

# Confronting traditional spatial planning with existential challenges 'Resilience check' of metropolitan planning systems

ENHR'2025 conference  
Grand Paris | 3 July 2025

Iván Tosics  
Metropolitan Research Institute, Budapest

# POLY-CRISIS: INCREASING CHALLENGES, REQUIRING NEW THINKING

Potential new principles to react

- take the **planetary boundaries** into account (green growth idea to be revised)
- Make development more **resilient** (strengthening communities)
- protect the **poor**

**Metropolitan/FUA cooperation** as a geographical territory where externalities can be handled

# An emerging idea: post-growth

Growth has to be abandoned as an objective, focus instead on equity, sufficiency and human wellbeing. **It is not aggregate production what matters but what we are producing, assuring that people have access to goods they require and that incomes are more equally distributed.**

Post-growth aims for a **planned and democratic reduction of less necessary production in rich countries in a safe and just way.**

Post-growth suggestions: **decommodify public services to make them accessible to everyone: health, housing education, food, ...**

Job guarantee, living wages, improve bargaining power of labour.

**Socially necessary sectors have to be improved and not necessary ones to be removed.** Right to repair, extend products life.

# Sufficiency: towards an eco-social economy

Towards an eco-social development model **optimise, exploit, and transform the existing infrastructure**

Cities could continue to evolve, flourish, and beautify, by

- focusing on **renewal, limited densification,**
- the **'repair' of certain areas** such as city entrances, commercial zones, or business districts.

To realign with planetary boundaries, we will have to learn to focus on, take care of, and pass on our **existing urban heritage.**

Philippe BIHOUIX, deputy CEO of the AREP Group (Paris)

**Sufficiency**, as defined in [COP26: Sufficiency should be First \(external link\)](#) and included in [IPCC 2022 climate mitigation report \(external link\)](#) and [IPCC 2023 synthesis report \(external link\)](#), is articulated around 4 pillars :

1. Sufficiency is a **set of policy measures and daily practices**.
2. These policies and practices **avoid demand for energy, materials, land, water and all natural resources**.
3. These policies and practices deliver on **well-being for all** to ensure within country equity.
4. These policies and practices are designed **within planetary boundaries to deliver on north/south and intergenerational equity**.

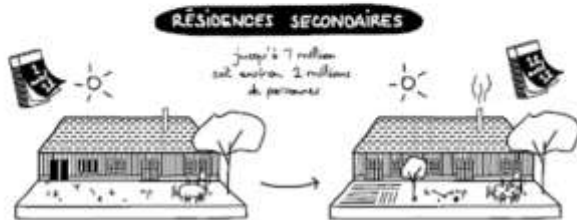
# Sufficiency policies in practice

Sufficiency policies can take many forms and must be based on an **appropriate assessment of social, distributional and environmental impacts** to ensure they generate the full potential of positive impacts across the board. Pursuing sufficiency on a sectoral basis could include:

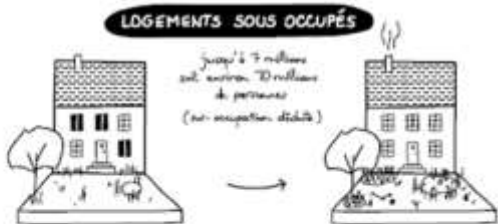
- Transport, mobility
- Energy, buildings and spatial planning
- Materials, products, food and water
- Cross-sectoral: taxation and finance, governance forms



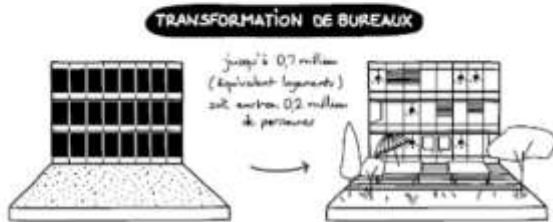
1 Million



1 Million



7 Millions



0,1 Millions

## Reserves for housing, instead of new building, in France

<https://bonpote.com/philippe-bihouix-pour-construire-mieux-nous-naurons-dautres-choix-que-de-construire-moins/>

