Urban Food Policy Training
2nd Module

Indicators to monitor urban food systems

2nd part

Food Partnership
Urban Agenda for the EU

19 November 2025
University of Barcelona

Source: FoodTank

THE URBAN FOOD SYSTEMS AND URBAN SUSTAINABILITY FRAMEWORK

Block 3, University of Barcelona, FARO,

Urban Agenda Training on monitoring,
Barcelona, 19-21 November 2025

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THE URBAN FOOD SYSTEMS AND URBAN SUSTAINABILITY FRAMEWORK

Roadmap presentation:

- The OBJECTIVES (of framework and Action 6)
- The PROCESS (to arrive to the framework)
- LAYERS AND INDICATORS
- COLLECTIVE DISCUSSION AND FEEDBACK

RECAP ACTION 6

Action 6_INDICATORS - Selecting indicators for urban food systems

The action aims to identify few common indicators to monitor ***urban*** **food systems** that can be widely used to track progress and compare **conditions and trends** across European cities.

The goal is to discuss indicators with cities and EC stakeholders, and **to propose one or a set of indicators on urban food systems to be introduced at the EU level- EUROSTAT**.

THE URBAN FOOD SYSTEMS *AND* URBAN SUSTAINABILITY FRAMEWORK

GOING BACK TO DEFINITION IN BLOCK 1:

Monitoring as:

The ***process*** of producing and assessing **relevant data** (quantitative, qualitative data) **that speak about the urban system *and* the food system** to inform **research**, **policy formulation and progress**, **and action** around the shaping of more sustainable and equitable food systems

(Source: different sources, own elaboration)

THE URBAN FOOD SYSTEMS *AND* URBAN SUSTAINABILITY FRAMEWORK

KEY GOALS:

> Incorporate ***non-food*** indicators, and indicators that **connect food with broader urban dynamics (or socio-ecological characteristics, or layers) of diverse cities**

THE URBAN FOOD SYSTEMS *AND* URBAN SUSTAINABILITY FRAMEWORK

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WHY?

To link food system assessment and action to key social, ecological, and economic urban trends and policy agendas

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WHY?

To link food system assessment and action to key social, ecological, and economic urban trends and policy agendas ← **"DE-SILOING" FOOD ACTION**

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THE PROCESS…

THE PROCESS…

2023-2024

PHASE 1
Scoping

Review of Literature and Indicators sets for **urban sustainability** and **urban food systems sustainability**

266 potential indicators to operationalise layer organised in dimensions

THE PROCESS…

2023-2024

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Review of Literature and Indicators sets for **urban sustainability** and **urban food systems sustainability**

266 potential indicators to operationalise layer organised in dimensions

PHASE 2
Applicability

Indicators tested in a few Spanish cities (Madrid, Barcelona, Cordoba, Valladolid, Valencia)

88 indicators for subsequent phase

THE PROCESS…

2023-2024

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Review of Literature and Indicators sets for **urban sustainability** and **urban food systems sustainability**

266 potential indicators to operationalise layer organised in dimensions

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Indicators tested in a few Spanish cities (Madrid, Barcelona, Cordoba, Valladolid, Valencia)

88 indicators for subsequent phase

PHASE 3
Experts' consultation

Delphi Survey
(2 rounds of surveys and 1 online meeting)

99 indicators
(69 core
30 aspirational)

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THE PROCESS…

2025-2026

CURRENT STAGE

**Expanding,
Refining,
and proposing
essential core
indicators
(Urban Agenda)**

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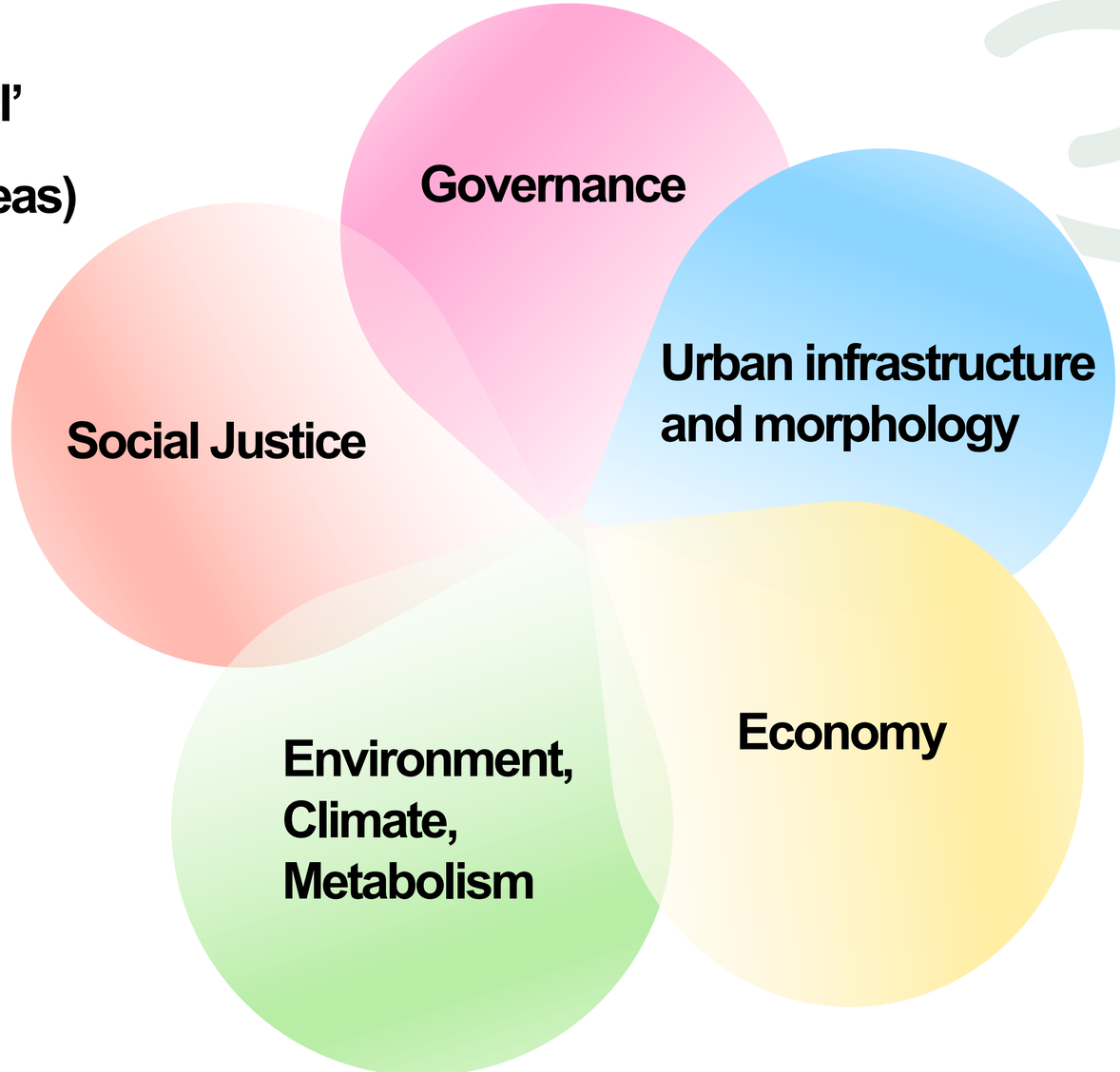
Our ‘directions of travel’

(or progress/impact areas)



