

The solid experience

User perceptions and behaviour unveiled

By Tim Theys



**Vlaamse
overheid**



DEPARTMENT OF
ECONOMY
SCIENCE &
INNOVATION



**Gefinancierd door
de Europese Unie**

NextGenerationEU



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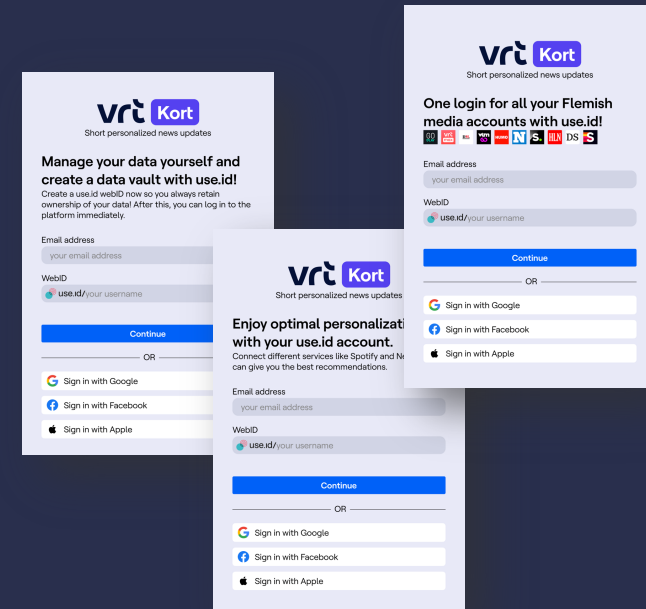
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Results of two consecutive experiments

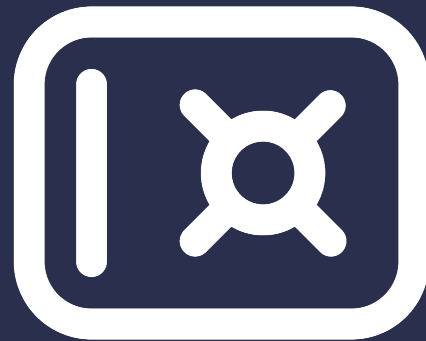


1) How does a **data vault** integration in the **news website** of the public broadcaster affect the **user experience**?



2) How can we heighten the users' intention to use Solid?

How does a **data vault** integration in the **news website** of the public broadcaster affect the **user experience**?





Gepersonaliseerd nieuws

gebaseerd op [jouw leesgedrag](#)



Omdat je leest over **Binnenland**

Fik (98) uit Meerhout getuigt na 75 jaar pas over zijn oorlogsverleden bij de Brigade Piron

© 15/9/2022 16:07



Omdat je leest over **Binnenland**

Regen doet slotshow OdeGand van het water naar 't Kuipke verhuizen: "Zelfde muzikaal spektakel, andere magische locatie"

© 15/9/2022 14:46



EUROPA

Oekraïense president Zelenski betrokken bij verkeersongeval in Kiev: "Geen ernstige verwondingen"

© 15/9/2022 01:34



Omdat je leest over **Binnenland**

"Het is een jongen!": Koningspinguin geboren in ZOO Antwerpen

© 15/9/2022 13:19



Omdat je leest over **Binnenland**

Armoedebaarometer: Mensen in armoede vorig jaar nog armer geworden, ook lage middenklasse stilaan in de problemen

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Test case

The user receives **personalized news recommendations** based on his/her reading behavior.

The effect of **different levels of transparency and control** over personal data processing was tested using **3 conditions.**



