

# Beautiful and Functional

Mobile Layout, User Experience, and Survey App Development for the LISS panel



Joris Mulder  
LISS coordinator  
Senior researcher



# Centerdata's core activities



## Policy Research & Analytics

Forecast Labour Market  
(Education)

Non-profit institute,  
~ 50 colleagues &  
Student assistants



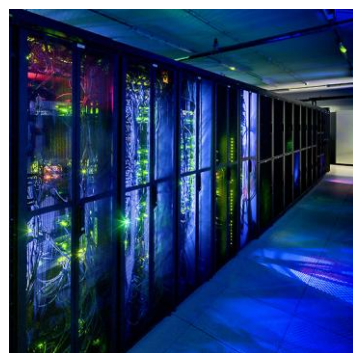
## Survey Research

Online (panel) surveys  
Target groups  
Experiments  
Data dissemination



## Data Science

Machine learning  
Deep learning  
Text analytics  
Data maturity  
Data visualisation



## IT

Software  
Development



## Consumer Research

Behavioural  
Research

Work for and with

- academic community
- policy makers
- government
- European Commission
- ESS, SHARE, EVS, CRONOS



**LISS**  
panel

## What is the LISS panel?

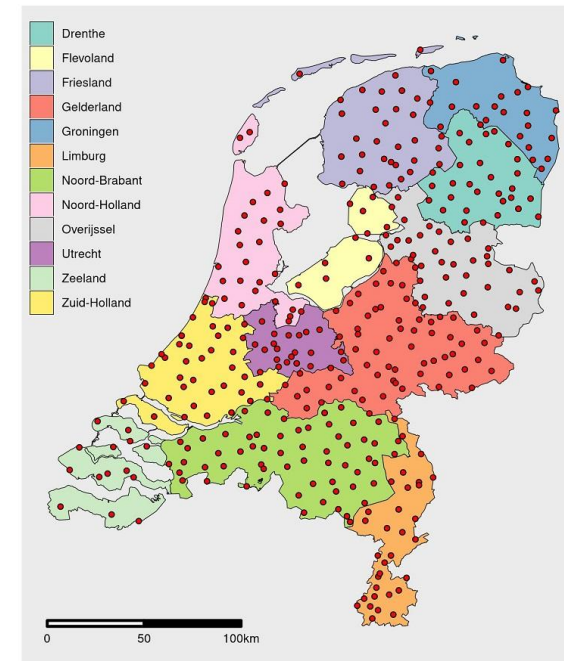
- Longitudinal research panel since 2007
- ~ 7,500 panel members (16+)

## Online research

- Monthly surveys and experiments
- Equivalent of € 15 p/h incentive (10 min survey = €2.50)

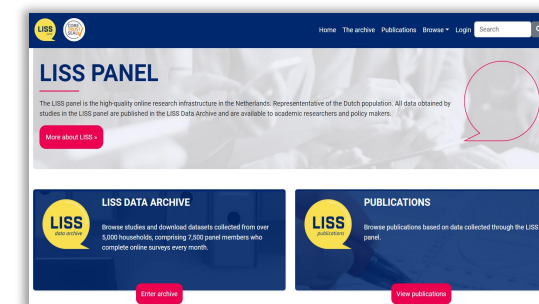
## Representative

- True probability samples (CBS), survey response (70-80%)
- Non-internet households included & smartphone friendly



## Unique features

- All collected data in the **LISS Data Archive**
- Enrich LISS data with **CBS microdata**



# LISS Data Archive

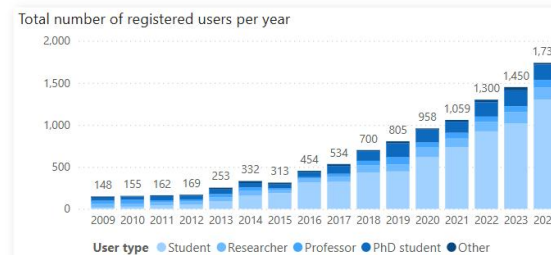
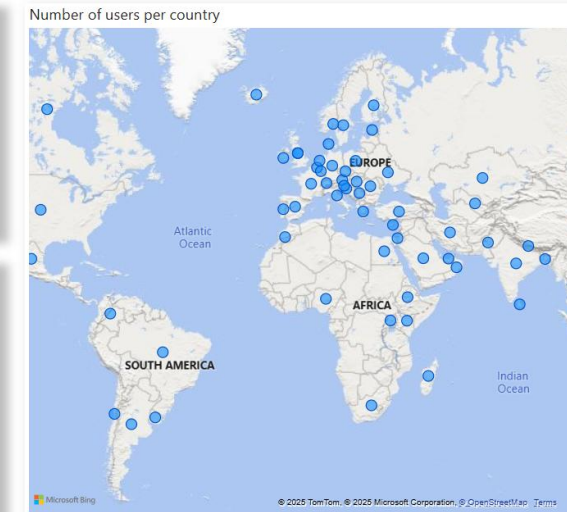
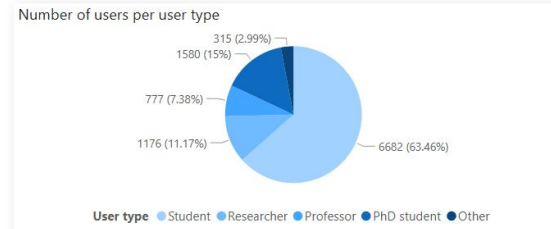
The screenshot shows the LISS Data Archive website. At the top, there's a navigation bar with links: Home, The archive, Publications, Browse, Login, and a search bar. Below the navigation bar is a large banner for the "LISS PANEL". The banner text states: "The LISS panel is the high-quality online research infrastructure in the Netherlands. Representative of the Dutch population. All data obtained by studies in the LISS panel are published in the LISS Data Archive and are available to academic researchers and policy makers." There's a red button labeled "More about LISS »". Below the banner are two dark blue boxes. The first box is titled "LISS DATA ARCHIVE" and contains the text: "Browse studies and download datasets collected from over 5,000 households, comprising 7,500 panel members who complete online surveys every month." with a red button "Enter archive". The second box is titled "PUBLICATIONS" and contains the text: "Browse publications based on data collected through the LISS panel." with a red button "View publications".