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THE URBAN FOOD SYSTEMS *AND* URBAN SUSTAINABILITY FRAMEWORK

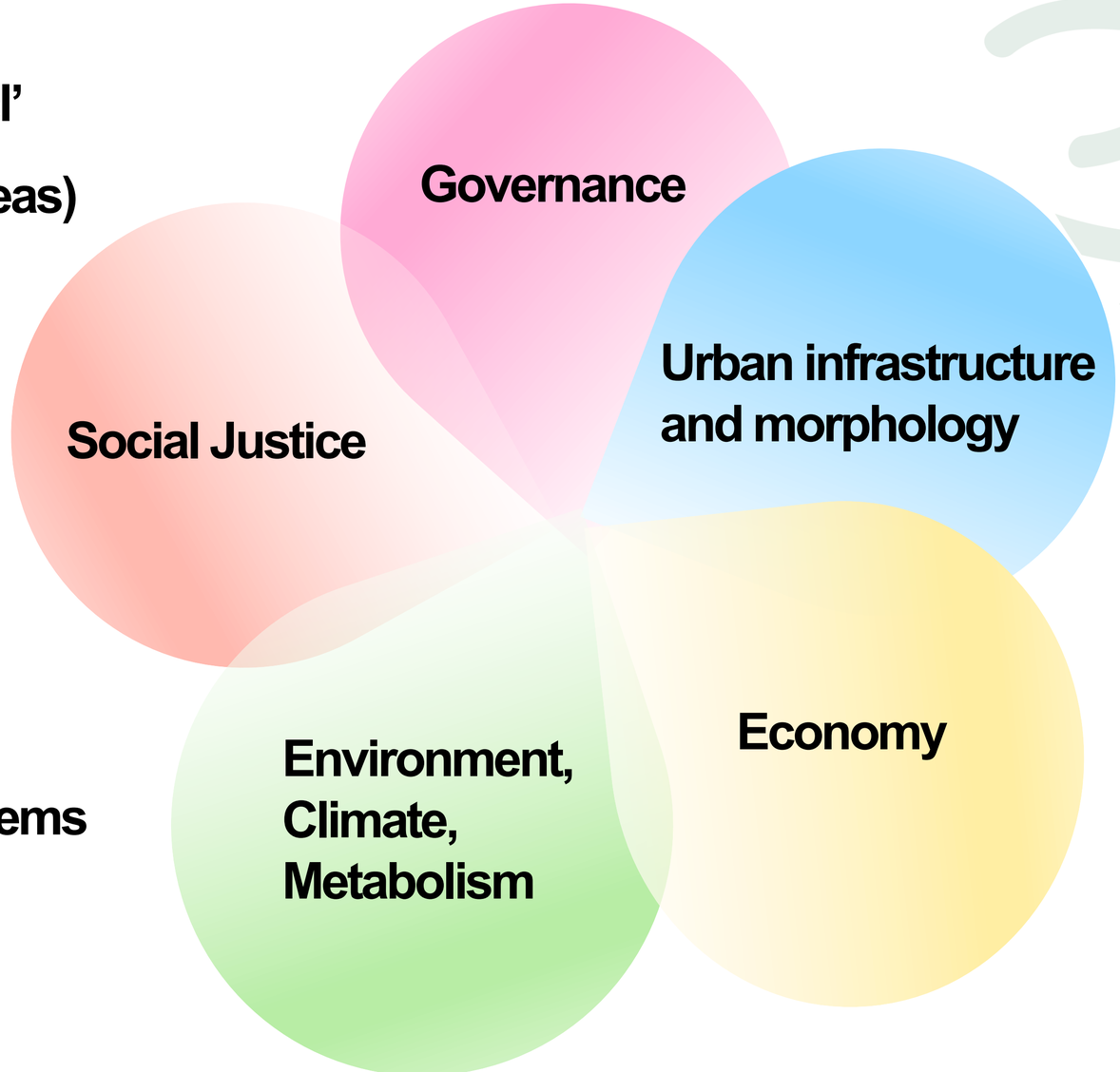
Our ‘directions of travel’

(or progress/impact areas)

Socio-ecological

layers and dimensions

of urban and food systems



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THE URBAN FOOD SYSTEMS *AND* URBAN SUSTAINABILITY FRAMEWORK

Social Justice

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Core indicators

Social Justice

Educational attainment level of the adult population (Between 24 and 65 years old)

Population rate at risk of poverty

% of population that are food insecure or hungry

Prevalence of **obesity and overweight** in children and adults (same with diabetes)

Housing costs

Fuel poverty

Municipality Unemployment rate

Water poverty

Immigration rate

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Social Justice

Population rate at risk of poverty

% of population that are food insecure or hungry

Essential! But tricky (city level statistics lacking)

Argument to the EU Level

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THE URBAN FOOD SYSTEMS *AND* URBAN SUSTAINABILITY FRAMEWORK

Population rate at risk of poverty

% of population that are food insecure or hungry

Social Justice

Proxies related to who has more/less access to key services

Housing costs

Fuel poverty

Water poverty

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Population rate at risk of poverty

% of population that are food insecure or hungry

Inequality + Cultural/demographic diversity (also, available indicators)

Social Justice

Housing costs

Fuel poverty

Water poverty

Municipality Unemployment rate

+Spatial distribution of households' income

Immigration rate

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Social Justice

Population rate at risk of poverty

Educational attainment level of the adult population (Between 24 and 65 years old)

Health+ Education

% of population that are food insecure or hungry

Prevalence of **obesity and overweight** in children and adults (same with diabetes)

Housing costs

Fuel poverty

Municipality Unemployment rate

Water poverty

Immigration rate

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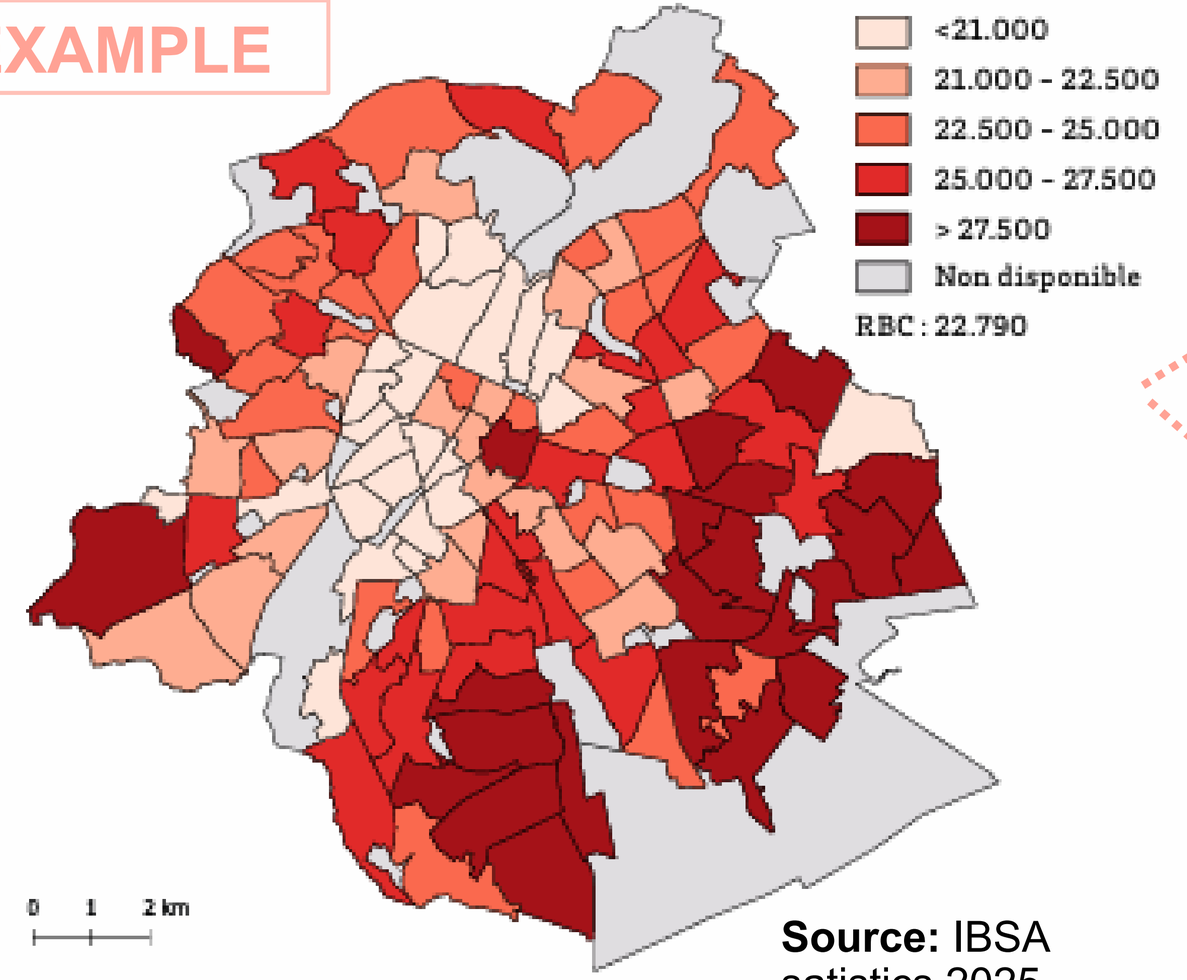
The Brussels-Capital Region
Income distribution
per neighbourhood

EXAMPLE



Source: IBSA
satistics 2025

Institutional and economic hub with high influx of high-income populations largely concentrated in specific districts of the Region

