## Healthy Urban Living

In the Utrecht region, the Netherlands

Freek van Muiswinkel, PhD

Managing Director Utrecht Life Sciences

Taipei Health Forum - Building future health together, December 10 2019







- Utrecht Life Sciences
- Healthy Urban Living & the Utrecht Exposome Hub
- Public Private Partnerships and Business opportunities

### Utrecht Life Sciences:

**Chronic Diseases** 

Solutions to Societal Challenges

# Research domains & and HUBS for specific societal challenges Regenerative Medicine

Science for Life





Public Partners











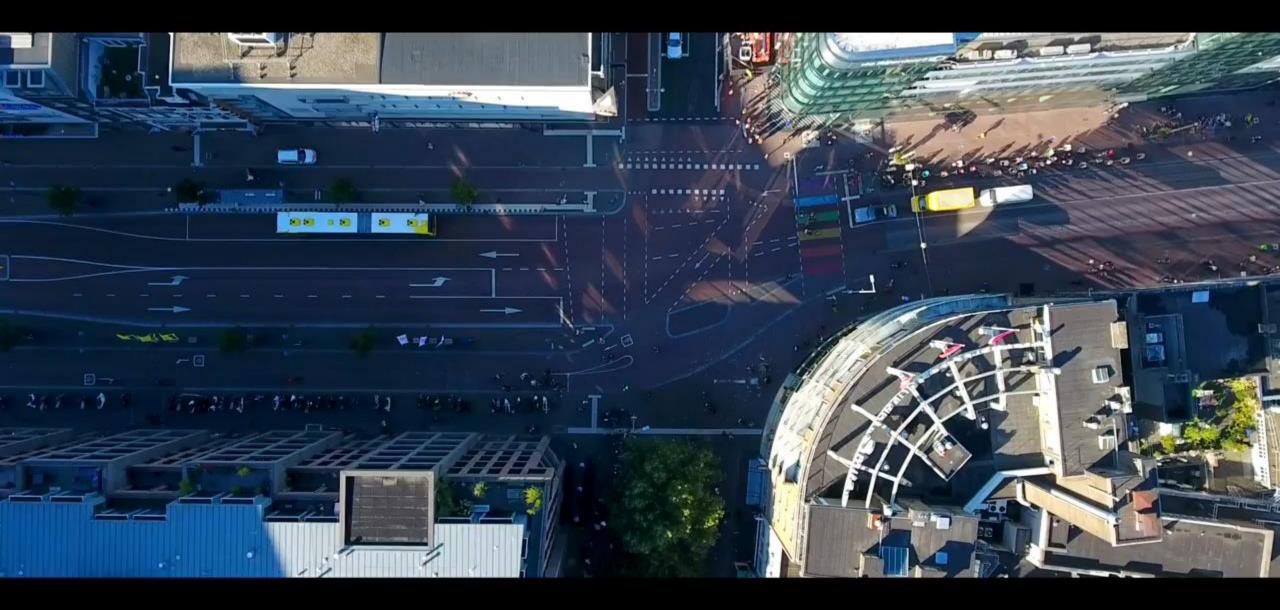


#### 'Healthy Urban Living': A holistic view with multiple domains









## Urban design & Healthy Urban Living

Impact of decision making is often determined at hindsight with all due effects...

India



















#### Exposome

In addition to our genetic nature, the environment in which we live has a major influence on our health.

Non-genetic factors, such as our physical or social environment, or our behaviour, play an important role in the development and prognoses of diseases.

The totality of environmental exposures over the life course is called 'the exposome'

The exposome includes every factor that determines sickness and health that is not part of a person's genome