All data are easily available at no cost through the LISS Data Archive: <https://dataarchive.lissdata.nl>

- More than **10,000** researchers
- Over **1,200** publications based on LISS data
- Including about **800** articles in peer-reviewed journals and over **70** Ph.D. theses

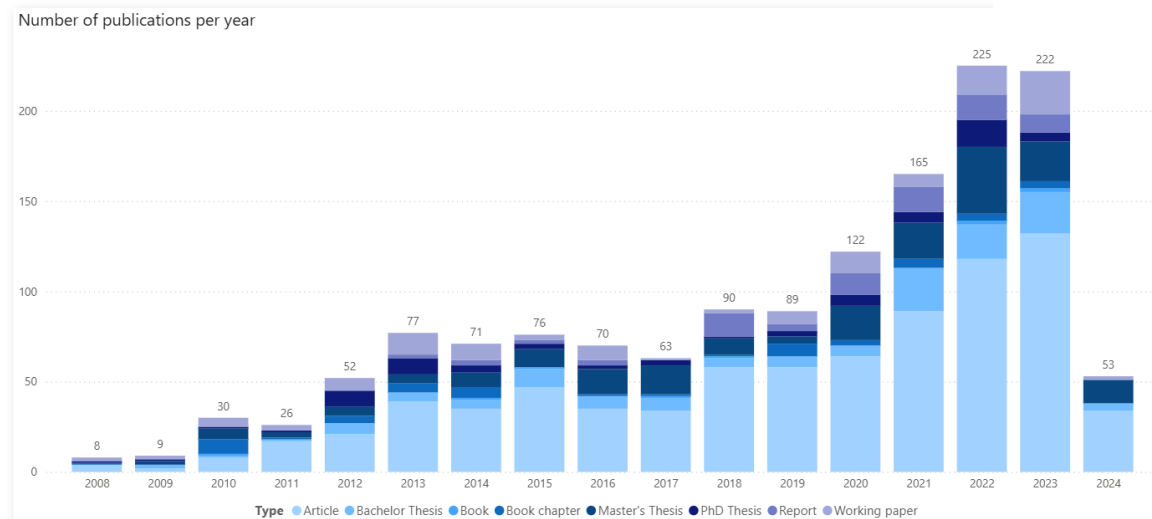
