

# URB401: Systems Approaches for Urban Transitions

**Sustainability frameworks**

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# Learning objectives

- Learn about various **sustainability frameworks** adopted by cities, including goal-oriented, domain-oriented, and hybrid frameworks.
- Facilitate a critical reflection on the **formulation of sustainability goals** and their (often) common lack of specificity and measurability.
- Support your project work in identifying your **city's sustainability policy landscape** (Step 1).

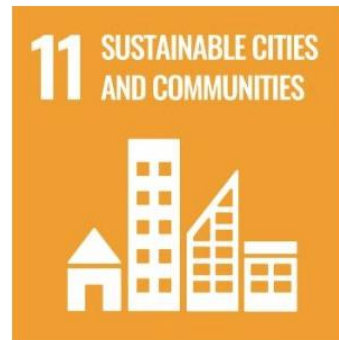
# Sustainable Development Goals (SGDs)

## SUSTAINABLE DEVELOPMENT GOALS



# SDG targets are vague

*Make cities inclusive, safe, resilient and sustainable*



- **11.1** By 2030, ensure access for all to **adequate**, safe and **affordable** housing and **basic** services and **upgrade slums**
- ...
- **11.3** By 2030, enhance inclusive and sustainable urbanization and capacity for **participatory**, integrated and sustainable human settlement planning and management in all countries
- **11.4** Strengthen efforts to protect and safeguard the world's cultural and natural **heritage**
- ...

# Lausanne: Energy goals at regional level

2 objectifs dans 3 domaines:



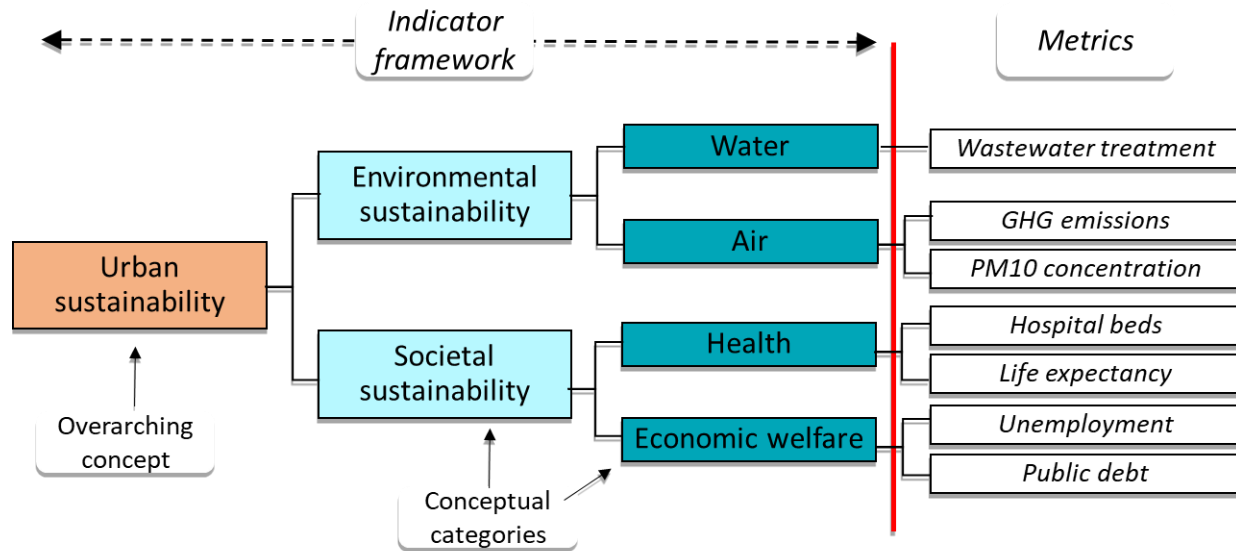
**Mobilité:** zéro émission directe dès 2030, donc 0 véhicule thermique à cette date sur sol lausannois.



