

European Human Exposome Project

EXPANSE

Roel Vermeulen - Utrecht University

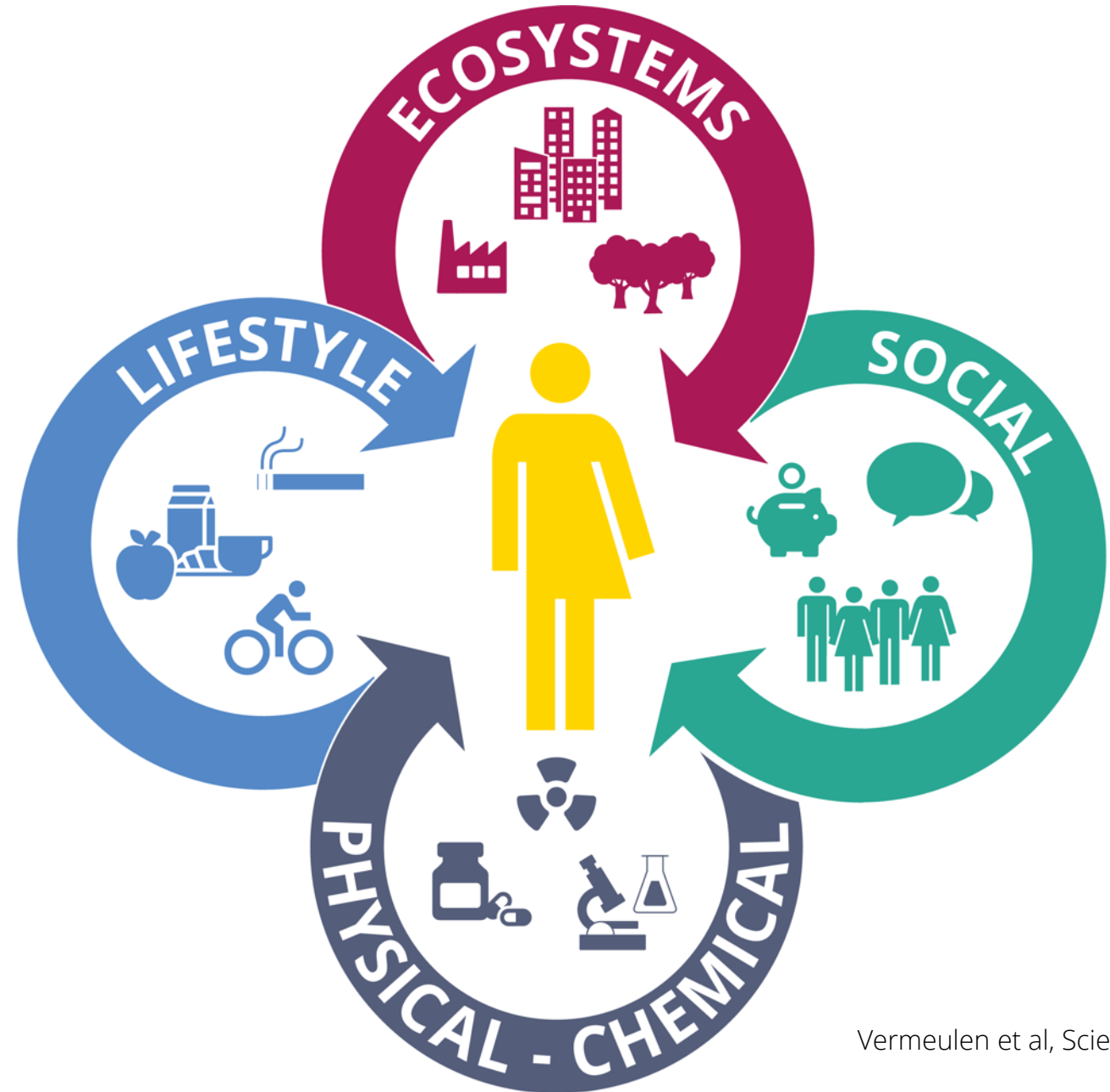


Why focus on urban?

EXPANSE will address one of the most pertinent questions for urban planners, policy makers, and inhabitants in Europe:

“How to maximize one’s health in a modern urban environment?”