At the same time, high amount of low-income inhabitants and migrants
37,2% incidence of poverty
in the BCR in the 2024
(Source: EU SILC, Regional Statistics)

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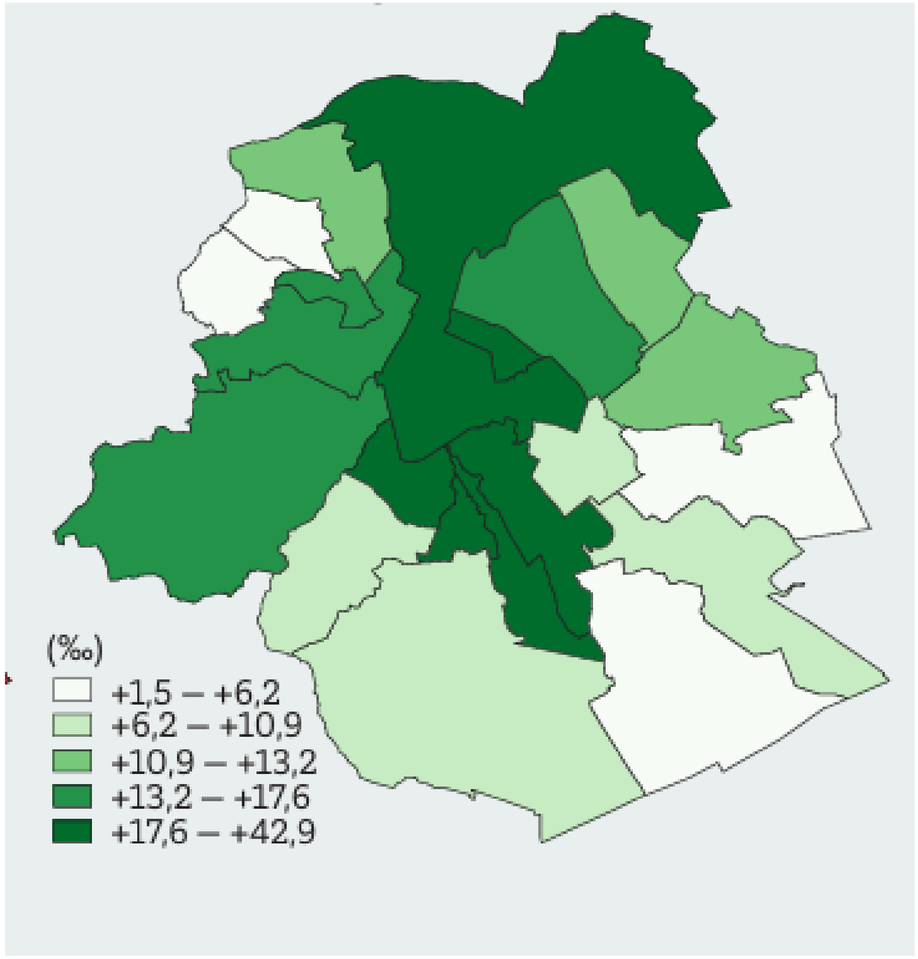
The Brussels-Capital Region
Migration rate

EXAMPLE



Source: IBSA satistics 2025

Institutional and economic hub with high influx of high-income populations largely concentrated in specific districts of the Region

International migration rate is positive for all Brussels municipalities in 2024

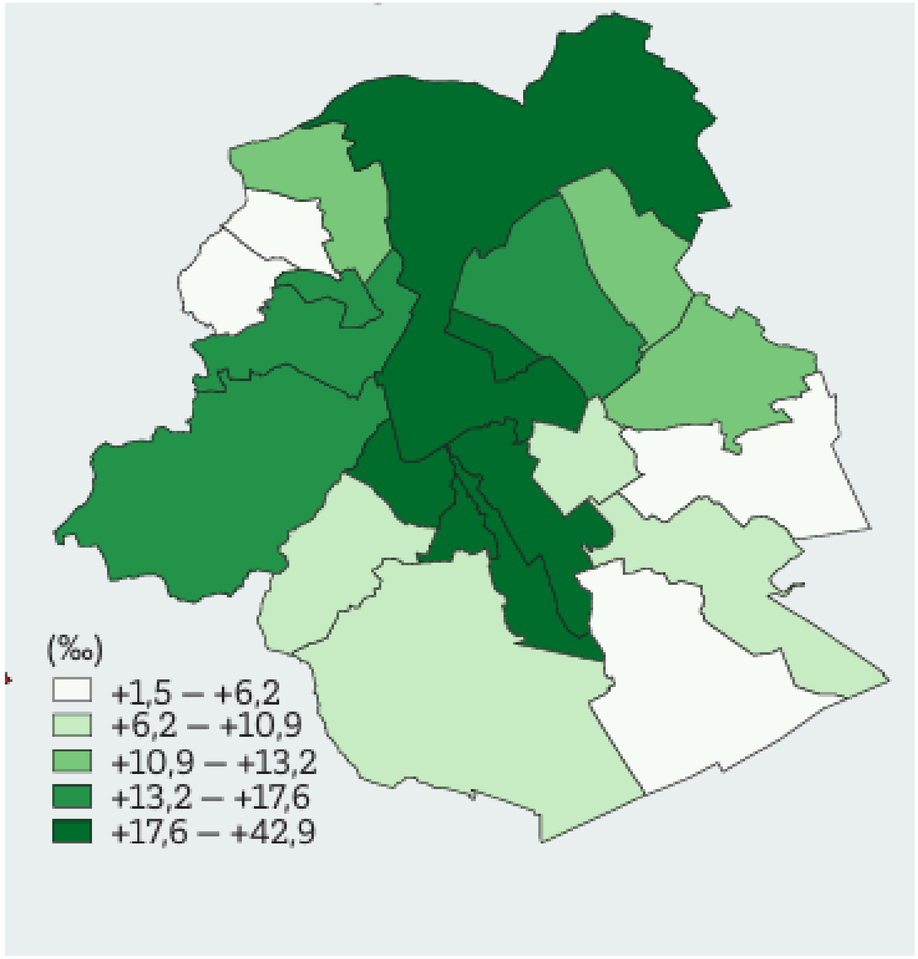
Particularly concentrated in central municipalities/districts (Saint-Josse-ten-Noode +42,9 %)

At the same time, high amount of low-income inhabitants and migrants

37,2% incidence of poverty
in the BCR in the 2024
(Source: EU SILC, Regional Statistics)

The Brussels-Capital Region
Migration rate

EXAMPLE



Source: IBSA satistics 2025

Institutional and economic hub with high influx of high-income populations largely concentrated in specific districts of the Region

Area of work:

Quality and diversity of food environments, and distribution of (conventional/alternative) food retail options within the Region

At the same time, high amount of low-income inhabitants and migrants
37,2% incidence of poverty
in the BCR in the 2024
(Source: EU SILC, Regional Statistics)