## LISS data archive - user statistics

**10,530** Number of users **8,859** Number of active users

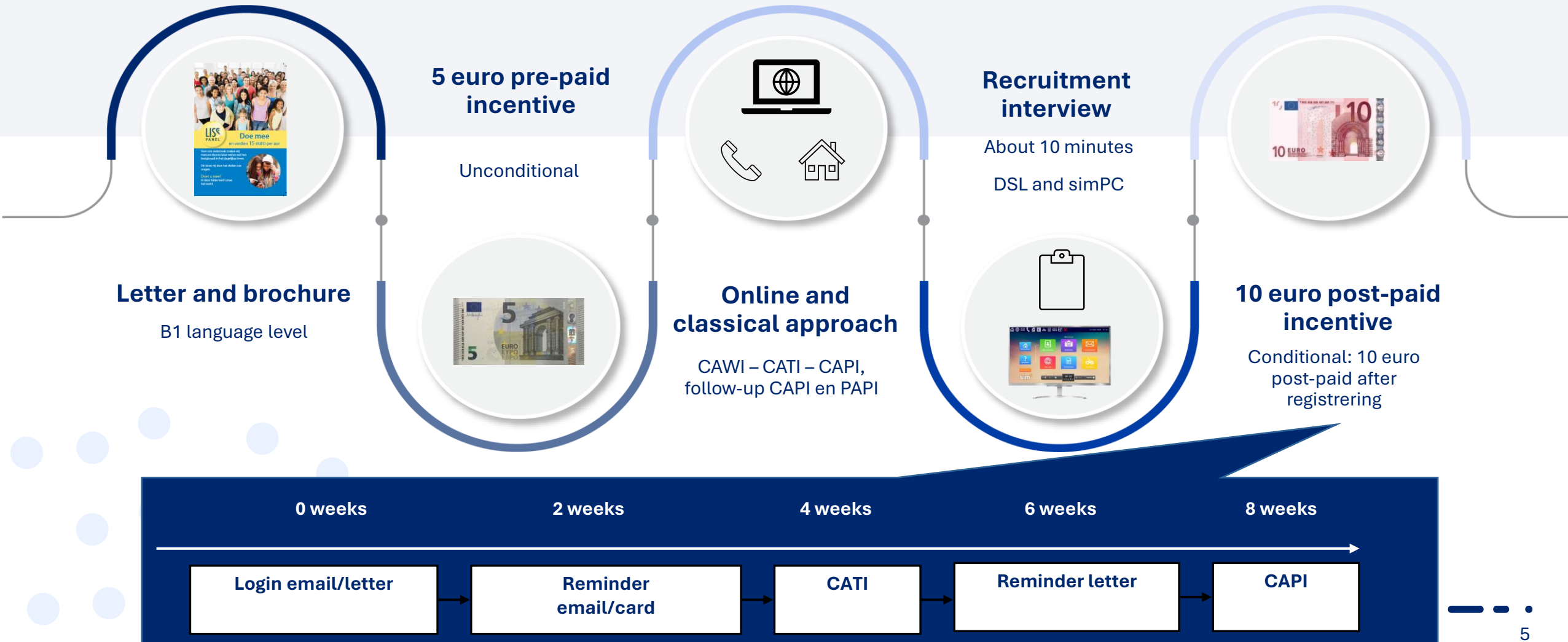


## LISS data archive - publication statistics

**1,448** Number of publications



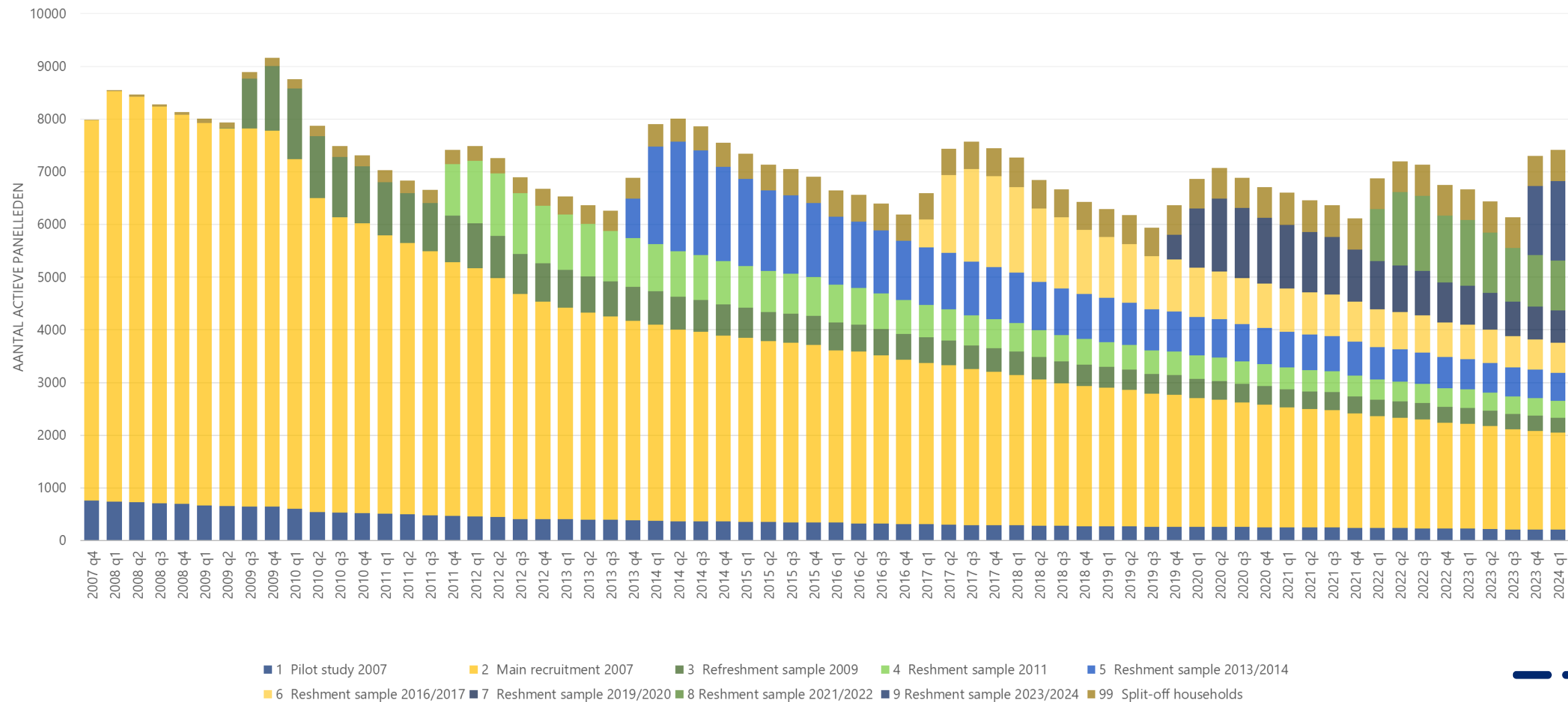
# Recruitment: sequential multi-mode strategy