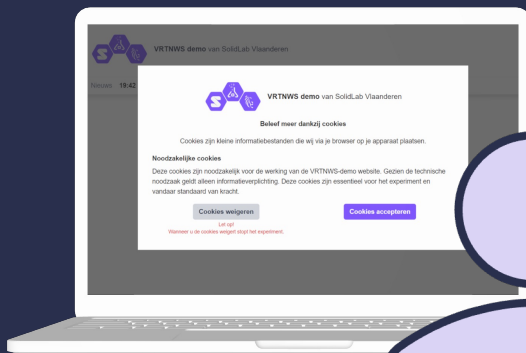
Cookies



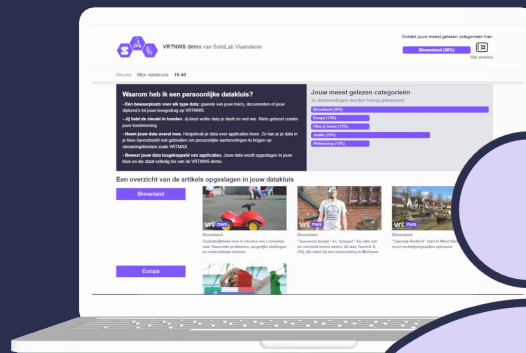
Data vault transparency



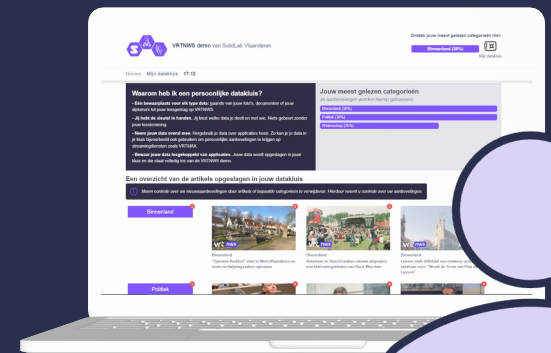
Data vault transparency & control



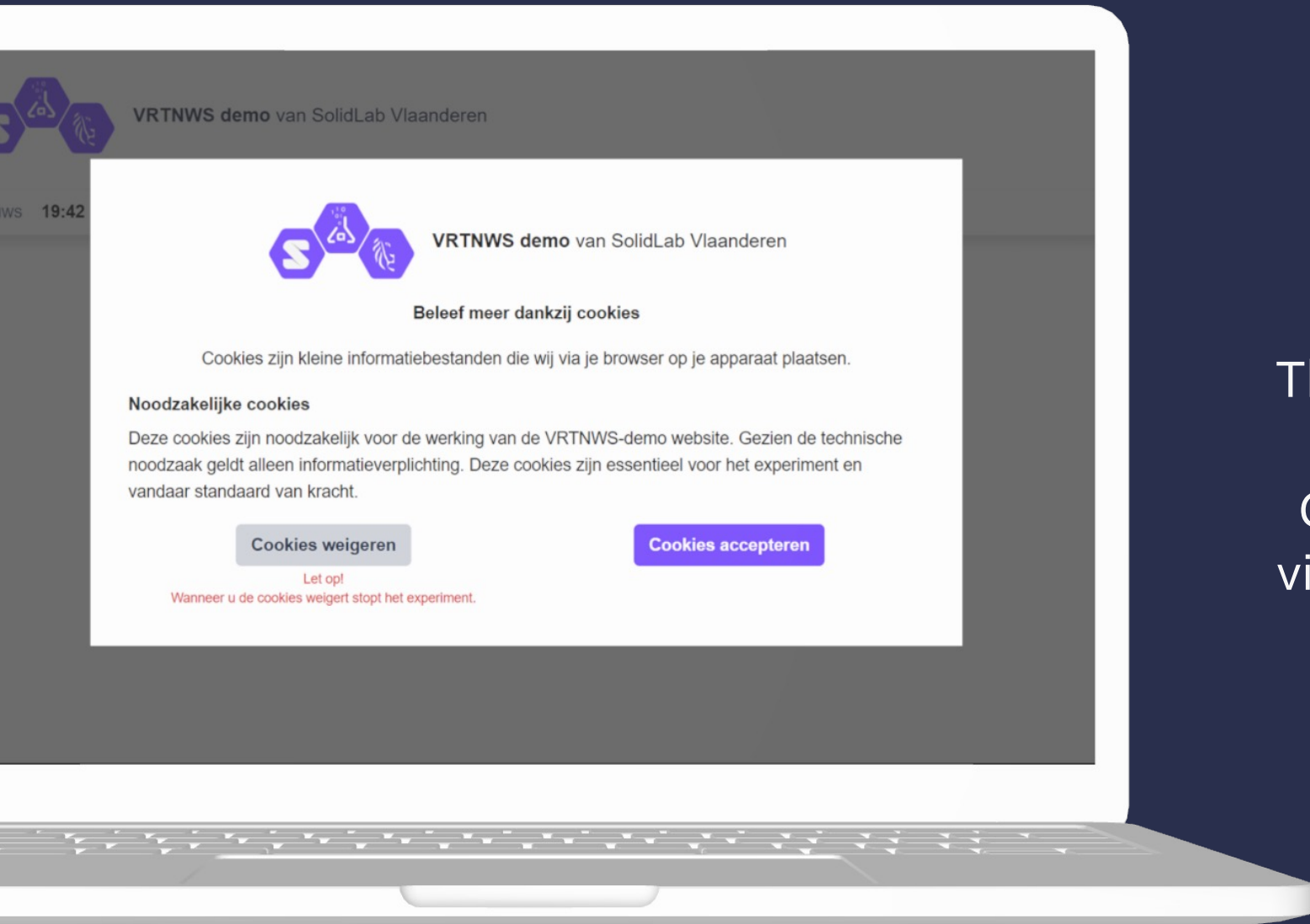
n=110



n=150



n=142



1. Cookies

The reading behavior of the user is processed via cookies. Consequently, the user cannot view or manage the stored data.



Binnenland (38%)



Mijn datakluis

Waarom heb ik een persoonlijke datakluis?

- **Eén bewaarplaats voor elk type data:** gaande van jouw foto's, documenten of jouw diploma's tot jouw leesgedrag op VRTNWS.
- **Jij hebt de sleutel in handen.** Jij kiest welke data je deelt en met wie. Niets gebeurt zonder jouw toestemming.
- **Neem jouw data overal mee.** Hergebruik je data over applicaties heen. Zo kan je je data in je kluis bijvoorbeeld ook gebruiken om persoonlijke aanbevelingen te krijgen op streamingdiensten zoals VRTMAX.
- **Bewaar jouw data losgekoppeld van applicaties.** Jouw data wordt opgeslagen in jouw kluis en die staat volledig los van de VRTNWS demo.

Jouw meest gelezen categorieën

Je aanbevelingen worden hierop gebaseerd.

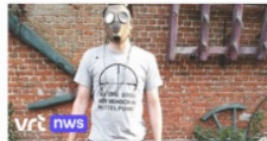


Een overzicht van de artikelen opgeslagen in jouw datakluis

Binnenland



Binnenland
Onduidelijkheid over 8 crèches van Lommelse vzw: financiële problemen, mogelijke sluitingen en onbereikbaar bestuur



Binnenland
"Soeverein burger" en "prepper" die niks van de overheid moest weten: dit was Yannick V. (36), die stierf bij een huiszoeking in Merkssem



Binnenland
"Operatie Kerkhof" start in West-Vlaanderen en moet verdwijningszaken oplossen