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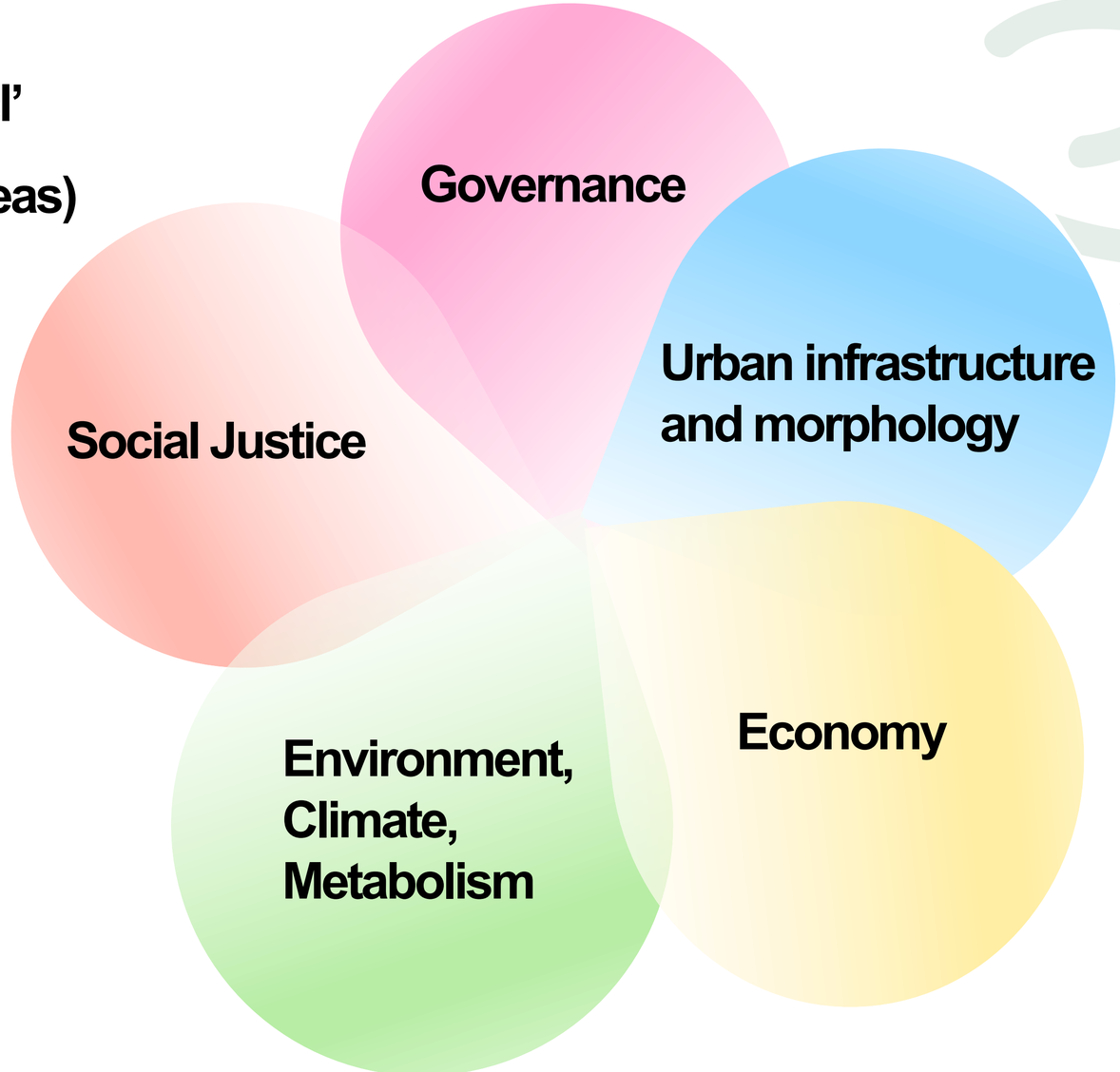
Our ‘directions of travel’

(or progress/impact areas)



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Environment,
Climate,
Metabolism

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Environment, Climate, Metabolism

Green areas per capita
(+%green areas/green cover)

% Surface area designated for natural protection

%Emissions agriculture sector

Energy consumption per capita (kWh/capita/year)

%Emissions per food chain sector/activity

Urban solid waste generated (production of municipal waste per capital per year (kg/capita/year)

Presence of a large-scale municipal food infrastructure that intercepts a large amount of food flows (e.g. wholesale market)

Per-capita water consumption

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Green areas per capita
(+%green areas/green cover)

% Surface area designated for natural protection

Environment,
Climate,
Metabolism

Strategic connections with Land, greening and biodiversity,

Generally available data

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Environment, Climate, Metabolism

Green areas per capita
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Key Flows,
data generally available
Food flows => tricky

Energy consumption per capita (kWh/capita/year)

Urban solid waste generated (production of municipal waste per capital per year (kg/capita/year)

Per-capita water consumption

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% Surface area designated for natural protection

Green areas per capita
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%Emissions agriculture sector

%Emissions per food chain sector/activity

Environment, Climate, Metabolism

Important for the Food-Climate Nexus, but tricky for obtaining data

Argument for support from the EU level and/or peer-to-peer learning

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Why important?

Environment, Climate, Metabolism

→

✓ **Greening and climate mitigation/adaptation as a key urban challenge and agenda**

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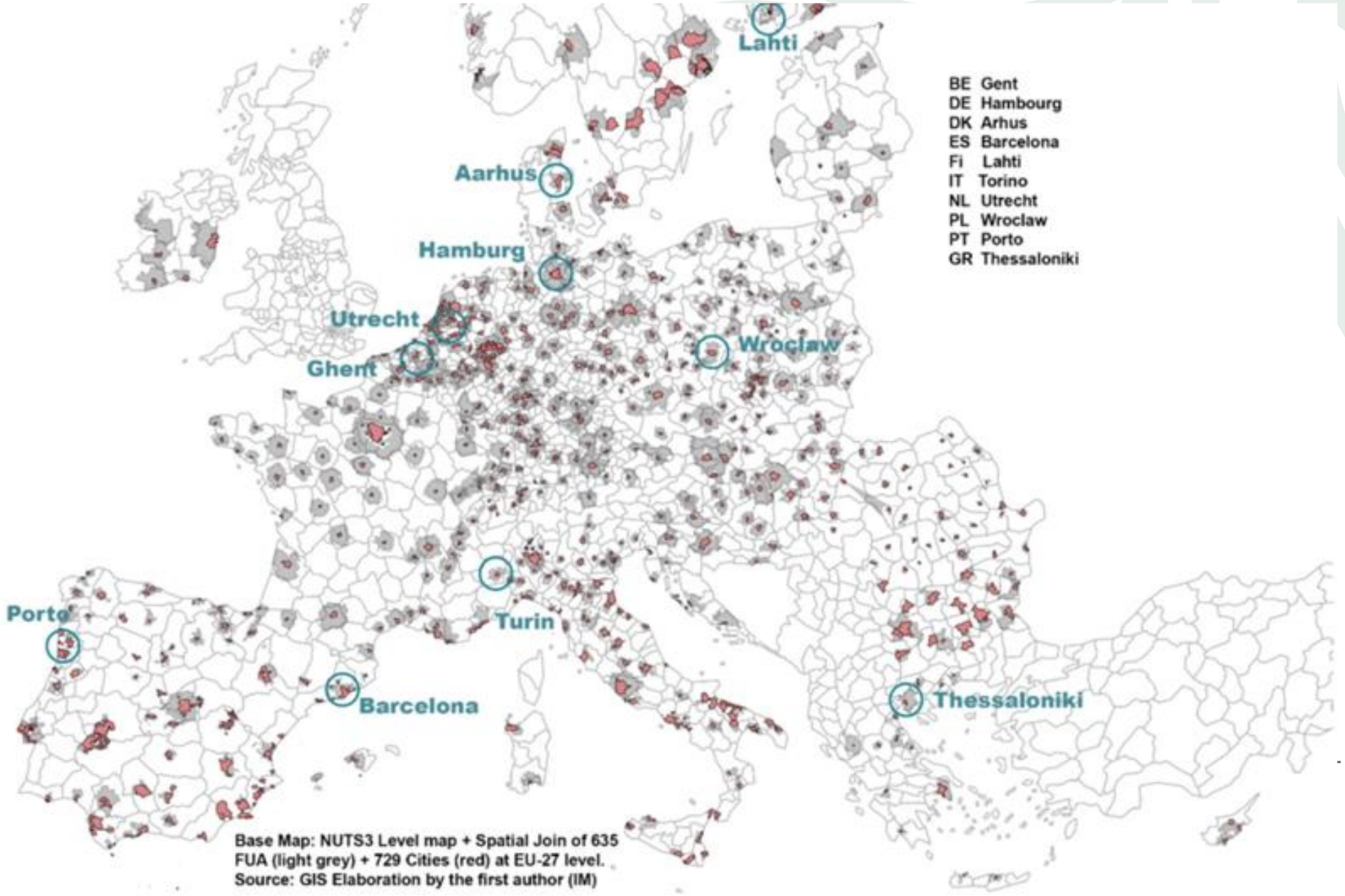
Environment,
Climate,
Metabolism



Mahmoud et al. 2025

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Why important?

