or desktop.



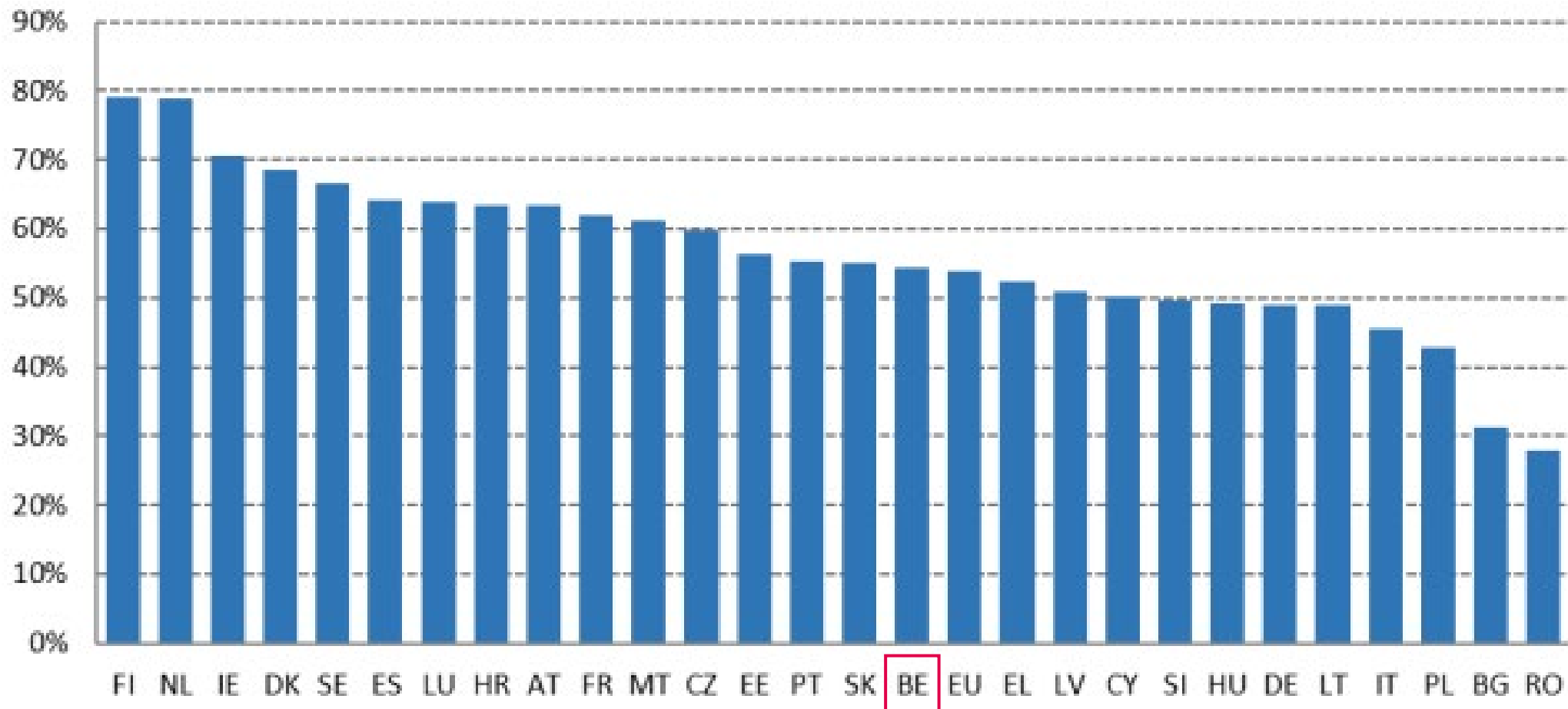
of single people have
weak digital skills.



of the Belgian population
are digitally vulnerable.