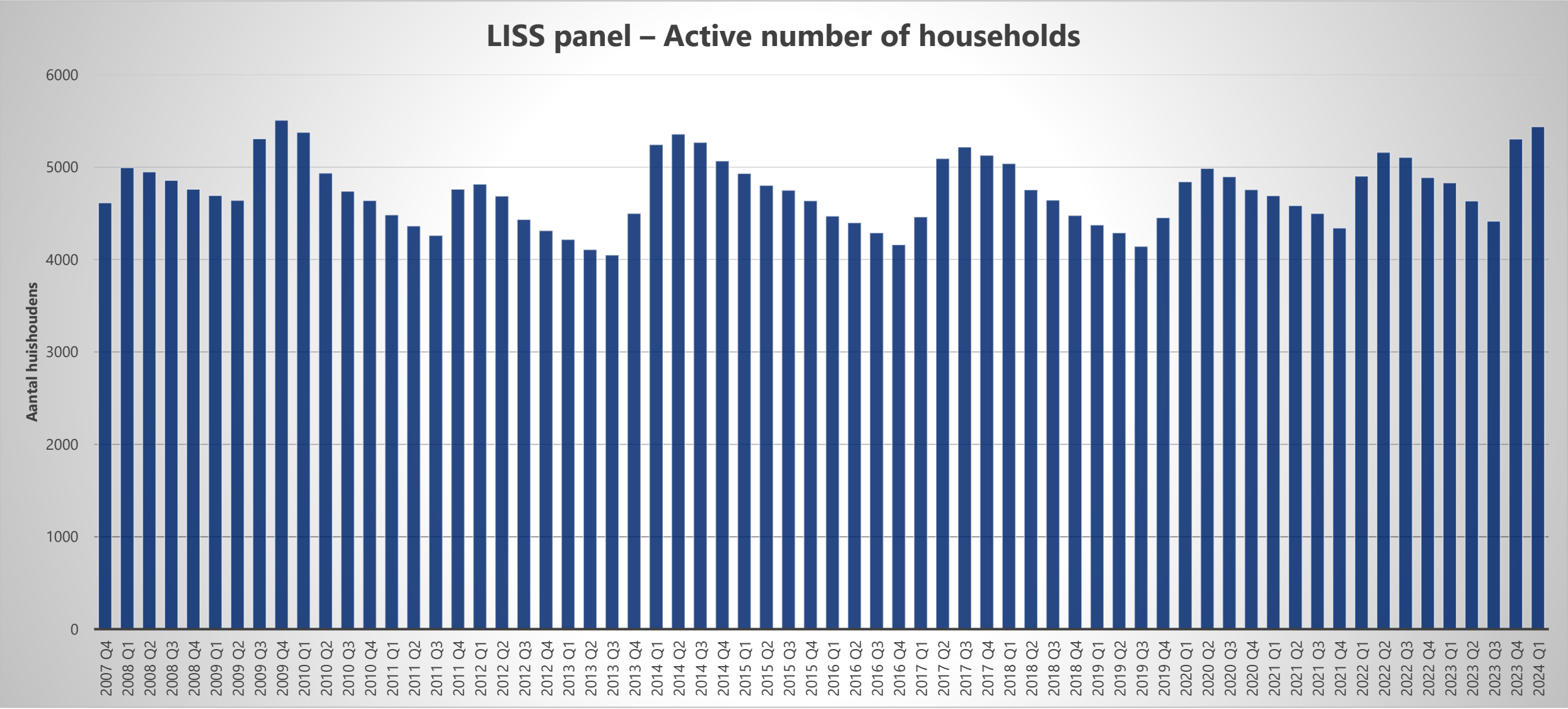
# Attrition and refreshment



LISS PANEL – ATTRITION PANEL MEMBER LEVEL



# Attrition and refreshment (2)





# Research in the LISS panel

# Research in the LISS panel



**Longitudinal annual  
LISS Core Study**

**Under Centerdata  
management**

## LISS Core Study

- 2 Health
- 3 Religion and Ethnicity
- 4 Social Integration and Leisure
- 5 Family and Household
- 6 Work and Schooling
- 7 Personality
- 8 Politics and Values
- 9 Economic Situation: Assets
- 10 Economic Situation: Income
- 11 Economic Situation: Housing