#### The three domains of the Exposome

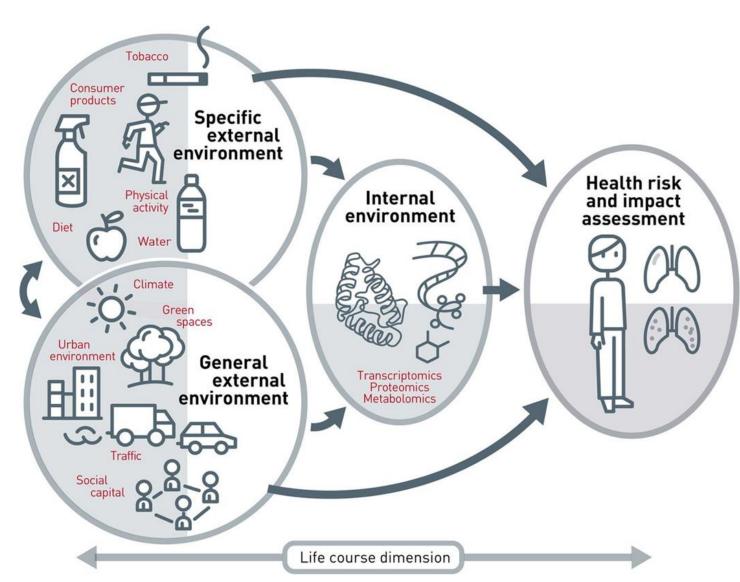
General external environment

Specific external environment

Internal environment

Wild et al. (2012)





#### Utrecht Exposome Hub – Connecting the dots...



How does the totality of exposures that a person experiences combined with the associated biological response, relate to health and disease?

