From evidence to practice:

Interdisciplinary guidelines to integrate health into urban planning processes

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Healthy Cith Design, London, 14 October 2019

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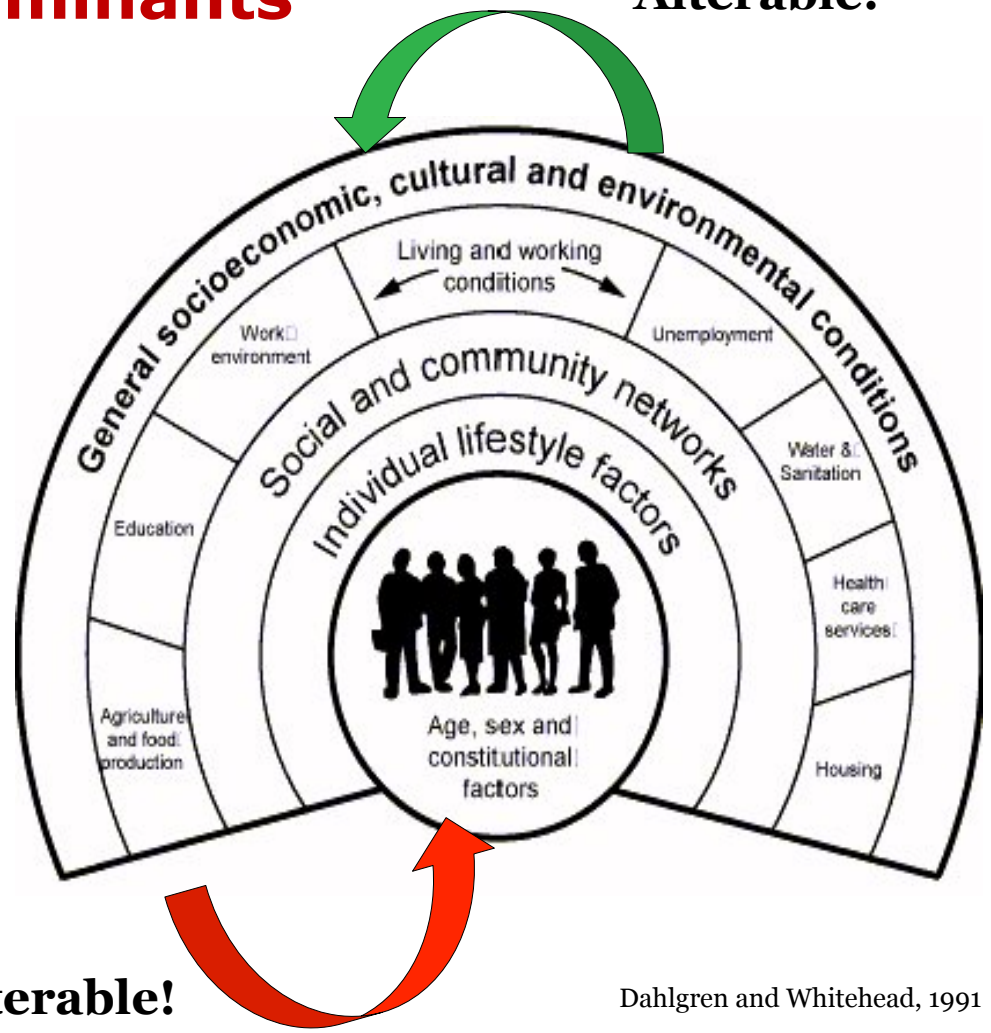
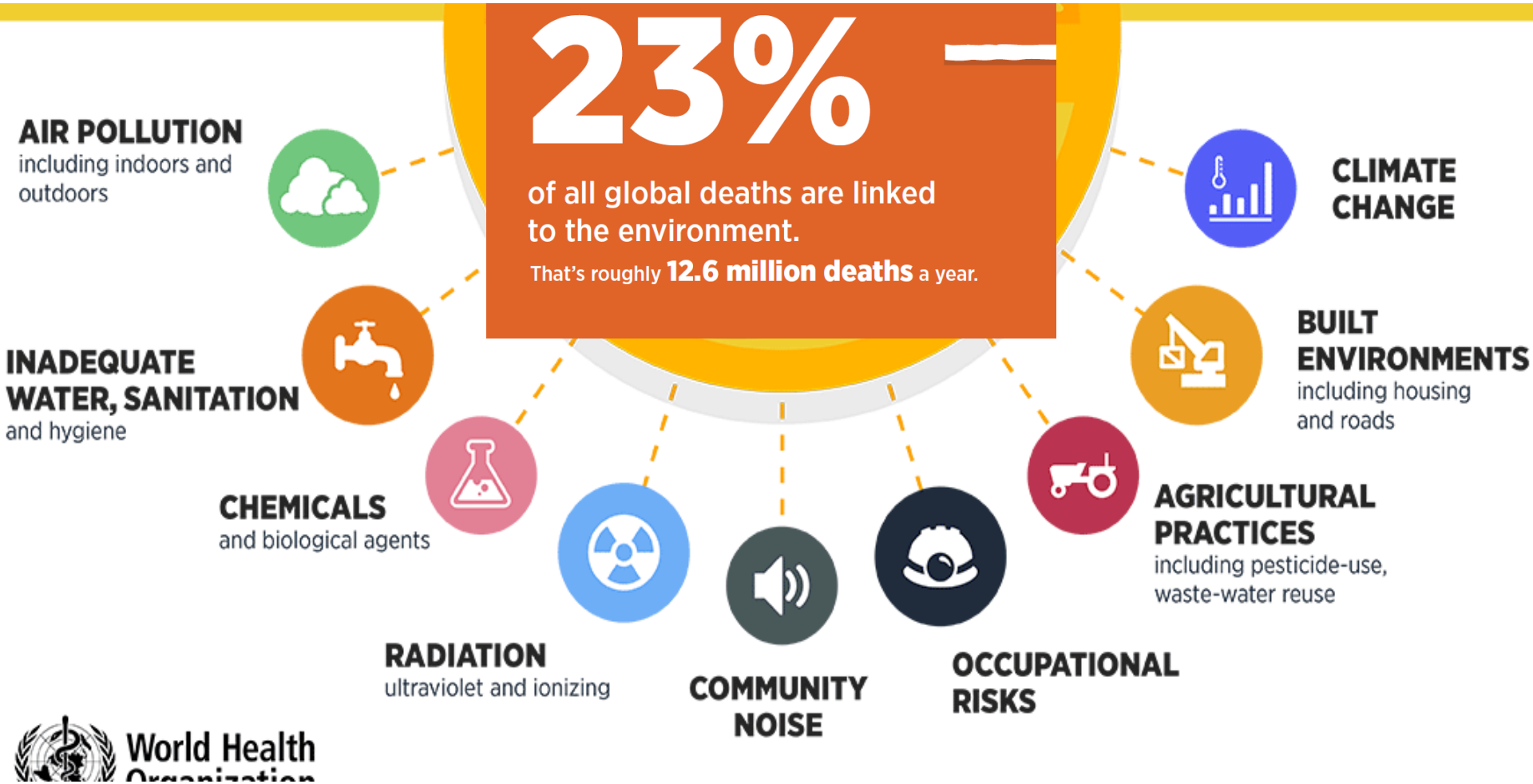
Health and Health Determinants