**Bâtiments et traitement des déchets et de l'eau:** zéro émission directe en 2050



# What is a framework?

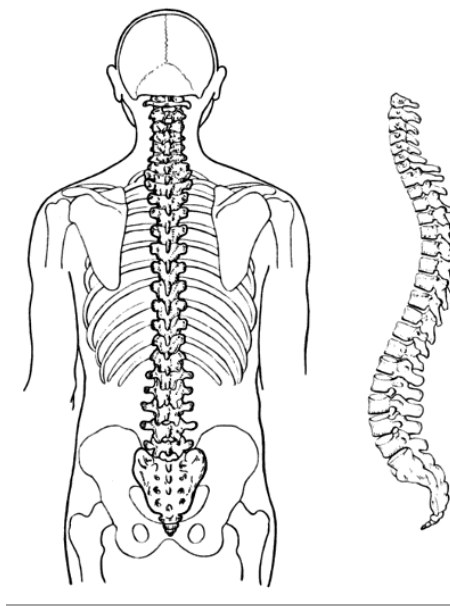


A framework is a structured way of organizing concepts, categories, and metrics that helps link an overarching idea (like urban sustainability) to measurable indicators, making complex topics easier to assess and compare.

# Why do we need a framework?

- Defining the overarching concept
- Structuring information
- Making interrelations between indicators explicit
- Communication

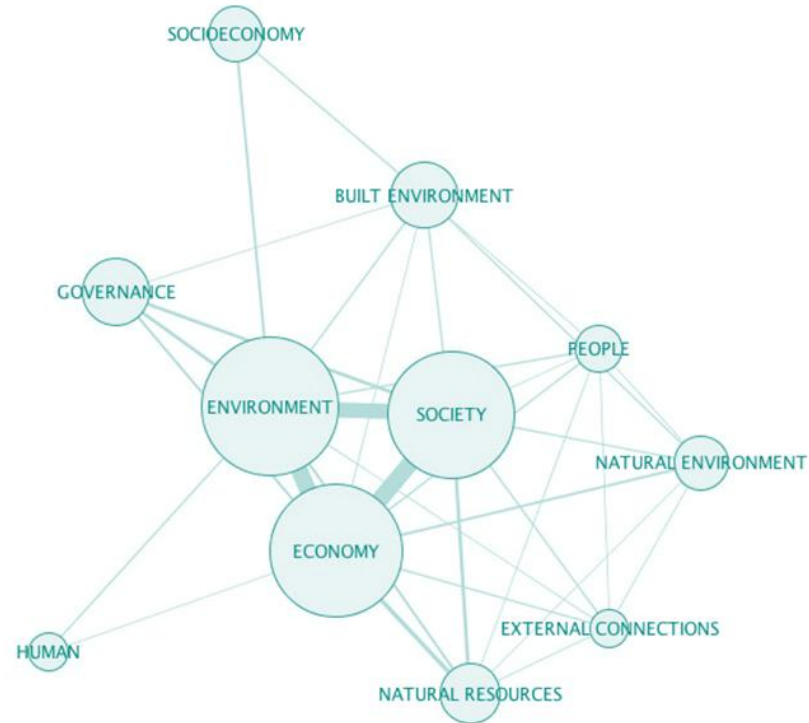
Frameworks as  
backbones



# Different types of frameworks

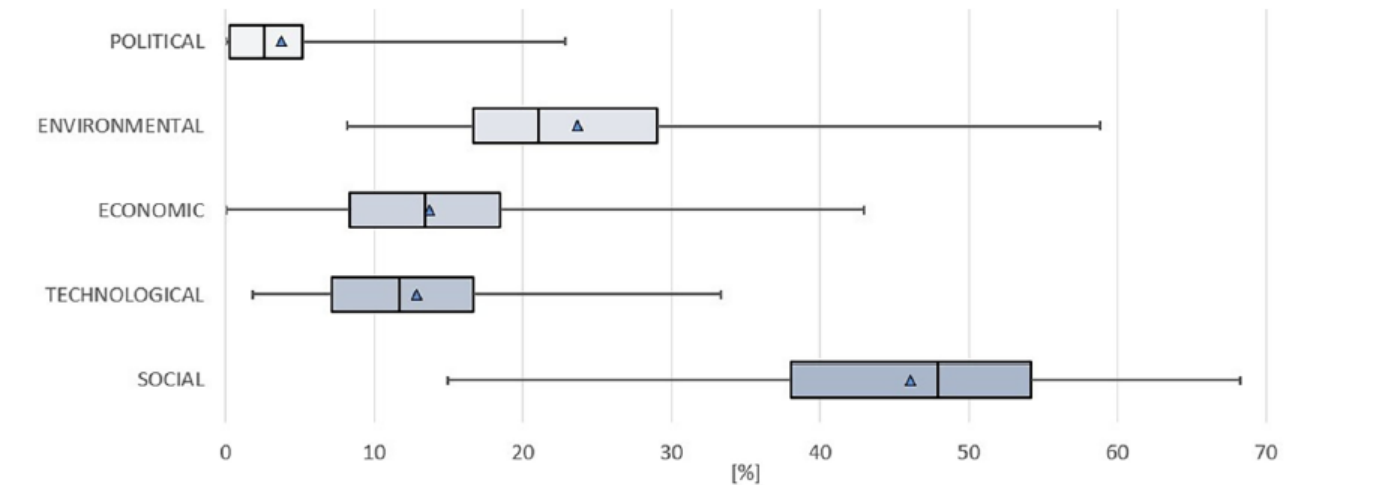
- **Domain-based frameworks**
- Theme-based frameworks
- **Goal-oriented frameworks**
- Systemic frameworks
- **Hybrid frameworks**

