

# EU-Human Exposome Project

Early Environmental quality and Life-course mental health effects (Equal-Life)

Irene van Kamp

## What is Equal-Life about?

- Objective #1: Enhance cognitive development and mental health at early life stages by improving the physical and social environments;
- Objective #2: Define and map the environmental health factors enhancing mental health and cognitive development;
- Objective #3: Compose and explore a set of interventions for different life-stages with the purpose to enhance the quality of locations and spaces relevant for children's activities;
- Objective #4: Develop a "living" Equal-Life digital Toolkit and Guidance document anticipating scenarios of changes in environments relevant for different developmental phases.

# Why is this important?

#### Specific challenge in the call

Improve Health

- Provide new and improved knowledge of health risks
- Building blocks for a set of future interventions
- More complete and accurate exposure data
- Toolkit and guidance document

#### And how we will achieve them

- Mental health enhancing environments will be defined for different life stages in of children and adolescents, developing the exposome in a sensible manner.
- Exposure and micro data are linked to longitudinal data on child development and early indicators of mental health.
- The complex pathways for different age groups in different settings are analysed.
- Data at different levels will be combined with social data and data gathered with new devices such as sensors, devices and heads.
- A set of interventions co-designed with different stakeholders in several cities will be developed.

#### Design, Steps Activities and Data Sources,

Time Line STEPS		ACTIVITIES		Sources & data
<ul><li>1 DEFINE</li><li>2 CONSULT &amp; SELECT</li></ul>		WP1 &4 describe Mechanism, fomulate questions and hypothesse		Literature Theory New exposure data
3 COLLECT		WP8 discuss with stakeholders And cities >> SELECT	,	(experiment, sensors) New Outcome data
Model Measure Datamining Enrich		WP1, 2, 3, 4, 5 Primary and Secondary Data collection  WP6 & 7 Collect multimodal exposure data with health		GIS-based historical data Measures Internet
4 MATCH		data and relevant factors Case control>>> biomarkers	S	
5 ANALYSE	WP 6, 2, 7 Apply mixed methods for analysis (targeted and			Birth cohort data School data
6 TRANSLATE RESULTS Interventions	unta	untargeted)  WP8, WP9 Translate results in		Longitudinal data
Tools		Interventions, "live" tool methods, data algorithms	:	
7 COMMUNICATION	WP9, WP10 Training, communication to a broader audience WP 11 CLUSTER ACTIVITIES			

## What will Equal-Life deliver in 5 years?

- ✓ Equal-Life will provide instructions for risk assessment of physical and social exposures associated with (mental) health and cognitive development of children;
- ✓ Deliver publicly available toolkits for policymakers, health practitioners and others;
- ✓ Provide access to information about implementation and good practice examples for interventions;
- ✓ The contribution to the Exposome Toolbox will be a set of algorithms that can be applied in different settings and guidance to stakeholder involvement and a living handbook

## How will Equal-Life improve urban life?

By the end products of our project:

- a living tool and guidance document including cues for indicators, interventions, approaches, integrated exposure data, and pooled mental health data, methods and sources, algorithms and good practices.
- new insight into the relationship between the social and physical environments and cognitive and mental health.

Together this will enhance the living conditions of children especially, but not exclusively in urbanized areas.

## What are the critical needs for success?

- ✓ Our Slogan is: Know each other, work together and create synergy on the impact.
- ✓ Equal-Life will include representatives from most relevant stakeholders at an early stage. They will participate in Working Groups and their views will be solicited at the workshops and the project web site;
- ✓ Equal- Life will organize joint meetings with other initiatives and projects to reduce costs according to the EU wishes for projects under the same call.

### Partners and Advisors



National Institute for Public Health and the Environment Ministry of Health, Welfare and Sport











































College of Human Ecology









