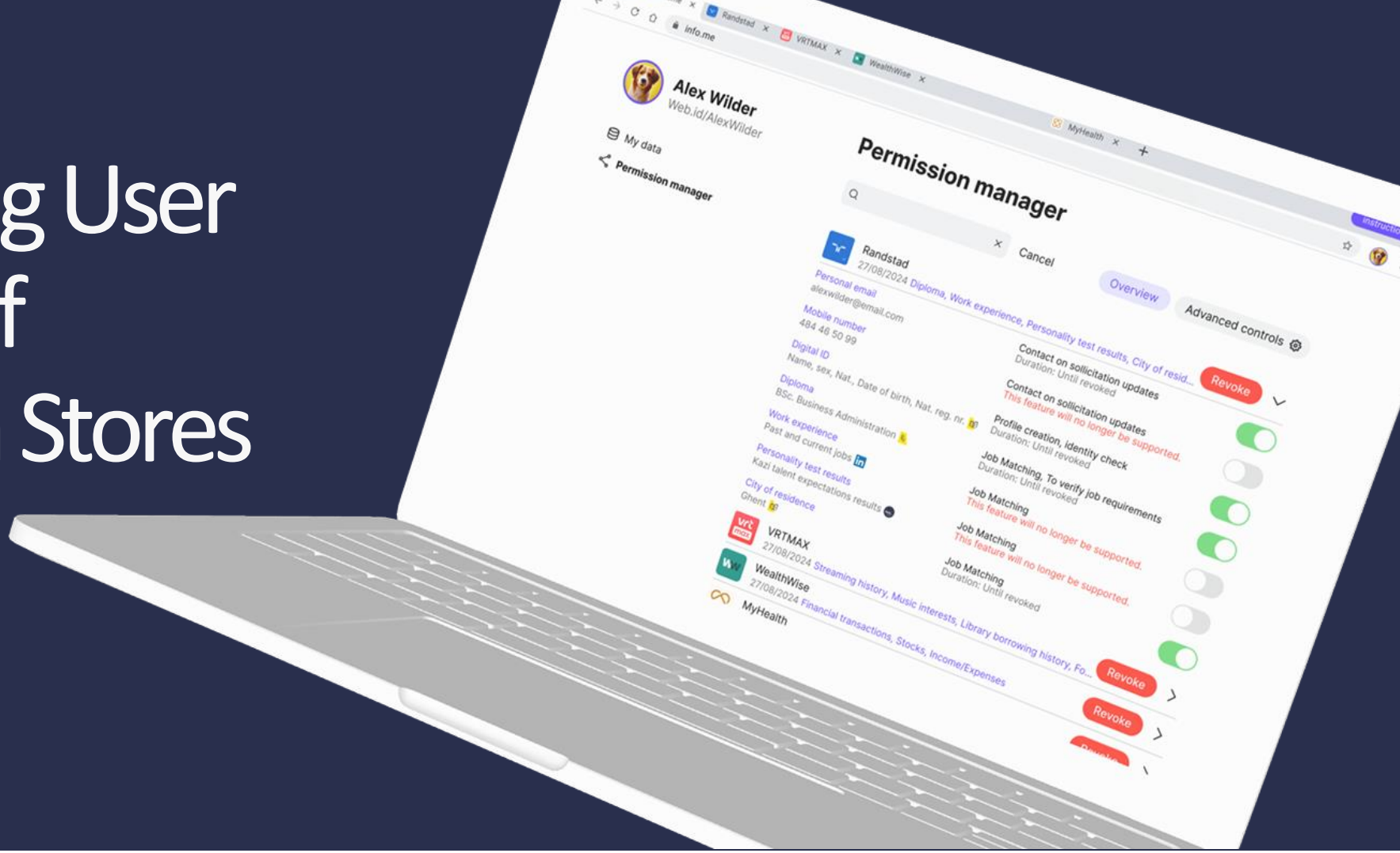
Understanding User Perceptions of Personal Data Stores

Tim Theys
Imec-Mict-Ugent



Vlaamse overheid

DEPARTMENT OF ECONOMY SCIENCE & INNOVATION

Gefinancierd door de Europese Unie
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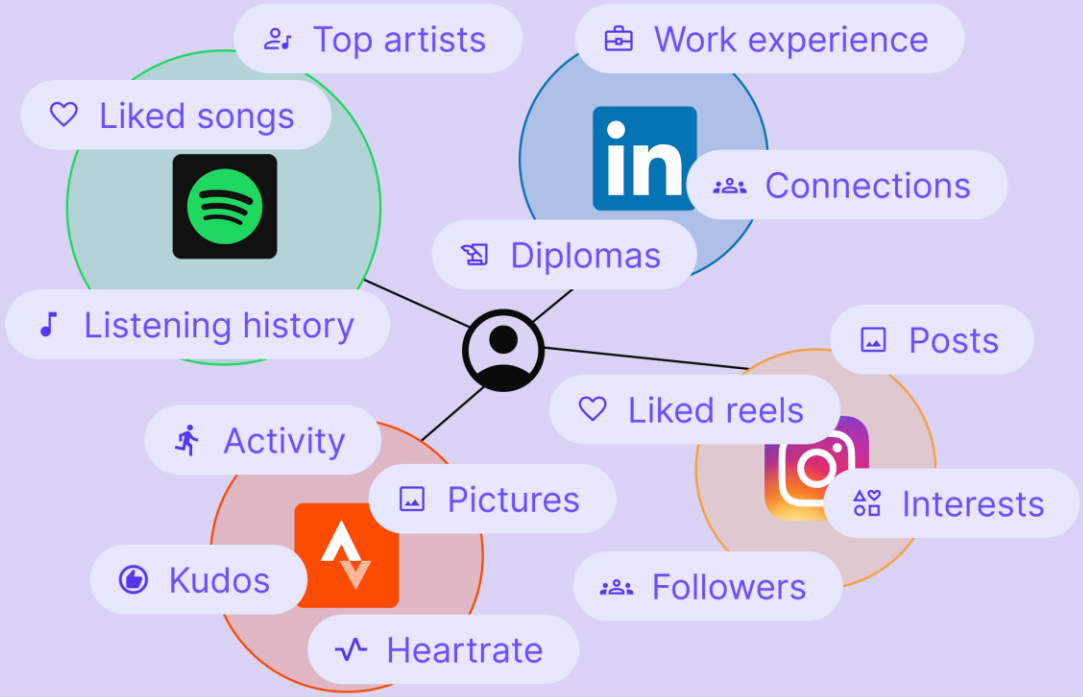
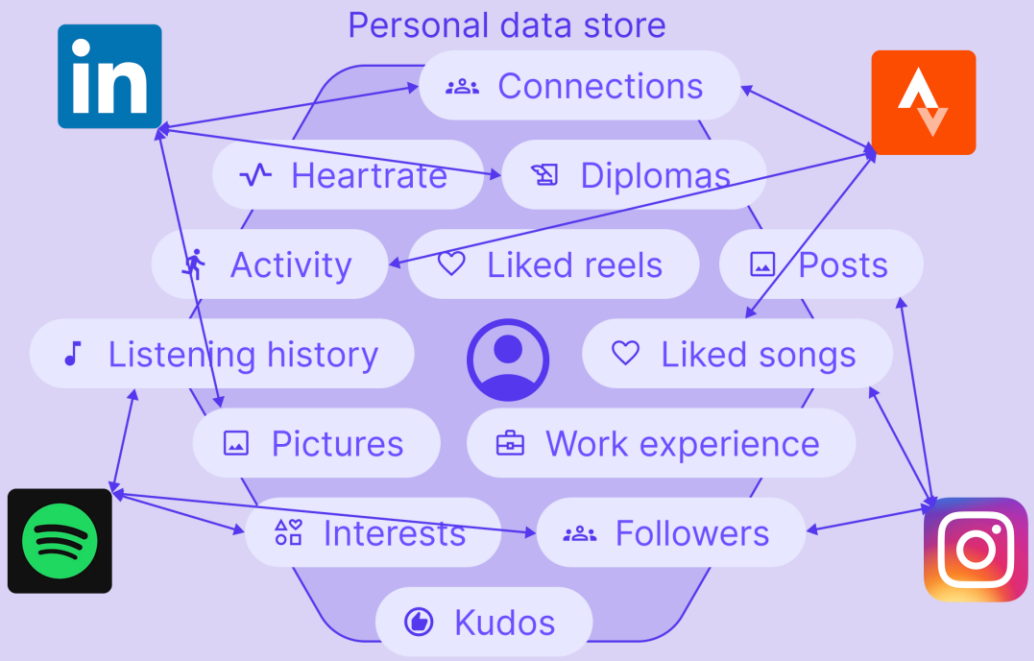
A Personal Data Store (PDS) is

a technology that enables individuals to **collect, store, update, correct, analyse, and share** their **personal data**. A key feature of a PDS is its **granular consent** management, allowing users to grant or revoke third-party access at any time



Data stored by service providers



Data stored in a Personal Data Store (PDS)

MyData Certified PDS

2023
Number of
Google Play Store
Downloads

CitizenMe
100K+

Digi.me
100K+

My:D
100K+

Ockto
100K+

Yivi
50K+

BitsAboutMe
10K+

DID Wallet
5K+

iGrant.io
1K+

PolyPod
1K+

Esatus
1K+

Cozy Cloud
500+

MyFairData
100+

Financieel Paspoort
100+

Geens
100+

Meeco Wallet
100+

Schluss
100+

MyData Certified PDS

2023 - 2025
Number of
Google Play Store
Downloads

CitizenMe
100K+ - 0

Digi.me
100K+ - 0

My:D
100K+ - 100K+

Ockto
100K+ - 100K+

Yivi
50K+ - 100K+

BitsAboutMe
10K+ - 0

DID Wallet
5K+ - 5K+

iGrant.io
1K+ - 1K+

PolyPod
1K+ - 0

Esatus
1K+ - 1K+

Cozy Cloud
500+ - 5K+

MyFairData
100+ - 0

Financieel Paspoort
100+ - 500+

Geens
100+ - 100+

Meeco Wallet
100+ - 0

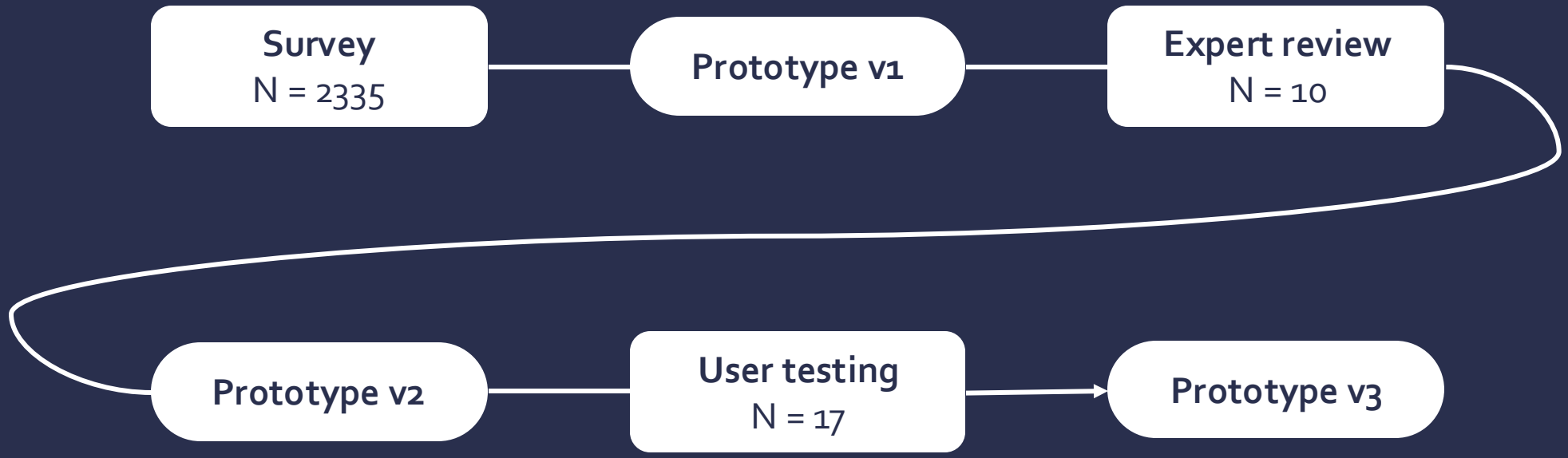
Schluss
100+ - 0

Hurdles to PDS adoption

- **Low user interest**
- **Lack of tangible experiences**
- **Trust concerns** regarding PDS providers
- Fear of **complex usability**
- Perceived **time burden**
- Concerns about **PDS security** and hacking
- Expected **financial costs**

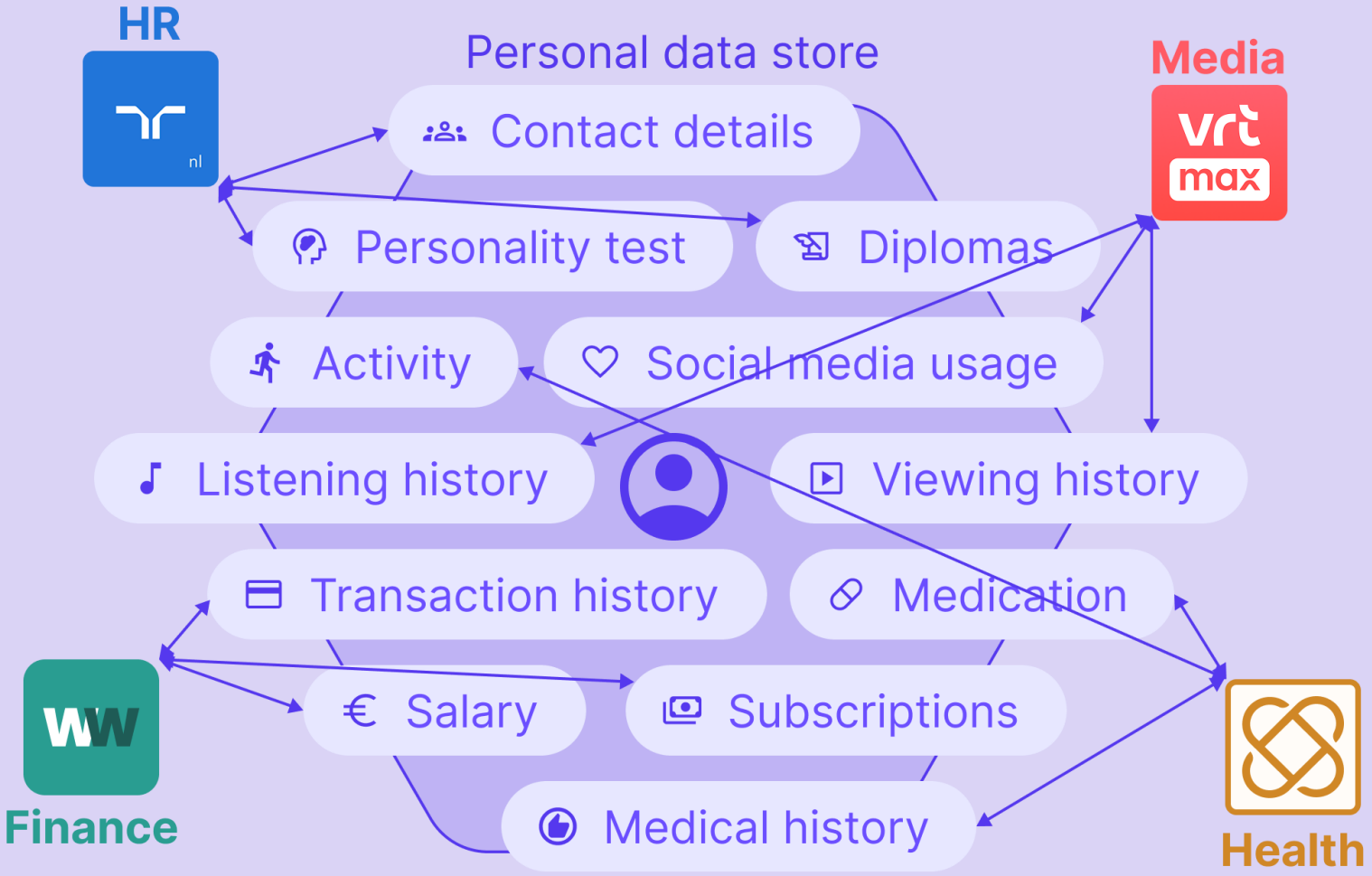
FLANDERS

Methodology



FLANDERS

Four use case scenarios



Four use case scenarios

HR

An online **career platform** uses data available in the PDS to **match candidates with relevant jobs** more effectively by accessing relevant career data with user permission.

Media

A **streaming service** requests access to relevant data in the PDS to enable enhanced, more **personalized recommendations**.

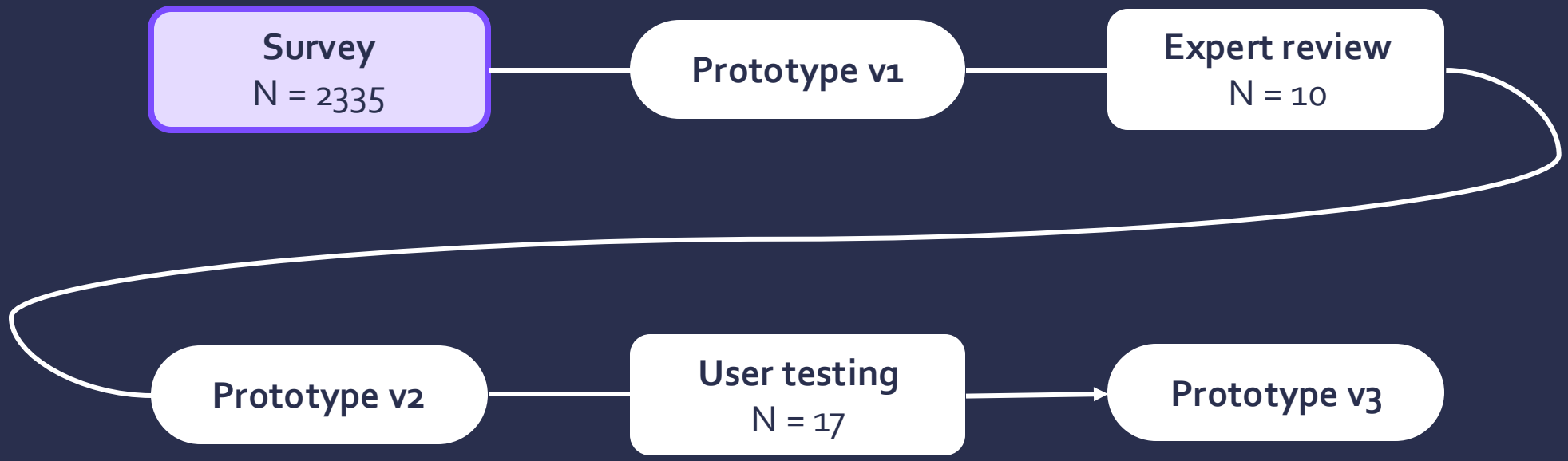
Finance

A **financial dashboarding platform** leverages PDS data to provide users with a **complete overview of their finances** across banks and investment platforms, helping them track income, expenses, and assets to achieve their financial goals.

Health

A health platform enables users to **share data** from their PDS **with doctors,** supporting more informed and **personalized health monitoring**.