A **domain-based framework** groups indicators into large, general categories or sub-systems (domains) that reflect the multiple perspectives of sustainability.



Halla, P., & Merino-Saum, A. (2022). Conceptual frameworks in indicator-based assessments of urban sustainability - An analysis based on 67 initiatives. *Sustainable Development*, 30(4), 856–868. <https://doi.org/10.1002/sd.2300>

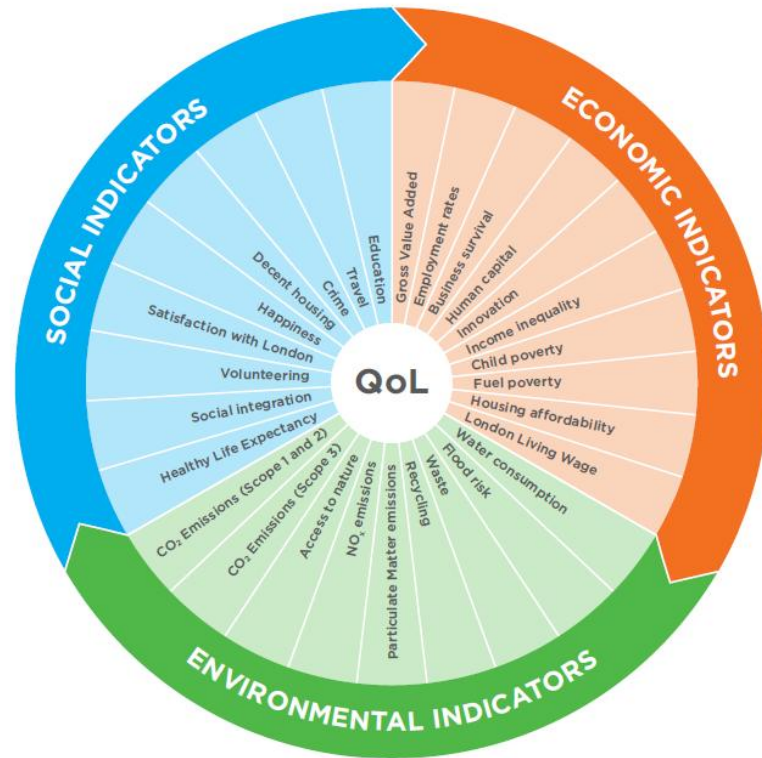
Which domains receive more attention?



# Domain-based frameworks

London Sustainable Development Commission

Where would you locate water-related metrics?



City of London (2017)

- **Advantages**
  - Easily understood
  - Helpful to check the relative importance of each sustainability dimension
  
- **Disadvantages**
  - Often ignore what is happening at the interfaces between dimensions
  - In some cases, they might oversimplify reality

Merino-Saum, et al (2020). Indicators for urban sustainability: Key lessons from a systematic analysis of 67 measurement initiatives. Ecological Indicators. <https://www.sciencedirect.com/science/article/pii/S1470160X20308177>