**Open for researchers  
collecting new data**



**Budget required  
LISS annual Call for Proposals**

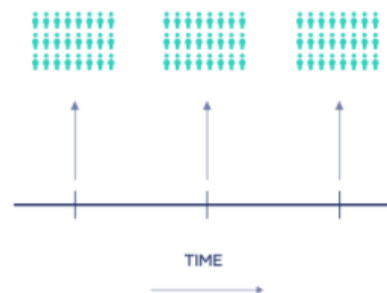
## Cross-sectional study

Data collected at one point in time

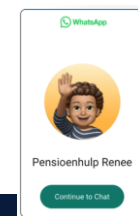


## Longitudinal study

Data collected repeatedly over time



**Innovative and sensory  
studies**



# Research in the LISS panel



Longitudinal annual  
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ODISSEI

Budget required  
LISS annual Call for Proposals

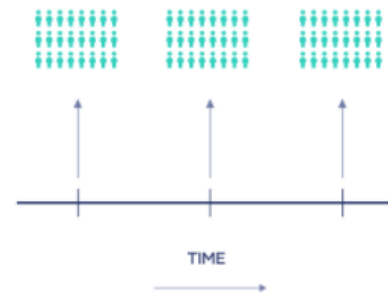
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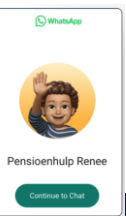


### Longitudinal study

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Innovative and sensory  
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# Research in the LISS panel



Longitudinal annual  
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ODISSEI

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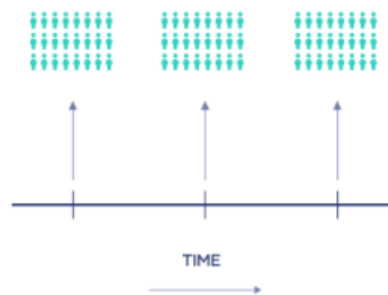
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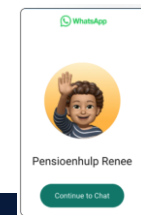


### Longitudinal study

Data collected repeatedly over time



## Innovative and sensory studies



# Device participation since 2007

Longitudinal  
Core Study

Surveys and  
experiments

Innovative studies

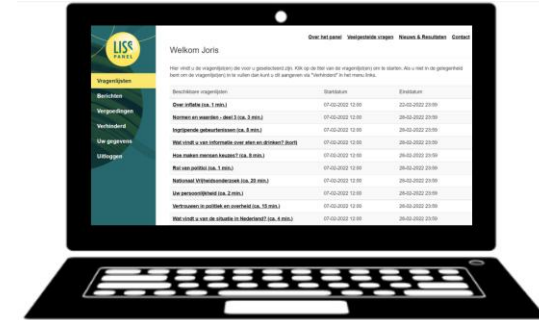
Microdata Statistics  
Netherlands (CBS)