Our health is determined by socio-economic, cultural and environmental factors and public policies



Dahlgren and Whitehead, 1991



World Health Organization

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How Urban Environment Impacts our Health

Health conditions associated with air pollution, noise and heat, and a lack of physical activity and naturals spaces

- Air pollution
- Noise
- Heat
- Lack of physical activity
- Lack of natural spaces

All

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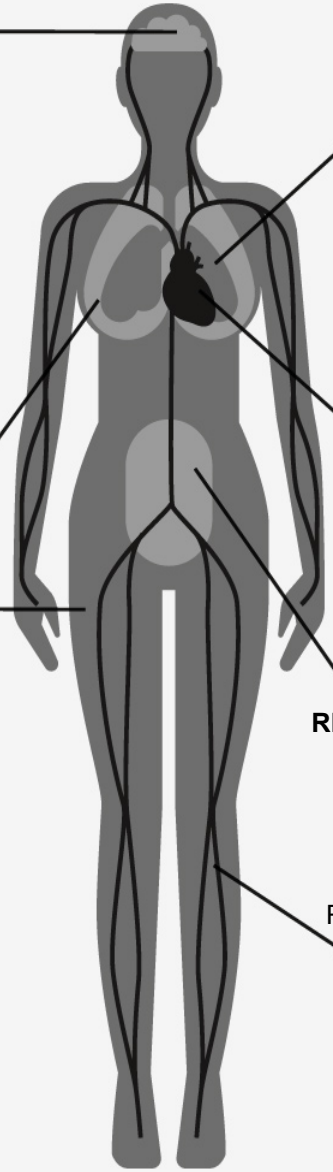

HEAD

Dementia
Cognitive impairment
Neurodegenerative diseases
Mental health problems
Stroke
Cerebrovascular diseases
Autism and child behaviour problems
Tinnitus or deafness
Reduction of cognitive performance

BREAST

Breast cancer

GENERAL/OTHERS

Obesity
Diabetes
Metabolic syndrome
Nuisance, stress
Sleep disorder
Injuries from work and traffic accidents
Colon cancer
Systemic inflammation
Worse general health
Increase in mortality

RESPIRATORY TRACT

Chronic Obstructive Pulmonary Disease (COPD)
Asthma
Respiratory diseases
Pneumonia Lung cancer

HEART

Myocardial infarction
Arrhythmia
Heart congestive failure
Cardiovascular diseases

REPRODUCTIVE SYSTEM AND FETUS

Premature birth
Reduced weight at birth
Preclampsia
Reduction in sperm quality

CIRCULATORY SISTEM

Hypertension Deep venous thrombosis

The drivers of health in cities must come from outside the health sector.

Designers, architects and urban and transport planners have a critical opportunity to protect and promote health.

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HOW?