Environment,
Climate,
Metabolism

→

✓ **Greening and climate mitigation/adaptation as a key urban challenge and agenda**

↓

Alligning food with greening actions and plans
(e.g. productive nature-based solutions, reinforcing arguments for supporting agroecology and bioregional approaches)

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% Surface area designated for natural protection

Green areas per capita
(+%green ~~areas/green~~ cover)

Environment, Climate, Metabolism

%Emissions agriculture sector

%Emissions per food chain sector/activity

Need to know more about the ecological impact of food production, transport, processing distribution (=>info at higher scale)

Argument for the EU and coordination with higher scales

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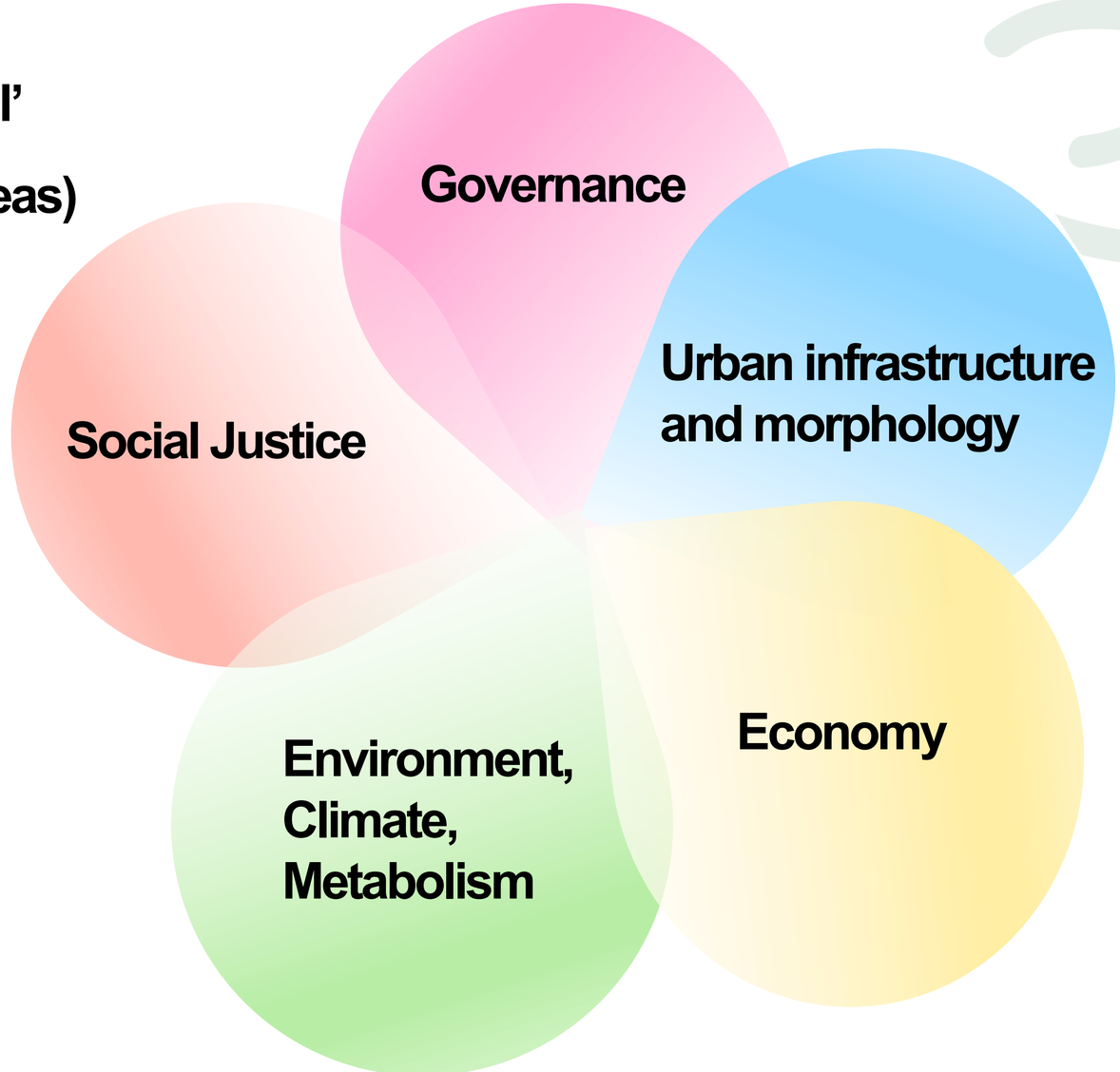
Our ‘directions of travel’

(or progress/impact areas)



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Economy

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Economy

% of people working in primary sector (agriculture, animal breeding, fishery, forestry)

% of people working in industrial sector

% of people working in tertiary sector

Tourism companies actively taking measures to source local, sustainable, fairtrade food

Relative contribution of tourism to the municipality´s economy (%GDP)

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Economy

% of people working in industrial sector

% of people working in primary sector (agriculture, fishery, forestry)

% of people working in tertiary sector

Employment and economic structure of a city

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Economy

Linking food with key drivers of economy and food environments

Tourism companies actively taking measures to source local, sustainable, fairtrade food

Relative contribution of tourism to the municipality´s economy (%GDP)

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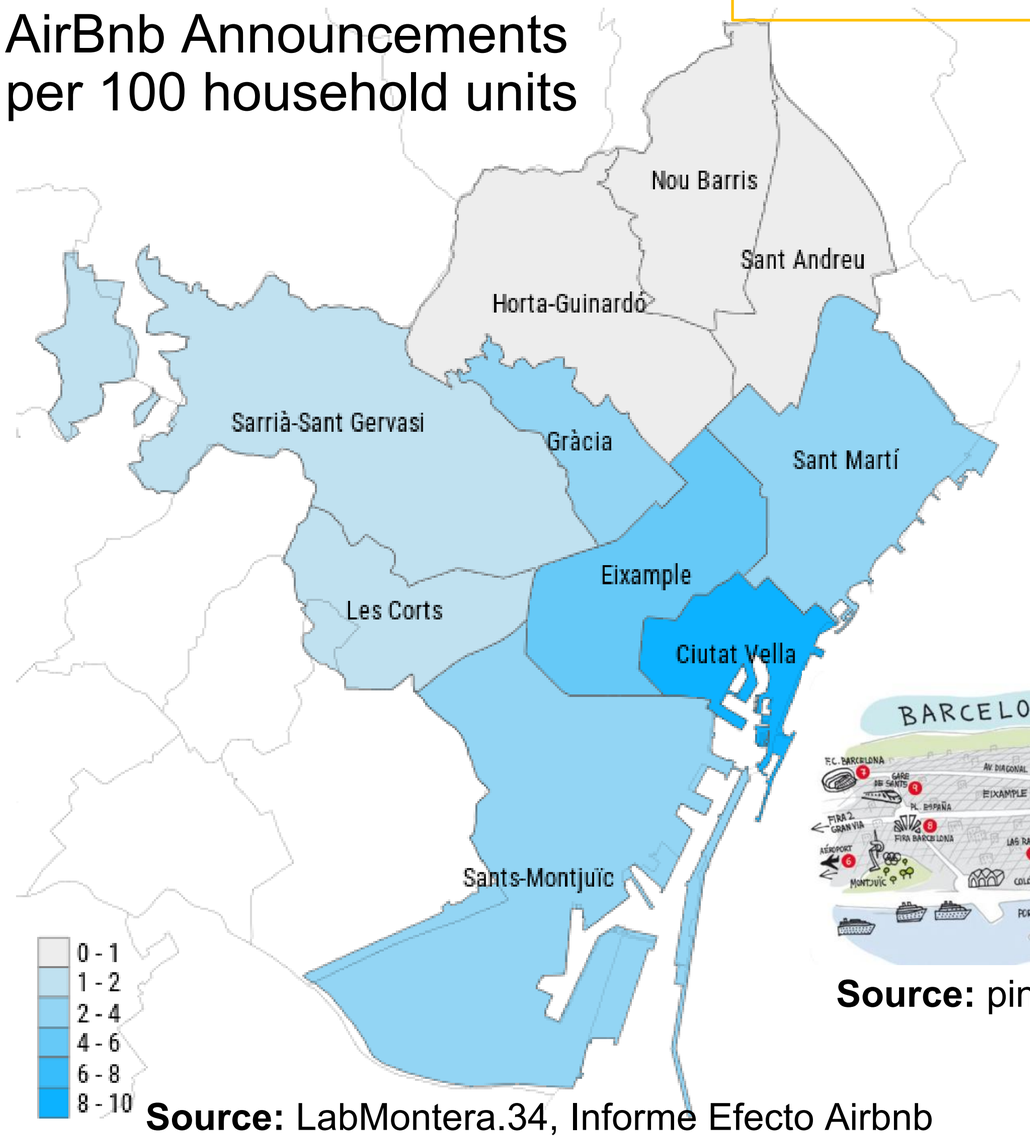
Barcelona
AirBnb Announcements
per 100 household units

EXAMPLE



Source: LabMontera.34, Informe Efecto Airbnb

Source: pinterest.com

- **Tourism sector as one of the main drivers of economic activity in Barcelona**