**Philippe Bihouix: "To build better, we will have no other choice but to build less"**

# Debates about post-growth

- In **Germany** 2 million housing units are staying empty... **people are using 50% more housing space as in 1990...** a post-growth agenda for housing should be possible under such circumstances...
- No more land take: **NRW 2008-2022**: 0.2 pop increase, 0.25% hh increase, 0.6% housing, 1.35% land use increase per year. The state created a strategy for a theoretical zero-sum situation, the regional plan designates **30 housing/ha density**, while municipalities want to deserve what we have on 10 housing/ha density level...
- It is proved that **building new housing does not lead to more affordability**
- **Post-growth as leading agenda can only work, if not the negative vision is emphasized but health, clean water, nature, just city as center of metropolitan images**

# The dilemma of affordable housing

**Netherlands needs to build another 1 million homes after 2030, even if immigration slows down significantly**

Outgoing Housing Minister Hugo de Jonge: the current housing construction goal is 981,000 new homes up to 2030, to solve the [housing shortage](#). And the work won't stop there: "We already know that the assignment could be of the same size between 2030 and 2040".

De Jonge wants to focus more on **large-scale housing construction**. As potential sites he is considering the area between Groningen and Assen, with an extension towards Emmen, the Gelderland city triangle of Apeldoorn, Zutphen, and Deventer, the Eindhoven region, Twente, and Zuid-Limburg. The fact that **there are no Randstad locations in that list** is deliberate, De Jonge said. "We can't all continue to live in a mess/huddle in the Randstad."

# Soft versus hard urban densification

- **Soft densification** typically proceeds incrementally through continuous, small-scale adjustments of the urban fabric (Moudon 1986). It is basically a form of urban expansion, still proceeding in the direct continuity of existing buildings.
- By contrast, **hard densification** proceeds through large-scale policy-driven developments, involving the redevelopment of existing urban structures. These pre-existing urban structures may be unused places, such as brownfields, or densely occupied areas, for example, resulting from slum resettlement policies. Hard densification is usually conceived as a state-driven policy.

**TAMA38 Nava Persov** and **Naomi Carmon**, co-authors of [Densifying and Upgrading the Existing Housing Stock: An Evaluation Study of an Innovative Program](https://n9.cl/k9bvr) <https://n9.cl/k9bvr>

**Soft,  
incremental**



Figure 12: A condominium renovation project under National Outline Plan 38 (Tama 38) in Israel before (left) and after (right) renovation (Source: Hanani, 2015).

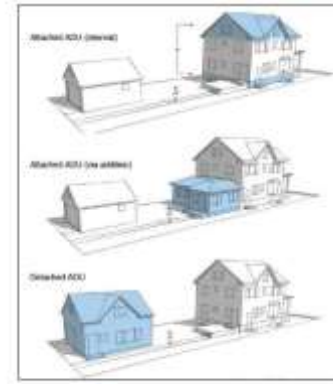


Figure 9: Examples of Accessory Dwelling Units (ADUs) provided by the City of St. Paul, Minnesota (ADUs in black; main residence in white) that help increase the city's First Coverage (Source: City of St. Paul, 2015).

**Hard,  
radical**



Israel: pinui-binui



Moscow: eliminating Khrushchevskis

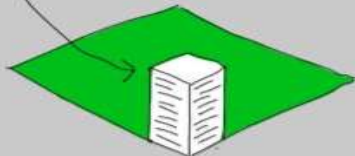


*Taken from a PPT presentation of Naomi Carmon, May 2021*

# Resistance to densification

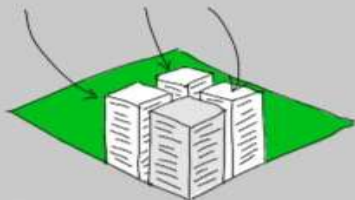
- **socioeconomic issues:** defending the rights of existing communities to maintain a low density in order to preserve affordable housing or local workplaces, etc.
- **environmental issues:** the protection of green areas included in already dense areas (Naess et al. 2020)
- **morphological issues:** cadastral inertia and difficulties in plot reallocation for larger developments (Gallagher et al. 2019)

**MIESZKANIA Z WIDOKIEM NA PARK**



2020

**MIESZKANIA Z WIDOKIEM NA PARK**



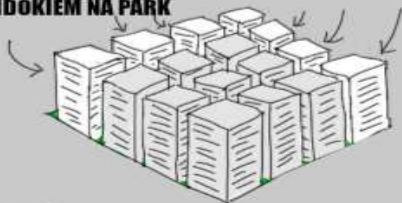
2022

**MIESZKANIA Z WIDOKIEM NA PARK**



2024

**MIESZKANIA Z WIDOKIEM NA FRAJERÓW  
PLEBSÓW, KTÓRZY KUPILI MIESZKANIA Z  
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2026