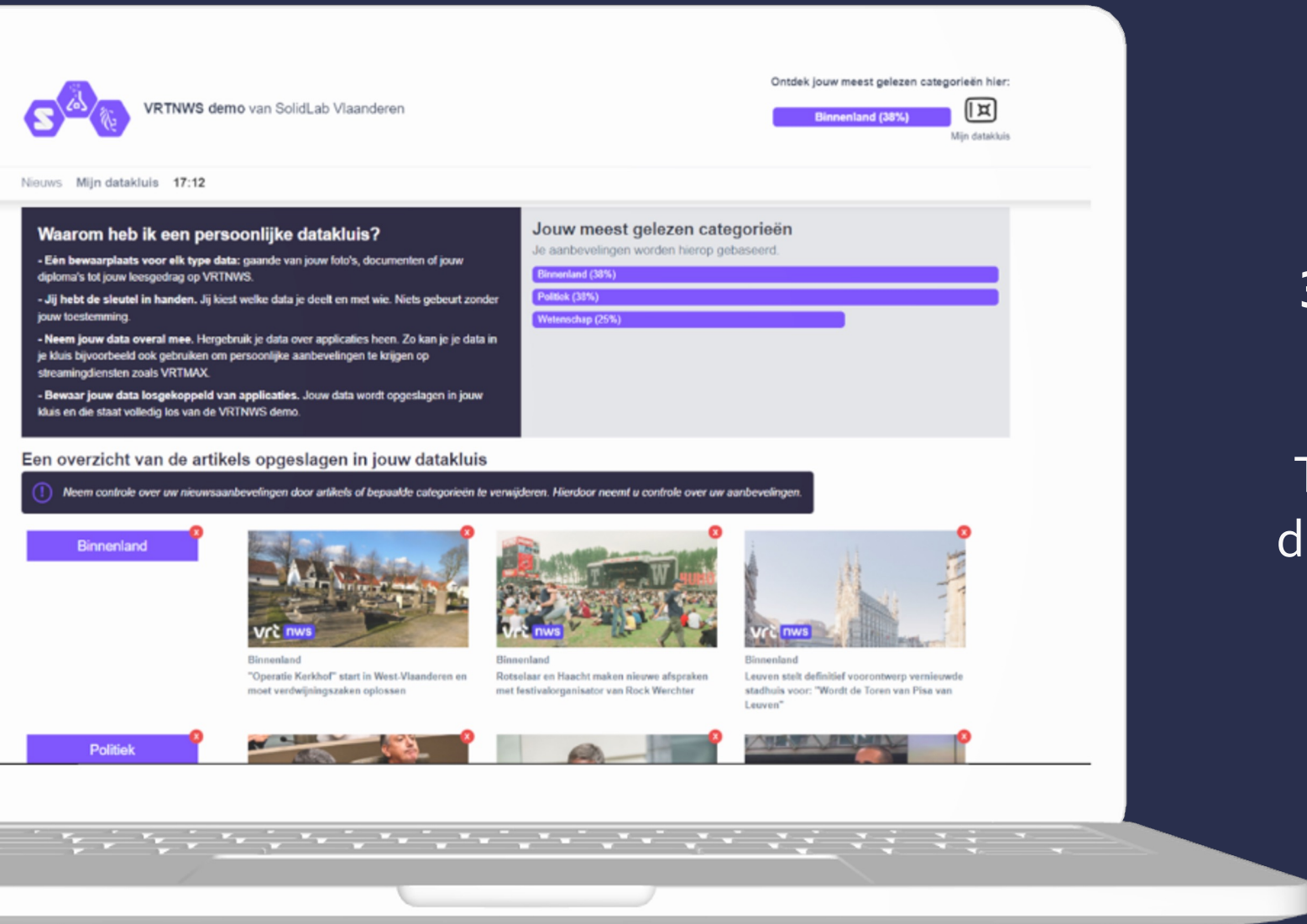
Europa



2. Data vault transparency

The user can access his/her stored data through the data vault tab.





3. Data vault transparency & control

The user can access the stored data and delete articles through the data vault tab.

The effect of **different levels of transparency and control** over personal data processing was tested using **3 conditions**.



Cookies



Data vault
transparency



Data vault
transparency &
control

Transparency: Insight into what data is processed for personalization.

No

Yes

Yes

Control: Ability to delete the data collected to affect personalization.

No

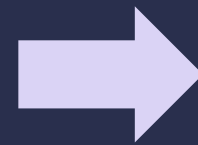
No

Yes

Experiment flow



10 min interaction with one of the three conditions



Survey of perceptions

Surveyed perceptions



Transparency

I have a clear view of how my personal data is processed.



Control

I feel like I have control over my personal data.



Understanding

I understand how my personal data is processed.



Trust

I trust the way my personal data is handled.



Usability

I found the website easy to use.



Intention to use

I plan to use this website in the future.

The integration of a **data vault** has a **significant positive impact** on:



Transparency 

I have a clear view of how my personal data is processed.



Control 

I feel like I have control over my personal data.