150,000 direct and indirect jobs,

13.4% of the city's employment,

16.0% companies

7.3% of the GDP

- **Vector of gentrification dynamics**

Source: Barcelona Metropolis, Barcelona Tourism observatory

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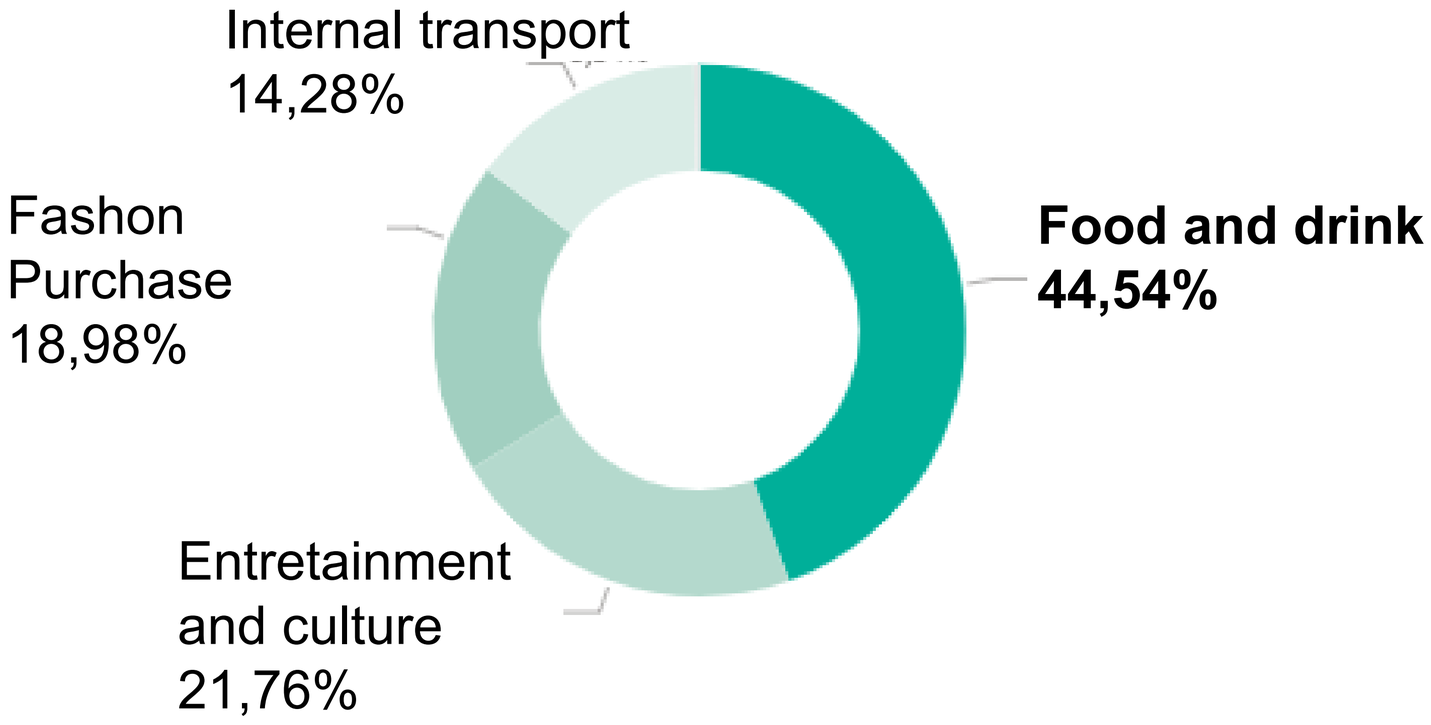
Barcelona

EXAMPLE

- **Tourism sector as one of the main drivers of economic activity in Barcelona**



Food and drink account for largest share of tourists' spending (2025)

Source: Barcelona tourism observatory, 2025

Barcelona

EXAMPLE

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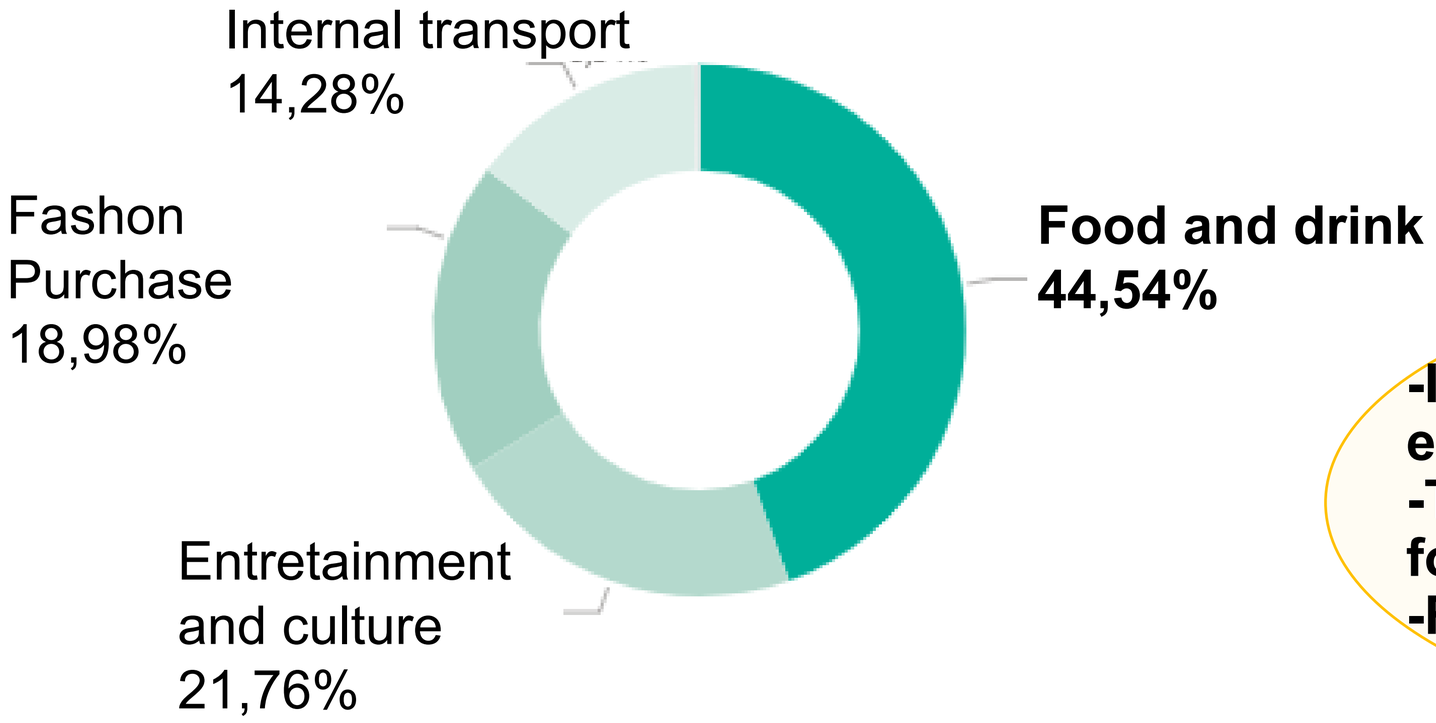

Source: Barcelona tourism observatory, 2025

Areas of work

-Incidence on food economy and food environments
-Tourism as lever for more sustainable food retail and consumption practices;
-Food catering sector