## The impacts of increasing residential density

Source: <https://kwejk.pl/obrazek/3475031/rozbudowa-infrastruktury.html>

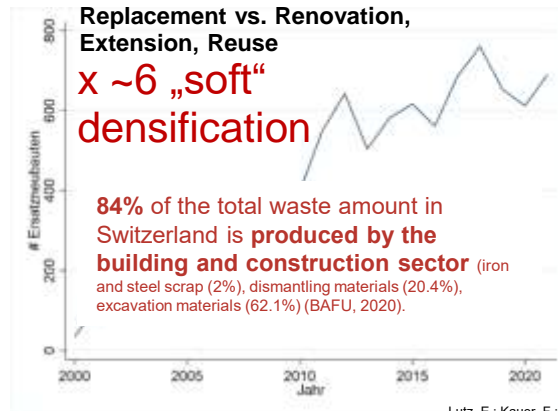
The deterioration of quality of life linked to densification: as densification is progressing, new residents, hoping for a park-view, get instead only a view on other fools who thought to buy such apartments with a park-view.

# Spatial justice perspective of densification

- What **public institutions** (at national, municipal and neighbourhood levels) have agency to incorporate these issues into their policies, assessments and practices?
- How do these institutions and their processes reflect the **voices and needs of different groups, especially the most disadvantaged** who may be more exposed to adverse consequences of densification?
- What links and connections operate between **urban planning and individual building site level**, and vice versa?
- What are the relevant **data sources** to steer existing urban densification processes, from the building to the metropolitan scale?

# Densification implemented at the local level

- **600-700** total replacement construction in the canton of Zurich per year (**2015-2020**)
- 80-100 “softly” densified buildings per year (renovations, extensions, reuse)
- **+21.2 % increase of housing space per room** in buildings built since 2000
- Increasing of building density, not use density (number of people per m<sup>2</sup>)



ETH Zürich | IRL Institut für Raum- und Landschaftsentwicklung | [www.irl.ethz.ch](http://www.irl.ethz.ch)

Lutz, E.; Kauer, F.; Kaufmann, D. (2023): Mehr Wohnraum für Alle? Zonenplanänderungen, Bauaktivität, und Mietpreise im Kanton Zürich von 1996-2020, <https://doi.org/10.3929/ethz-b-000603242>. ETH Zürich.

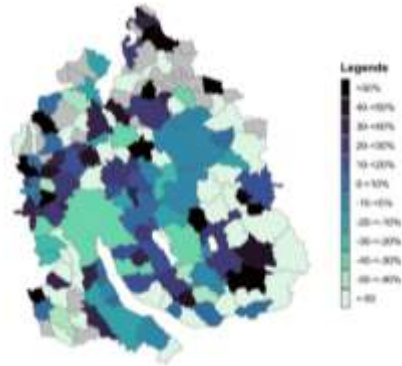
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Presentation of Gabriela DeBrunner, February 2024

# New housing in itself does not lead to more affordability

## Who gets densified through total replacement construction?

Target municipalities for residents, which have to move after renovation or total replacement construction (2014-2020)



- Evicted residents **move to agglomeration municipalities**, e.g., Regensdorf, Buchs, Bülach, Weiningen, Dietikon, Schlieren, or Adliswil.
- **Low-income, foreigners and single parents** are affected more by eviction than the rest of the population.

Source: Kaufmann, David, Elena Lutz, Fiona Kauer, Malte Wehr, und Michael Wicki. 2023. Erkenntnisse zum aktuellen Wohnungsnotstand: Bautätigkeit, Verdrängung und Akzeptanz. Bericht ETH Zürich. DOI: 10.3929/ethz-b-000603229