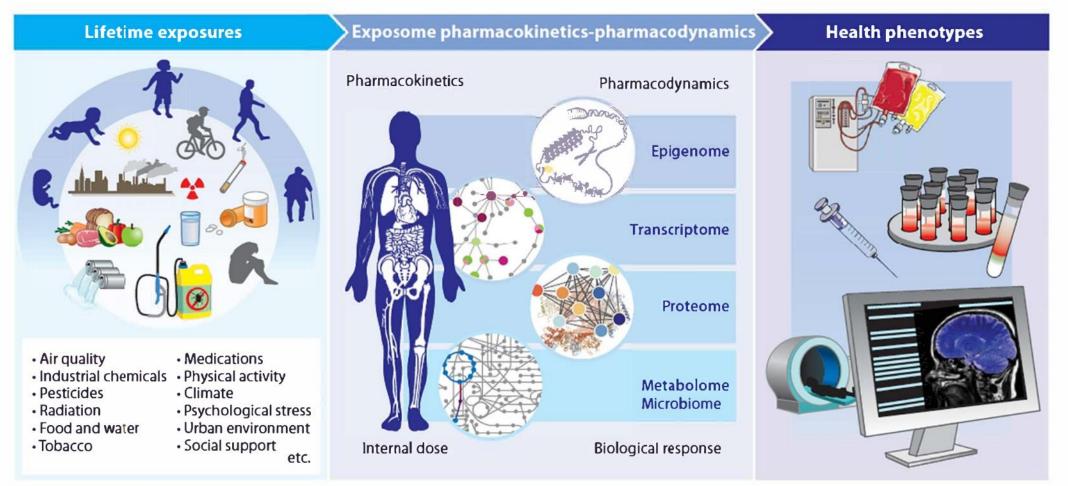






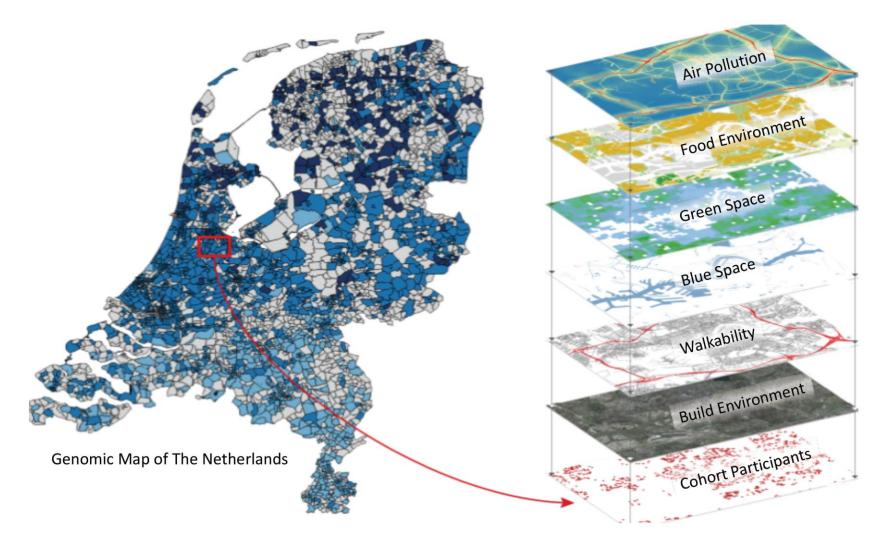


#### The Exposome: A system approach to personalised health





#### The Exposome: Layers of Exposome maps (data sciences)





#### Utrecht Exposome Hub – Sniffer bikes





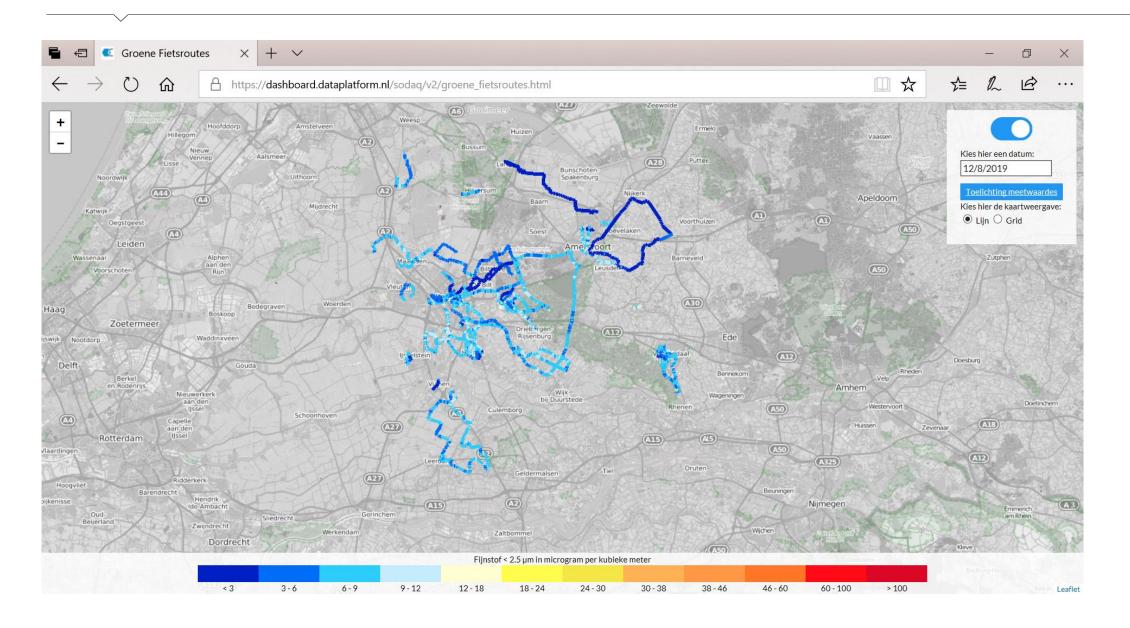






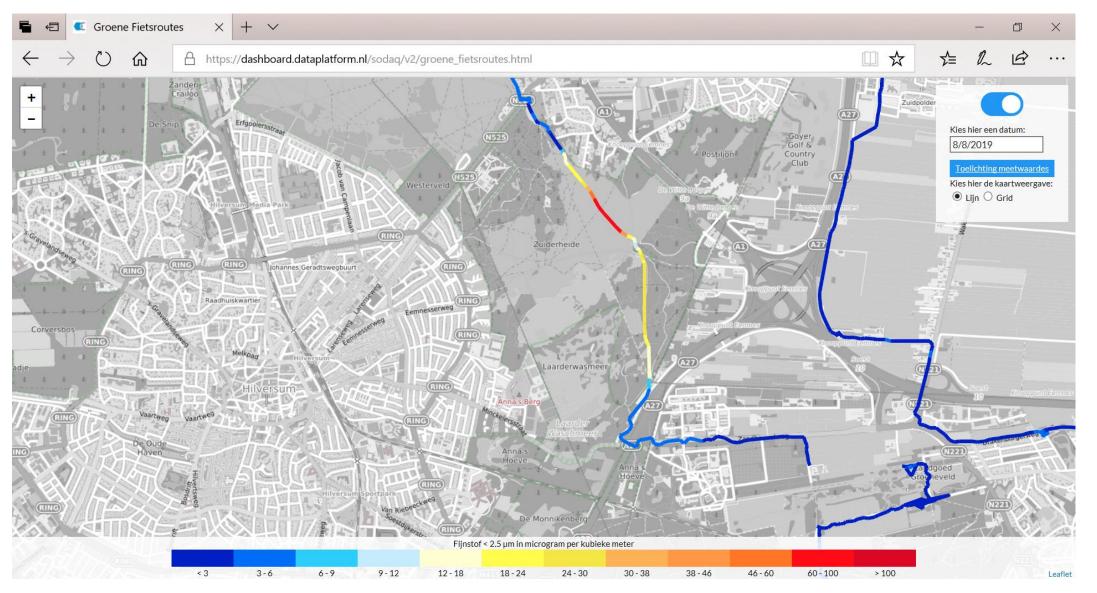