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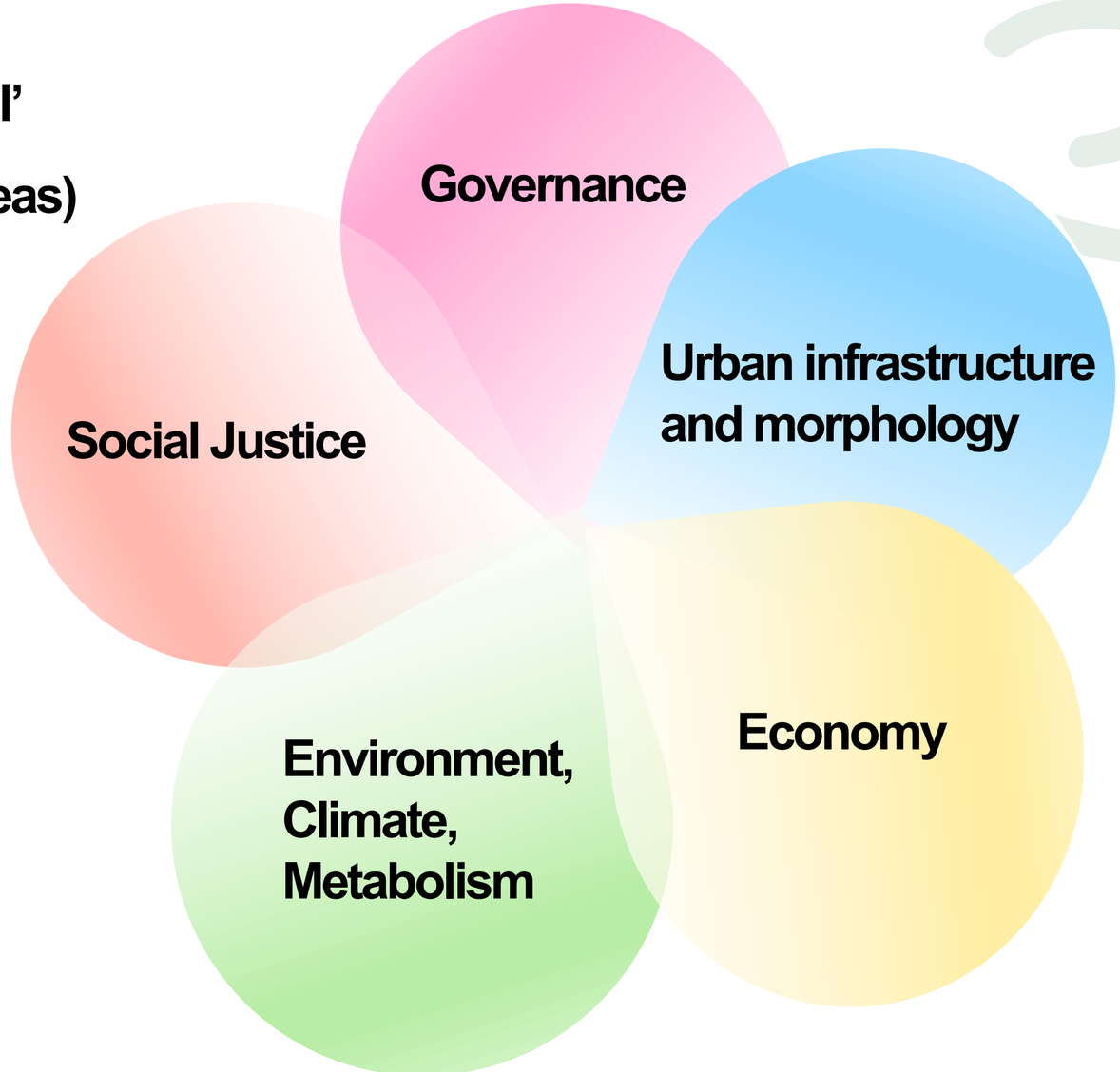

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Our ‘directions of travel’

(or progress/impact areas)

Urban infrastructure and morphology

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Urban density
(inhab/Km2)

Modal split
(car, public transport, walking)

%of built-up vs unbuilt areas

Urban infrastructure and morphology

Density of restaurants and fast food stores (per inhab)

Number of community gardens

Number of urban agriculture projects

Density of supermarkets (per inhab)

Number of farmers markets (per 100,000 inhab)

Number of municipal markets per 100,000 inhabitants

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Urban infrastructure and morphology

Modal split
(car, public transport, walking)

Urban density
(inhab/Km2)

%of built-up vs unbuilt areas

Urban connectivity, land and land use, progress in enhancing urban agriculture and gardening

Number of community gardens

Number of urban agriculture projects

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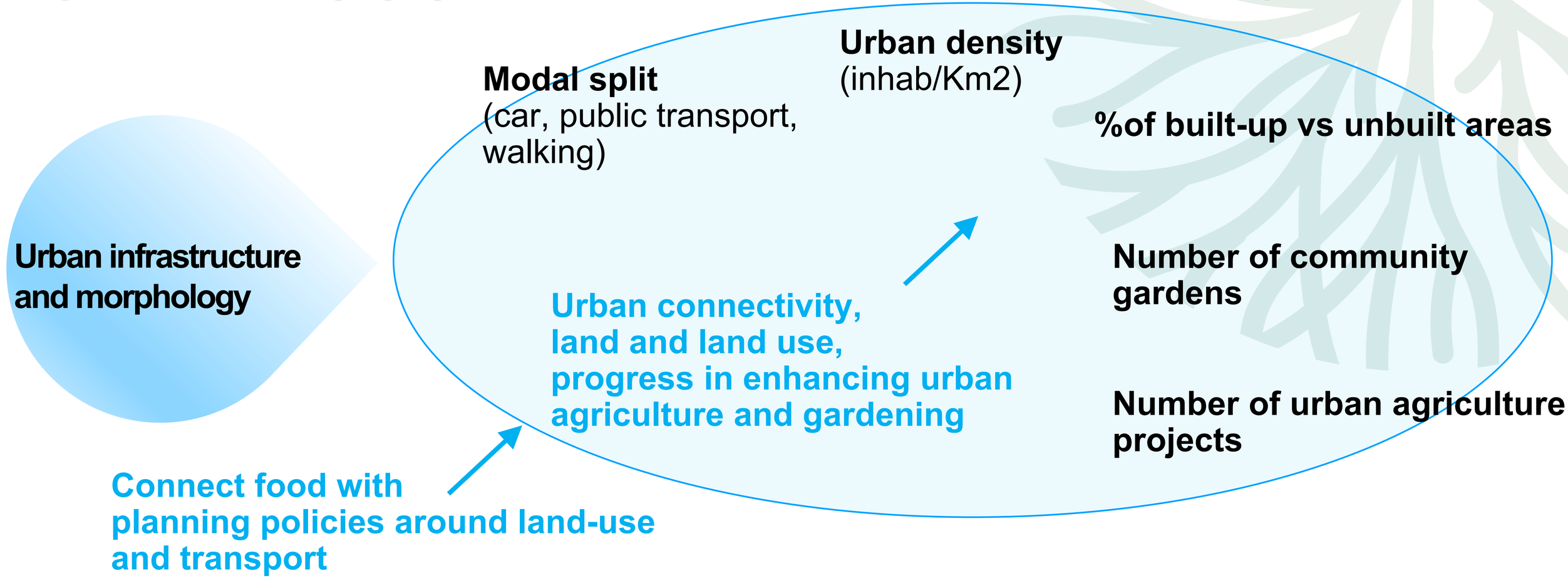

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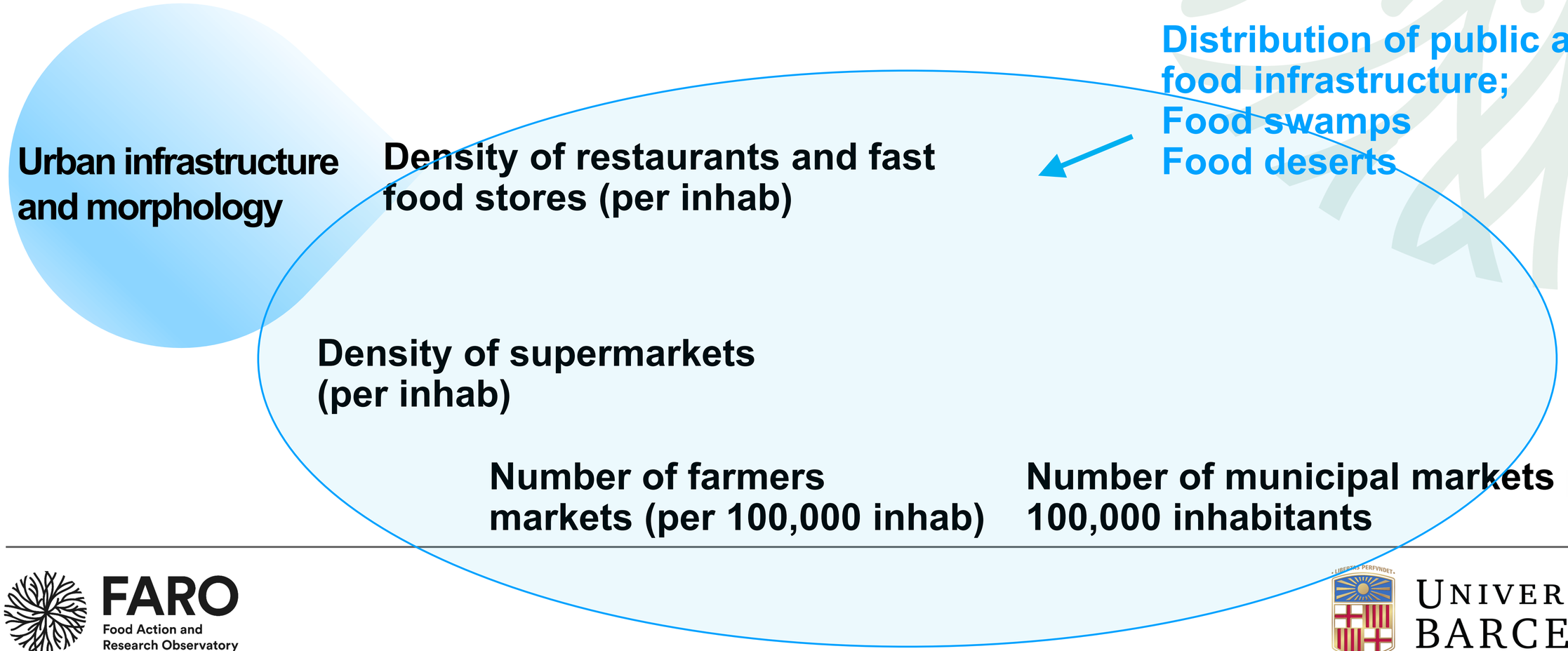