Figure 3 At least basic digital skills (% of individuals), 2021





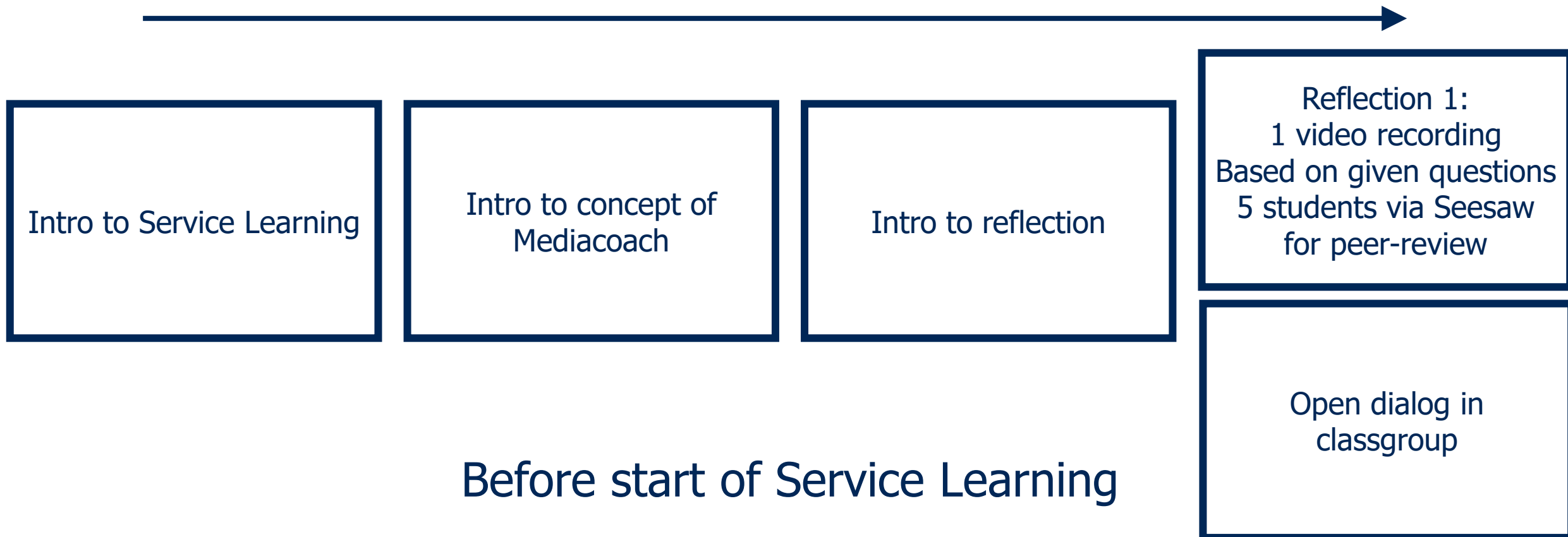
Goal of Service Learning

- Student experiences what it means to be digitally vulnerable
- Student reflects on the direct or indirect influence they have on people and society in their role as IT'er
- Influence by:
 - Developing software
 - Appropriate training of users
 - Decision making on mass hardware and software deployment
 - ...



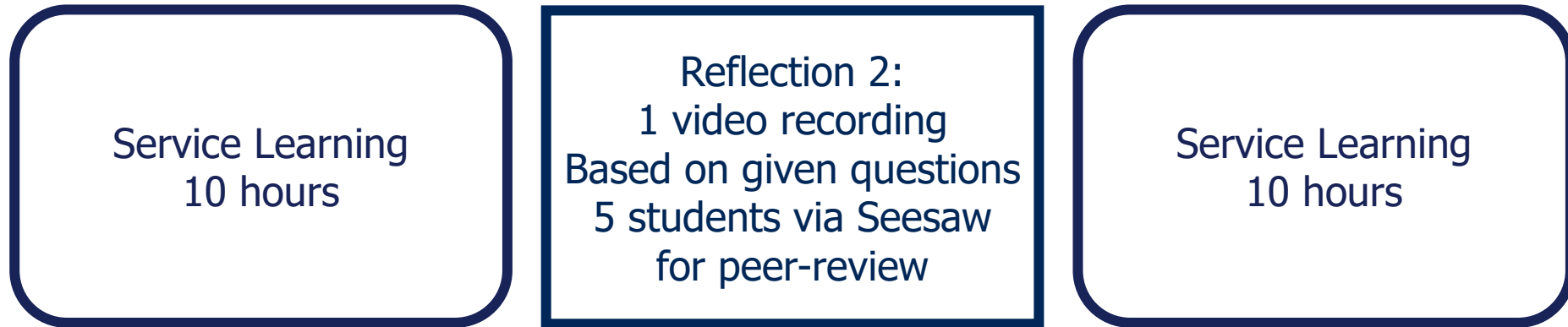


Service Learning path





Service Learning path



Whilst Service Learning



Service Learning path



Reflection 3:
1 video recording
Based on given questions
5 students via Seesaw
for peer-review