#### Utrecht Exposome Hub – Citizen Science (public engagement)





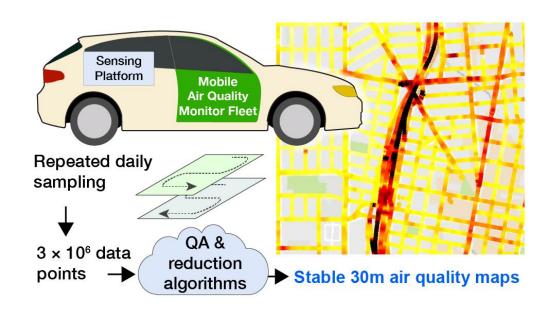
#### Utrecht Exposome Hub – Citizen Science (public engagement)

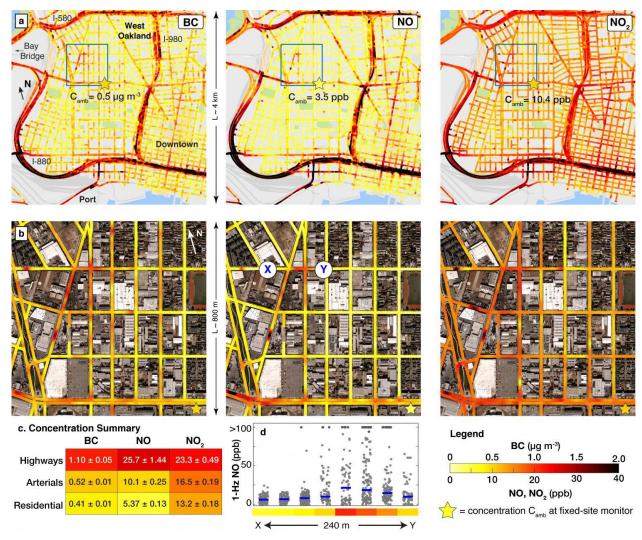




#### Utrecht Exposome Hub – Public Private Partnerships







#### Utrecht Exposome Hub – an endeavor beyond traditional R&D borders





Mobile platform 'Google Air View'





Wearables (E-Health)





