

# Innovation in online data collection for scientific research: the Dutch MESS project

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**CentERdata**  
Institute for data collection and research



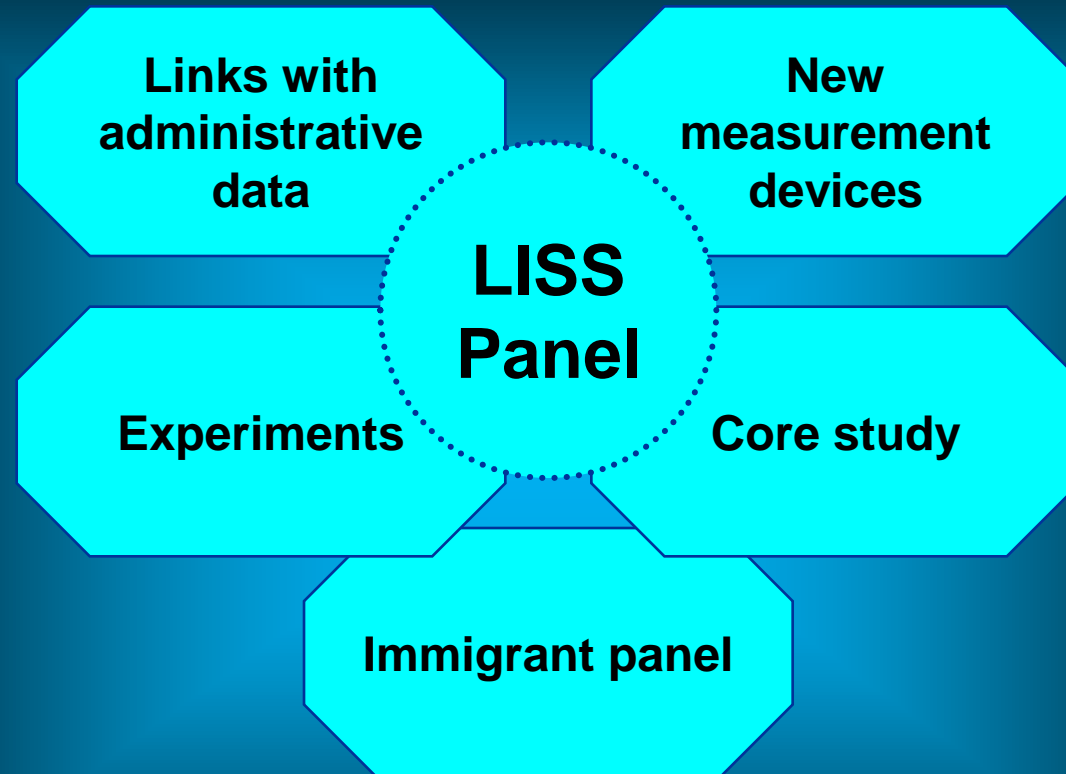
# CentERdata

An independent non-profit institute housed at the campus of Tilburg University (The Netherlands)

Three main activities:

- data collection / online survey research
- quantitative research, policy analysis and model development
- software solutions (tailor-made software for data collection and dissemination)

# MESS Project: a highly advanced research infrastructure for the social sciences



**Open to scientists worldwide**



# Central element MESS project: LISS panel

- Online panel of 4,500 households
  - 7,000 individuals ( $\geq 16$  years)
- Questionnaires each month, 30 min.
- Incentive 15 euro an hour (average)
- For scientific use, at no cost



# **Why use online panels for scientific research?**



# Disadvantages online surveys

- Noncoverage:
  - Persons without Internet are usually excluded
- No probability sample:
  - Visitors of specific websites
  - Self-selection (interested, strong opinions, specific goal)



# LISS panel

- Online interviews as method, but:
- Probability sample drawn from address sampling frame of Statistics Netherlands
- Includes households without Internet access (less than 15%): CentERdata provides equipment
- Contacted by letter, telephone or visit





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# Households without Internet