EXPANSE defines the Urban Exposome as the complex mixture of social and environmental factors in the urban environment that collectively have an impact on health

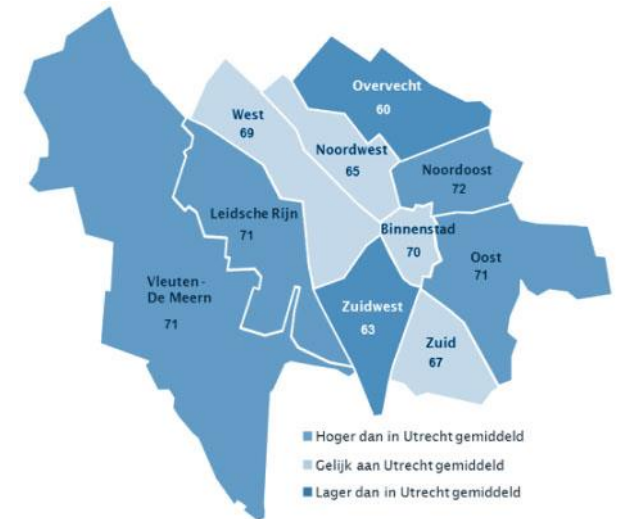


Why is this important?



Reduced burden of NCDs

Utrecht, The Netherlands



How will EXPANSE reach that goal?

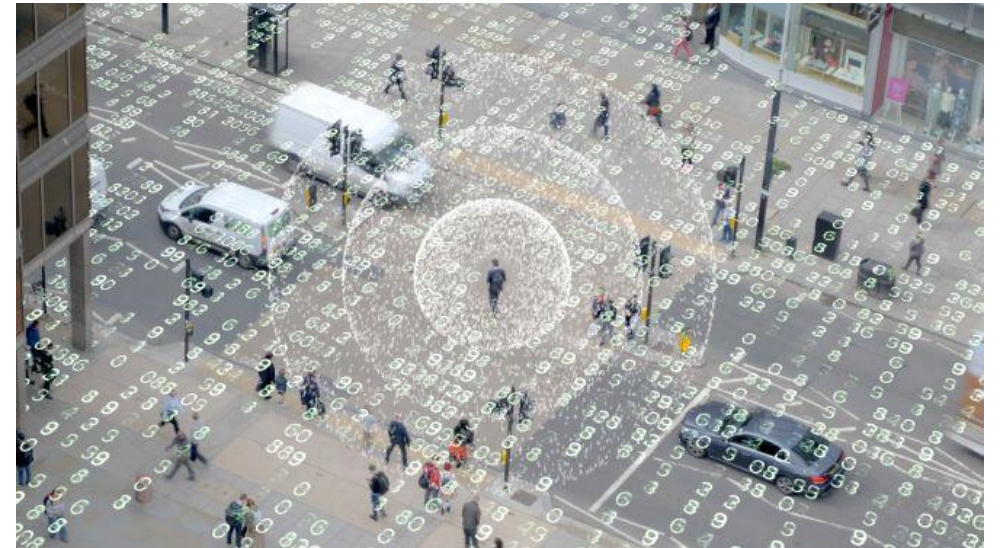
Personalised urban exposome and health assessment over the life course for 55 million European inhabitants across 12 countries

>25,000 DNA methylation, transcriptomic, proteomic and microbiomics profiles

10,000 de novo ultra high resolution mass spectrometry profiles using a novel approach detecting thousands of exogenous and ten-thousands of endogenous compounds

Novel big data approaches to identify the life course impact of the urban exposome on population clustering, their biological consequences, and cardio-metabolomic-pulmonary health

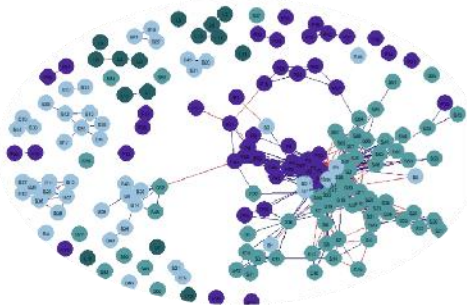
Large scale tracking and natural experiments in the urban labs