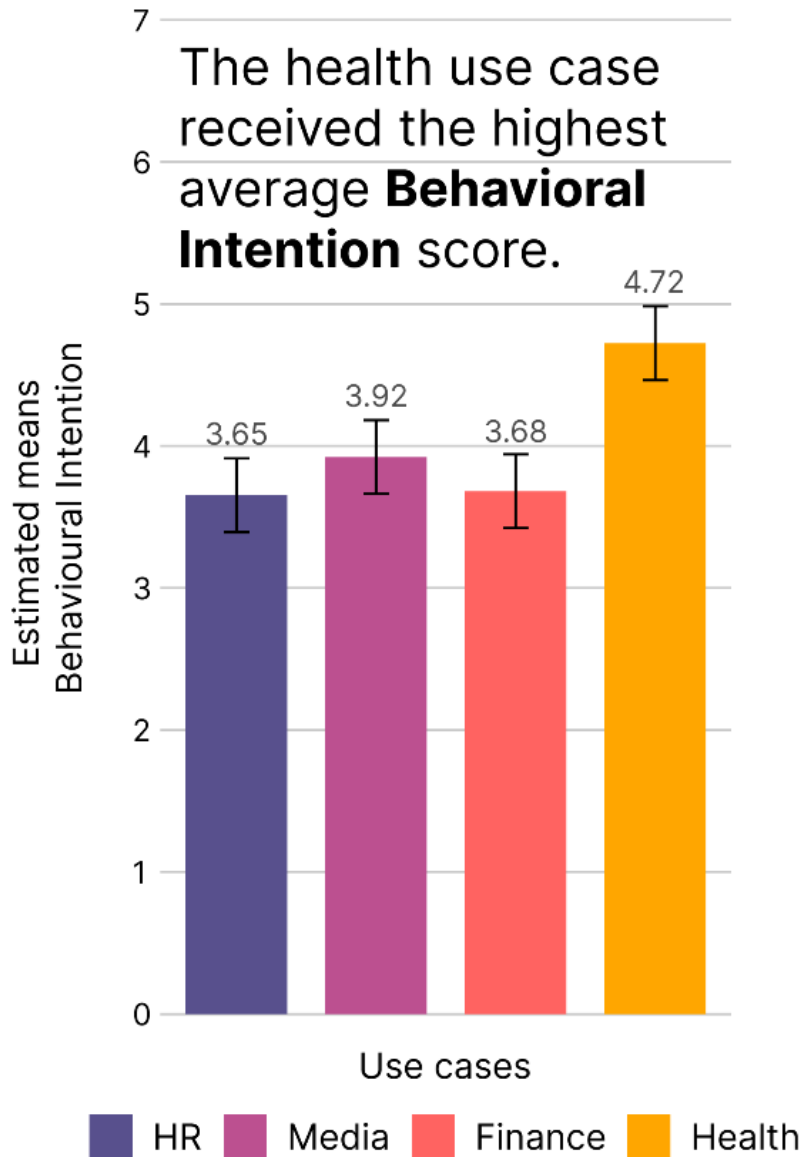
Methodology



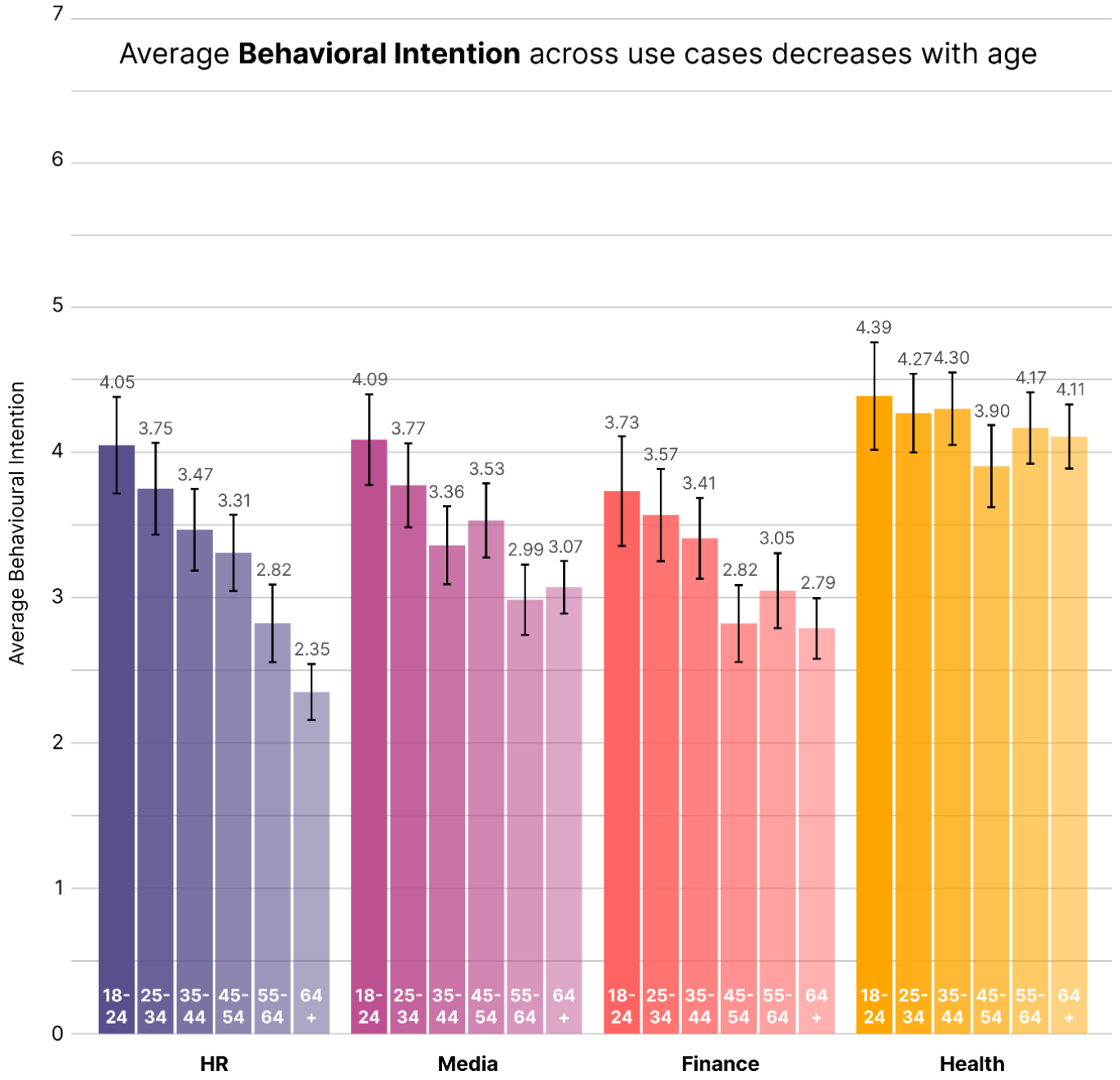
FLANDERS

Survey

- Evaluated the use cases based on a written scenario
- 2335 participants
- All 18+ years (average age = 51 years)
- Flanders



Interest in the uses cases decreases with age



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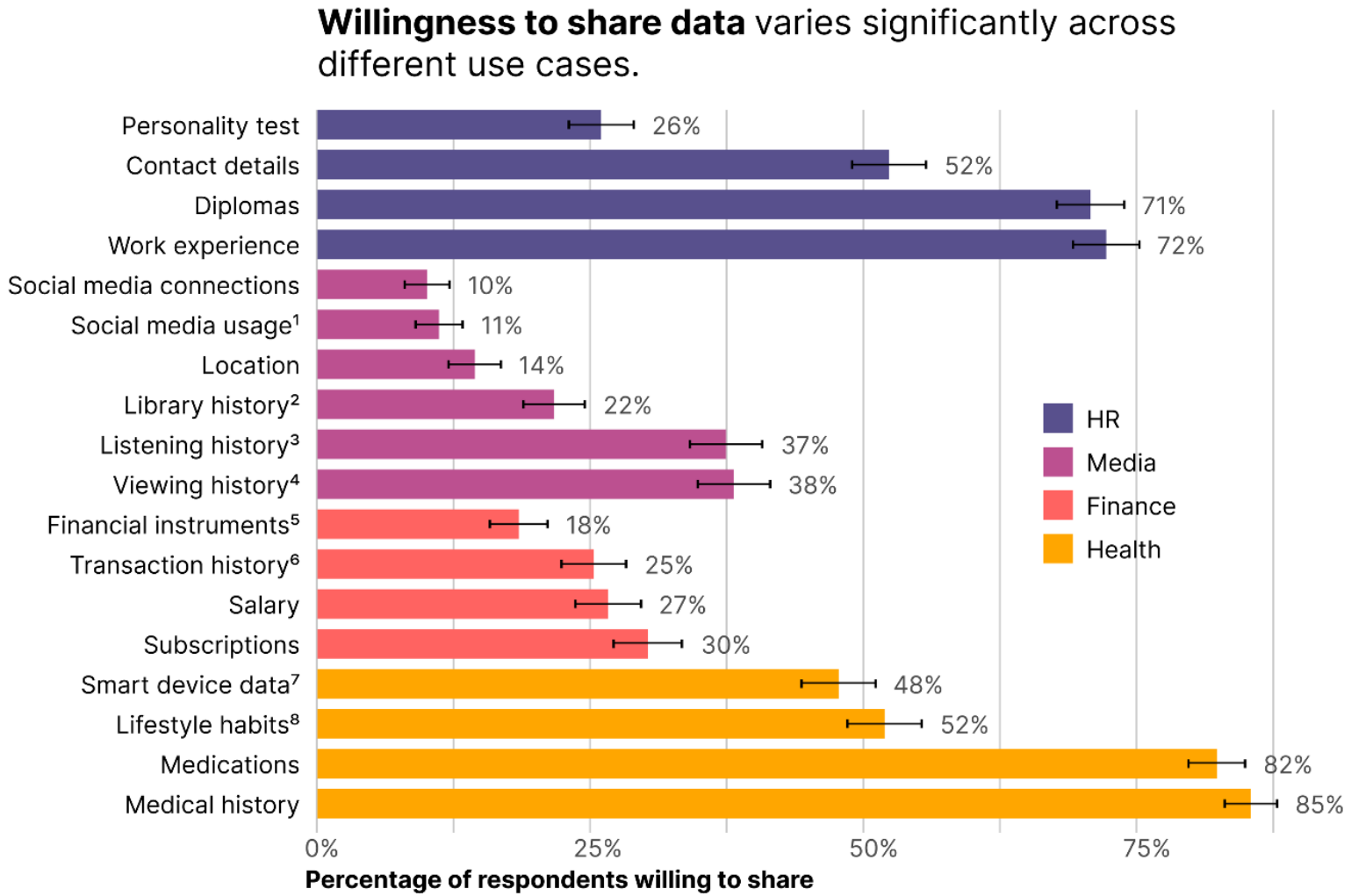
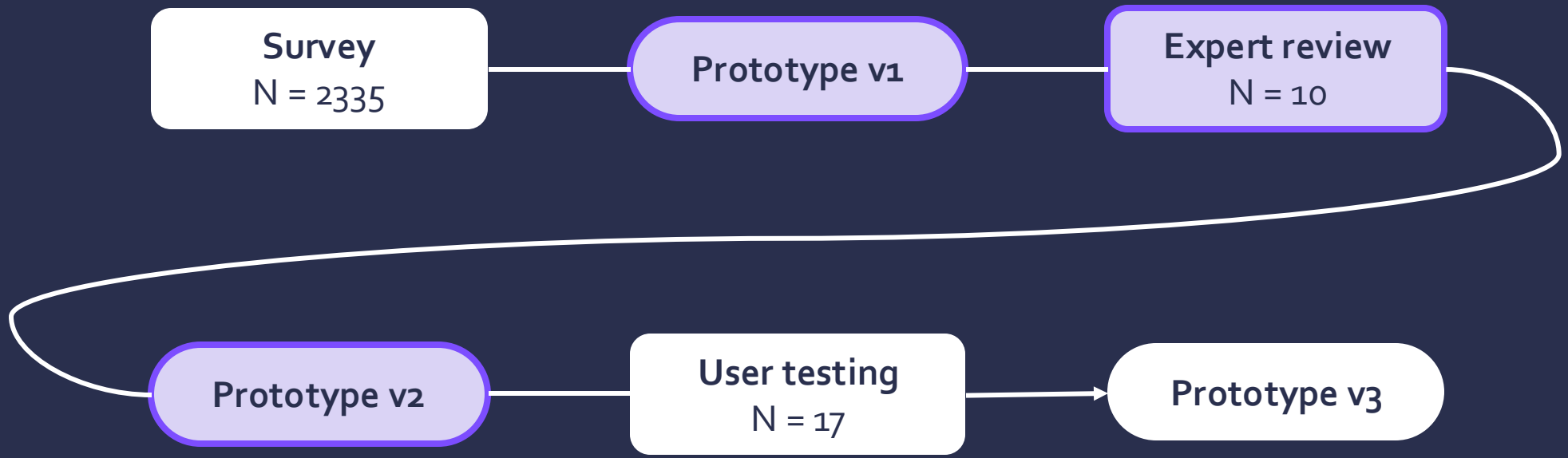
The willingness to share appears to be use case dependent rather than related to data sensitivity



[1]following pages and saved posts; [2]books borrowed; [3]music and podcasts listened to; [4]series/films watched online; [5]stocks, funds, crypto, etc.; [6]purchases, expenses; [7]heart rate, weight, sleep measurements; [8]workouts, smoking, alcohol consumption

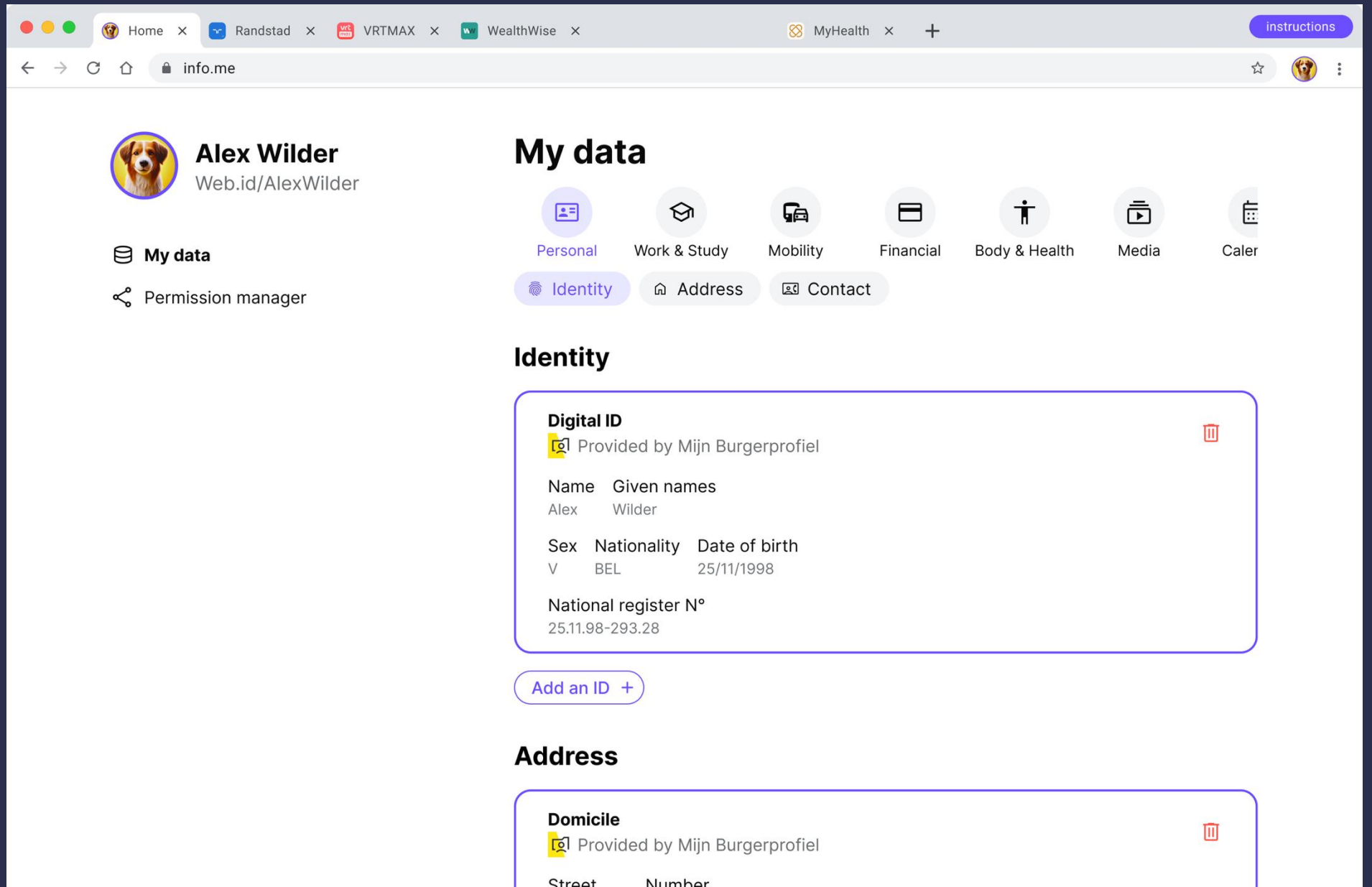
FLANDERS

Methodology



FLANDERS

Personal Data Store



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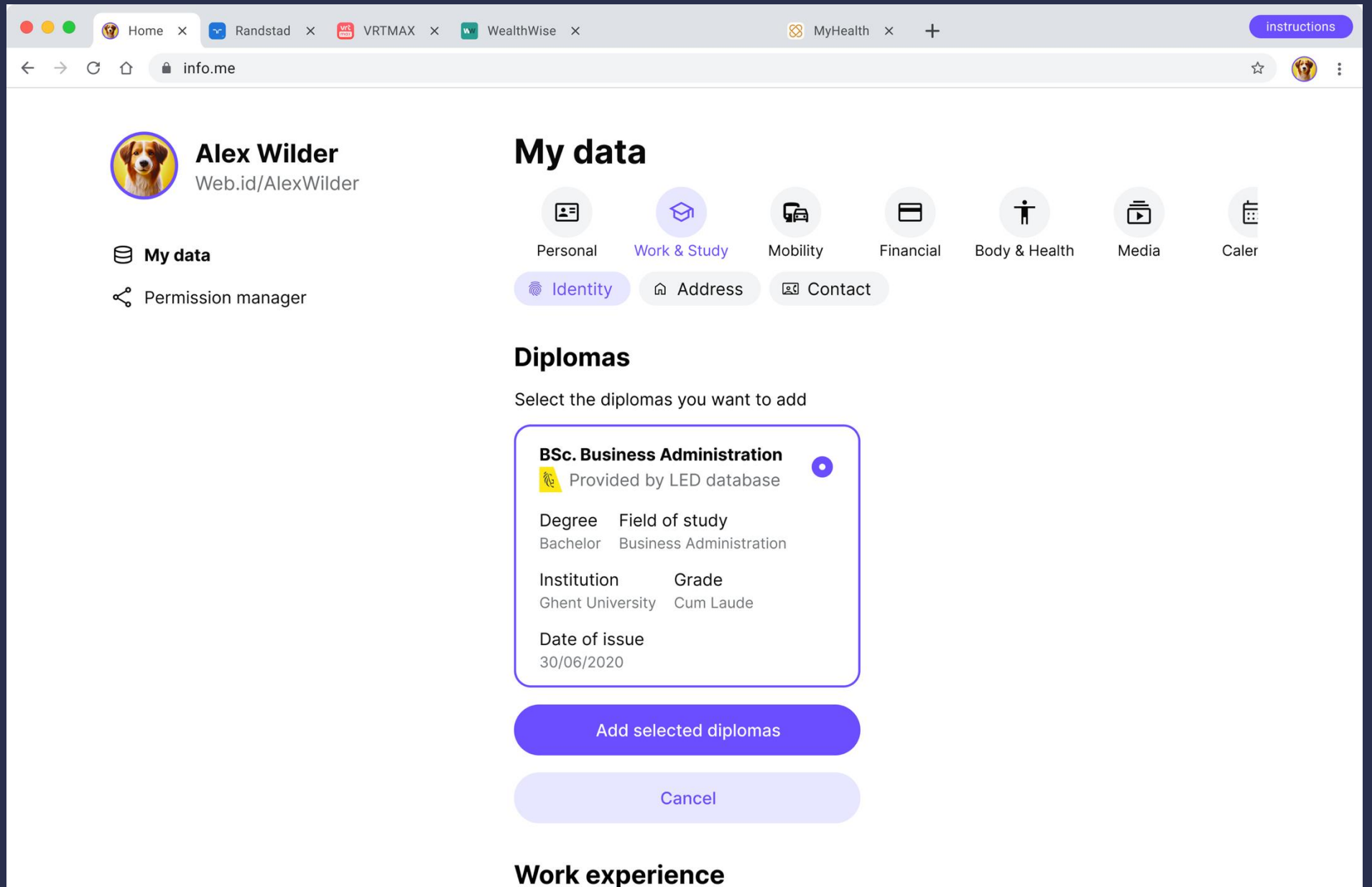