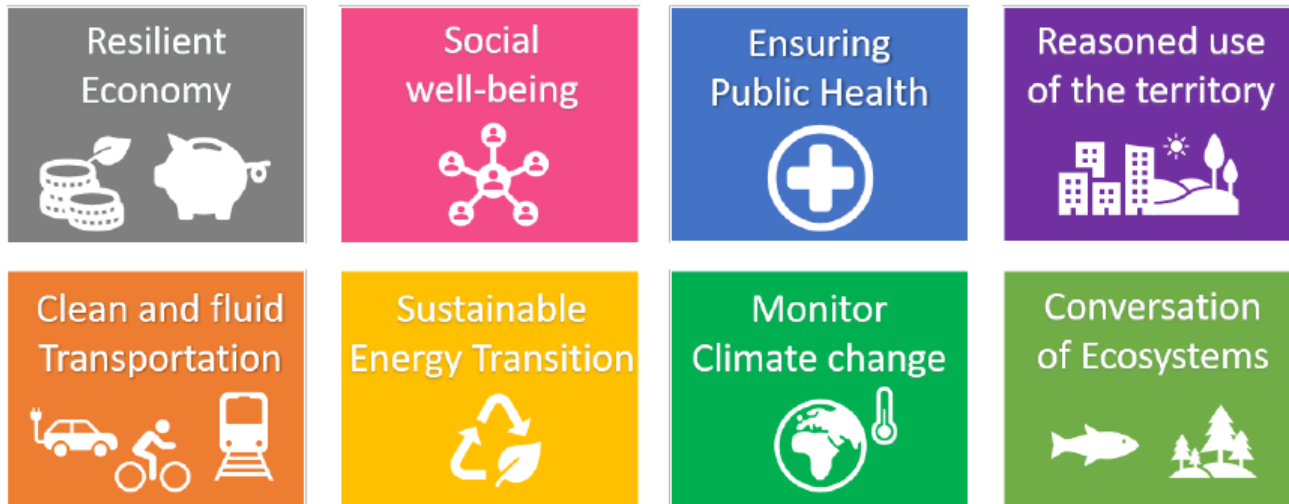
Categorization across outcomes seen as desirable for sustainability.



Halla, P., & Merino-Saum, A. (2022). Conceptual frameworks in indicator-based assessments of urban sustainability - An analysis based on 67 initiatives. Sustainable Development, 30(4), 856–868. <https://doi.org/10.1002/sd.2300>

# Goal-oriented frameworks

## Sustainability of European Port Cities



- **Advantages**
  - Relate indicators to specific sustainability goals
  - Particularly supportive when the goal is to measure progress
  
- **Disadvantages**
  - Involve high level of normativity
  - Might hide value conflicts

Merino-Saum, et al (2020). Indicators for urban sustainability: Key lessons from a systematic analysis of 67 measurement initiatives. Ecological Indicators.

<https://www.sciencedirect.com/science/article/pii/S1470160X20308177>

## Reference Framework for Sustainable Cities (RFSC)



- **Advantages**

- Make it possible to exploit synergies between different framework types
- Force developers to work at a meta-level

- **Disadvantages**

- Time-consuming
- Involve higher degrees of complexity

Merino-Saum, et al (2020). Indicators for urban sustainability: Key lessons from a systematic analysis of 67 measurement initiatives. Ecological Indicators. <https://www.sciencedirect.com/science/article/pii/S1470160X20308177>

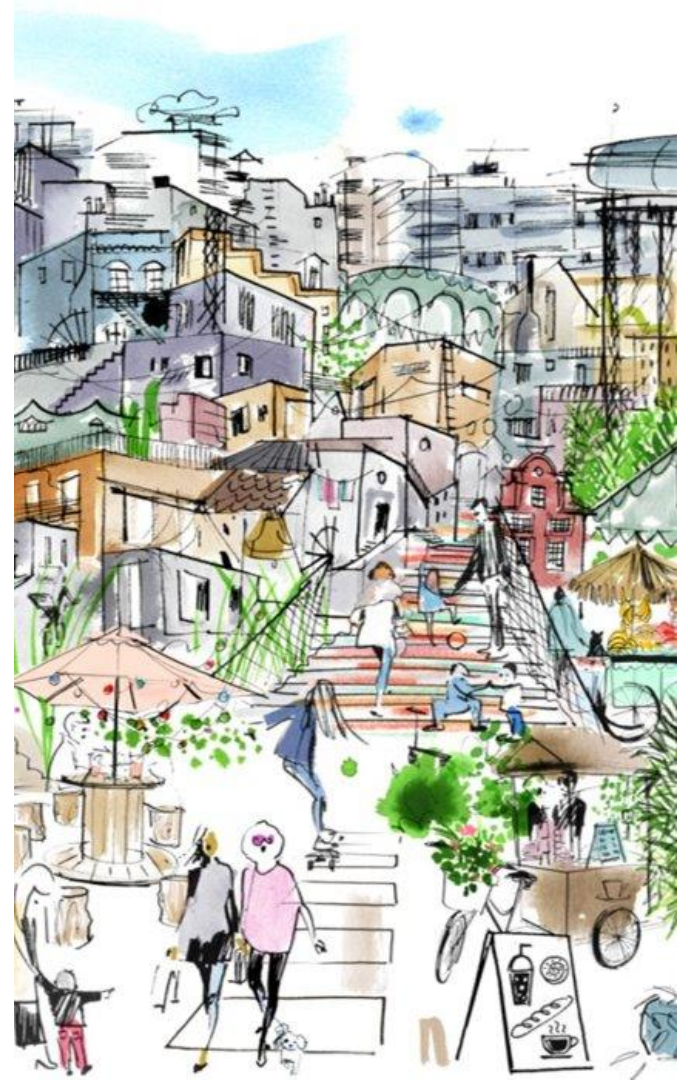
# Some key messages on sustainability frameworks