# simPC



Small and silent

Only the most frequently used functions

Automatic maintenance, safety

Simple operation and readable screens

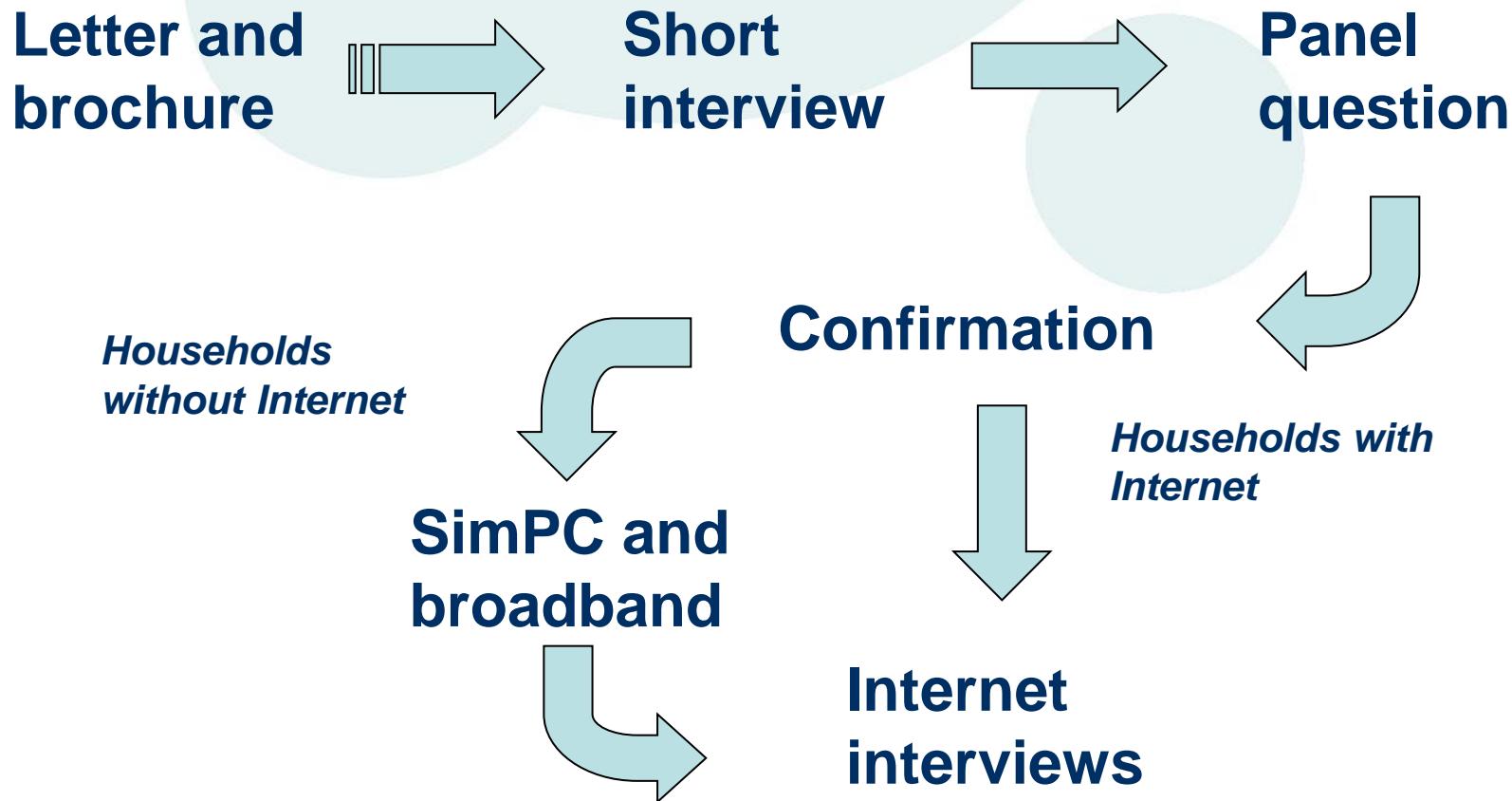
Installation and support



# Recruitment of LISS panel



# Recruitment





# Response

Letter and  
brochure

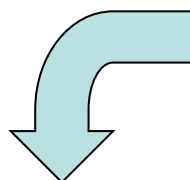


Short  
interview

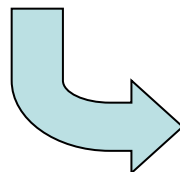


Panel  
question

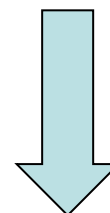
**Primary  
response  
target: 80%**



SimPC and  
broadband



Confirmation



Internet  
interviews

**Secondary  
response  
target: 60%**



*Households with  
Internet*

**Tertiary  
response  
target: 53%**



# Recruitment experiment

## Experimental design

		CATI		CAPI		N
		Special letter	Standard letter	Special letter	Standard letter	
Prepaid incentive	Introduce panel in letter	0 euro	10 euro			200
	Introduce panel after interview		20 euro	50 euro		300
Promised incentive	Introduce panel in letter			0 euro	10 euro	400
	Introduce panel after interview	50 euro			20 euro	300
N		200	200	400	400	1200