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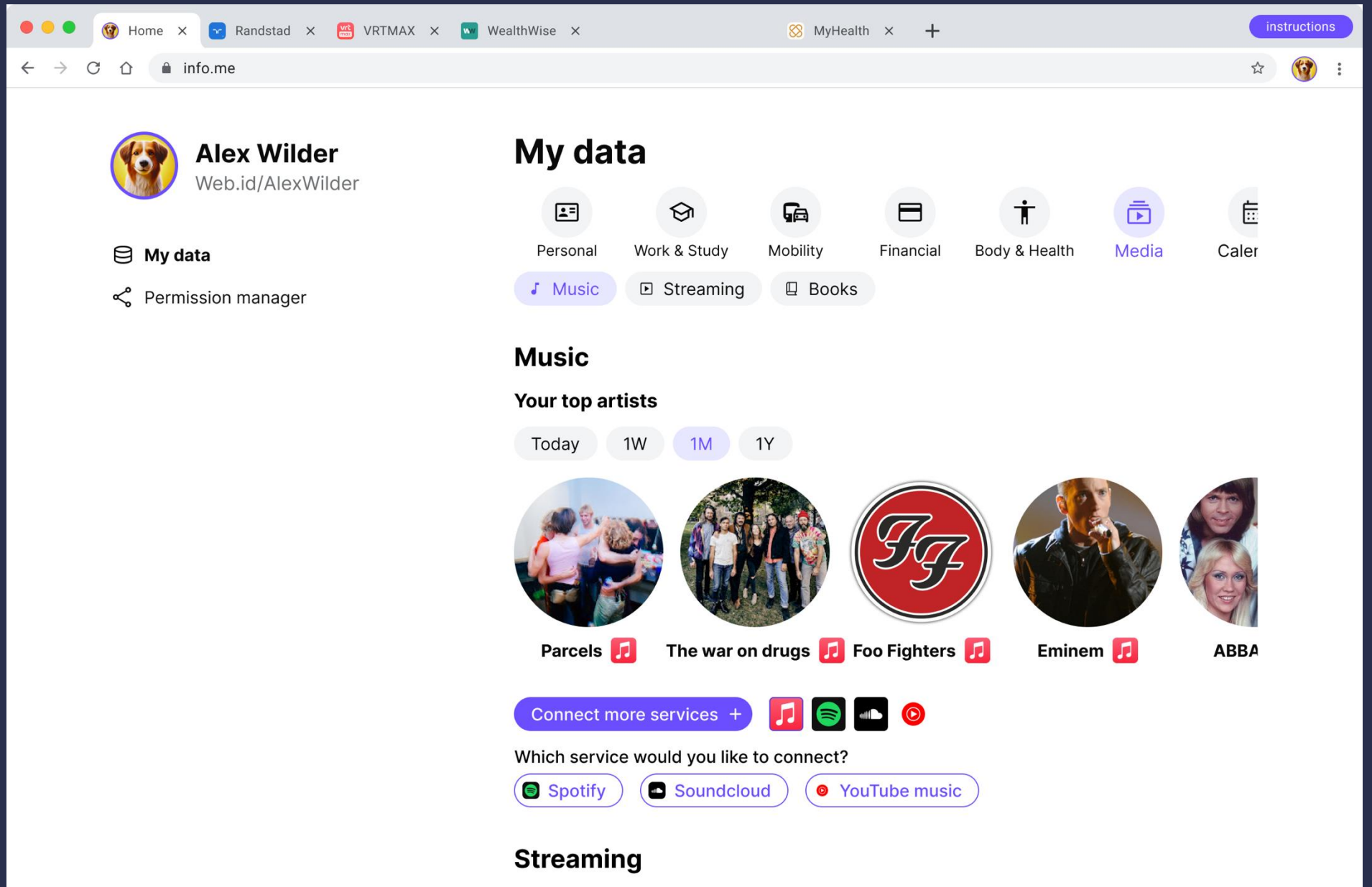

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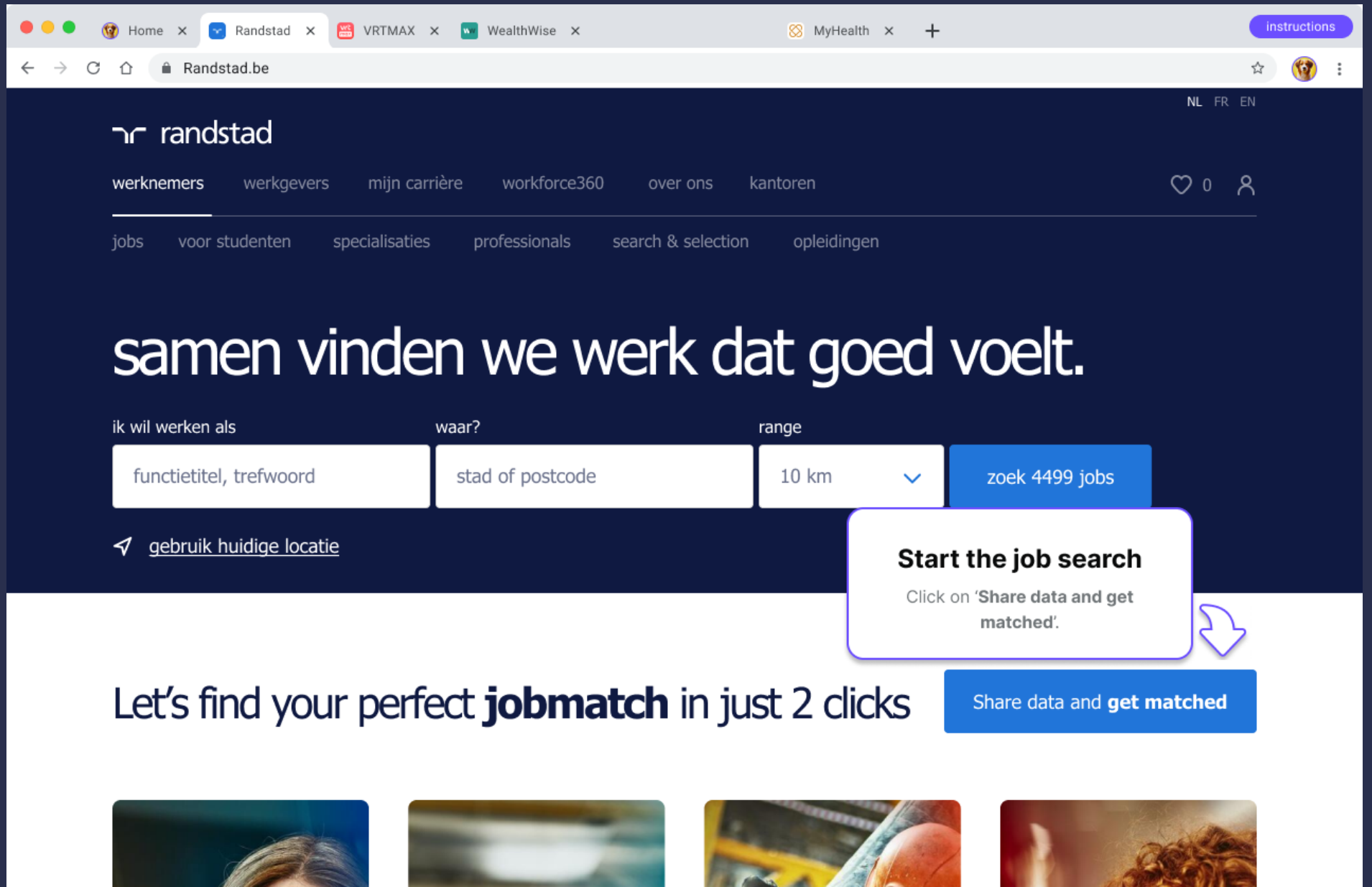
HR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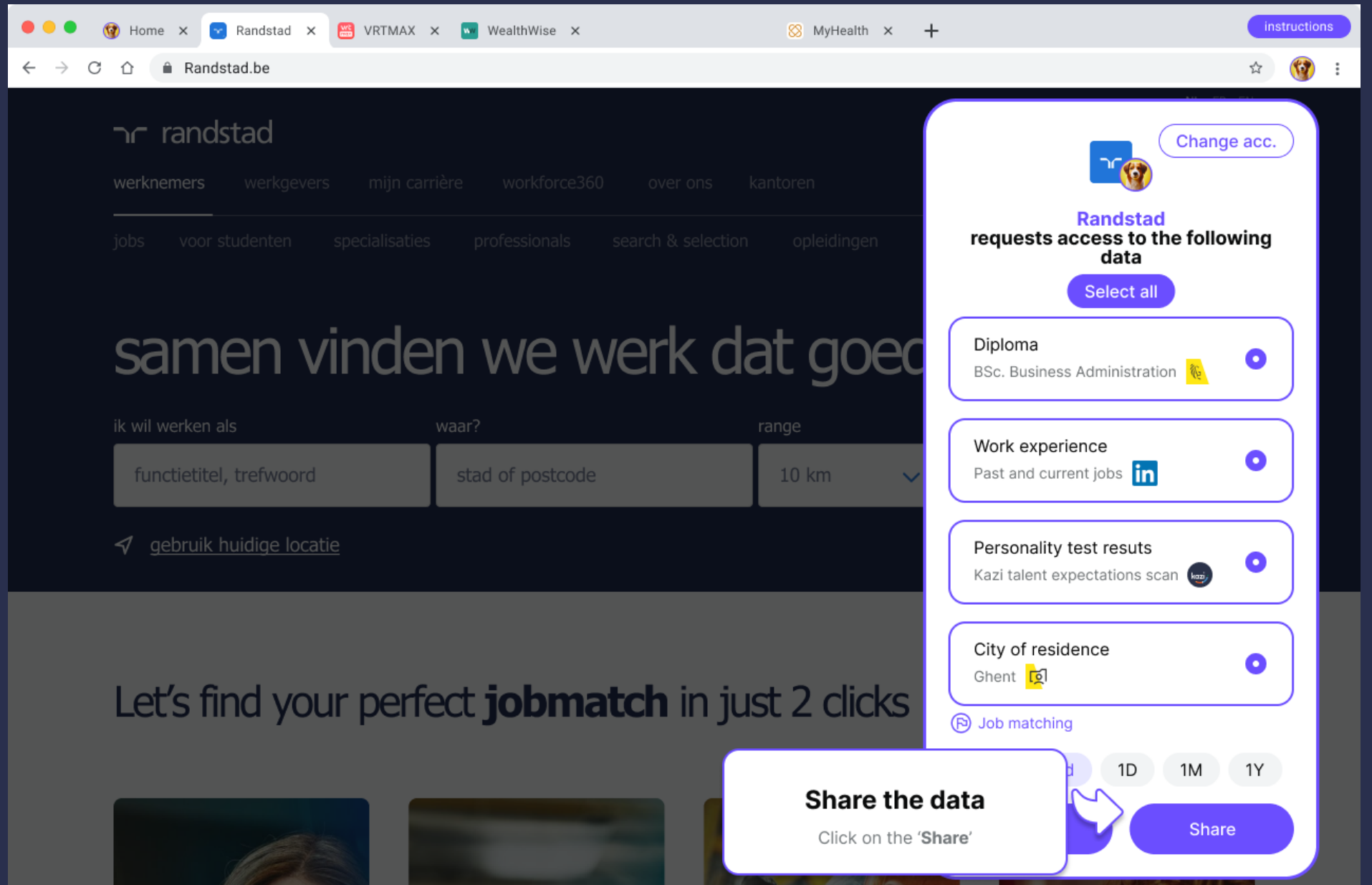
ik wil werken als
functietitel, trefwoord
waar?
stad of postcode
range
10 km
zoek 4499 jobs
gebruik huidige locatie
Start the job search
Click on 'Share data and get matched'.
Let's find your perfect jobmatch in just 2 clicks
Share data and get matched

FLANDERS

HR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Let's find your perfect jobmatch in just 2 clicks
Change acc.
Randstad
requests access to the following data
Select all
Diploma
BSc. Business Administration
Work experience
Past and current jobs
Personality test resuts
Kazi talent expectations scan
City of residence
Ghent
Job matching
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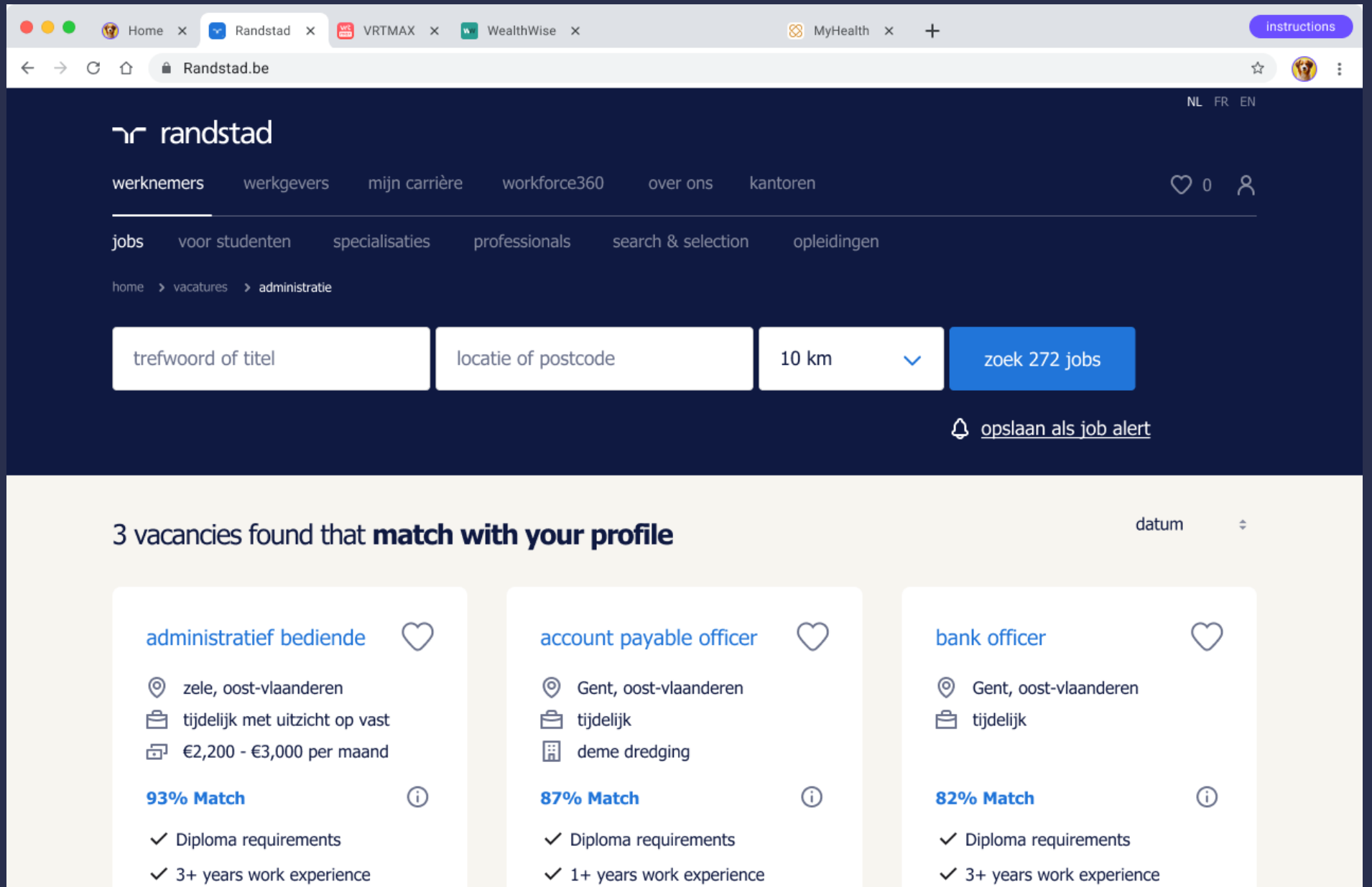
1M
1Y
Share the data
Click on the 'Share'
Share

HR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3 vacancies found that match with your profile
datum
administratief bediende
zele, oost-vlaanderen
tijdelijk met uitzicht op vast
€2,200 - €3,000 per maand
93% Match
Diploma requirements
3+ years work experience
account payable officer
Gent, oost-vlaanderen
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deme dredging
87% Match
Diploma requirements
1+ years work experience
bank officer
Gent, oost-vlaanderen
tijdelijk
82% Match
Diploma requirements
3+ years work experience

FLANDERS

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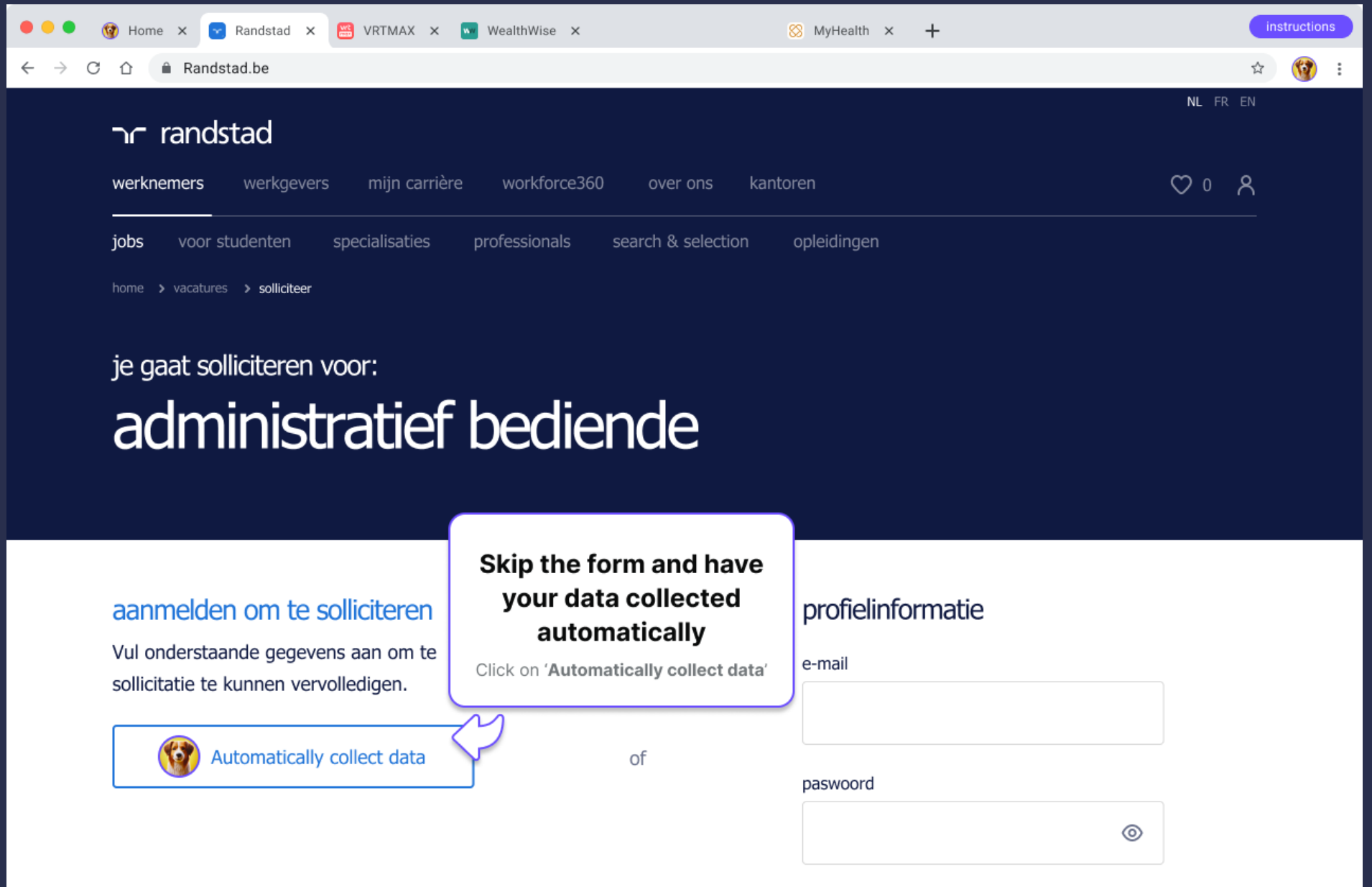
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Skip the form and have your data collected automatically
Click on 'Automatically collect data'
aanmelden om te solliciteren
Vul onderstaande gegevens aan om te sollicitatie te kunnen vervolledigen.
Automatically collect data
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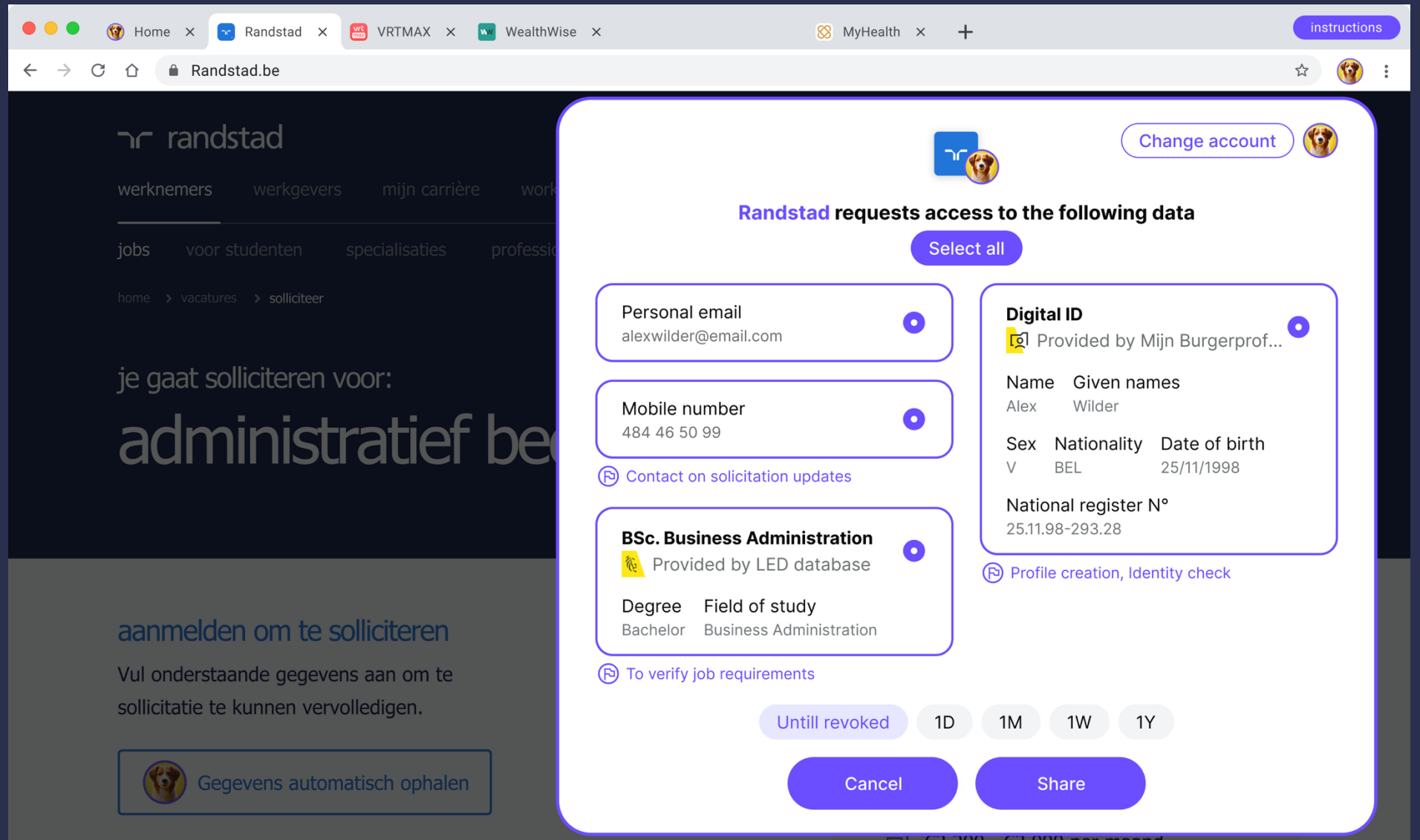
e-mail
paswoord