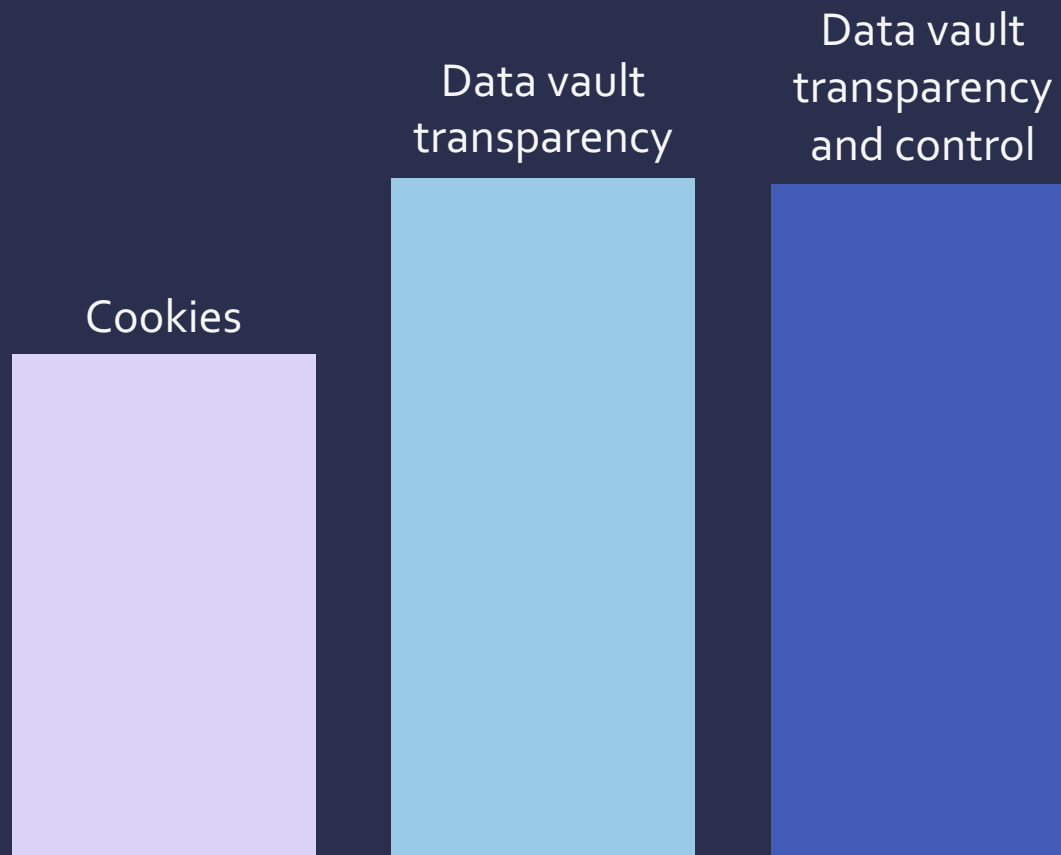
Understanding 

I understand how my personal data is processed.



Transparency

I have a clear view of how my personal data is processed.



A data vault makes people feel that they have a **clearer view of how their personal data is being handled.**



Understanding

I understand how my personal data is processed.