A multisectoral approach from Catalunya

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947
MUNICIPALITIES

4
PROVINCES

1
METROPOLITAN AREA

7,6 M
POPULATION

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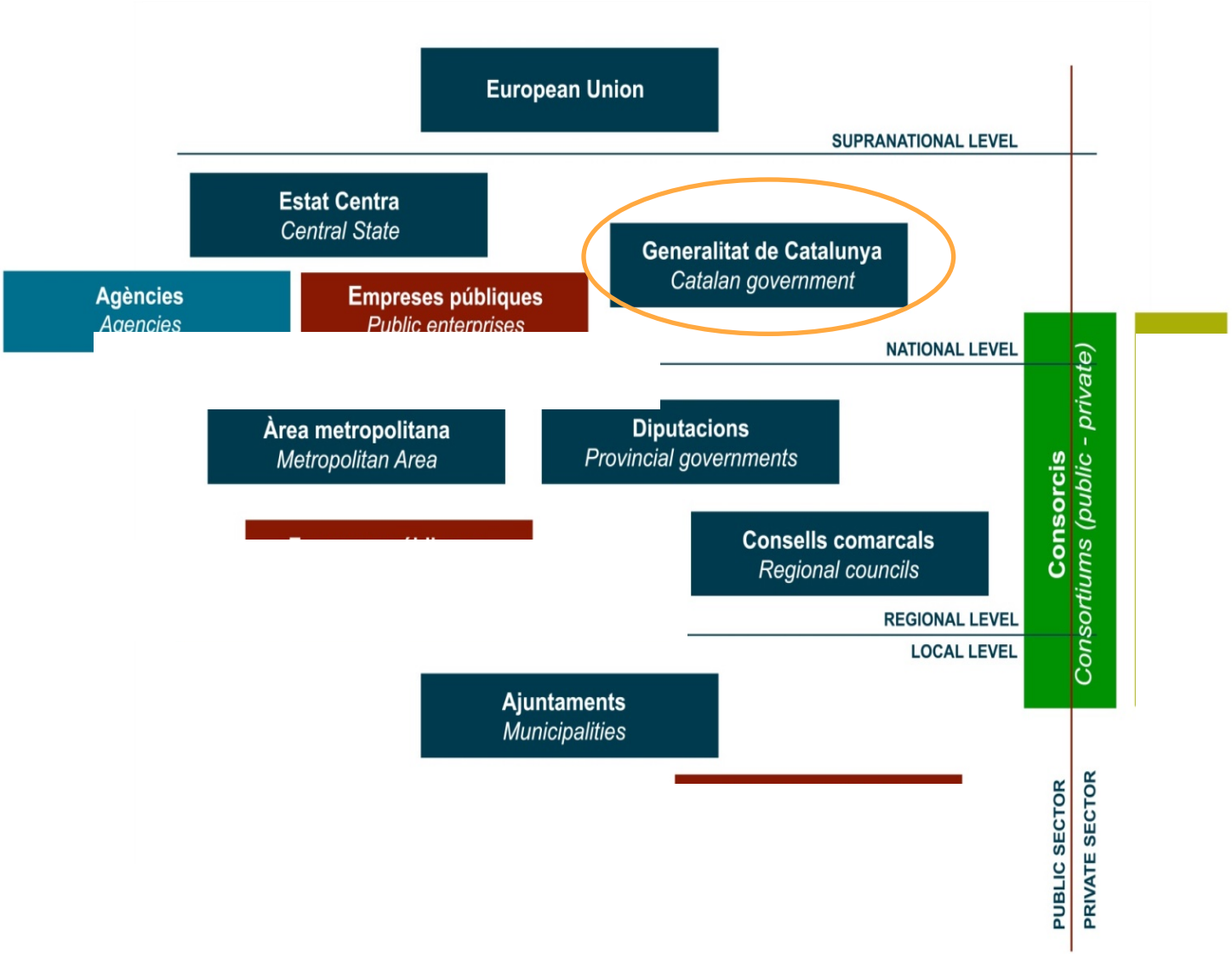
Institutional structure in Catalonia



Strategic Environmental Assessment as a mechanism to improve health

What is the Strategic Environmental Assesstment (SEA)?

Facilitator of **strategic decisions** whose ultimate goal is the p**romotion of sustainability** in policies, plans and programmes (Partidario, 2008; Bina, 2007).

Main objective

Achieve full integration of environmental and health requirements in the preparation and adoption of those plans and programmes that can have **significant repercussions on the environment and health.**

Directive 2001/42/EC of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment Law 21/2013 of 9 December, environmental assessment