Linux simPC



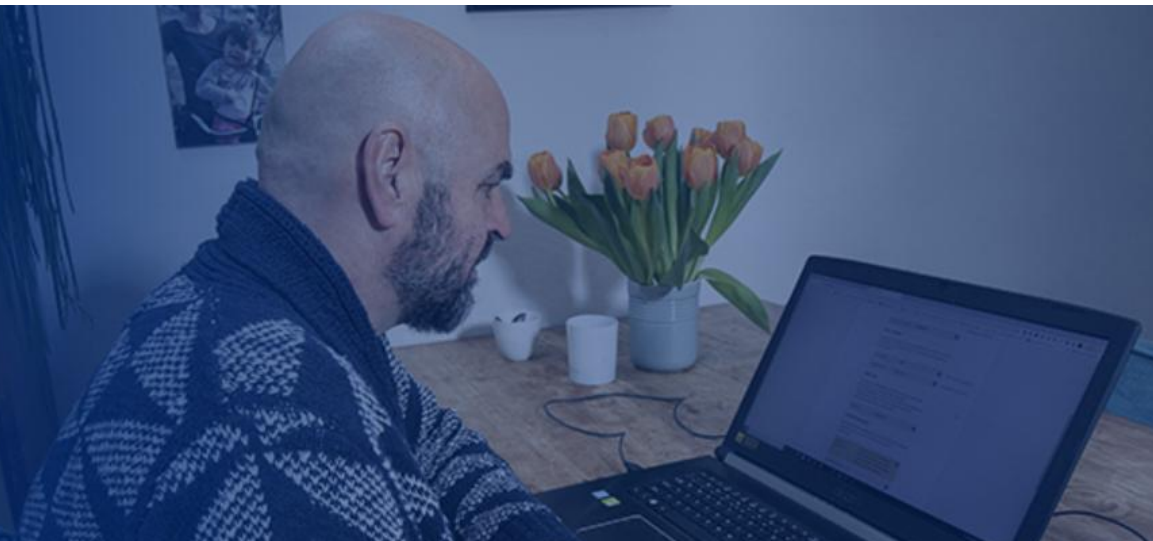
PC



mobile



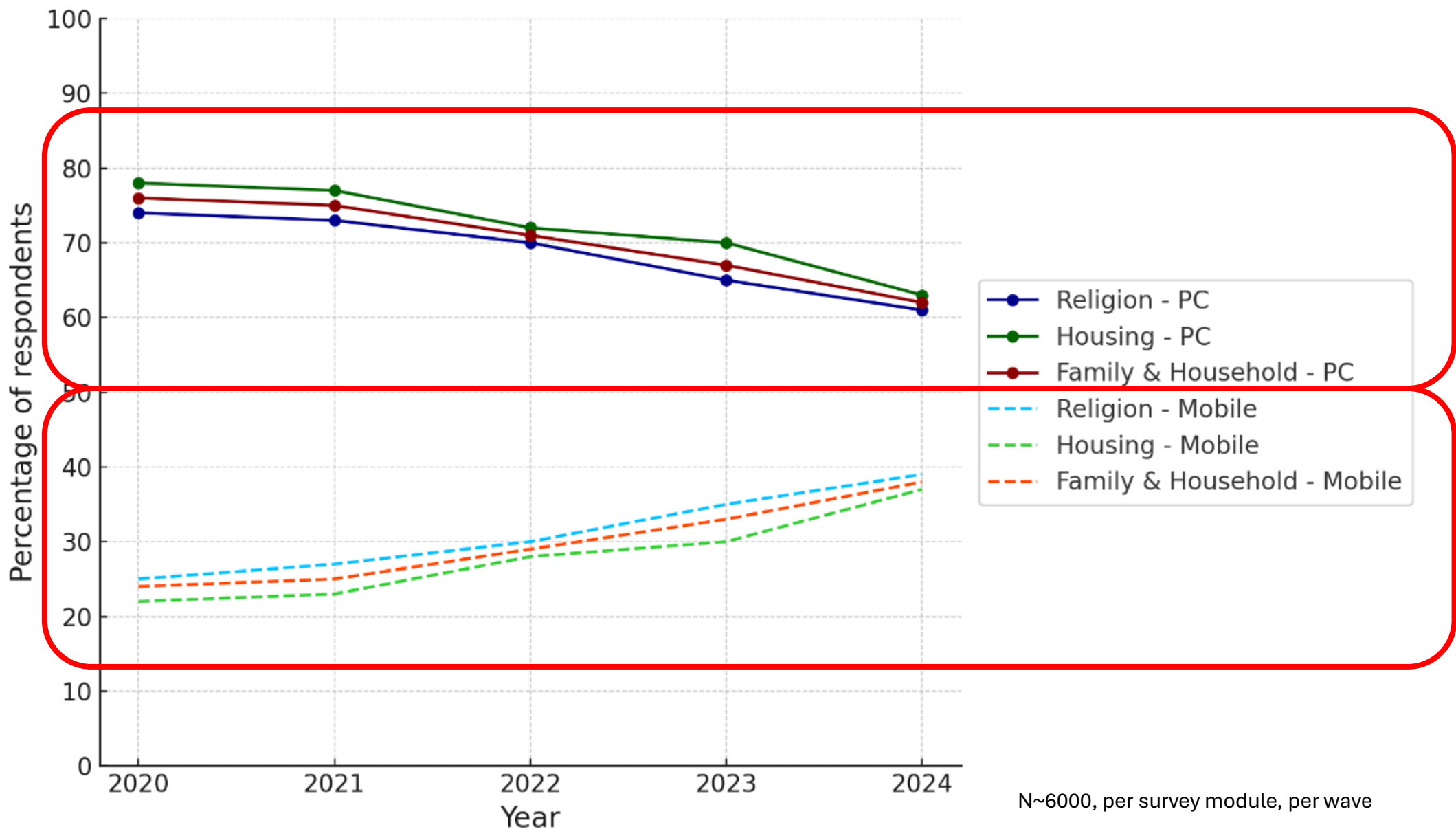
High-quality online research infrastructure for  
the social sciences, available to researchers  
worldwide





# PC versus smartphone survey participation

# PC versus smartphone survey participation



# Responsive survey design

## RESPONSIVE

The desktop version of a website is created first, but the design is fluid and adapts to different screens.



Hoeveel dagen bent u in de afgelopen week politieke informatie tegengekomen op de onderstaande websites of apps?

|                                                                                                    | nooit                 | 1 dag                 | 2                     | 3                     | 4                     | 5                     | 6                     | 7 dagen               |
|----------------------------------------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| YouTube                                                                                            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Websites of apps van nieuwsmedia (bijv. NU.nl, NOS.nl, AD.nl, RTL nieuws)                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Instagram                                                                                          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| WhatsApp                                                                                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| X (Twitter)                                                                                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Facebook                                                                                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| TikTok                                                                                             | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Websites en apps die verschillende nieuwsbronnen verzamelen (bijv. Google News, Apple News, Uplay) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

09:58 50



Hoeveel dagen bent u in de afgelopen week politieke informatie tegengekomen op de onderstaande websites of apps?