Cookies

Data vault
transparency

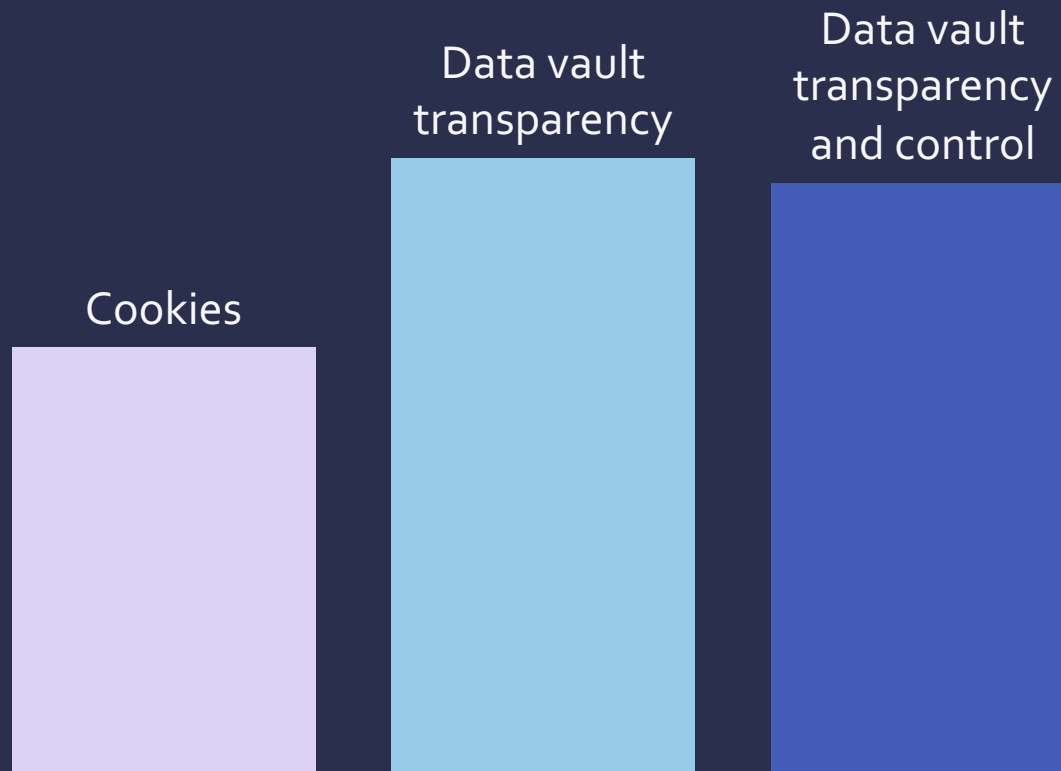
Data vault
transparency
and control

Greater transparency about data processing through a data vault also leads to a **better understanding** of it.



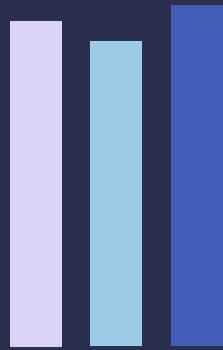
Control

I feel like I have control over my personal data.



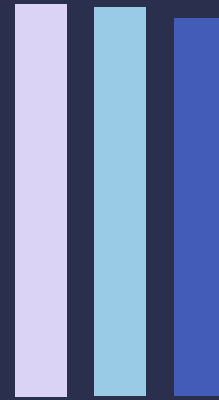
Remarkable: **Transparency in particular influences perceived control.** We see no additional effect by also effectively giving the user more control.

The integration of a data vault had no significant impact on:



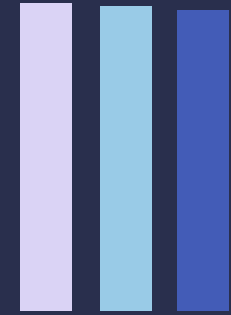
Trust

I trust the way my personal information is handled.



Usability


I found the website easy to use.



Intention to use

I plan to use this site in the future.

 Cookies

 Data vault transparency

 Data vault transparency and control

“Ik heb niets van Sport gezien.”

“Was duidelijk, vlot navigeerbaar en duidelijke info over wat de artikels gaan.”

“Ik vond de inlog procedure nogal chaotisch.”

“Te veel nieuws in één keer.”

“Enkel een beetje saai qua lay-out en kleuren”

Qualitative results

Feedback of the users on the news website

“Aanbod van nieuwsartikelen mocht iets ruimer zijn.”

“Inzicht en controle op vergaarde privacygegevens moeten een prominentere plaats innemen op de website.”

“Vooral de afwezigheid van storende banners was een verademing.”