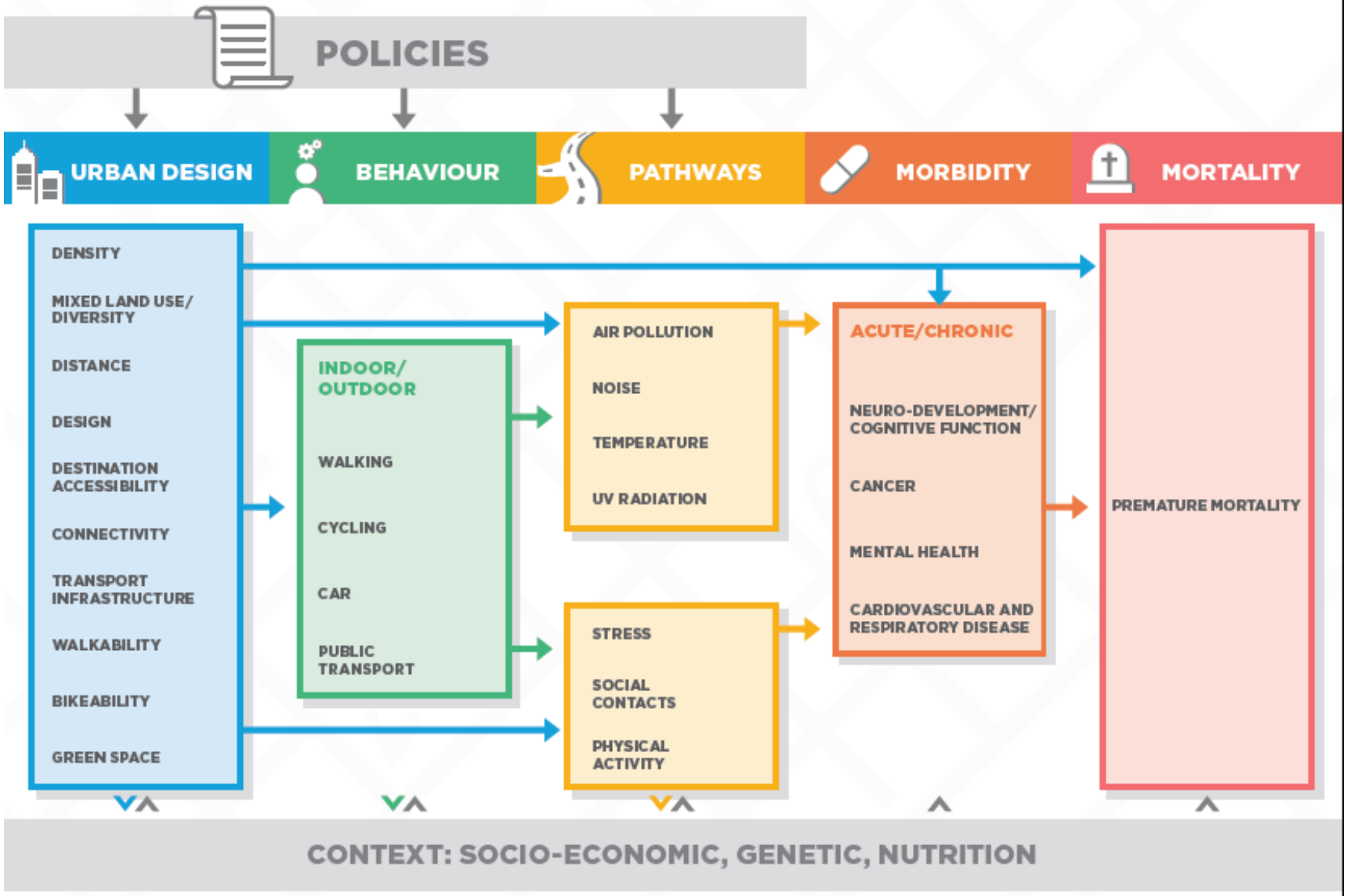
Strategic Environmental Assessment as a mechanism to improve health

Strategic environmental assessment (SEA) for spatial planning, towns and regional and sectorial planning for more than 15 years

Strategic level and approach

Health and environment are two sides of the same coin.

A new strategy is needed !!!



Conceptual framework for the relationship between urban and transport planning, environmental exposures and human health

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The Strategy for Sustainability & Health in Planning

The motivation

Our health depends on our environment

23% premature deaths depend on the environment in which we live

Planning can drastically reduce the number of deaths

Model change through planning enabled by SEA

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Priority

Change the urban and mobility model through planning to improve health and environment in an integrated and effective way

Sustainability-health in planning strategy

The Strategy for Sustainability & Health in Planning

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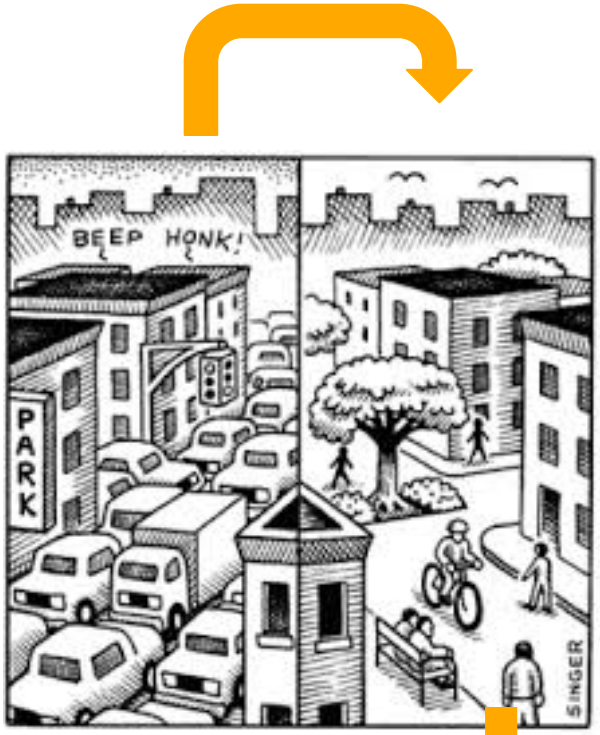
Tool to assist city planners to incorporate measures that promote and protect health and wellbeing through SEA