HR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administratief be
aanmelden om te solliciteren
Vul onderstaande gegevens aan om te sollicitatie te kunnen vervolledigen.
Gegevens automatisch ophalen
of
€2,200 - €3,000 per maand
tijdelijk met uitzicht op vast
Change account
Randstad requests access to the following data
Select all
Personal email
alexwilder@email.com
Mobile number
484 46 50 99
Contact on solicitation updates
BSc. Business Administration
Provided by LED database
Degree
Bachelor
Field of study
Business Administration
To verify job requirements
Digital ID
Provided by Mijn Burgerprof...
Name
Alex
Given names
Wilder
Sex
V
Nationality
BEL
Date of birth
25/11/1998
National register N°
25.11.98-293.28
Profile creation, Identity check
Untill revoked
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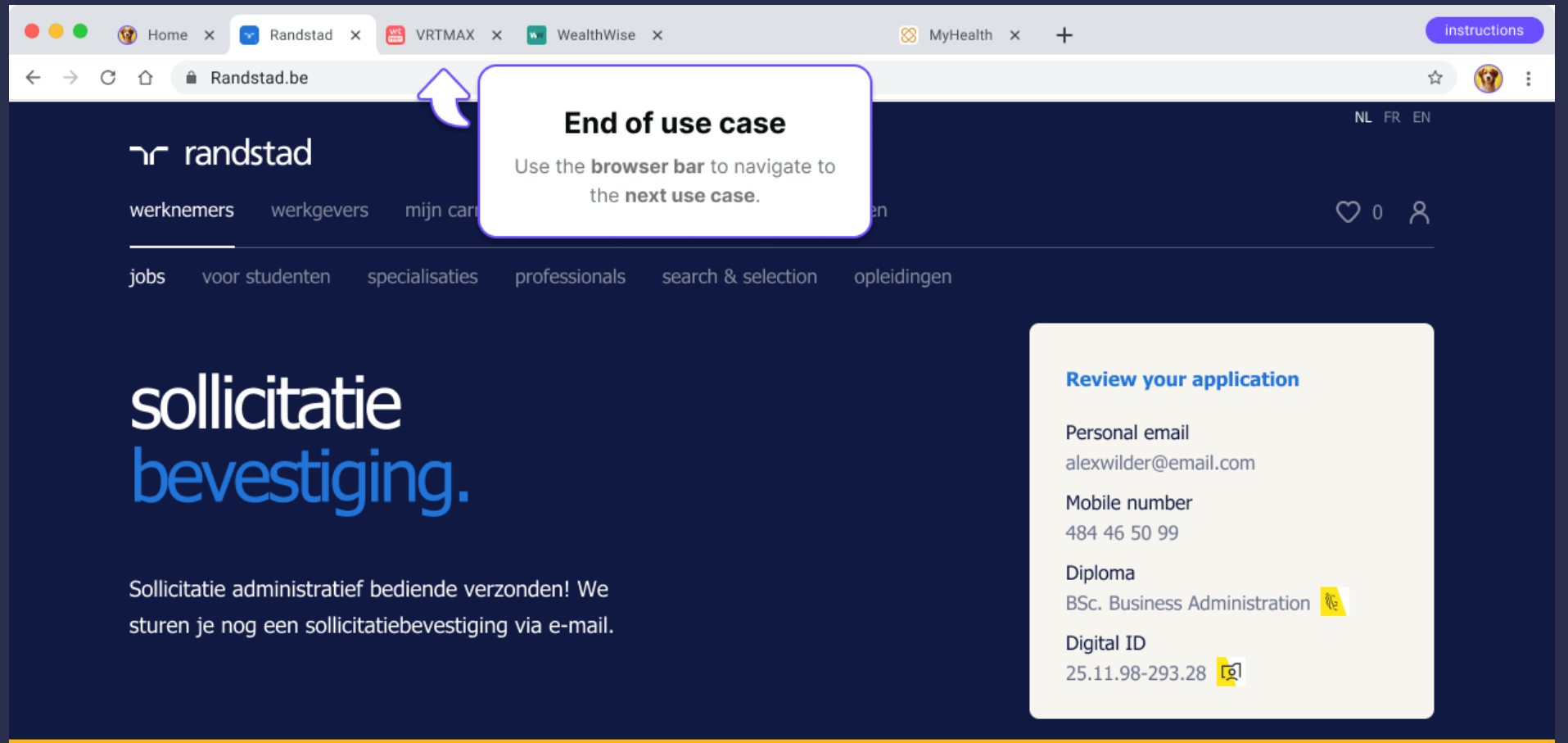
Cancel
Share

FLANDERS

HR

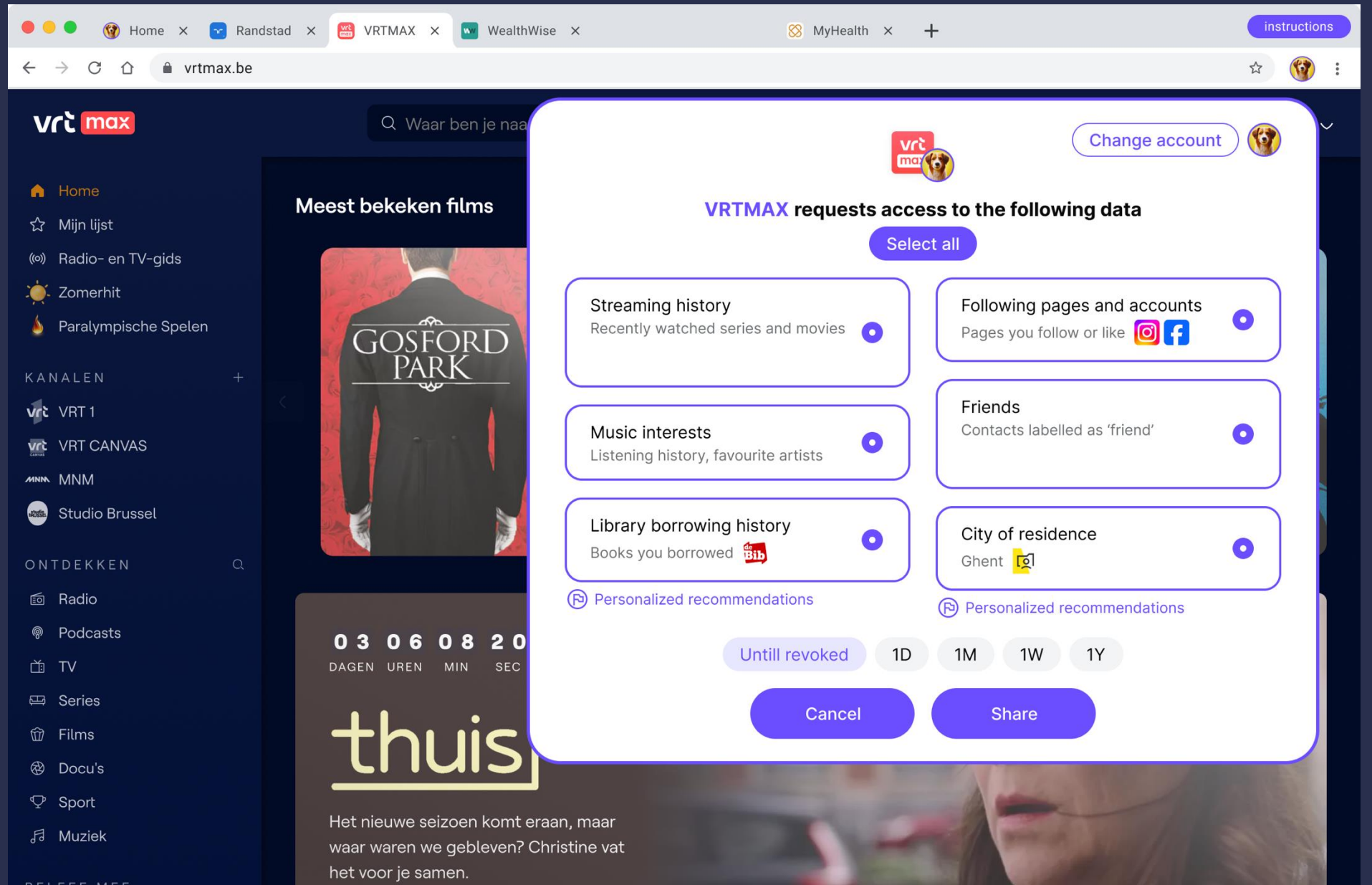


vacatures in je mailbox.

Makkelijk gepaste jobs ontvangen in jouw mailbox? Wanneer jij wilt? Dat kan met de Randstad jobagent!

FLANDERS

Media



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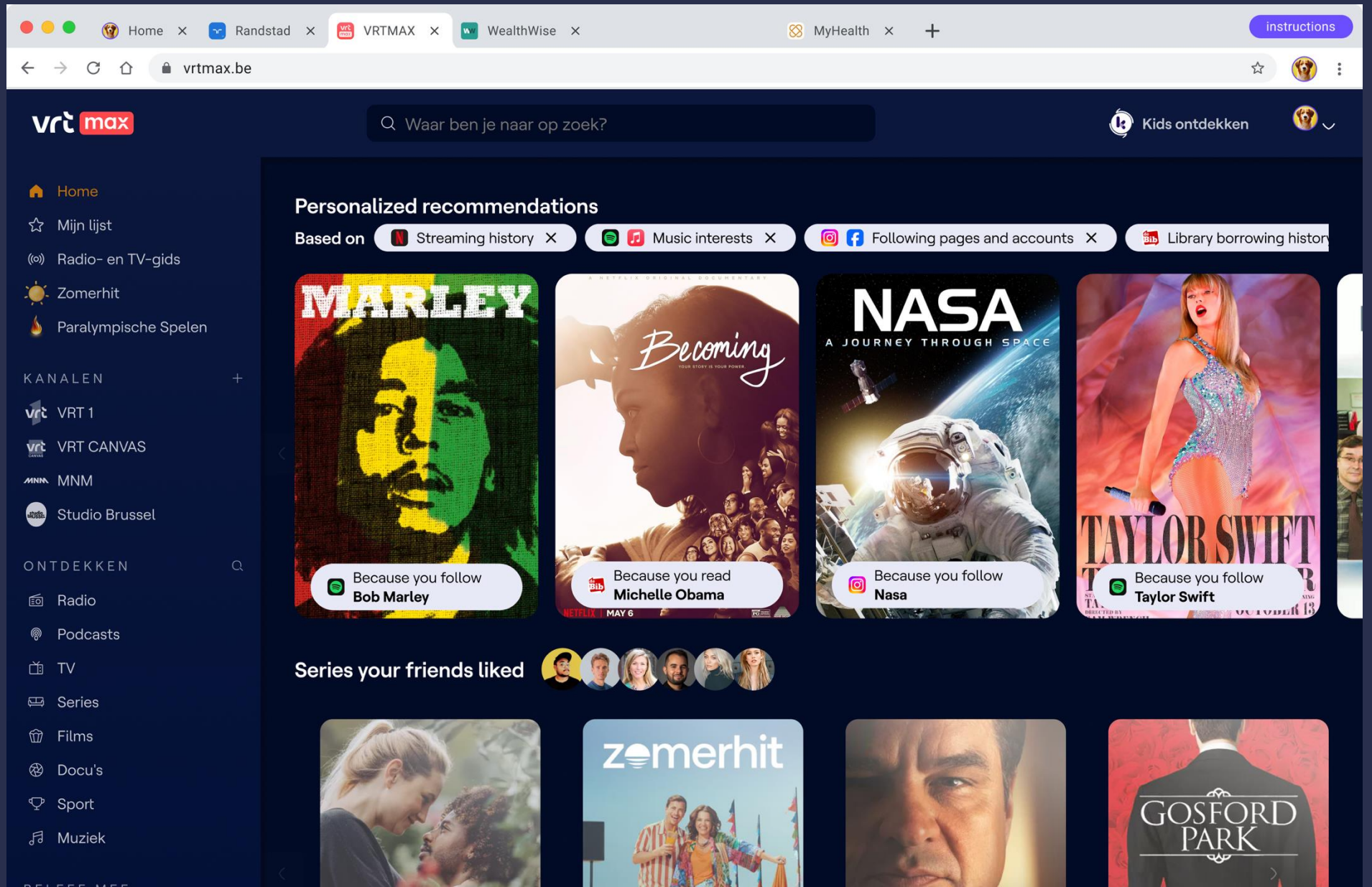
Media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instructions
vrtmax.be
vrt max
Waar ben je naar op zoek?
Kids ontdekken
Home
Mijn lijst
Radio- en TV-gids
Zomerhit
Paralympische Spelen
KANALEN
VRT 1
VRT CANVAS
MNM
Studio Brussel
ONTDEKKEN
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TV
Series
Films
Docu's
Sport
Muziek
Personalized recommendations
Based on
Streaming history
Music interests
Following pages and accounts
Library borrowing histor
MARLEY
Because you follow
Bob Marley
Becoming
Because you read
Michelle Obama
NETFLIX | MAY 6
NASA
A JOURNEY THROUGH SPACE
Because you follow
Nasa
TAYLOR SWIFT
Because you follow
Taylor Swift
Series your friends liked
zomerhit
GOSFORD PARK

Finance

Home | Randstad | VRTMAX | WealthWise | MyHealth | instructions

WealthWise.com

WealthWise

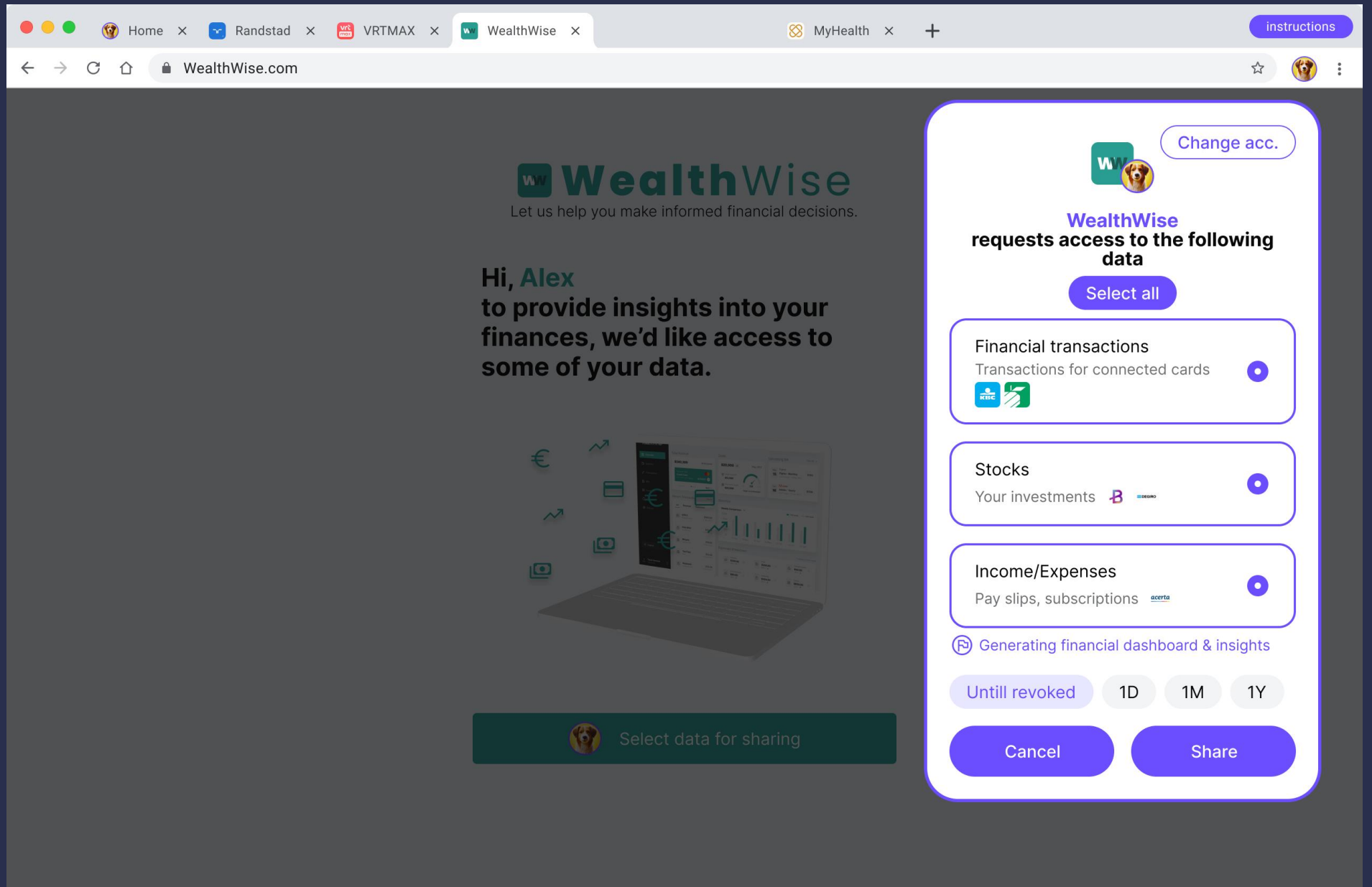
Let us help you make informed financial decisions.

Hi, Alex
to provide insights into your finances, we'd like access to some of your data.