# Effect of incentives

- incentives increase response rates
  - effect is large from 0 to 10 euro (increase of 15%)
  - effect is not significant from 10 to 20, 20 to 50 euro (about 3%)
- prepaid works better than promised



# Effect of information

- no effect of letter content
- no effect of timing panel introduction
- effect of seeing/reading brochure





# Set up main recruitment

- Combination CATI – CAPI, follow up CAPI
- Prepaid 10 euro incentive
- Promised extra 10 euro incentive for starting
- Attention to design letter and brochure



# Response in recruitment

<b>Recruitment stage (households)</b>	<b>% of total gross sample</b>
	LISS panel
Reached	90
Completed interview or central questions	75
Willing to participate in panel	63
Registered as panel member	48
Total gross sample*	9844

**\*excluding not usable addresses (308)**



# Non-response patterns

**Similar** to those of other leading scientific panels

**Superior** to commercial access and volunteer panels:

- no coverage problems
- no self-selection



# Attention for difficult groups

- Correction by refreshment sample in 2009 (stratified) and 2011 (random), in close collaboration with Statistics Netherlands
- Separate immigrant panel in 2011 (with Cross-cultural Psychology, Tilburg University and Statistics Netherlands)



# Use of the LISS panel



# Use of infrastructure

**1.** Collection of ***new*** data; proposals can be submitted throughout the year

→ Budget available for academic researchers to use the LISS panel

**2.** Use of ***existing*** data (free of charge)

→ Available data:

- longitudinal core study
- proposed studies



# 1. Collection of new data

- **Who** can use the LISS panel:  
every researcher who wants to collect  
data for scientific, policy or societal  
relevant research

## Scientific research:

Academic researchers, irrespective of  
nationality, can use the LISS panel **at no  
cost**

- Proposals can be submitted throughout  
the year





# Use of a subsample

- Effects of illness babies in first year on labour participation parents:
  - Pregnant women, follow 3 years!
- Effects of the economic crisis on household portfolio choice:
  - Panel members who own stocks
- Random subsample or experimental groups: different conditions



# Proposals: Summary (April 2013)

<i>Decision Board of Overseers</i>	<b>Count</b>
Undecided (in review or revision)	24
Accepted	121
Rejected	25
<b>Total</b>	170



# Overview of affiliations

Proposals LISS panel

## The Netherlands

Eindhoven University of Technology  
Erasmus MC, Rotterdam  
Erasmus University Rotterdam  
Free University, Amsterdam  
Groningen University  
Leiden University  
Maastricht University  
Open Universiteit  
Radboud University Nijmegen  
Tilburg University  
University Medical Center Utrecht  
University of Amsterdam  
University of Twente  
Utrecht University  
VU University MC  
Wageningen University

ACCR (Free University Amsterdam)  
ASCoR (University of Amsterdam)  
Dutch Central Bank  
Netherlands Bureau for Economic Policy Analysis (CPB)  
Netherlands Institute for Social Research (SCP)  
Netherlands Institute for the Study of Crime and Law Enforcement  
Netherlands Interdisciplinary Demographic Institute (NIDI)  
Netherlands Organization for Applied Scientific Research (TNO)  
NHTV Breda University of Applied Sciences  
Rutgers Nisso Groep  
Statistics Netherlands  
Tranzo

## Australia

## Canada

## Israel

## New Zealand

## USA

Arizona State University  
Bar-Ilan University  
Carnegie Mellon University  
Connecticut College  
Duke University  
Emory University  
Federal Reserve Bank of New York  
Griffith University  
Harvard University  
Hebrew University of Jerusalem  
Laval University  
Michigan State University  
Michigan Technological University  
Neuroscience Research Australia  
New York University  
Northeastern University  
Pew Research Center  
Saint Leo University  
Stanford University

Stony Brook University  
Swinburne University of Technology  
Tel Aviv University  
Université du Québec à Montréal  
University of Calgary  
University of California  
University of Florida  
University of Maryland  
University of Michigan  
University of Waterloo  
University of Wellington  
Washington State University  
World Values Survey Association

Basel University  
City University London  
ECARES  
European University Institute  
GESIS  
Ghent University  
Institute for Employment Research (IAB)  
KU Leuven  
Max Planck Institute for Human Development  
National Center for Scientific Research (France)  
Norwegian University of Science and Technology  
Nuffield College  
Ulm University  
University College Dublin  
University College London  
University of Bath  
University of Bristol  
University of Copenhagen  
University of Duisburg  
University of Essex  
University of Florence  
University of Heidelberg