Sustainable and healthy planning

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Tool to assist city planners in incorporating measures that promote and protect health and wellbeing through SEA

1. Oriented towards towns and cities with more **than 25,000 people** in a Mediterranean context (represents more than 70% of population in Catalonia)

Mataró

Olot

Granollers

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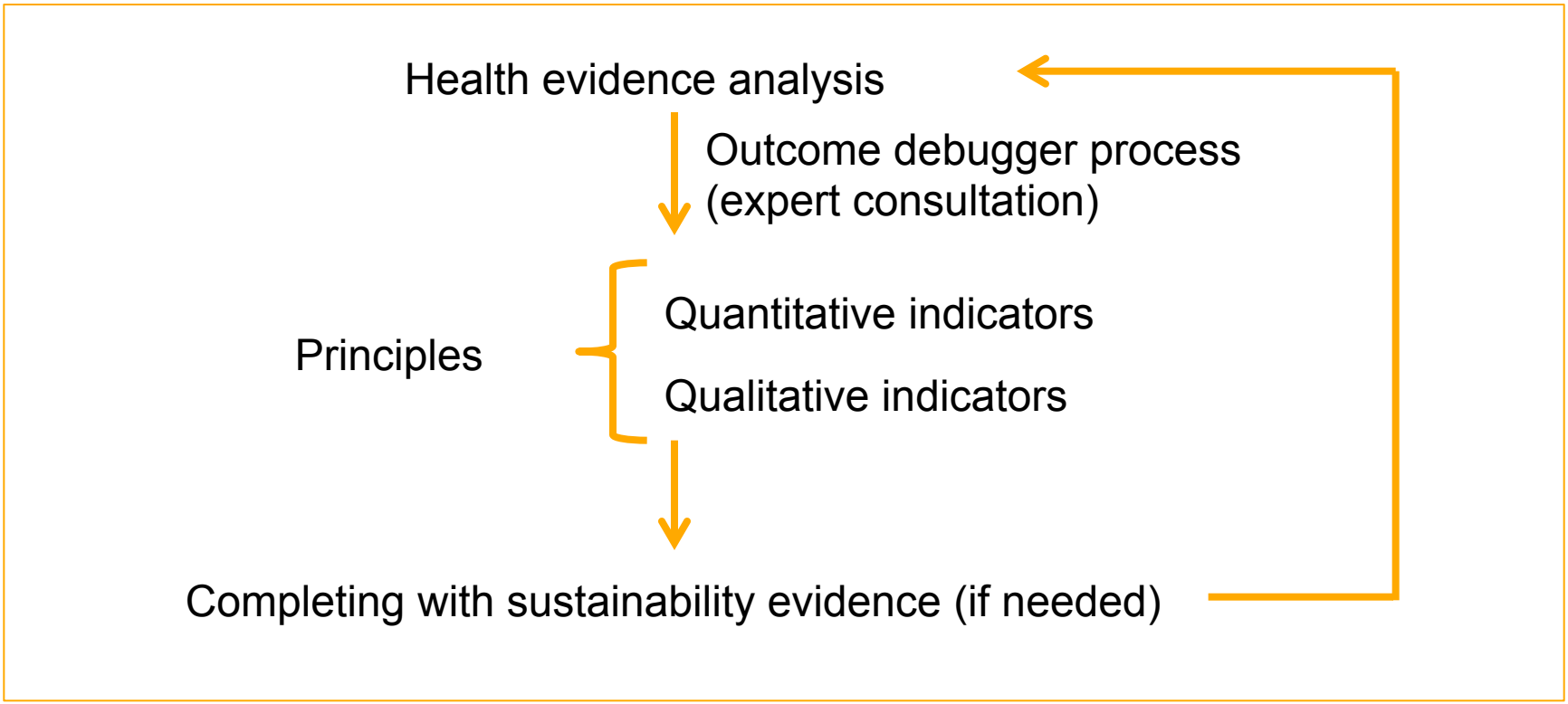
Tool to assist city planners to incorporate measures that promote and protect health and wellbeing through SEA