Select data for sharing

FLANDERS

Finance



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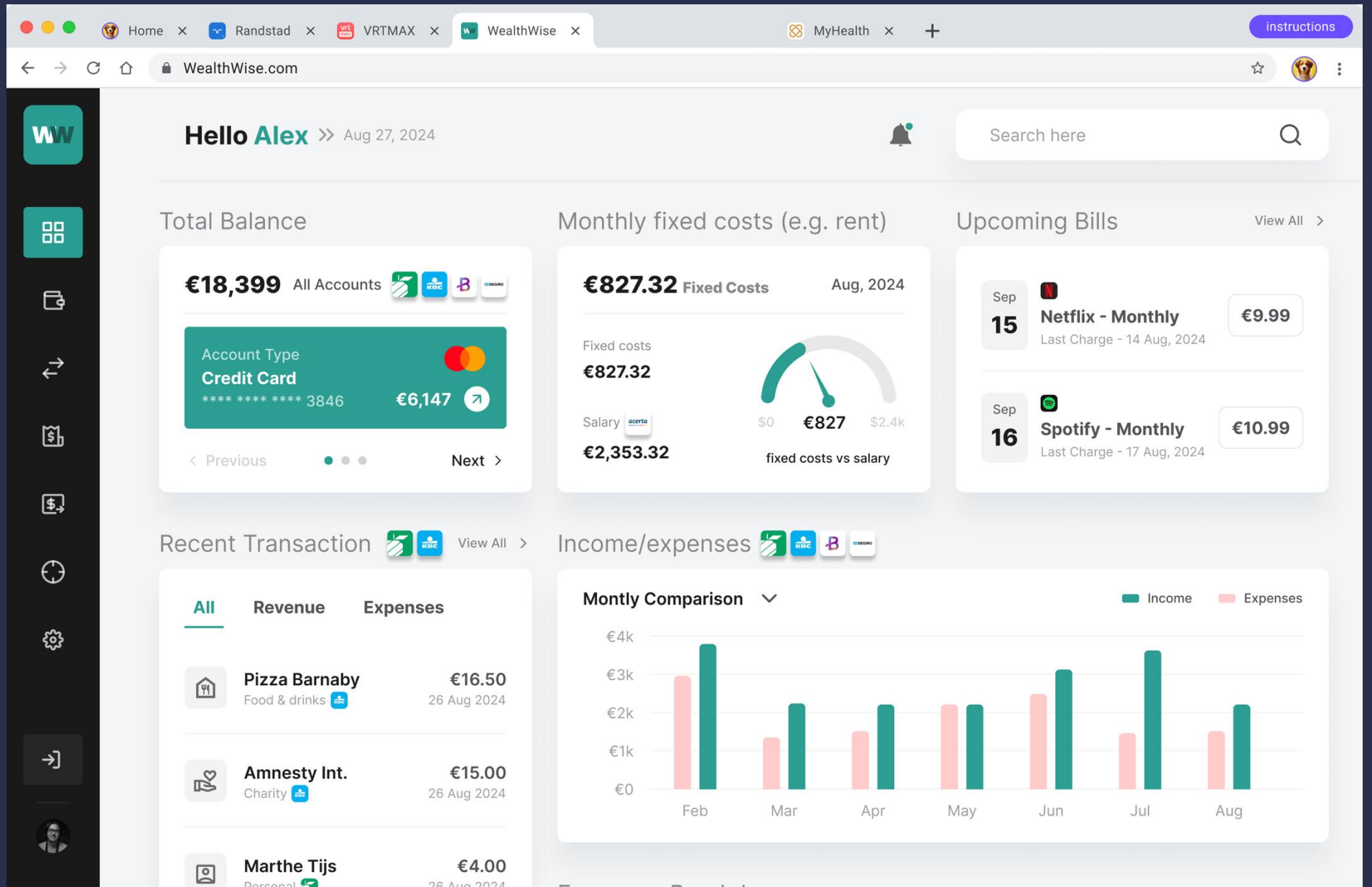
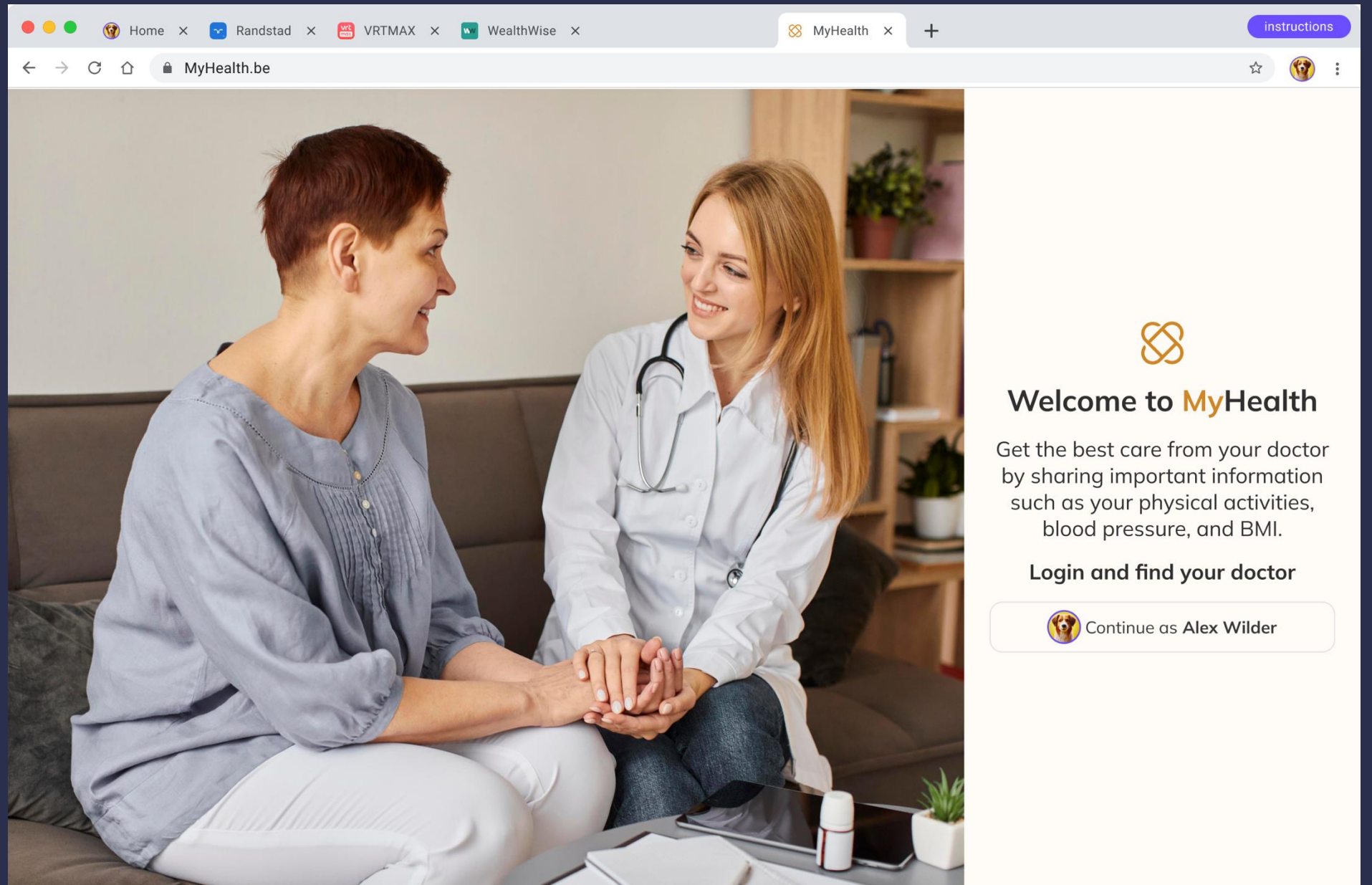
Finance



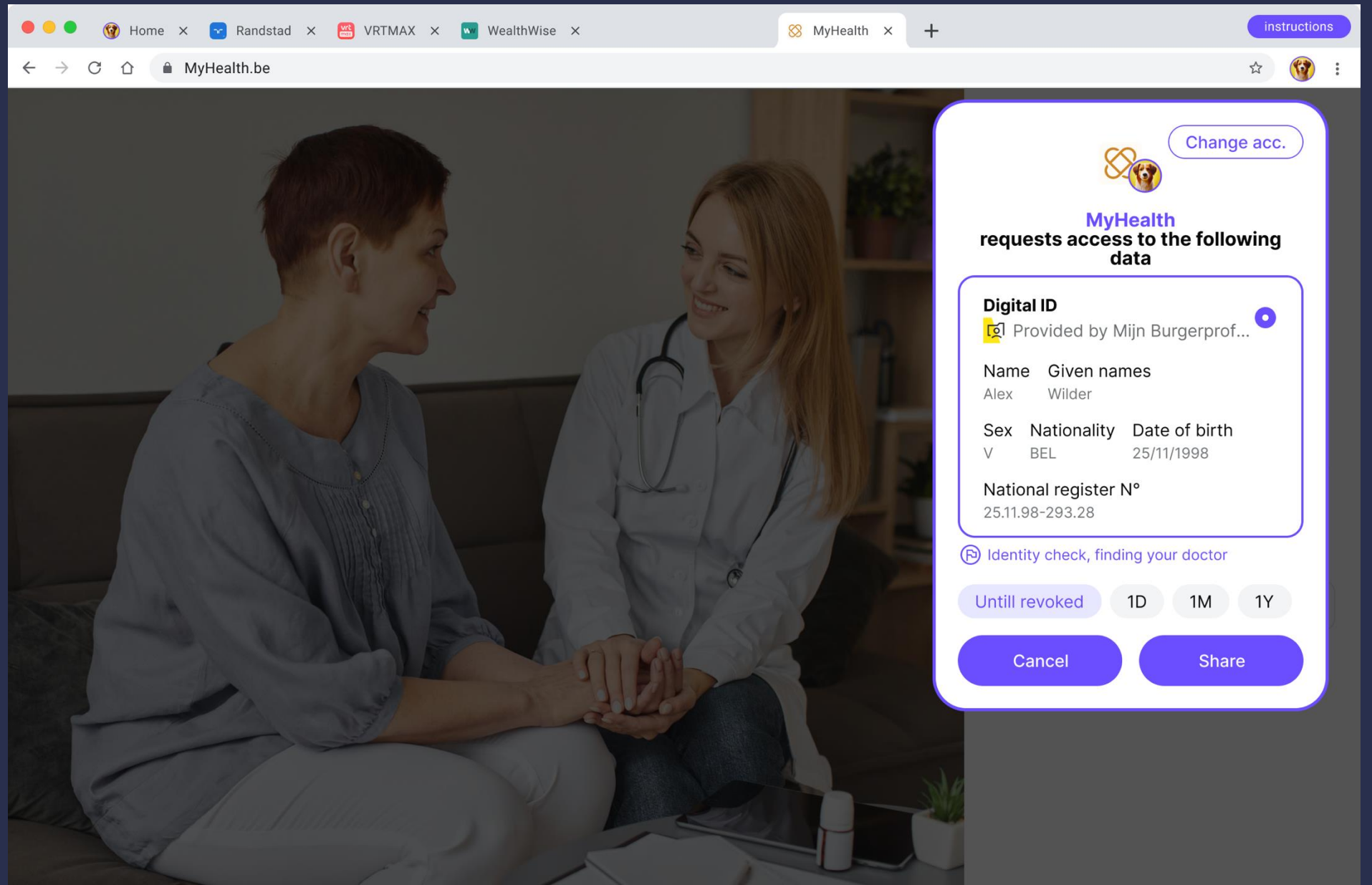
FLANDERS

Health



FLANDERS

Health



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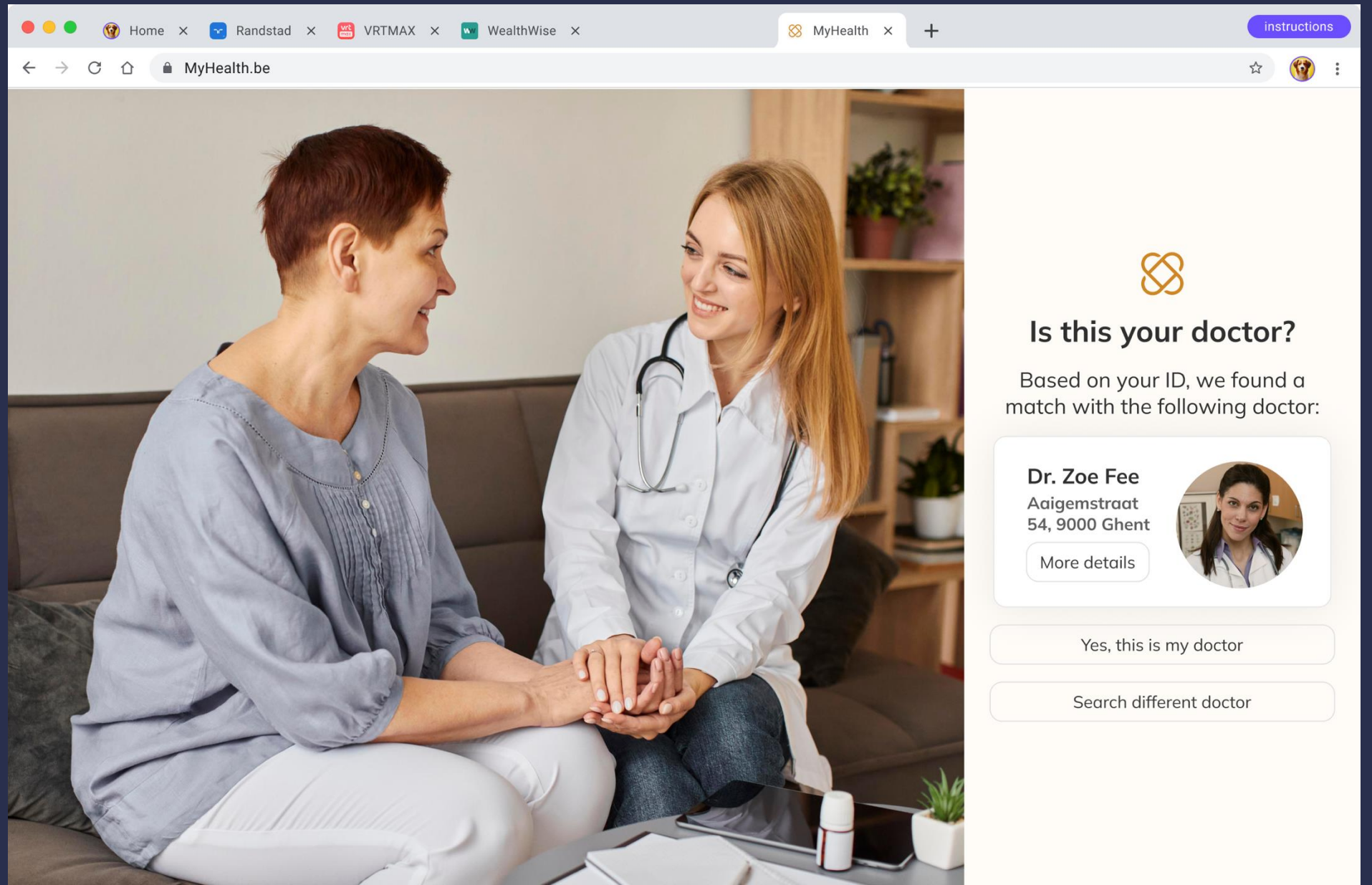
Health



FLANDERS

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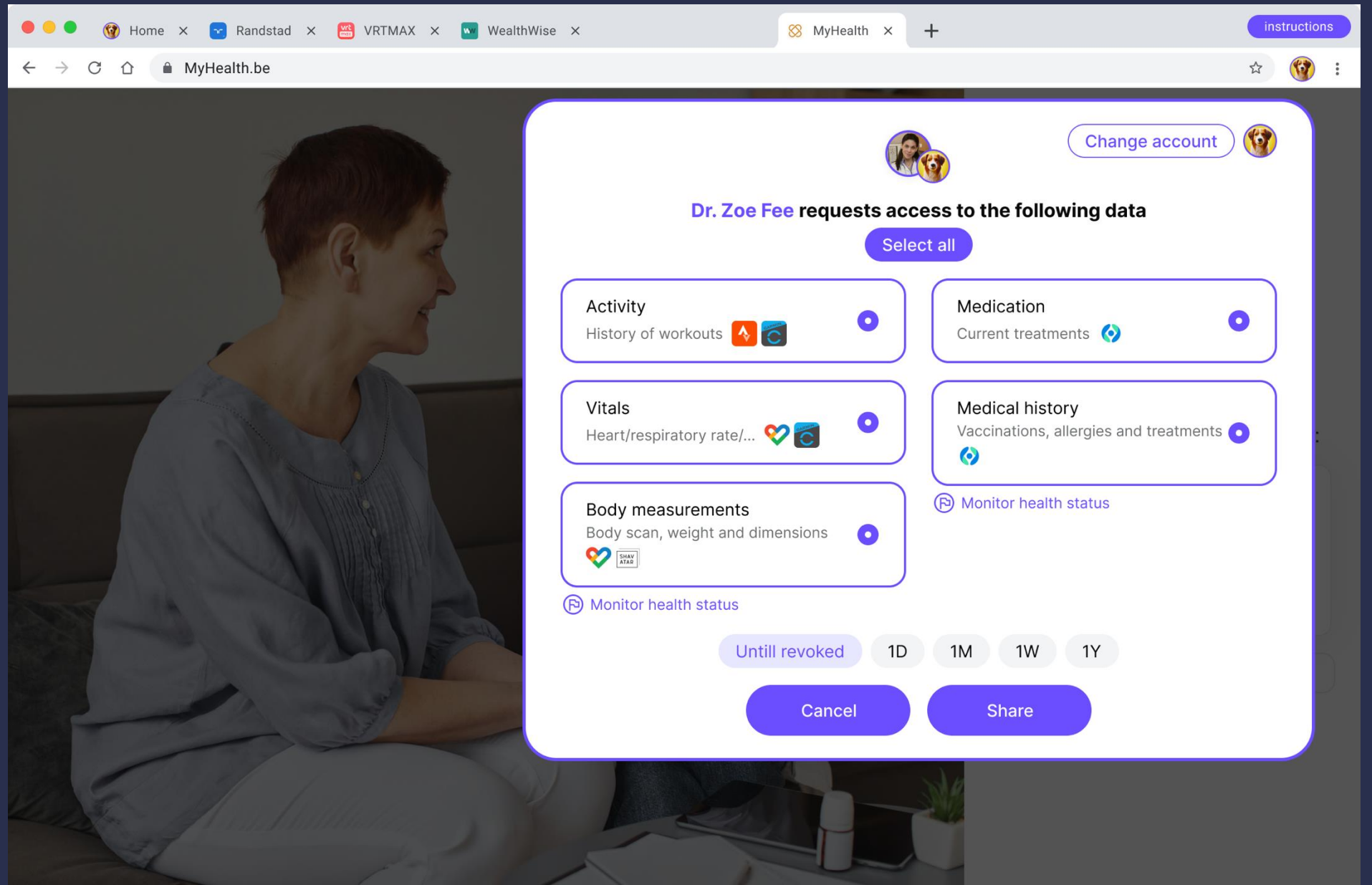