YouTube

☐ nooit

☐ 1 dag

☐ 2

☐ 3

☐ 4

☐ 5

☐ 6

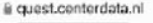
☐ 7 dagen

Websites of apps van nieuwsmedia (bijv. NU.nl, NOS.nl, AD.nl, RTL nieuws)

☐ nooit

☐ 1 dag

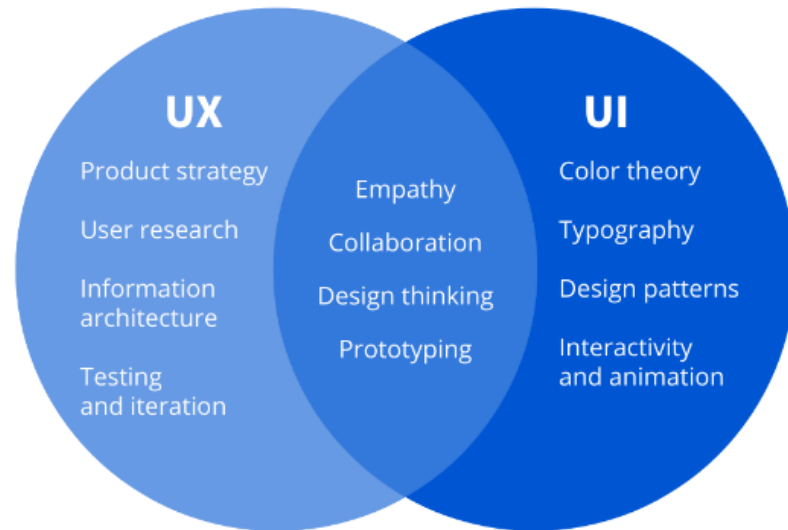
☐ 2





UI/UX survey (re)design

# UX/UI design principles and WCAG



## UI: visual and interactive elements

- typography
- design patterns
- apply new LISS branding

## UX: user-centered practices

- product testing
- user feedback research (usability testing)
- validity and reliability measurement focus

W3C® Web Accessibility  
Initiative WAI



## WCAG 2

Web Content  
Accessibility Guidelines

## Web Content Accessibility Guidelines (WCAG)

- surveys are **inclusive** and **accessible**
- including those with disabilities
- (W3C, 2018)

# Mobile first survey design



## MOBILE

The mobile version of a website is created first, but the design is fluid and adapts to different screens.



Kun je een voorwerp van 5 kg (bijvoorbeeld een volle boodschappentas) over een afstand van 10 meter dragen?

- ☐ Ja, zonder moeite
- ☐ Ja, met enige moeite
- ☐ Ja, met grote moeite
- ☐ Nee, dat kan ik niet

< Vorige      Verder >

AW VB verstaan en verbinden

Kun je een voorwerp van 5 kg (bijvoorbeeld een volle boodschappentas) over een afstand van 10 meter dragen?

- ☐ Ja, zonder moeite
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< Vorige      Verder >

AW VB verstaan en verbinden

Mobile-first layout example from the AWVB panel



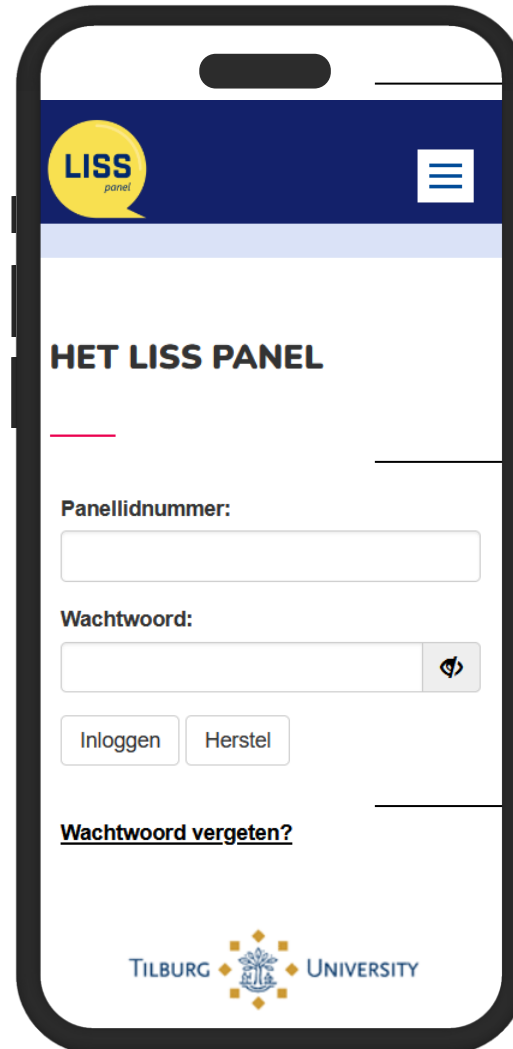
# Mobile app development

# Multi-system architecture Android & iOS



## Requirements

- **Panel management system**  
 **PanelCTRL**
- **Survey software**  
 **QuestionnaireCTRL**
- **App development & codebase**  
 **Eyra**