## Europe

University of Lausanne  
University of Limerick  
University of Louvain  
University of Mannheim  
University of Padua  
University of Southampton  
University of Southern Denmark  
University of Stirling  
University of Vienna  
University of Zurich  
Universitat Pompeu Fabra



## 2. Use of existing data

- **Who** can use the LISS data:  
every researcher who wants to use data for scientific, policy or societal relevant research
- Use of data is free of charge (unless data are used for research funded by means of external sources)
- Available data:
  - longitudinal core study
  - proposed studies



# Longitudinal core study

Questions were designed in close collaboration with experts in the relevant fields

Core study borrows from various national and international surveys

Topics: Household and family, Economic situation and housing, Work and schooling, Social integration and leisure, Health, Personality, Religion and ethnicity, Politics and values

**LISS wave 6: Nov 2012 to June 2013**



# LISS data

- Disseminated through website / data archive: <http://www.lissdata.nl>
- Database is based on an internationally used specification for describing social science data (DDI 3)
- Recent new feature: shopping cart
- Exchangeable with data archives; source code of data dissemination system available free of charge



# LISS data

- Demo...

<http://www.lissdata.nl>





# Innovation in data collection

- Smartphones (Time Use, with the Netherlands Institute for Social Research; Mobility, with Twente University)



- Accelerometers (international collaboration)



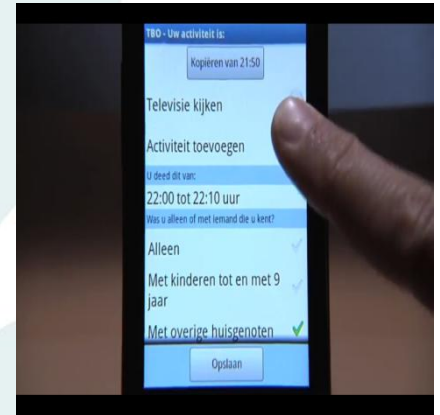
- Internet weighing scales





# Time use diary app

- Developed by CentERdata
- Can be used any time
- Notifications (reminders)
- Closed answers: codes for activities
- Experience sampling: 3 popup questions on feelings, random moments



## Design study:

- 12 months data collection
- 170 panel members per month, 2000 total
- Panel member completes two days
- **200 loan smartphones, lend for 7 days**

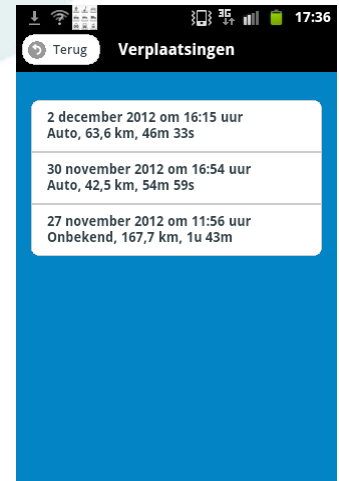


# Mobility App

- Developed by Novay (The Netherlands)
- Uses GPS and Mobile Networks
- Algorithm: distance, mode (speed), time
- Web interface: respondents check and adapt
- Privacy issue: Consent procedure

## Design study

- 3 waves spread over 3 years
- 500 panel members per wave
- 4 - 6 weeks measurement per wave
- ***200 loan smartphones, lend for 4 weeks***





# Accelerometer study

- Developed by Geneactiv (UK)
- Measures acceleration, body temperature, day light

## Design study:

- 13 weeks data collection
- 70 - 90 panel members per week, 1000 in total
- Panel member wears 8 days
- ***300 accelerometers, lend for 8 days***





# Weighing scale study

- Wireless weighing scales
- Uses radio signals through “bridge” and Internet, to send the data
- Measures weight and body fat
- Variability over time: more accurate and more frequent

## Design study:

- Longitudinal study, currently 2.5 years
- 950 scales, recently 300 new scales added
- ***Lend to household for at least 1 year***





# International collaboration

Institutes in other countries will have an innovative role model to follow

ELIPSS (Étude Longitudinal par Internet Pour les Sciences Sociales), Science Po, Paris

GIP (German Internet Panel), Mannheim University

GESIS Omnibus Panel, Mannheim

This may lead to a wealth of international comparisons and new global data networks



# **In its first phase, MESS has generated a clear return on investment**

- An ultra-modern, efficient research infrastructure is now solidly in place
- The LISS panel has collected five years of rich and innovative data, using state-of-the-art methods
- Researchers worldwide have accessed this data for use in scientific, policy, and societal studies
- An innovative data archive is now easily available through a web tool on a dedicated LISS website



**[www.lissdata.nl](http://www.lissdata.nl)**



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