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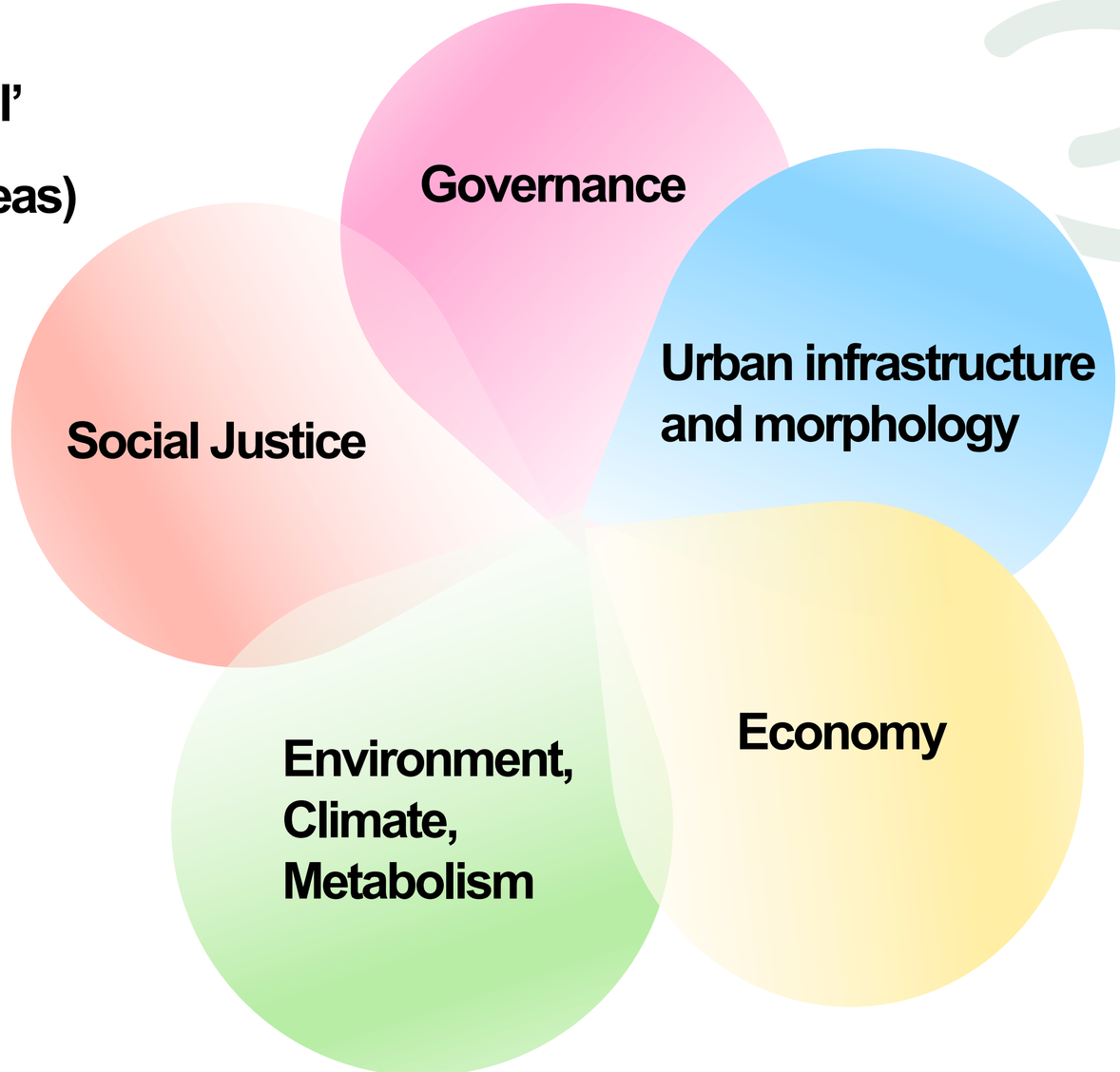

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THE URBAN FOOD SYSTEMS *AND* URBAN SUSTAINABILITY FRAMEWORK

Our ‘directions of travel’

(or progress/impact areas)

Governance

THE URBAN FOOD SYSTEMS *AND* URBAN SUSTAINABILITY FRAMEWORK

Governance

Presence of active multi-stakeholder food planning and policy structure

Number of public investments per capita

Share of municipal budget for the food planning and policy structure

Municipal support for food markets or retail stores providing fresh food

Presence of healthy and sustainable food as a key pillar in the other city policies (climate, health, social services, planning…)

Presence of a mechanism for collecting and analysing data on the urban food system

Degree of implementation of criteria based on proximity, health and sustainability in the food procurement policy

Presence of a food procurement policy

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THE URBAN FOOD SYSTEMS *AND* URBAN SUSTAINABILITY FRAMEWORK

Governance

Presence of active multi-stakeholder food planning and policy structure

Number of public investments per capita

Share of municipal budget for the food planning and policy structure

Municipal support for food markets or retail stores providing fresh food

Strenght and capacity of the public sector compared to other sectors

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Governance

Presence of active multi-stakeholder food planning and policy structure

Number of public investments per capita

Share of municipal budget for the food planning and policy structure

Municipal support for food markets or retail stores providing fresh food

Food in other policies

Presence of healthy and sustainable food as a key pillar in key other city policies (climate, health, social services, planning…)

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Share of municipal budget for the food planning and policy structure

Municipal support for food markets or retail stores providing fresh food

Presence of healthy and sustainable food as a key pillar in key other city policies (climate, health, social services, planning…)

Commitment to food procurement and embedding of criteria

Degree of implementation of criteria based on proximity, health and sustainability in the food procurement policy

Presence of a food procurement policy

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Governance

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Presence of a mechanism for collecting and analysing data on the urban food system

Enforcing food policy + monitoring
EU and National Level Message

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SUMMARY

- **A FRAMEWORK INTEGRATING FOOD + URBAN INDICATORS, BASED ON ESSENTIAL SOCIO-ECOLOGICAL URBAN AND FOOD LAYERS**

- **DOES NOT DENY EXISTING FRAMEWORKS (**SEE BLOCK 1 PRESENTATION**), BUT TAKES FROM THEM, ADDING ATTENTION TO URBAN DYNAMICS**

- **OPPORTUNITY TO LEVERAGE DIFFERENT LAYERS, DIMENSIONS, INDICATORS TO ASSESS AND TRACK PROGRESS, BASED ON CITIES' DIVERSE CHARACTERISTICS AND AGENDAS**

- **ATTENTION TO DATA AVAILABILITY HAS BEEN PUT, BUT DATA AVAILABILITY AND ACCESSIBILITY IS STILL A CHALLENGE**

COLLECTIVE DISCUSSION

CHOICE OF ESSENTIAL INDICATORS

PROPOSITIONS TO THE NATIONAL AND EU LEVEL

- include important statics on food – currently missing – in EU statistics about cities (see social justice and climate-impact indicators), and/or enhance improve connections between cities and higher scales for accessing data
- Provide legitimate and stable frameworks for cities to develop both food policies and monitoring mechanisms

COLLECTIVE DISCUSSION

CHOICE OF ESSENTIAL INDICATORS

PROPOSITIONS TO THE NATIONAL AND EU LEVEL

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