### ● **Notifications and communication**

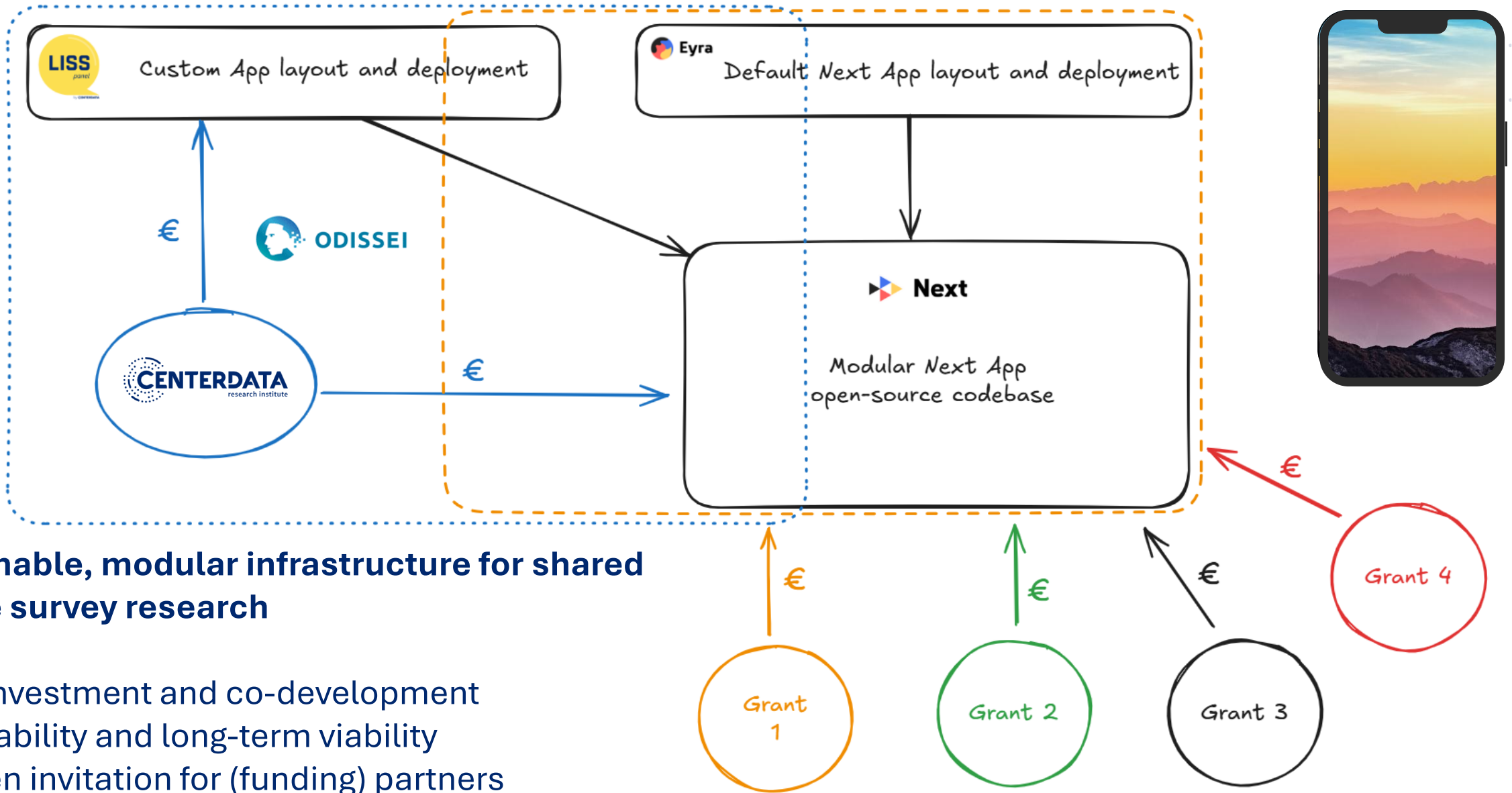
Survey invitations and reminders  
Messages and helpdesk support  
News, incentives, personal information

### ● **Mobile (first) surveys**

Deploy surveys and experiments  
Gamification?

### ● **Sensor based data collection**

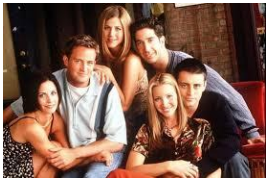
EMA, ESM, Diaries, Traveling  
Mobile data donation  
Camera, microphone, GPS, etc.



**Sustainable, modular infrastructure for shared mobile survey research**

- co-investment and co-development
  - scalability and long-term viability
- Open invitation for (funding) partners

**Become our new best Grant friend!**



## Questions?

More information:

Centerdata:  
[www.centerdata.nl](http://www.centerdata.nl)

LISS data archive (non commercial use):  
[www.lissdata.nl](http://www.lissdata.nl)



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