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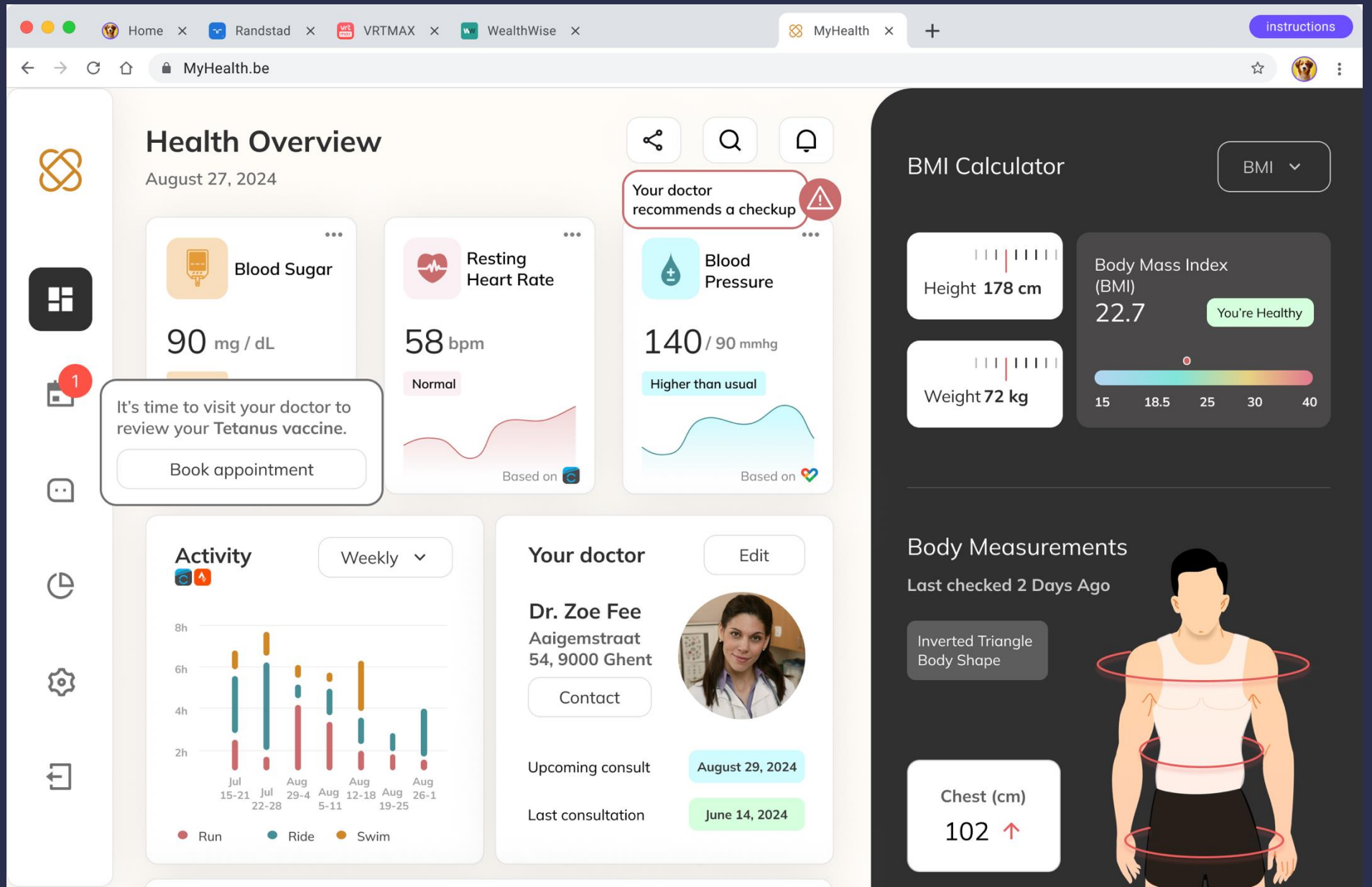
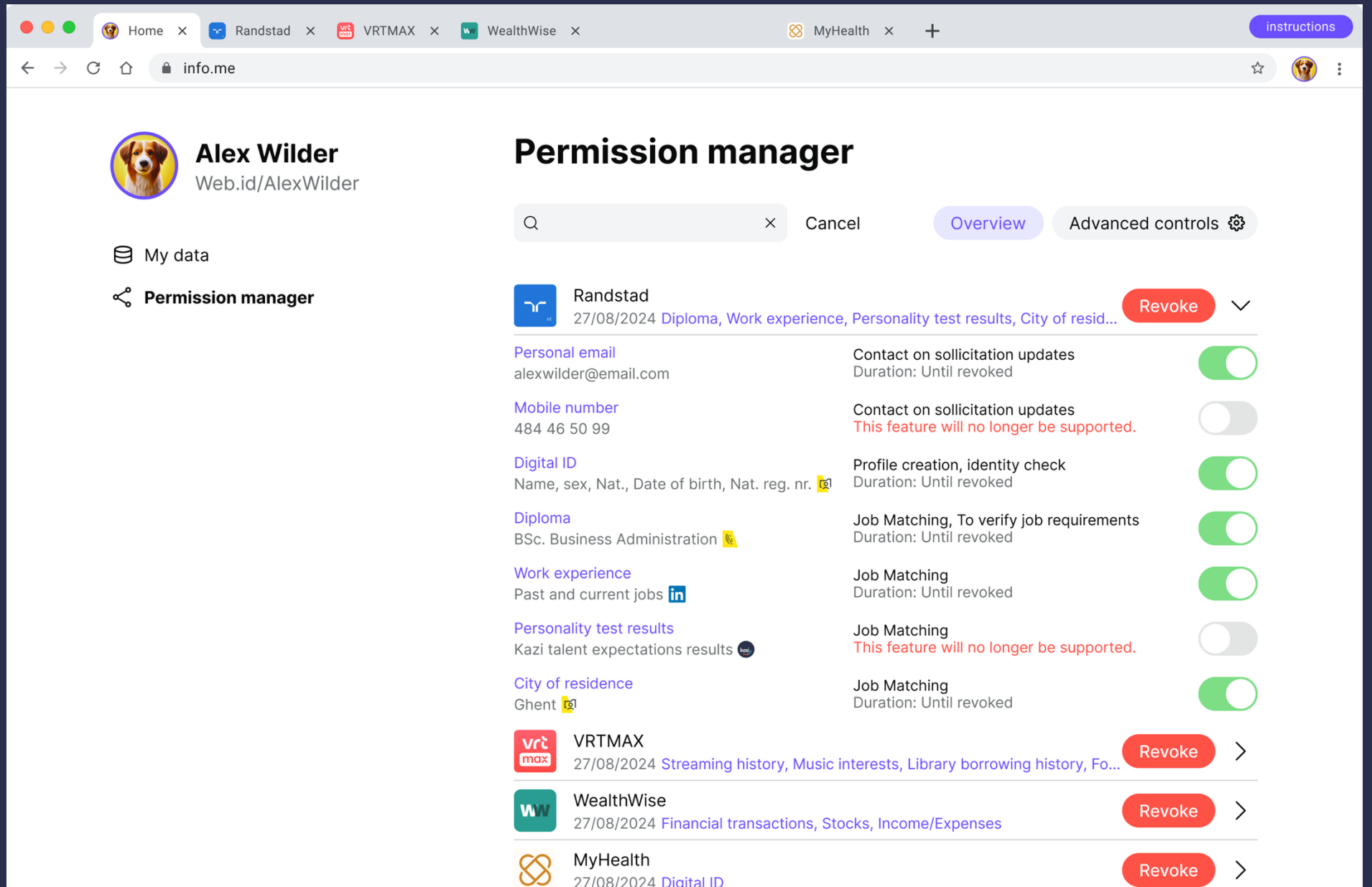
Health



FLANDERS

Personal Data Store



FLANDERS

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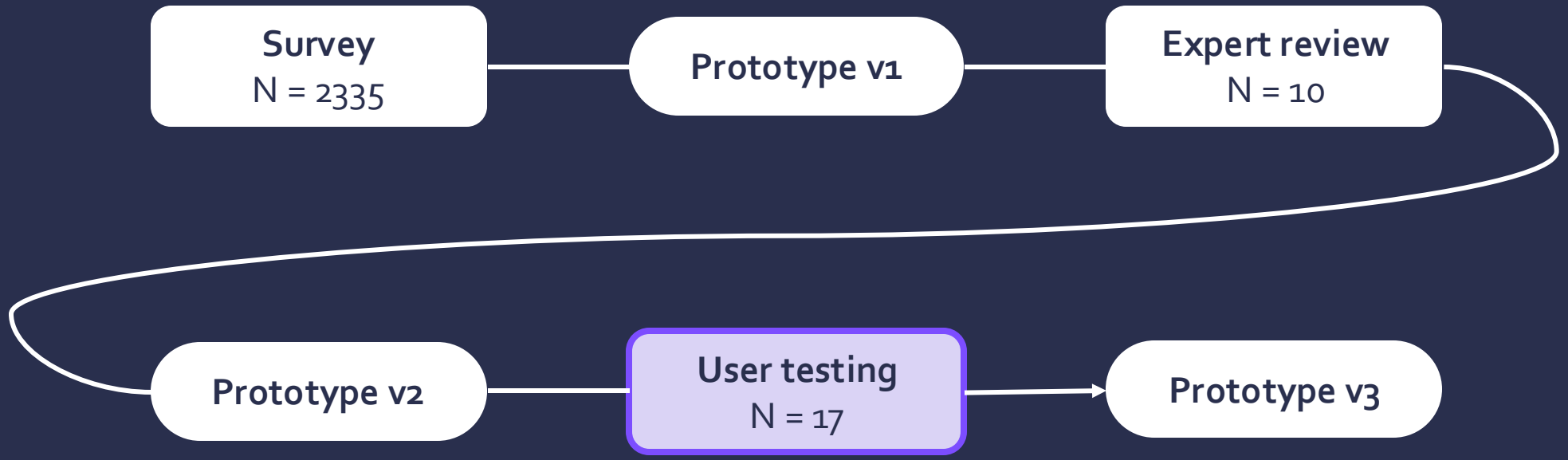
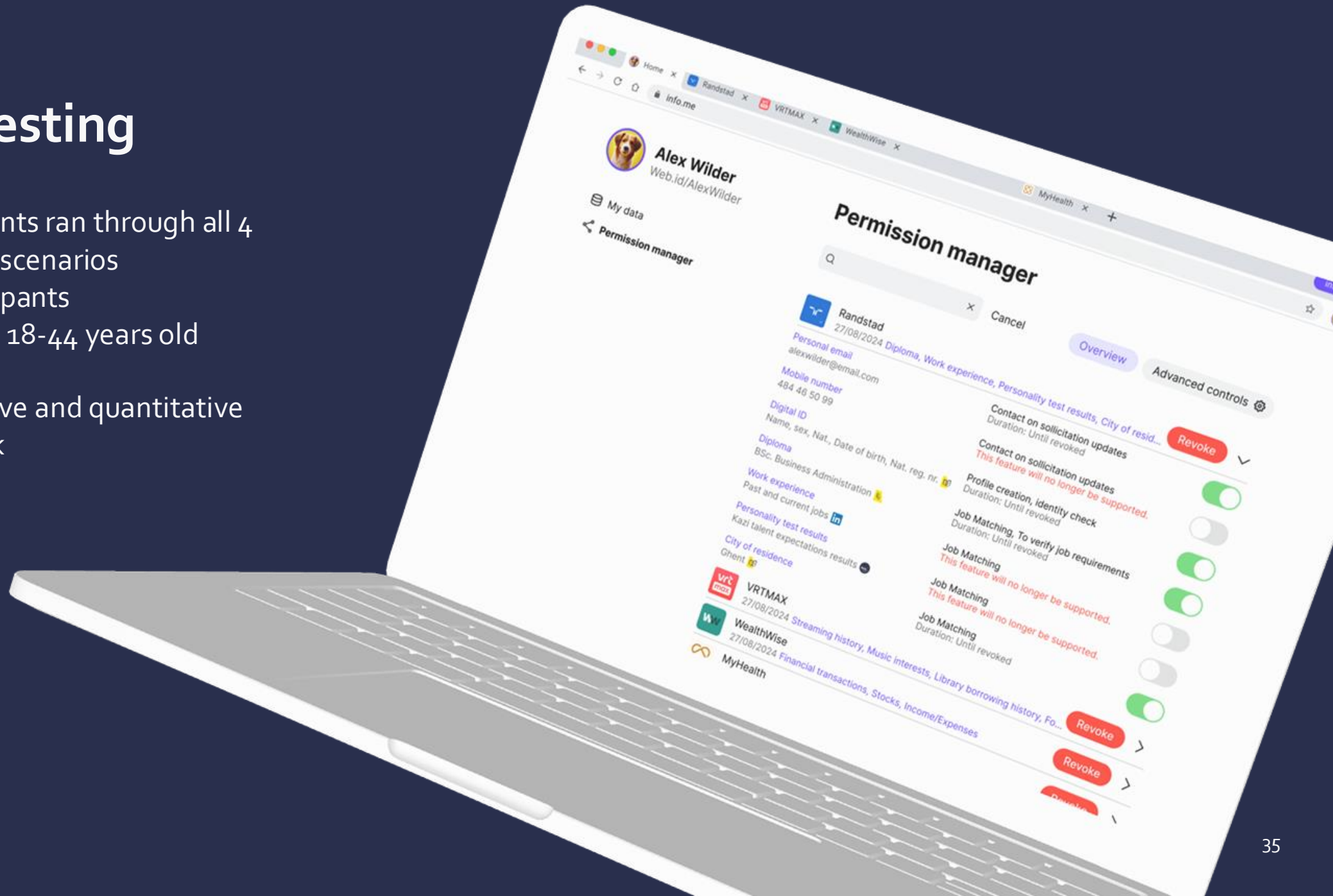


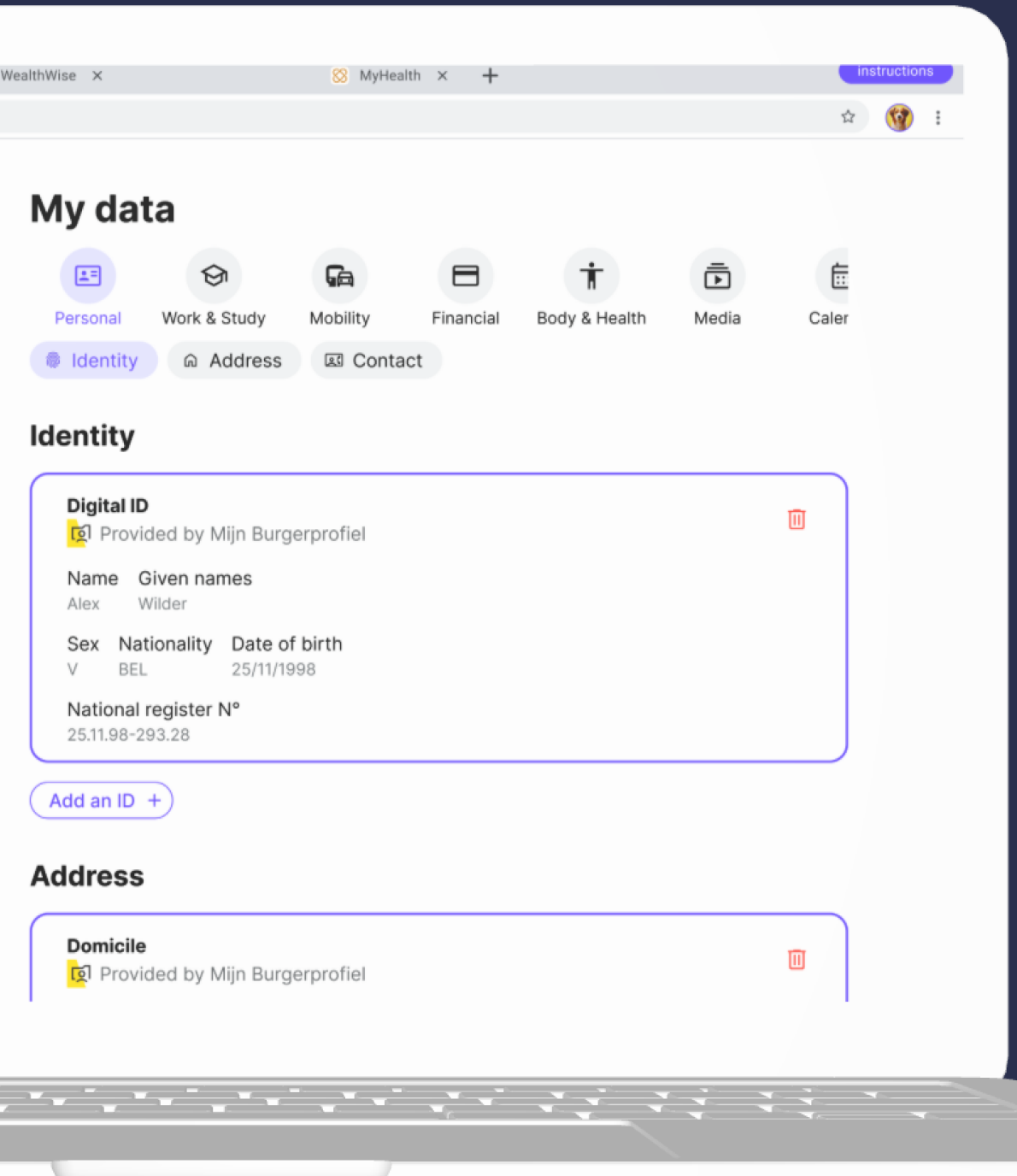
FLANDERS

User testing

- Participants ran through all 4 use case scenarios
- 17 participants
- Between 18-44 years old
- Flanders
- Qualitative and quantitative feedback

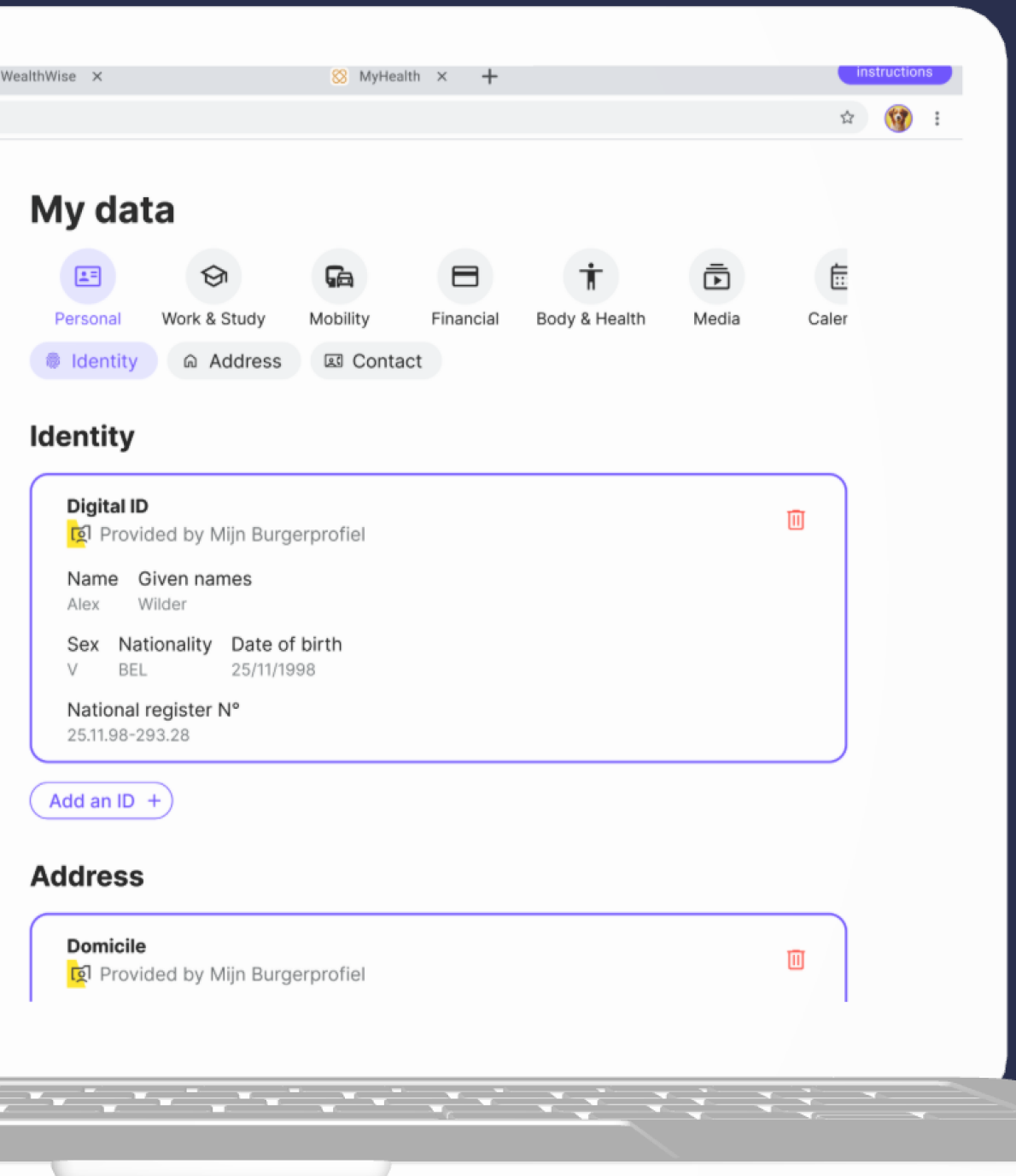


FLANDERS



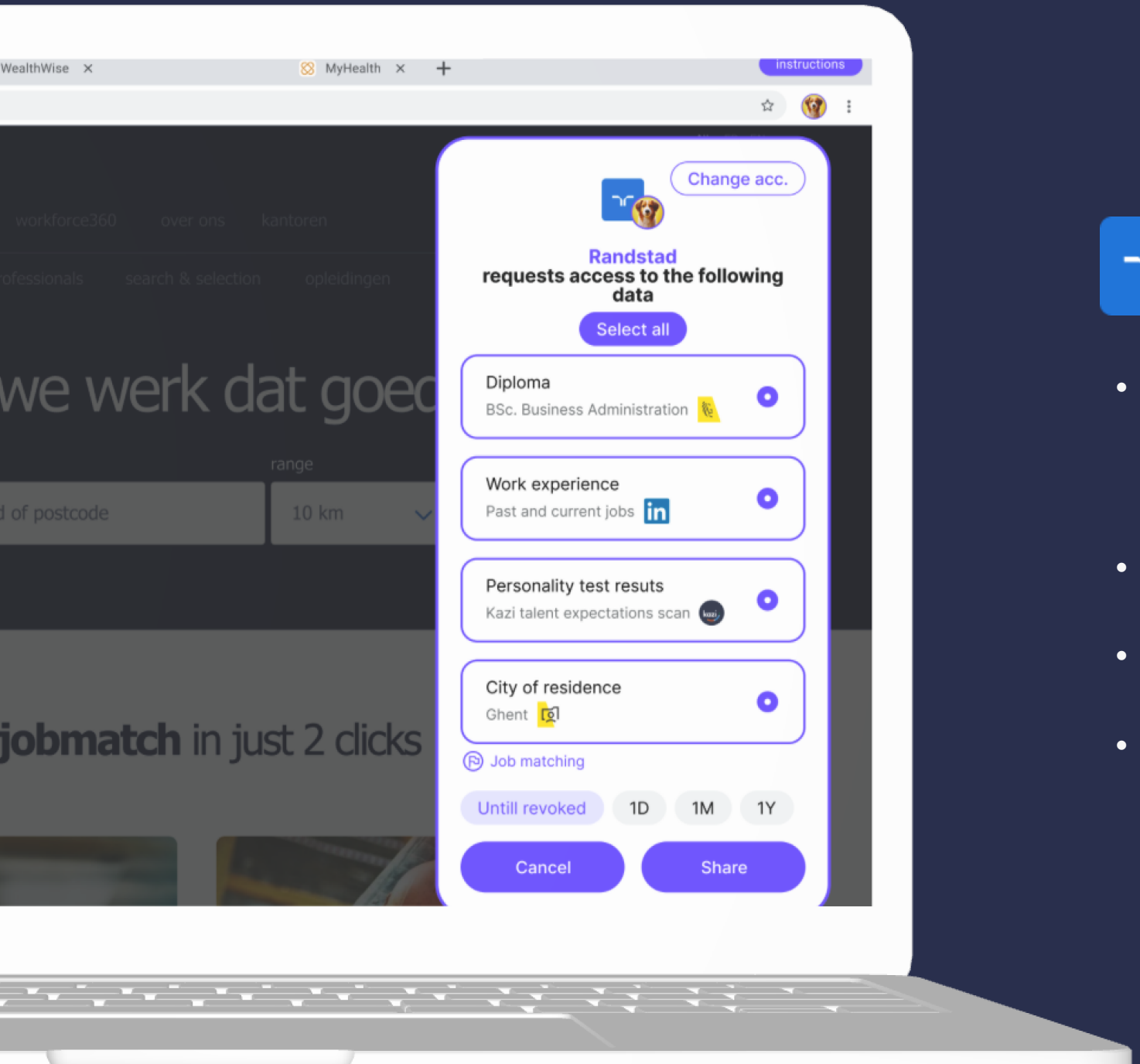
Personal Data Store

- Positive reception overall: structure and efficiency
- **Major security concerns** due to data centralization
- Trust tied to provider
  - Government affiliation seen as essential for credibility
  - But doubts about **state involvement in leisure data**
- **Permission manager** well appreciated



