

Slide 1



Building a Sustainable Research App for Digital Data Collection

Bella Struminskaya (Utrecht University)
Thijs Carrière (Utrecht University)
Adriënné Mendrik (Eyra)

MASS workshop 2026



Joris Mulder
Senior researcher
LISS quality & innovation lead

Barcelona, June 4 & 5

Slide 2

We are not just building one specific research app.

We are building a shared research infrastructure.

CENTERDATA
research institute

Next

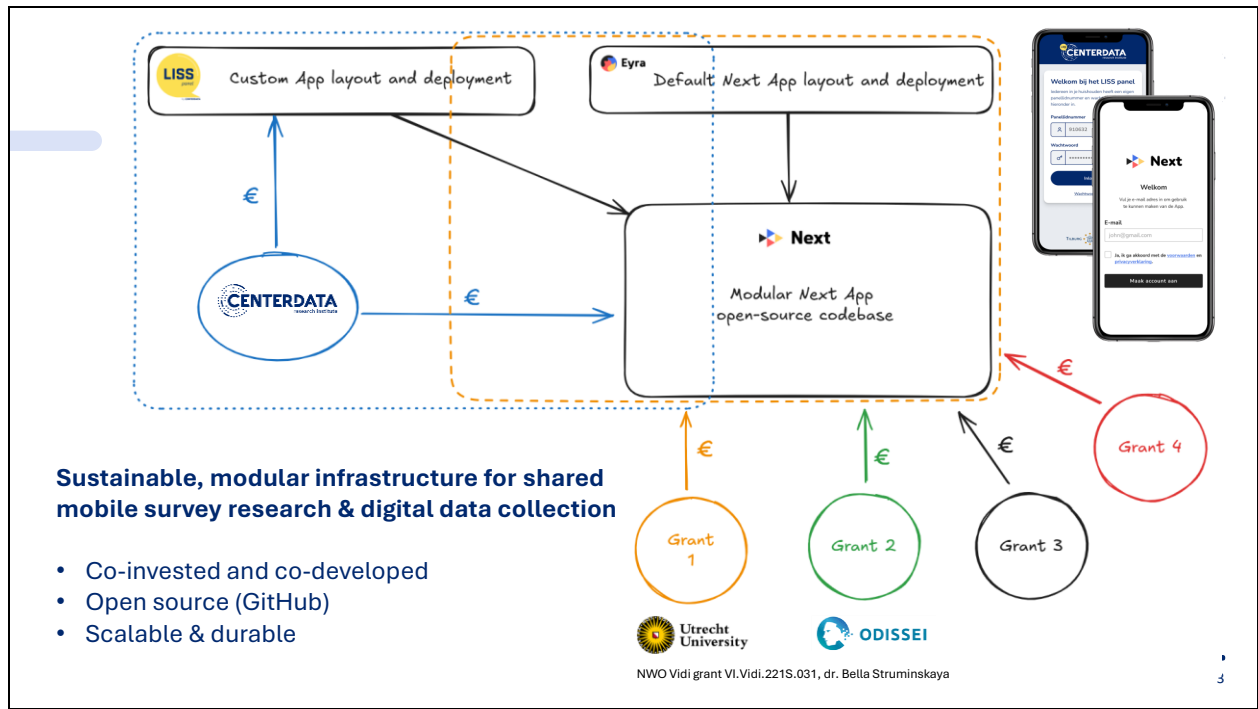
Utrecht University

Eyra

2

We intend to build a sustainable research infrastructure for mobile and sensor-based research that can be reused as an extension to (or outside) the LISS panel, across projects, organisations, and populations.

Slide 3



Modular frameworks and branding can be applied, sharing the same codebase.

At the time of this presentation, funding partners were Centerdata (www.centerdata.nl) and Utrecht University (Vidi Bella). ODISSEI (<https://odissei-data.nl/>) indicated they are also willing to invest in near-future module development. As the main app developers, Eyra also contributes.

The app codebase is open source and governed through the applicable Nova Software Foundation (<https://www.novasoftwarefoundation.org/>) Program Circle. Ensuring all stakeholders equally define how decisions are made and how the service evolves over time.

Why not build separate apps?



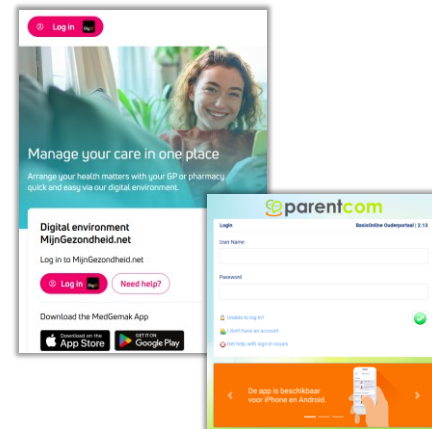
Practical and financial limitations

- Expensive
- Hard to maintain
- Duplicate effort
- Difficult to scale
- Funding ends



- E.g.: Time-use app for SCP study was discontinued after the experiment ended.