1. Based on an **extensive literature review** of evidence of urban planning measures linked to health. The evidence was then grouped into planning principles and indicators developed and adjusted for the local context.

2. Developed **by researchers, environmental officers and planners** through an iterative and participatory process.

3. Tested with end users and the government agency responsible for local planning.

The tool creation process



Expert testing

Tool to assist city planners to incorporate measures that promote and protect health and wellbeing through SEA

Tool to assist city planners to incorporate measures that promote and protect health and wellbeing through SEA

Core objectives

1. Development of compact neighbourhoods, with a mixed land use, high street connectivity that prioritizes active and public transport use and the development of a medium to high population density;

2. Reduction of private motorized transport;

3. Promotion of walking, cycling, public transport use and the enabling of multi-modality;

4. Liberation of public space and the development of green and public open space.

Tool to assist city planners to incorporate measures that promote and protect health and wellbeing through SEA

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Indicator checklist for **healthy urban and transport planning**

1. Land use mix

2. Street connectivity

3. Density

4. Traffic calming

5. Walking

6. Cycling

7. Public transport

8. Multi-modality

9. Green and public open space

10. Integration of all planning principles

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Indicator checklist for **healthy urban and transport planning**

PLANNING PRINCIPLE	☑	INDICATOR
1. LAND USE MIX		
Is the proportion of green and public open space appropriate?	☐	≥ 25% of total land surface for green and public open space
Is the proportion of built environment appropriate?	☐	≤ 75% of total land surface for built environment
• Is the proportion allocated to roads and parking appropriate?	☐	≤ 25 % of total land surface for roads and parking
• Is the proportion allocated to buildings appropriate?	☐	≤ 50% of total land surface for buildings
• Is there a mix between residential and non-residential building function?	☐	75% of building function should be residential 25% of building function should be non-residential
Are there numerous, diverse destinations in direct proximity? Note: 'Walkable' destinations are those within a ≤ 300 m street network distance 'Cyclable' destinations are those within a ≤ 5 km street network distance	☐	↑ Number and diversity of destinations in proximity (food, retail, general services, healthcare, community services, sports and recreation, entertainment, etc.) ≤ 300 m street network distance ≤ 5 km street network distance

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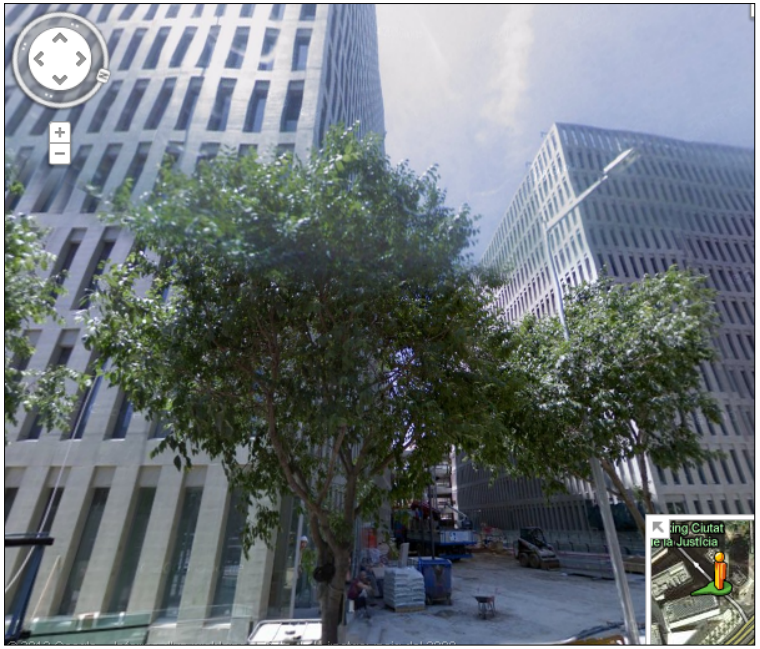
Land use mix