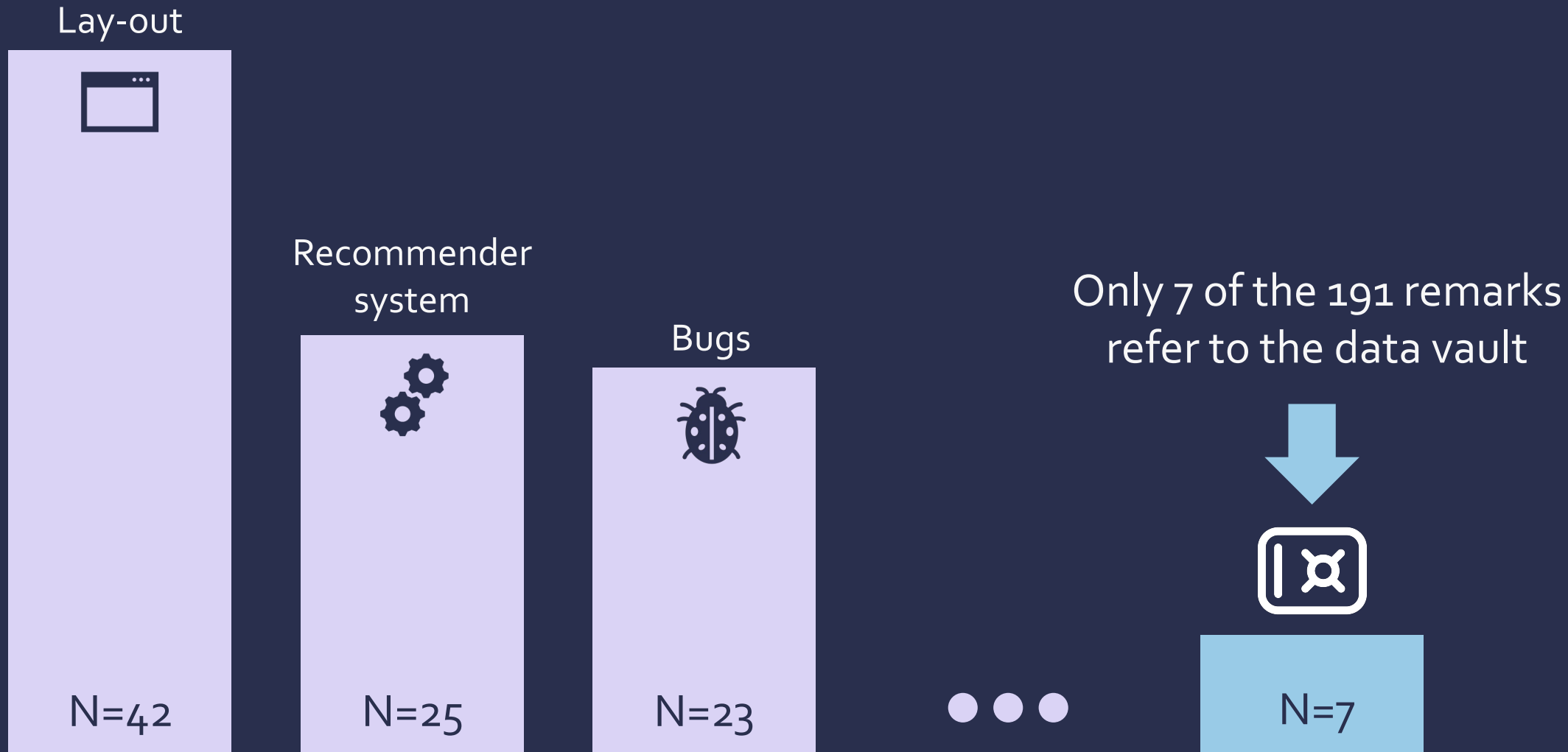
“Wie kan mijn interesses zien?”

“Datakluis media, datakluis overheid, datakluis bank, ... Hoeveel nog?”

“De meeste titels suggereren al een bepaalde visie op het nieuws die misschien niet overeenkomt met de visie van de lezer.”

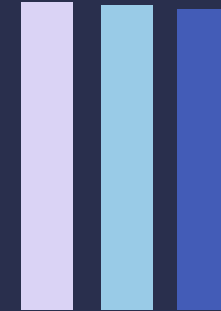
Classification of the qualitative feedback