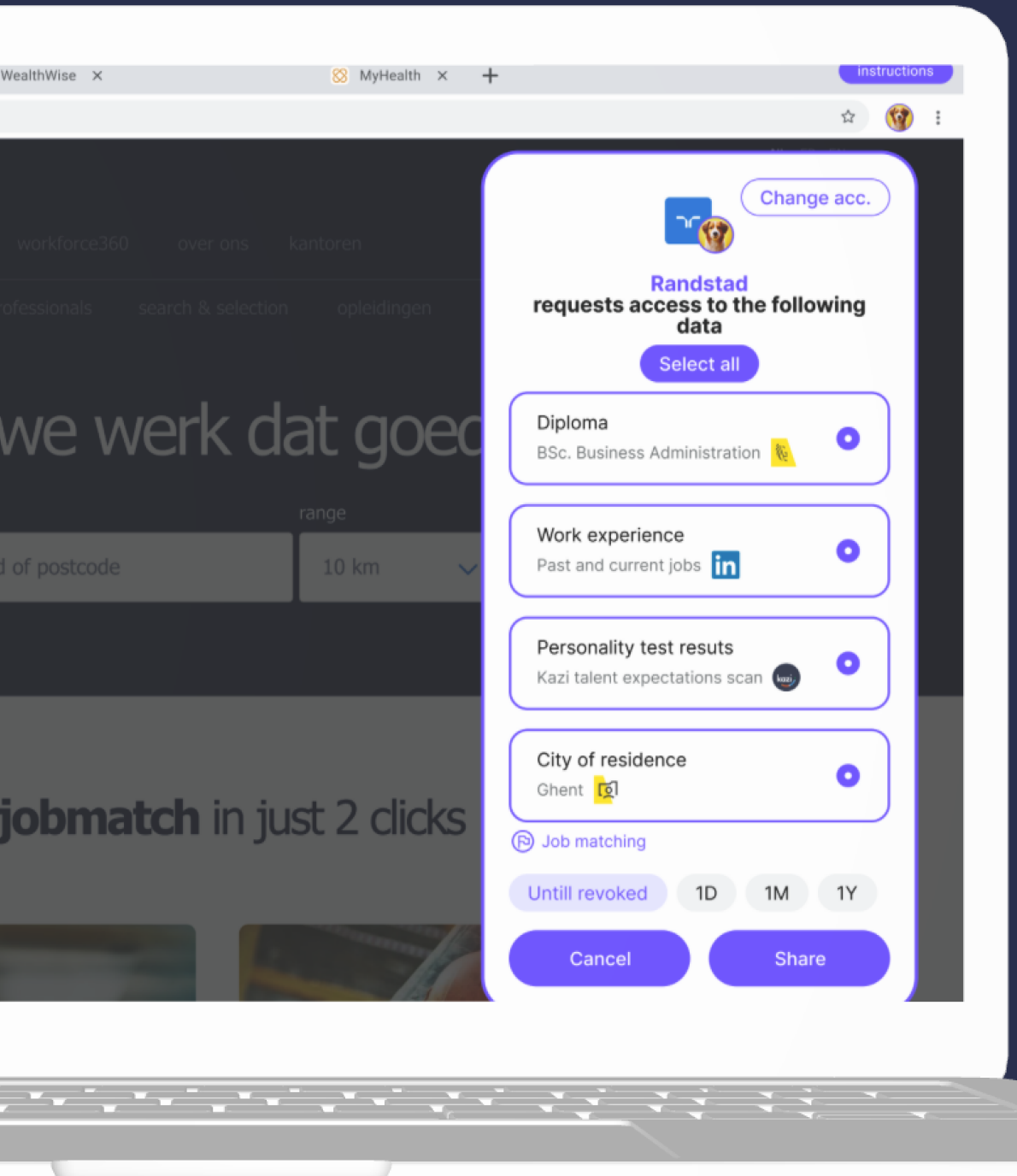
Personal Data Store

"Interesting to have that in one location instead of having 456 different apps for it."



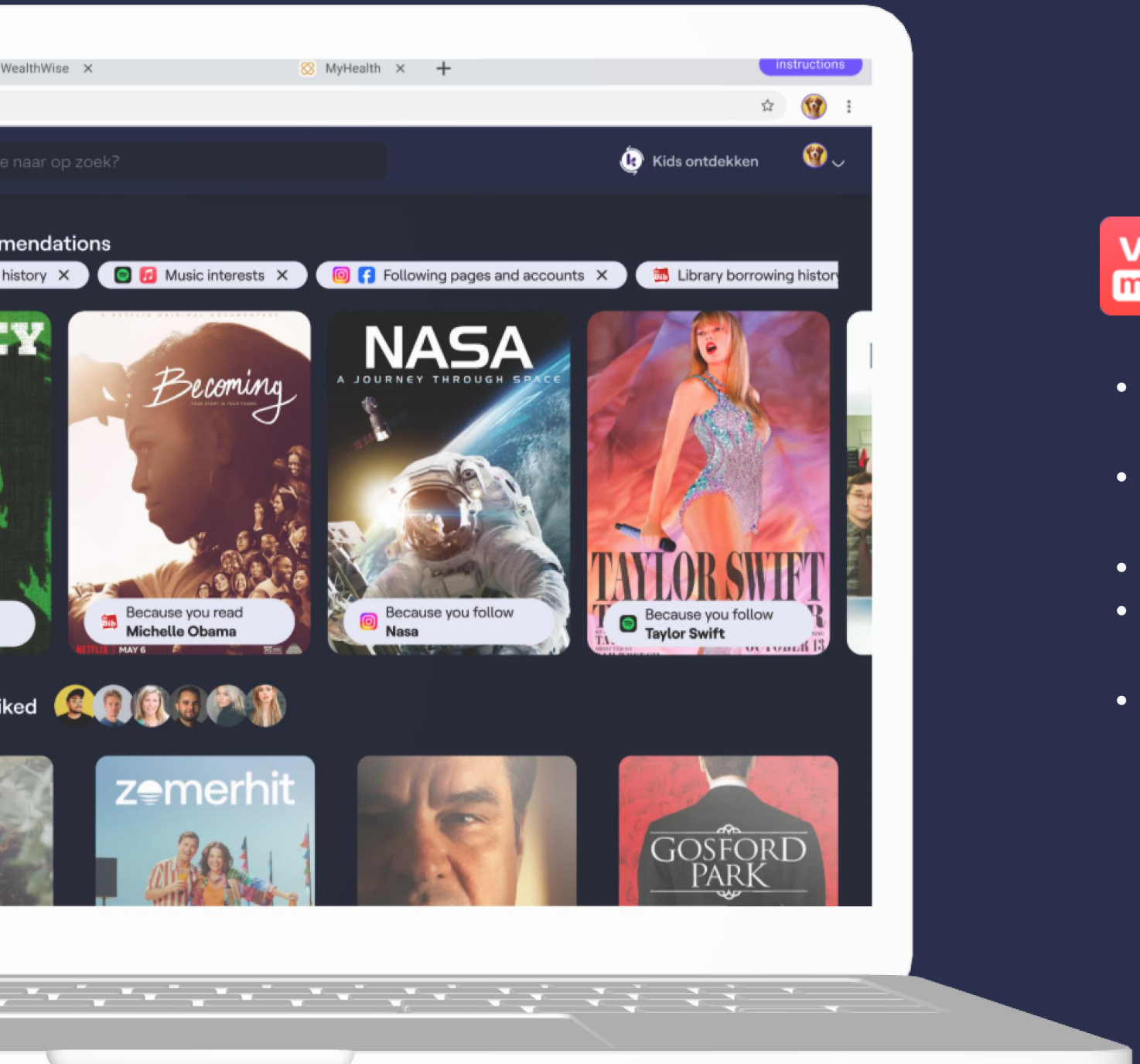
HR

- **High willingness to share data** for job matching
  - Some doubts about **personality tests, sex and age**
- Appreciation for **data minimization** (e.g. city instead of exact address)
- **Desire for more control**: filters, keyword preferences
- **Positive overall**: fast, simple, efficient



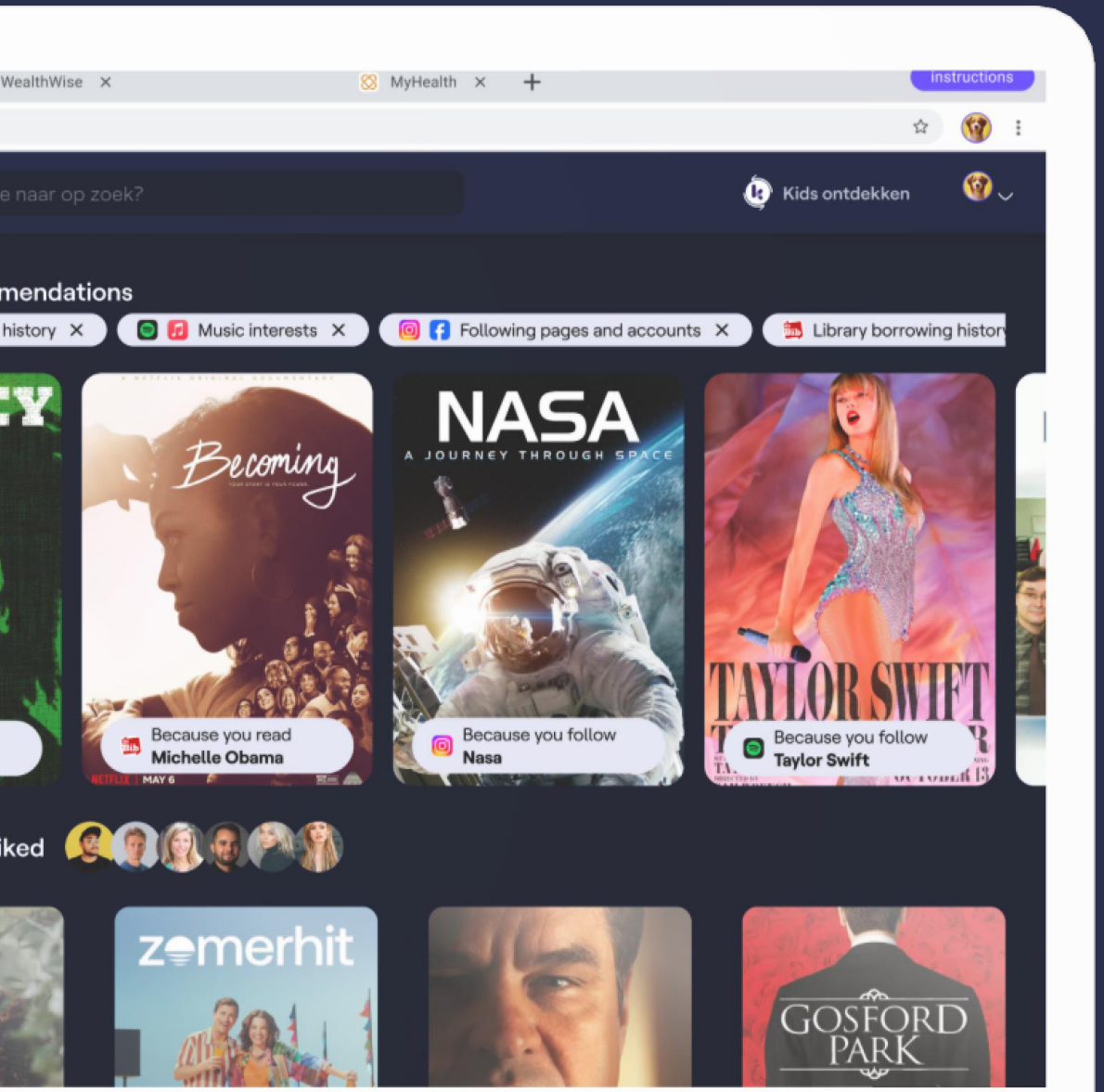
HR

"I just think it goes really fast, and it's just super simple like that. Check, check, check. [...] It's really super simple."



Media

- **Initial scepticism** about relevance of certain data (e.g. city, listening history)
- Strong **reluctance to share social media data**
- **Trust in platform** mattered
- Perception shifted after seeing recommendations
- Mixed reactions overall: **convienence VS fear of filter bubbles**

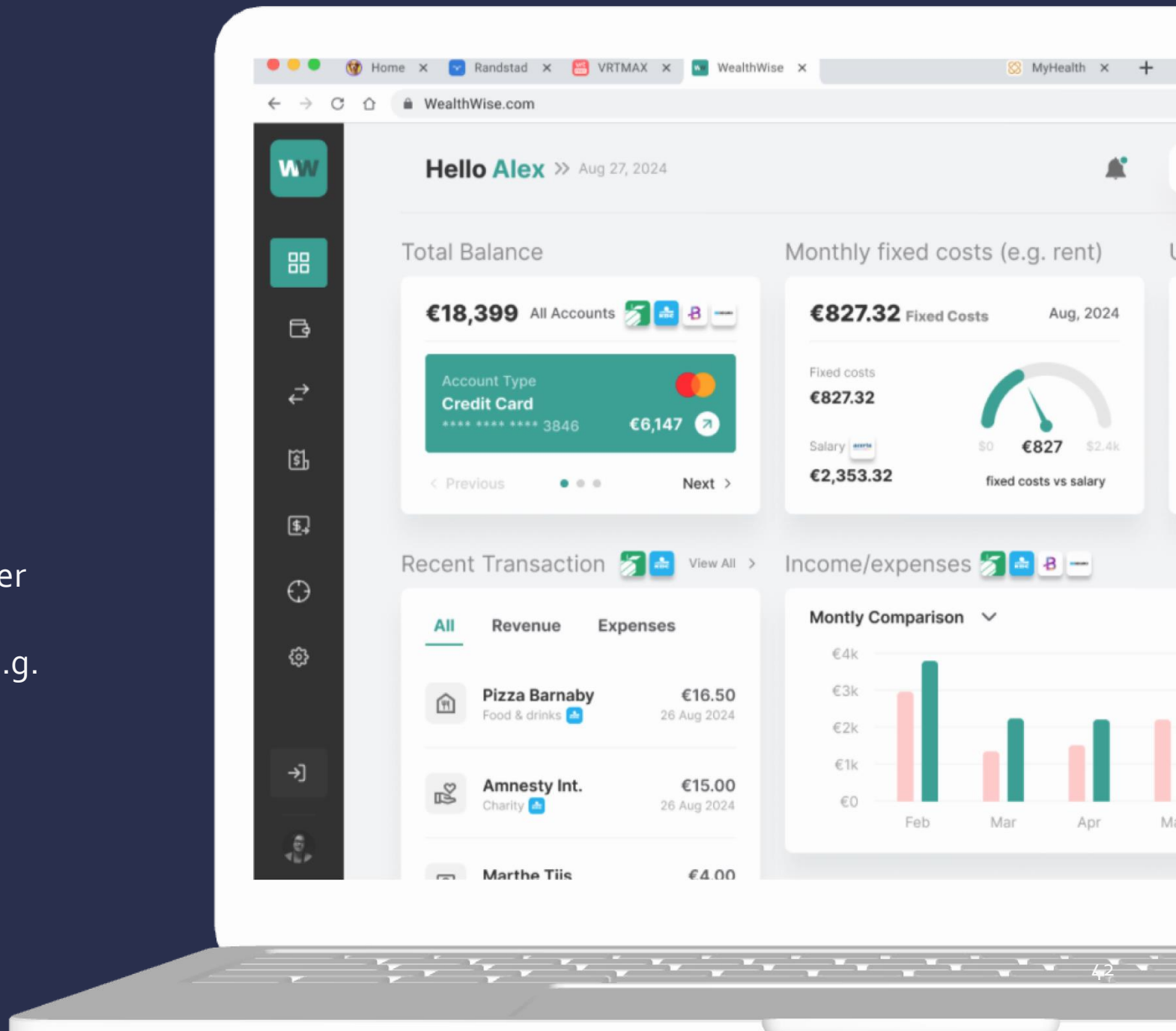


Media

"Sometimes you just want to watch a no-brainer, and then I wouldn't share because I think, wow, people would think I only watch silly series."

Finance

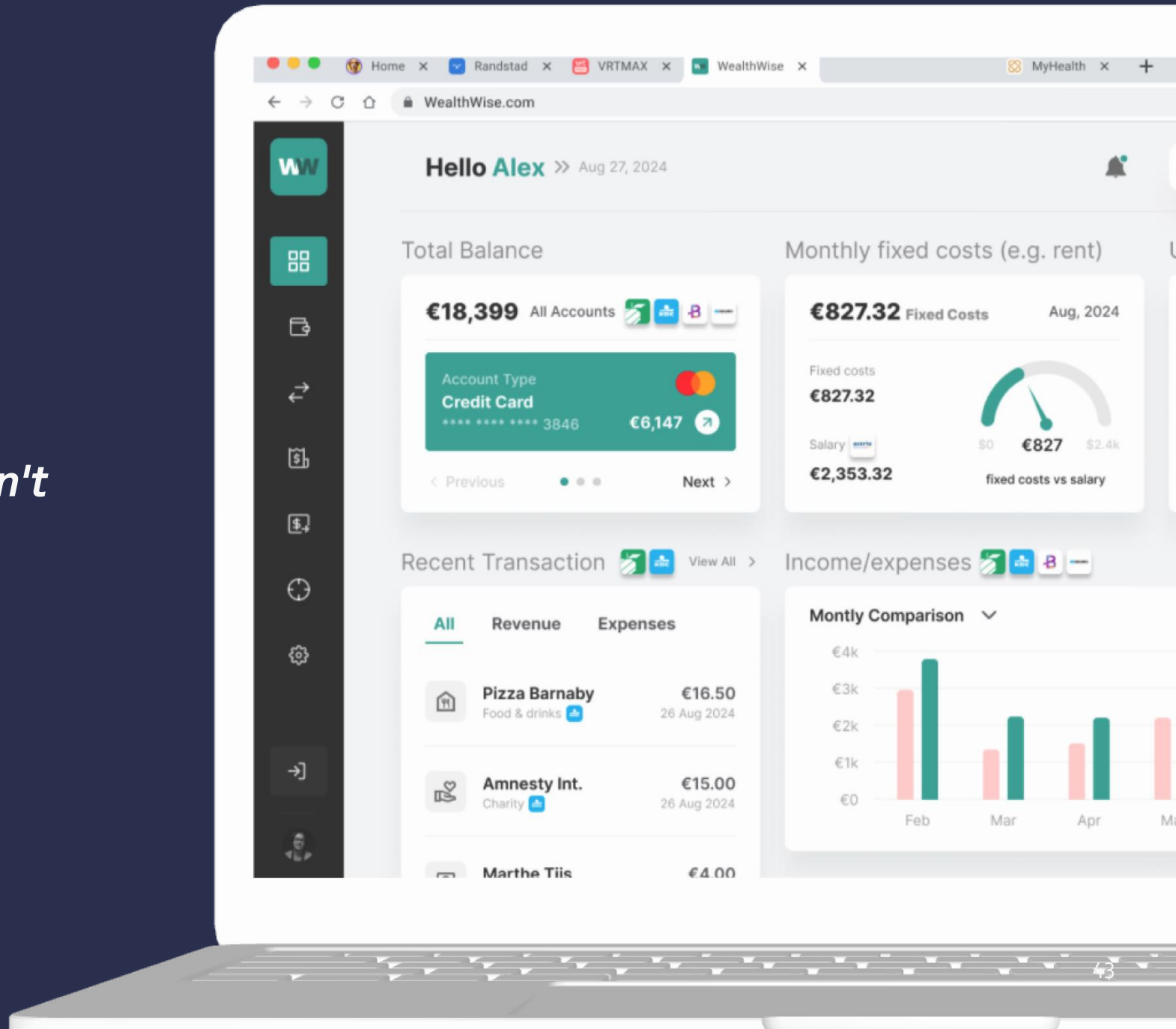
- **Initial caution** due to platform unfamiliarity
- Participants were looking for a **link with their bank**
- Clear value in financial overview
- **Willingness to share increased** after using the tool
- **Lower relevance for some users** (e.g. students, single bank users)