Real-time personal radiation dosimeters





Environment monitoring networks
Citizen Science



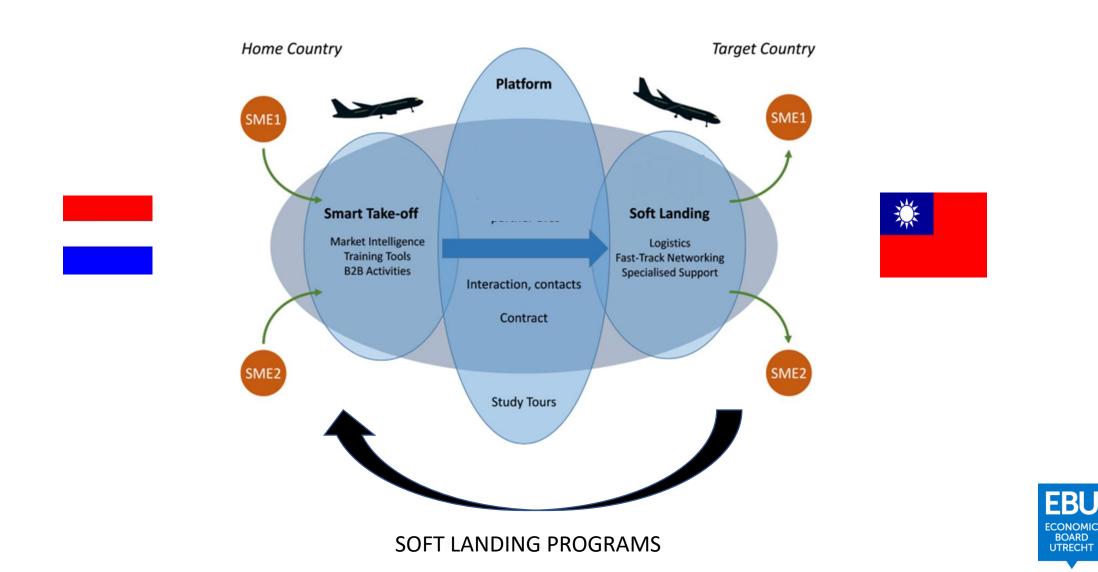


Your technology, product, services





#### Utrecht Exposome Hub – an endeavour beyond traditional R&D borders





Improving Health and Quality of Life

Utrecht Region: One of the most competative regions

of Europe



UTRECHT SCIENCE PARK





## BUSINESS DEVELOPMENT

Education, Training and Internships

Through publicprivate partnerships

Investments

Knowledge & Technology Transfer

Public Private Partnerships

InnovationLabs

Research
Facilities &
Services

















## Utrecht Region is connecting the dots by using an increasing number of comprehensive (data driven) projects and partnerships, all leading to accurate scenario based interventions for Healthy Urban Living **COME and JOIN US!**

**UTRECHT REGION** 

## BUSINESS SUPPORT

Seed

Startup

Scale up

Mature









Talent, Training & Support





































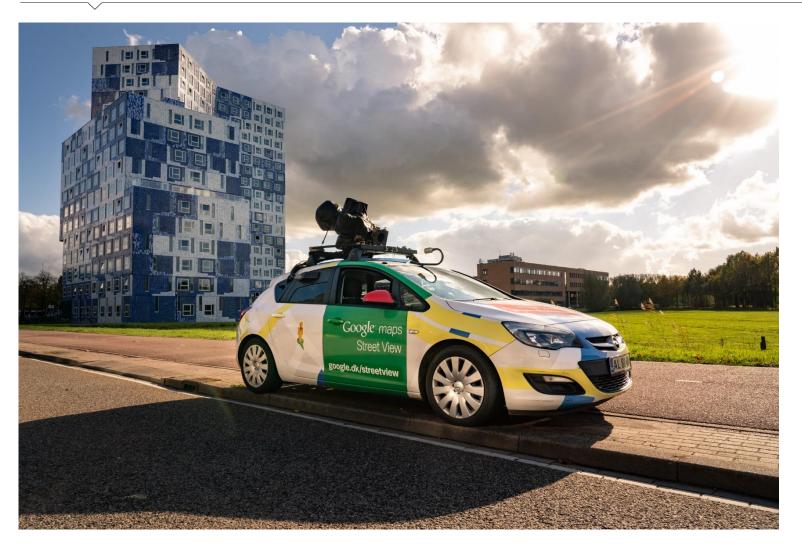


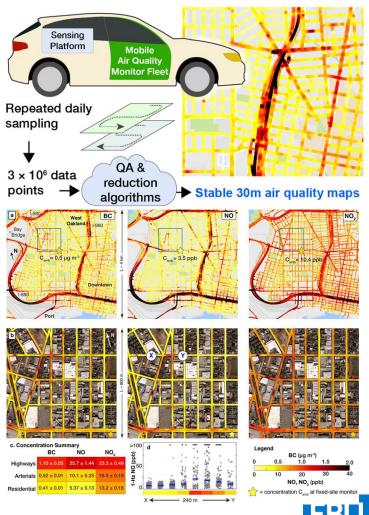






#### Utrecht Exposome Hub – Public Private Partnerships





ECONOMIC BOARD UTRECHT

#### 'Healthy Urban Living' and the Exposome