Comparison: health care or parent school apps



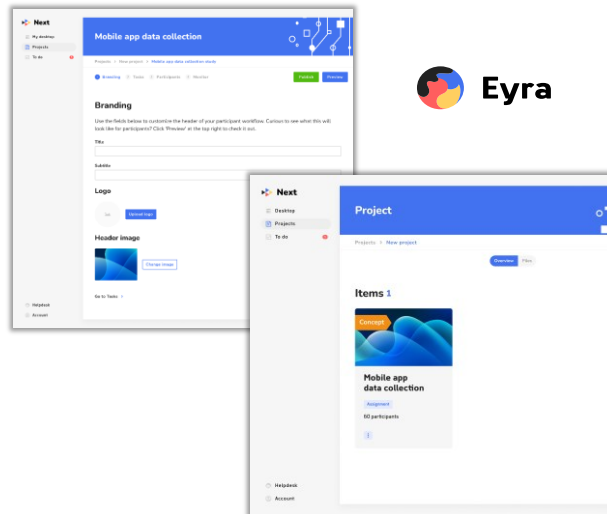
Many research apps are built for a single project and quite a lot disappear when funding ends (e.g. the LISS time-use app for replacing paper and pencil Social and Cultural Planningbureau (SCP)).

We believe research infrastructure should work more like the healthcare or school infrastructure. For instance, general practitioners or schools do not all develop their own apps. They share a common platform while keeping their own branding, options and workflows.

We want to offer the same for social sciences, humanities and health research.

Minimum Viable Product (MVP)

- Core infrastructure
- Build shared foundation
- Operating system Next platform
- Modular “apps” run on top
- Configure apps in CMS backend



Researchers can setup and configure studies on a back-end CMS and add applicable branding and study specific information.

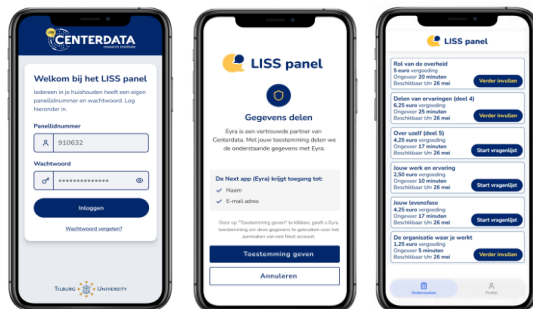
The platform automatically recognises LISS panel members when they login. For them, the LISS panel branding will be applied automatically.

Slide 6

Two arms in MVP phase

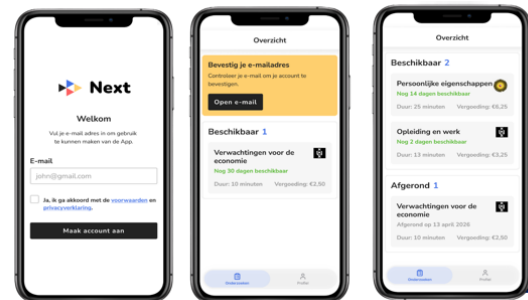
LISS panel flow

- App notification or email invite and install app;
- Authenticate through OAuth LISS login;
- Complete studies through the Quest survey tool.



Individual researcher flow

- Receive an email invitation;
- Download the app and sign-up using email;
- Complete studies through e.g. Qualtrics.



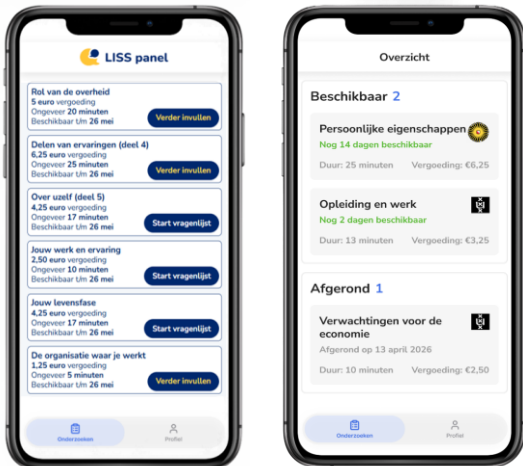
28

The two distinct flows in the app are:

- LISS panel flow (probability-based target group within the panel)
- Individual researcher flow (providing one's own target population group)

Slide 7

Second, non-MVP phase, and long-term vision



- Mobile (first) surveys (MVP)**
 - Deploy mobile surveys and experiments
- Notifications and communication**
 - In-app invitations and reminders
 - Messages and helpdesk support
 - Control over (sensor) data collection
 - Research result feedback
- Sensor based data collection**
 - EMA, ESM, TUS diaries, GPS
 - Mobile data donation
 - Camera, microphone, Paradata app en survey software, etc.

The app layouts in this presentation are example mock-ups and do not necessarily reflect the final layout.

Left: the LISS panel flow, what panel members will see

Right: individual researcher flow, what a specific target group outside the LISS panel will see

Slide 8

Why is this important, inside *and* outside LISS?

Annual longitudinal Core Study since 2007

Surveys and experiments

Innovative studies

Microdata Statistics Netherlands (CBS)



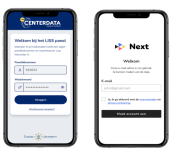
Linux simPC



PC mobile responsive



Native mobile



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



Most important on this slide:

Researchers can experiment with the app using their own non-prob target population. Once they feel the need to scale up to a probability sample, they can be sure the same codebase and app functionalities are available when fielding it to the LISS panel.

Slide 9



Questions?

More information:

Centerdata:
www.centerdata.nl

LISS data archive (non commercial use):
www.lissdata.nl

CENTERDATA
research institute

Joris Mulder
Joris.mulder@centerdata.nl

Any questions? Feel free to contact me!