FLANDERS

Finance

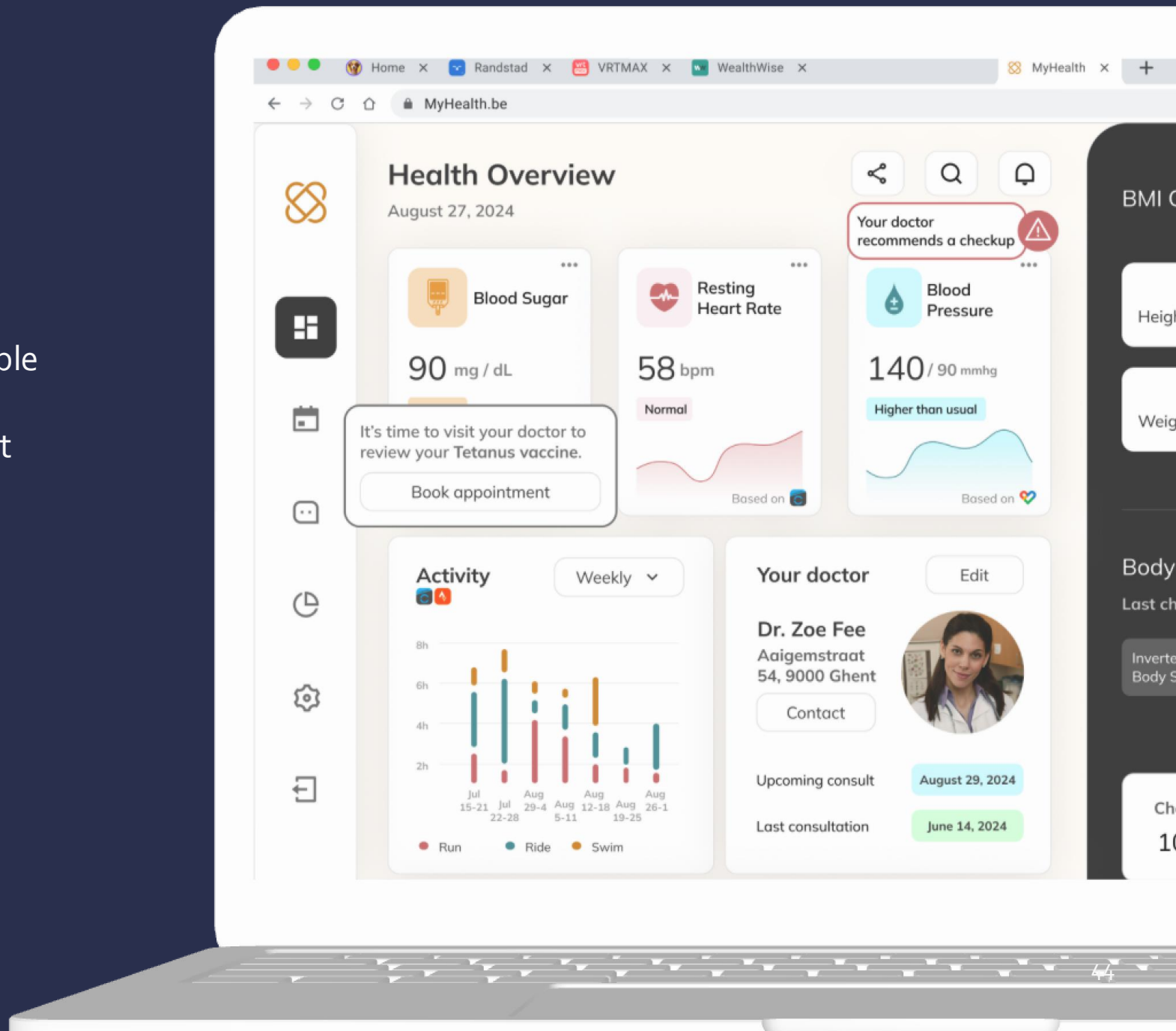
"It must be really secure, because otherwise I would never use it. [...] If this doesn't look secure, then I would rather scroll through the various banking apps than open this."



FLANDERS

Health

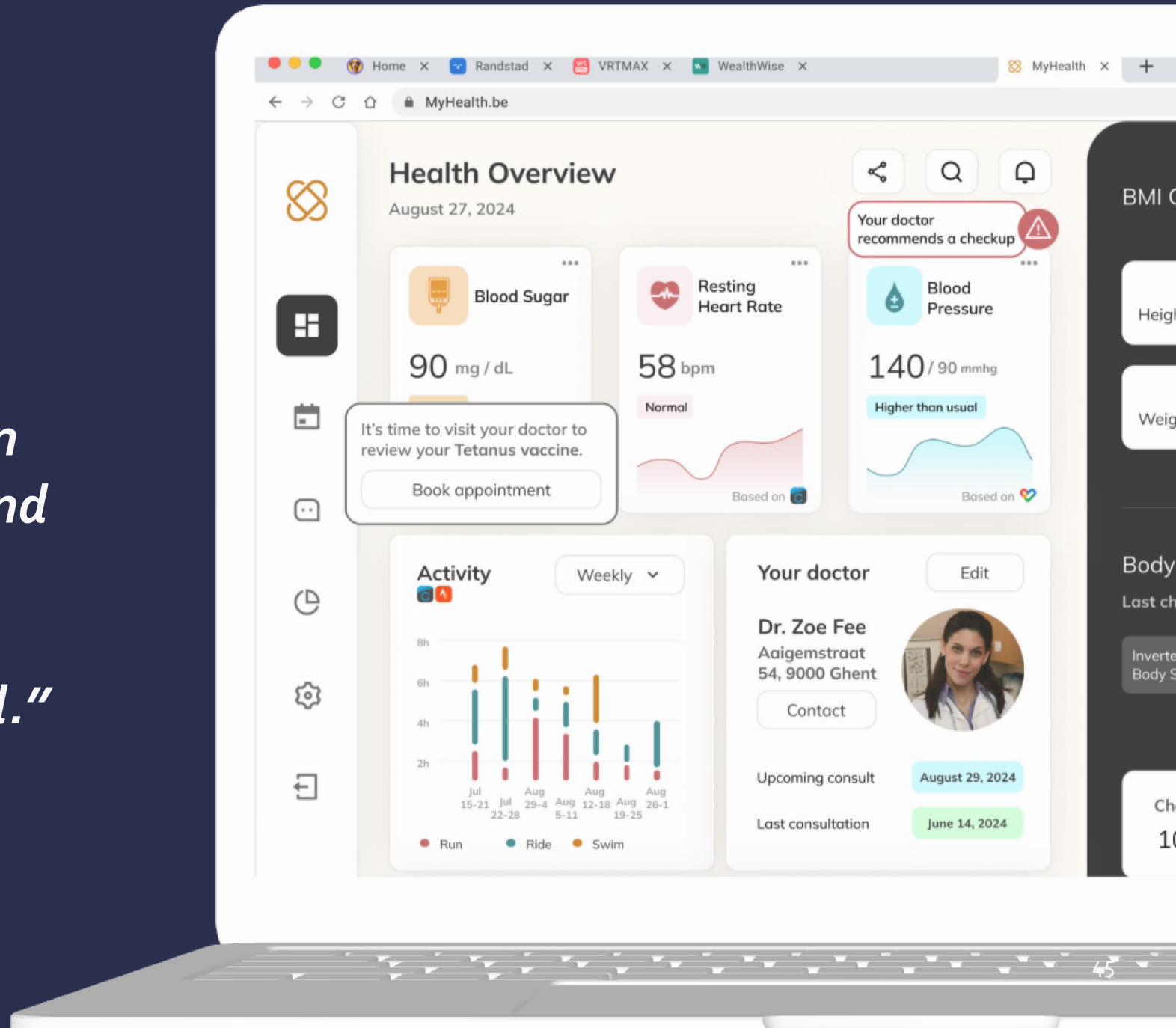
- “With your doctor you should be able to share everything” VS “If I do not have any issues, then he should not know when I’m exercising.”
- **High willingness to share**
- Strong appreciation for **admin simplification**
- **Proactive health alerts** and **clear dashboards** well received
- Concerns **insurance misuse**



FLANDERS

Health

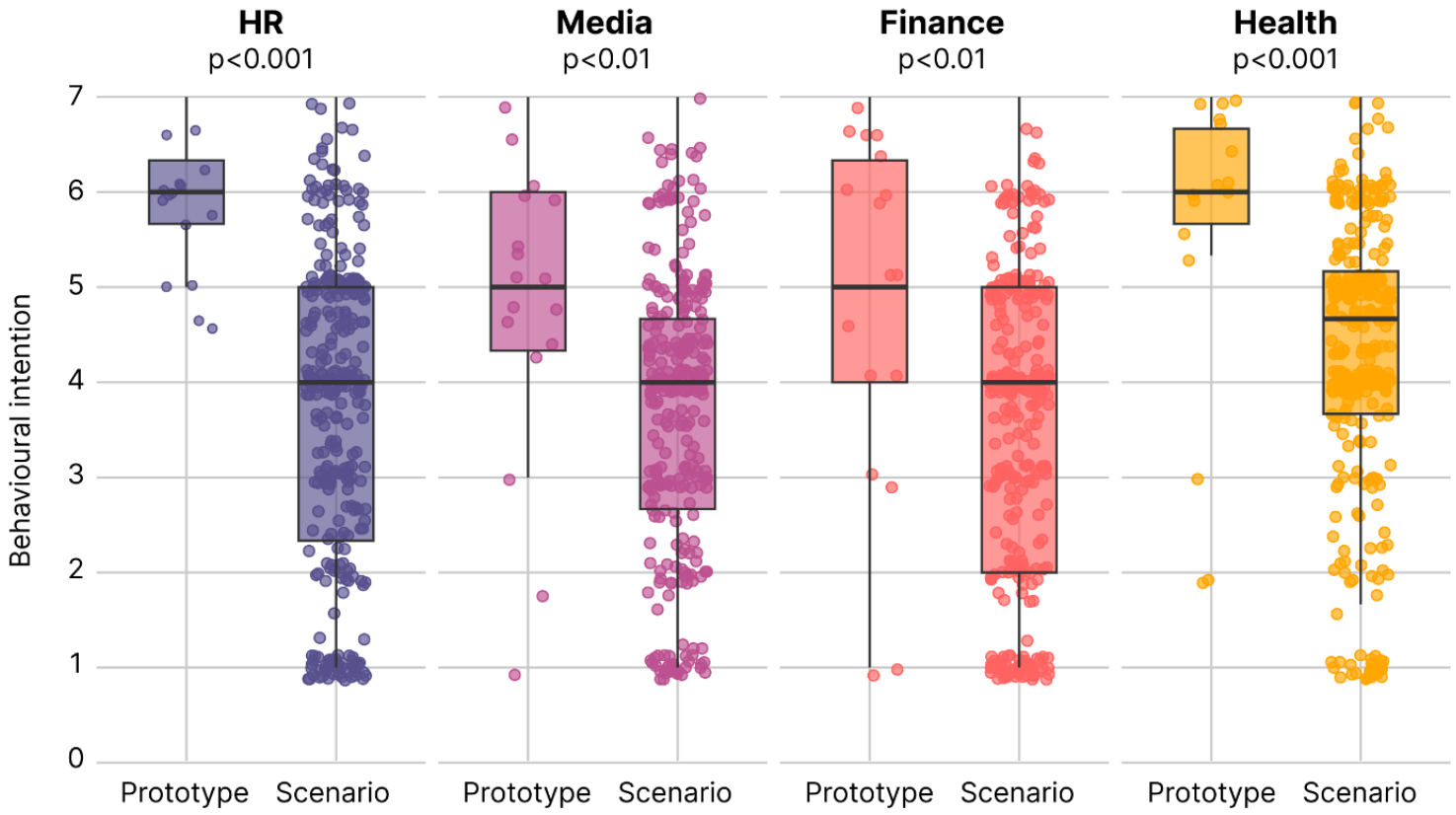
"I had surgery recently, and I had to do things on a thousand platforms and so on. So if those things were all clustered, that would be super practical."



FLANDERS

Prototype interaction appears to heighten users' interest

Participants who interacted with the **prototype** report **higher behavioral intention** scores across all use cases compared to those who evaluated the written scenarios.



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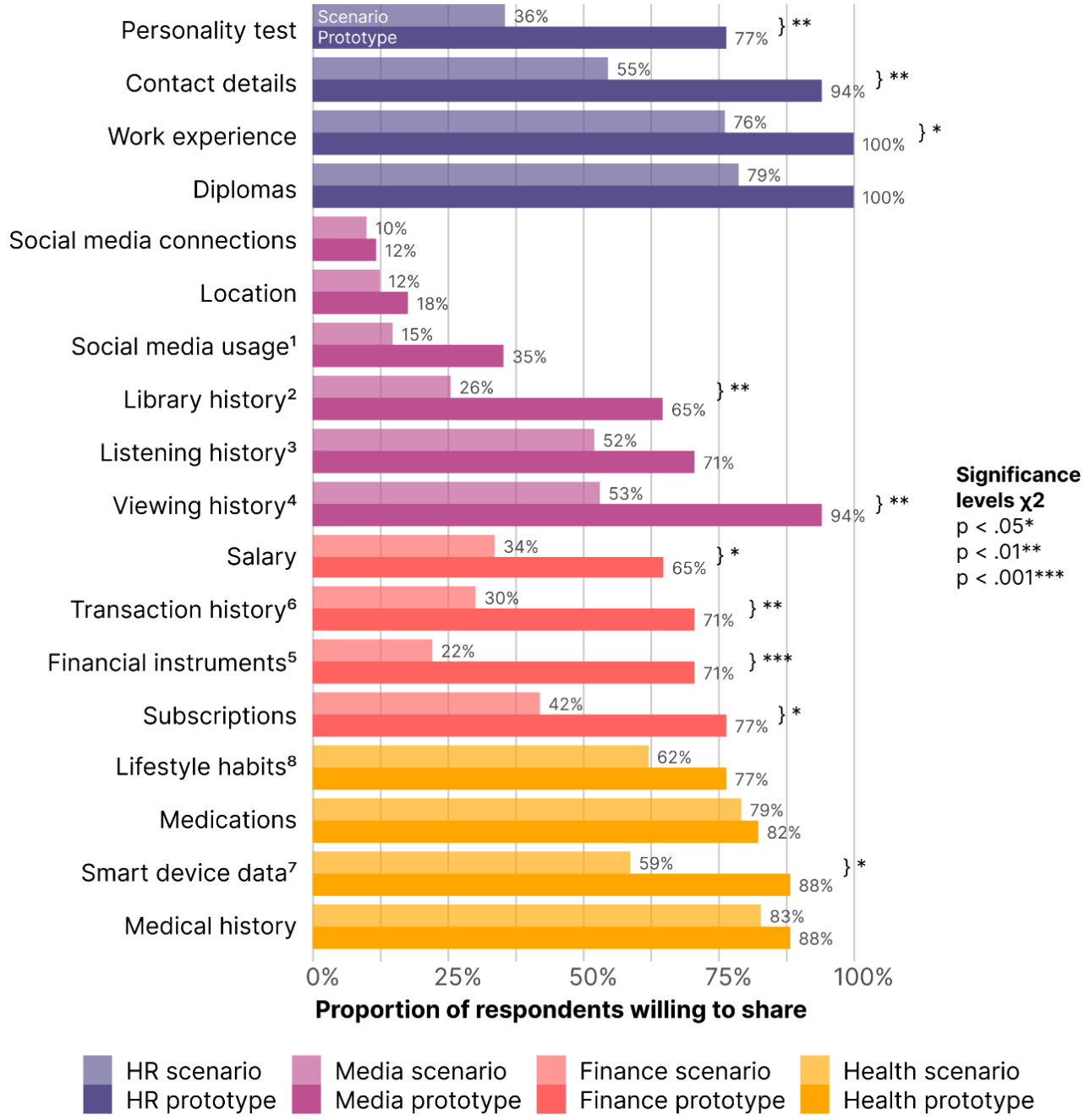
Participants who interacted with the prototype report a higher willingness to share data



FLANDERS

Conclusion

1. "Show don't tell"
Tangible experiences increase adoption potential

2. Security is the top barrier
Thematic PDSs could reduce perceived risk but reduce PDS efficiency

3. Trust in provider is essential
Government affiliation increases credibility—but not for all data types

4. Users prefer utility over leisure
Stronger enthusiasm for Health and HR use cases

5. Simplicity vs. Control tension
Personalization with transparency and control, data minimization and gradual onboarding

6. Usability ≠ main hurdle
Explainability—not usability—is the real challenge

FLANDERS

Questions or remarks?

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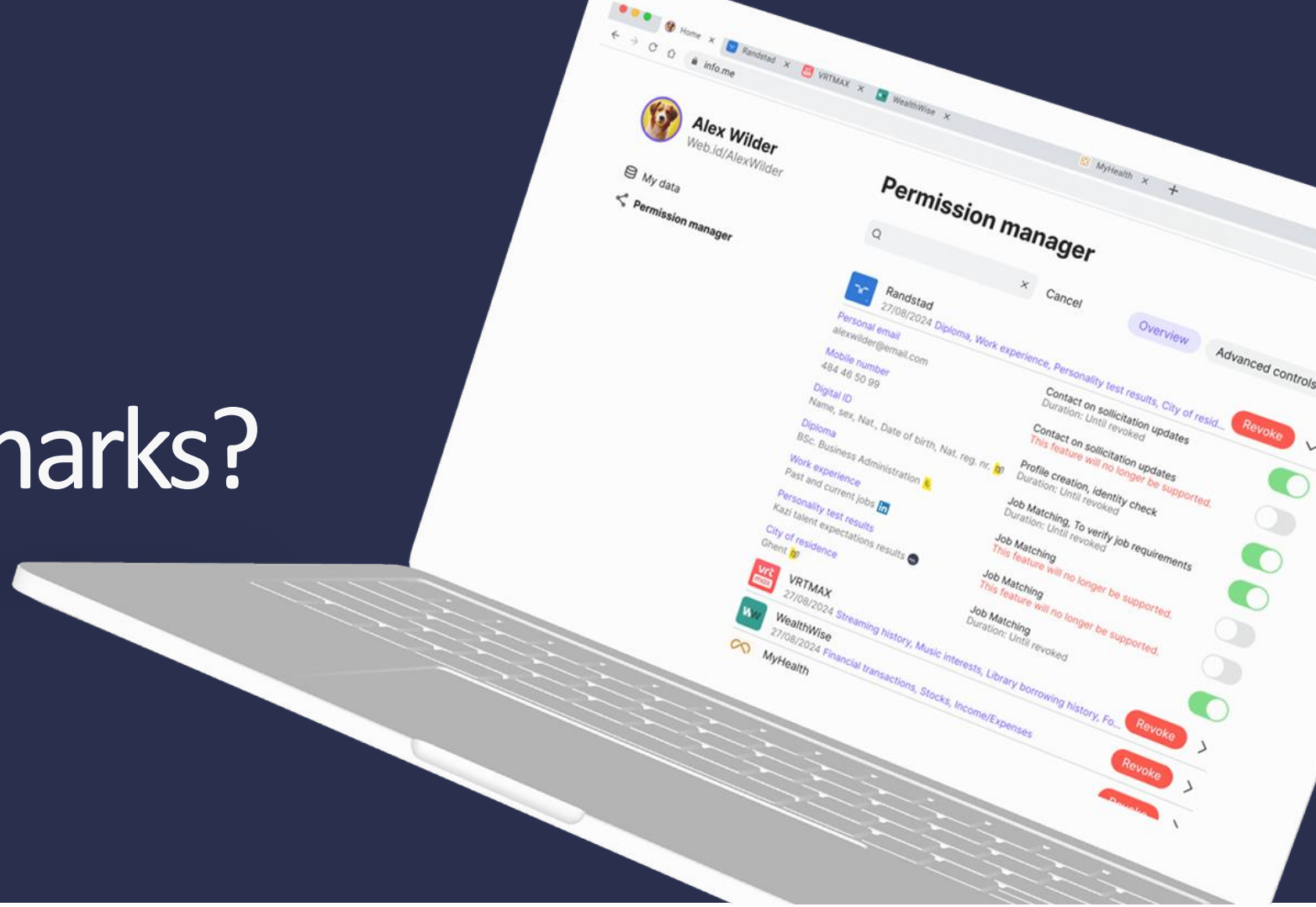

Vlaamse overheid

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