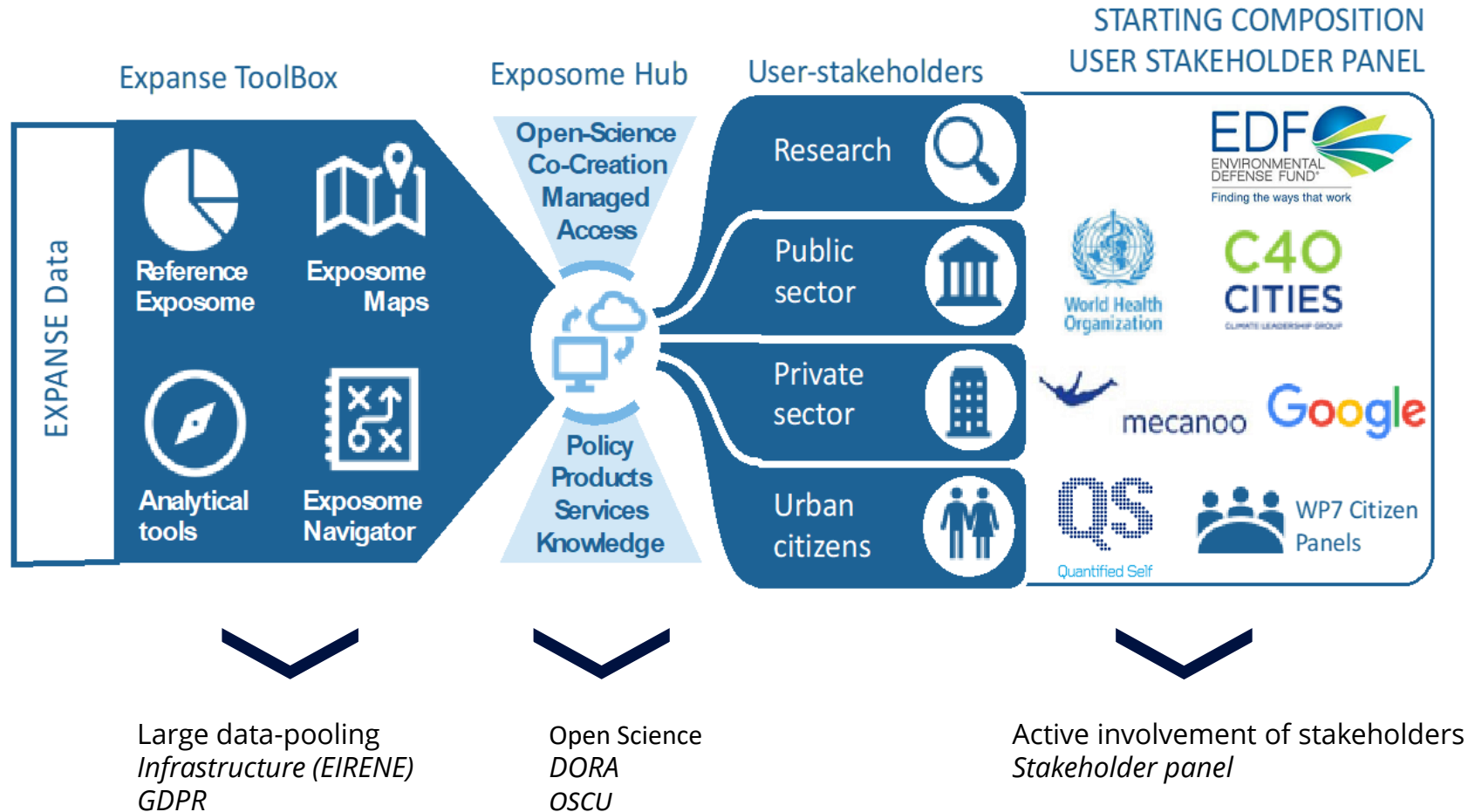
What will EXPANSE deliver in 5 years.....



Reference
Exposome



What are the critical needs for success?



Acknowledgements

our partners



Karolinska Institute
Sweden



Helmholtz Zentrum
Germany



Imperial college
United Kingdom



UMC Utrecht
The Netherlands



VU Medical
Centre
The Netherlands



Game Solutions Lab
The Netherlands



M2M4ALL
The Netherlands



Columbia University
US



ICAHN School of
Medicine
US



Tartu
Ülikool
Estonia



Instytut Medycyny
Pracy
Poland



Institut de la Salut
Global
Spain



Azienda Sanitaria
Locale Roma
Italy



Masarykova
Univerzita
Czech Republic



Jagiellonian
University
Poland



Institute National
de la Santé
France



IARC
France



Swiss Tropical and Public Health Institute
Schweizerisches Tropen- und Public Health-Institut.

Schweizerisches Tropen und
Public Health Institut
Switzerland

Acknowledgements

user stakeholder panel



Environmental
Defense Fund



World Health
Organization



C40
Cities Network



MECANOO



GOOGLE



BERTHA
Aarhus University



CANUE program



Quantified self