N(total) = 191 remarks



Experiment 2

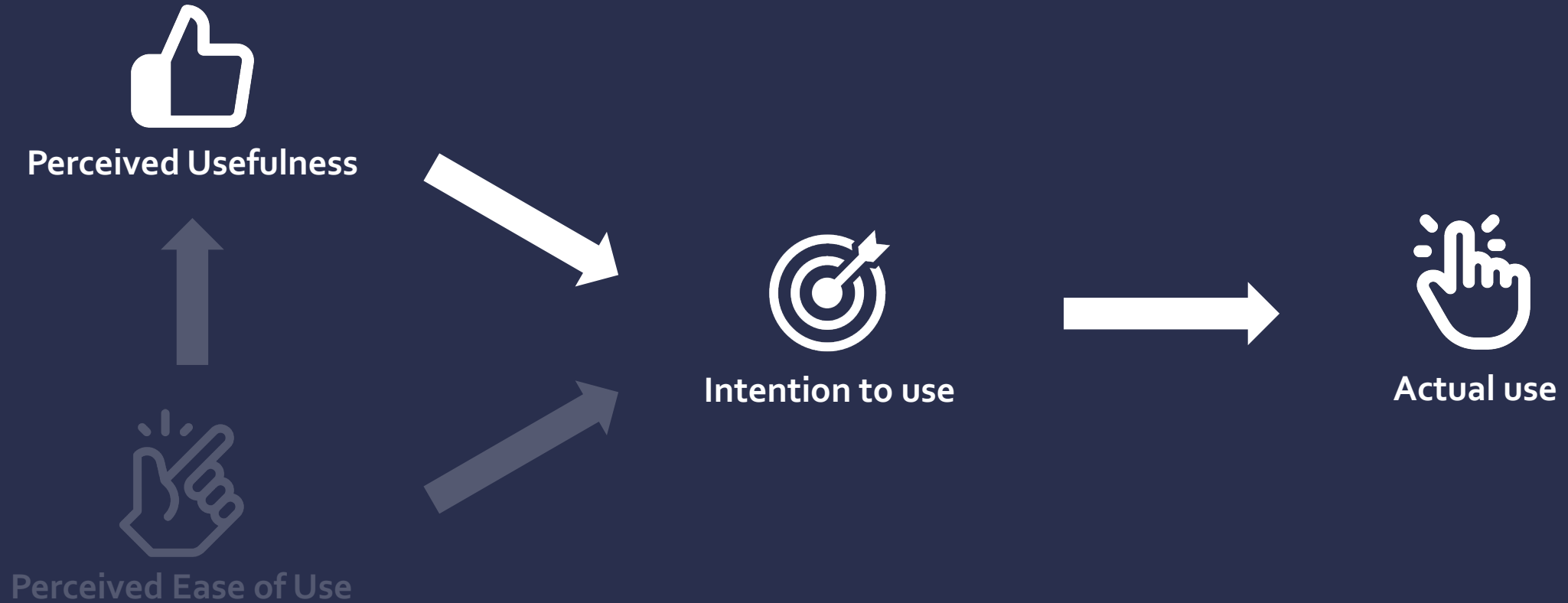
How can we **heighten the users' intention to use Solid?**



Intention to use

I plan to use this site in the future.

Technology Acceptance Model



3 different arguments aiming to heighten the perceived usefulness of Solid

Enhanced control

vrt Kort
Short personalized news updates

Manage your data yourself and create a data vault with use.id!
Create a use.id webID now so you always retain ownership of your data! After this, you can log in to the platform immediately.

Email address
your email address

WebID
use.id/your username

Continue

OR

Sign in with Google

Sign in with Facebook

Sign in with Apple

Enhanced personalization

vrt Kort
Short personalized news updates

Enjoy optimal personalization with your use.id account.
Connect different services like Spotify and Netflix so we can give you the best recommendations.

Email address
your email address

WebID
use.id/your username

Continue

OR

Sign in with Google

Sign in with Facebook

Sign in with Apple

Single Sign-On

vrt Kort
Short personalized news updates

One login for all your Flemish media accounts with use.id!

GO vrt max DMC VIER HUMO N S HLN DS S

Email address
your email address

WebID
use.id/your username

Continue

OR

Sign in with Google

Sign in with Facebook

Sign in with Apple



Short personalized news updates

Manage your data yourself and create a data vault with use.id
Create a use.id webID now so you always retain ownership of your data! After this, you can log in to the platform immediately.

Email address

WebID

Continue

OR

Sign in with Google

Sign in with Facebook

Sign in with Apple

Proportion of users opting for a Solid WebID over login



Enhanced personalization

Enjoy optimal personalization with your use.id account.
Connect different services like Spotify and Netflix so we can give you the best recommendations.

65%

Single Sign-On

One login for all your Flemish media accounts with use.id!

70%

Enhanced control

Manage your data yourself and create a data vault with use.id!
Create a use.id webID now so you always retain ownership of your data! After this, you can log in to the platform immediately.

34%

Conclusion

Solid is a promising approach to **heightening users' perceptions** of:




Transparency



Control



Understanding

But In order to **enhance users' intention to use**  Solid, it appears more effective to emphasize the benefits of Solid, such as **improved personalization services**, or position Solid as a **Single Sign-On (SSO) solution**, rather than placing the emphasis on **enhanced control over personal data**.

Question or remarks?

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Research group Imec-Mict-UGent



FLANDERS

<https://solidlab.be>



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