- Conceptual frameworks determine a **particular understanding** about what urban sustainability is or should be
- They allow for a **systemic approach** and understanding
- They impose a certain degree of **normativity**, which needs to be made transparent
- Developing frameworks is more a process of invention than a process of discovery - they are built rather than found (Turnhout, 2009).

# Some reflections on goal knowledge

- Frameworks set "frame" for goal formulation (**mental models**)
- Goals are diverse, mostly vague and unspecific
- Goals are formulated on different spatial and temporal scales, and they might have a different "pace"
- Pathways on how to reach these goals is mostly unclear

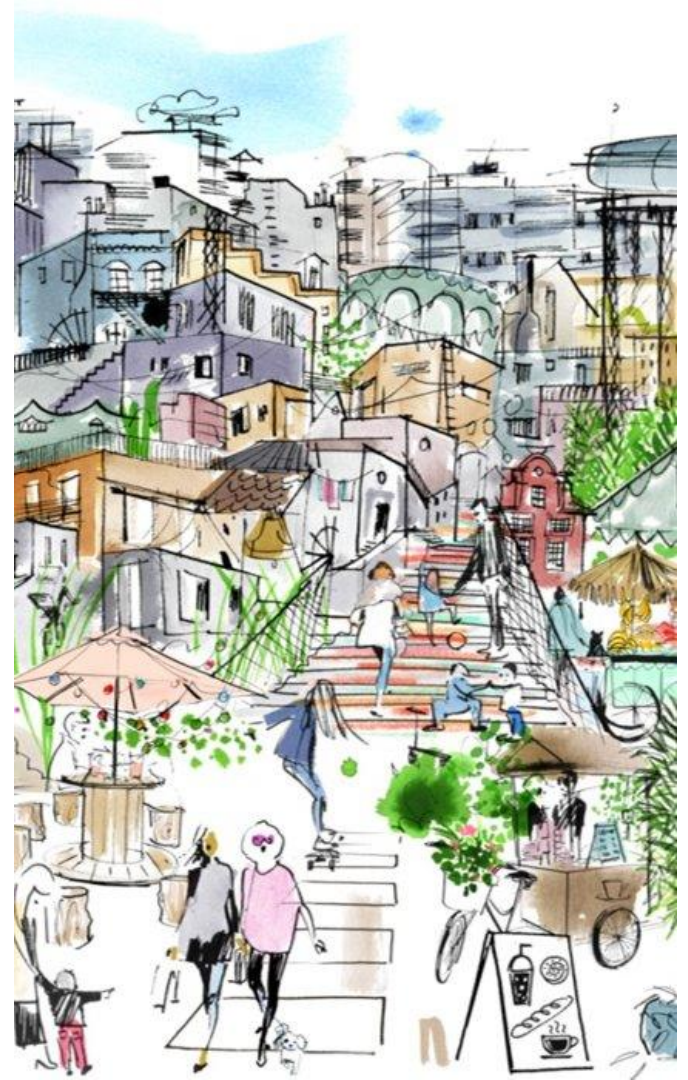
- Divide into groups of 3-5 people
- Choose one of the following sustainability reports to analyze
- Present in 3 minutes your findings and answer to the following questions



- What are the sustainability goals officially articulated?
- What sustainability framework underpins these ambitions?
- To what extent are their stated sustainability goals specifically and measurably formulated?
- Where do you identify clear coherence, and where might significant gaps, contradictions, or missed opportunities exist?



- New York: Sustainability Plan 2021-25 - Advancing the ESG Foundational Pillar of VISION2030
- Rome: Resilience Strategy (look at the strategy)
- The Reference Framework for Sustainable Cities
- London's quality of life. Indicator Report 2017
- Paris Tomorrow 2022





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