Open dialog in
classgroup

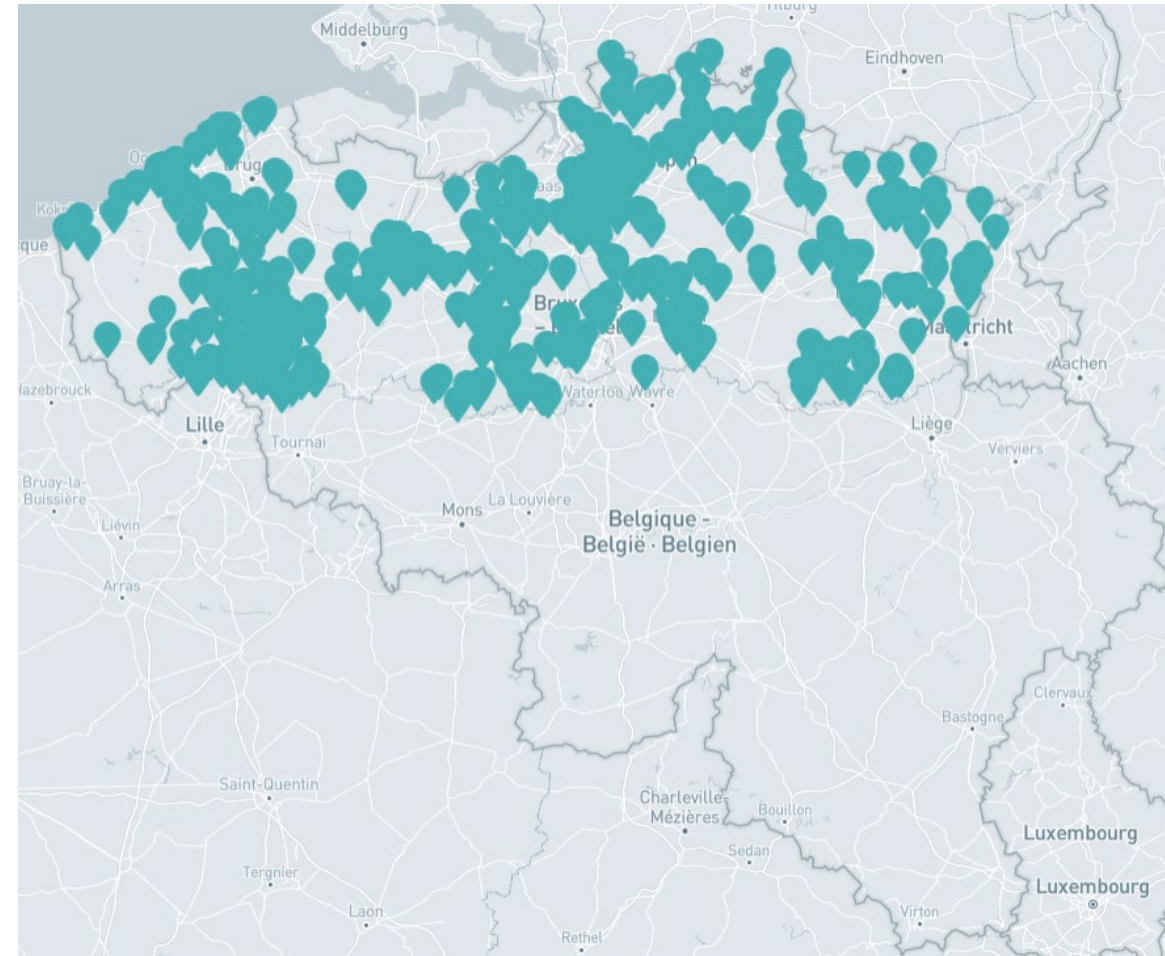
Celebration
Drink with all students
and organisations

After Service Learning



Service Learning activities

- “Digital banks”
 - Locations in Flanders for your digital questions
 - to lend a laptop
 - to turn in a used device (laptop, tablet,...)
 - to receive training on how to use a laptop
 - to answer all your digital questions
 - training on the basic use of a laptop





Challenges

- Will we be able to provide enough SL opportunities for 150 students?
- Enough allocated time for Service learning = 2 credits
 - Norm student: 1 credit ~ 25 hours
 - +- 50 hours for:
 - introduction,
 - Service Learning activity,
 - commute,
 - reflection questions,
 - peer review
- Internal operation of partner organisation



Future challenges

- Increasing growth of IT programs (+10% each year)
 - Will we be able to provide enough SL opportunities?
- Addition of extra IT course in other IT program in '24
 - +- 30 students
 - Same challenge as above
- New program for international students starts '24 – '25
 - +- 30 students
 - Same challenge as above
 - New: English speaking "target groups"



Evaluation of Service Learning

- February '24
 - Partnership with organisations
 - Type of activities
 - Location of activities
 - Reflection
 - Peer evaluation
 - ...
- Impact study
 - On students
 - On "target groups" ~ digital vulnerability



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Thank you

Any questions?