City of Justice (Barcelona)

City center /Eixample (Barcelona)

Tool to assist city planners to incorporate measures that promote and protect health and wellbeing through SEA

3. DENSITY

Is a medium to high dwelling density provided?	☐	100 dwellings/ ha (range: 45-175 dwellings/ ha)
Is a low to mid-rise building form provided?	☐	≤ 5-6 storey buildings that can be 'walked-up'
Is a human scale with sky visibility within normal sight lines retained?	☐	50º above horizontal is normal angle of sight
Is horizontal sprawl (i.e. low density development) avoided?	☐	↓ Low density development
Is vertical sprawl (i.e. high-rise building development) avoided?	☐	↓ High-rise building development
Is the housing surface per capita appropriate?	☐	≥ 30 m²/ capita

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Density

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9. GREEN AND PUBLIC OPEN SPACE

Is universal access (100% of population) to green and public open space provided?	☐	≤ 300 m street network distance
Is there sufficient public open and green space?	☐	≥ 20 m2/ capita of public open space, of which ≥ 10 m2/ capita should be green space
Is a major local green space provided?	☐	≥ 0.5 ha, optimal if within ≤ 300 m street network distance
Is a district green space provided?	☐	≥ 5 ha, optimal if within ≤ 2 km street network distance
Is a regional green space provided?	☐	≥ 15 ha, optimal if within cities catchment area
Is continuous surrounding greenness provided? (e.g. green corridors, street trees, green patches, pocket parks, etc.)	☐	100% of streets with vegetation ≥ 10 trees/ city block
Are walking and cycling infrastructures integrated into the local green space system?	☐	↑ Walking and cycling infrastructures in green spaces

Tool to assist city planners to incorporate measures that promote and protect health and wellbeing through SEA

10. INTEGRATION OF ALL PLANNING PRINCIPLES

Are the land use mix, connectivity, density, traffic calming, walking, cycling, public transport, multi-modality and public open/ green space objectives developed simultaneously and integrated?

☐ ↑ Integration of all planning principles

Integration of all planning principles

Conclusions

- The tool raises awareness about the interlinkages between health, environment and urban planning and it provides a mechanism for **explicitly and intentionally integrate** them in urban planning**.**
- The planning principles indicators could be adapted to **other cities worldwide**.
- The **multi-sector** (administration, researchers, planners,...) and **multi-perspective** (sustainability, health, urbanism) approach has resulted in a great **learning experience** and has provided a **new way of working together based on mutual trust**.

Other outcomes thus far

It´s not just the product but the process…..

- ❖ Increased collaboration between local government and research
- ❖ Increased collaboration with private sector and other sectors
- ❖ Development of specialized training, new tools and methodologies
- ❖ Increased presence in media
- ❖ Diversification in types of projects and funding
- ❖ Publications with added value of impact in society

Lessons Learned

It takes

- Time to build relationships, trust, and a shared language
- Flexbility on all sides and willingness to take risks
- Many iterations to get to a product (that stil might not be final)
- Buy-in from leadership
- Recognition that change comes from below and above
- Developing a shared vision
- More meetings (but more effecitve)
- Capacity building depending on the task or proccess
- A little funding (that can go a long way)

Next steps

- The tool will be available via web to facilitate its use in the first stages of decision making in urban planning.
- The tool is part of the SEA process
- Follow-up and tool improvement through implementation
- Adaptation to other contexts

Thank you for your attention!

The Team

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Indicator checklist for **healthy urban and transport planning**

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