**Making inner cities attractive to maximize tax incomes („revanchist regeneration”)**





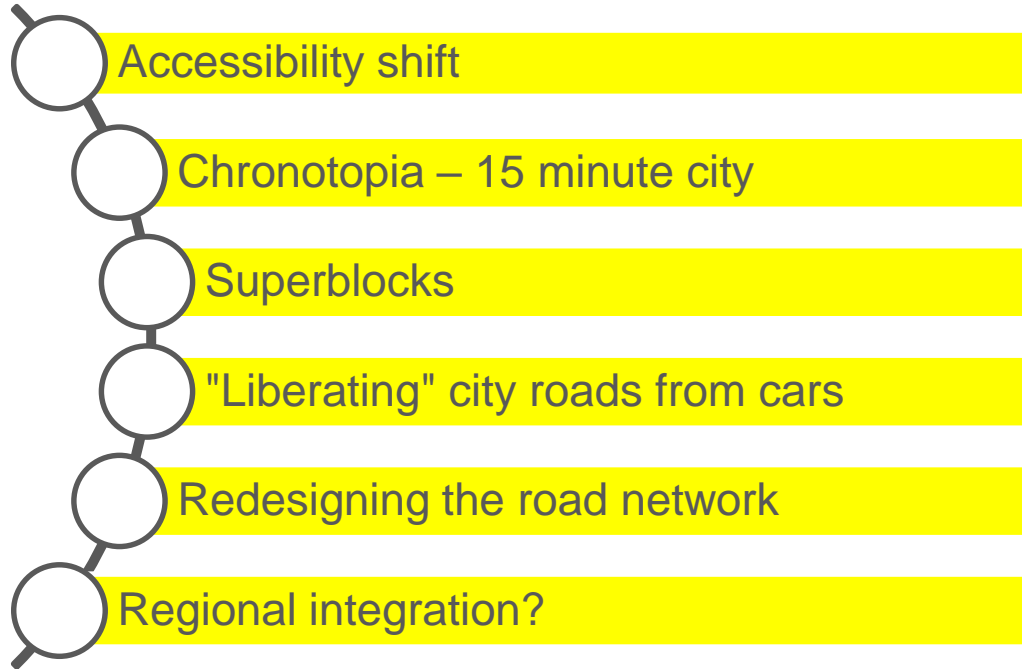
# Walk'n' Roll Cities: an URBACT cooperation in mobility and public space



- Urban Policy Learning Platform
- **Focus:** mobility and public space
- **Spatial cover:** from metropolitan level to neighbourhood and street level
- **Examples of topics:**
  - Metropolitan transport and local active mobility
  - Integration of infrastructures
  - Intelligent parking solutions
  - Changing the mobility mindset of people
  - Placemaking



# Visions



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- 3
- 4
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# An overarching concept: ‚Accessibility shift’

Transportation and land-use planning should be strongly connected, and based on people's ability to reach destinations, rather than on their ability to travel fast.

The new approach should be based on

- **connectivity:** forms of connection that avoid physical displacement should also be considered;
- **proximity:** the city must be transformed so that more and more needs can be met within a short distance without the use of cars;
- **mobility:** addressing the remaining mobility needs should be based on integrating different modes of transport, with a focus on public transport and active forms of mobility, in addition to restricting car use.

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# Tools



**Superblock**



**From highways  
to urban boulevards**



**Tempo 30**



**Circular mobility  
model**



**Parking  
management**



**Pedestrian priority city /  
Walkable city**



**School area**



**Shopping street**

- 1
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- 3
- 4
- 5



**Public transport**



**Cycling network**

**Mobility hubs**

**Micromobility**



**#WalkAndRollCities**  
Where streets belong to people!

## TRANSFORMING HIGHWAYS INTO URBAN BOULEVARDS



Source: Silvia Casorrán, Barcelona

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# The metropolitan as an ideal level for stationary, resilient eco-social planning

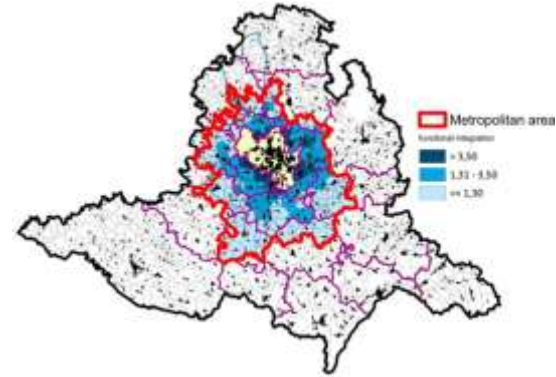


Switzerland's spatial concept (urban and rural planning)

Polymetric spatial development fulfils cross-compatibility while preserving competition and potential.

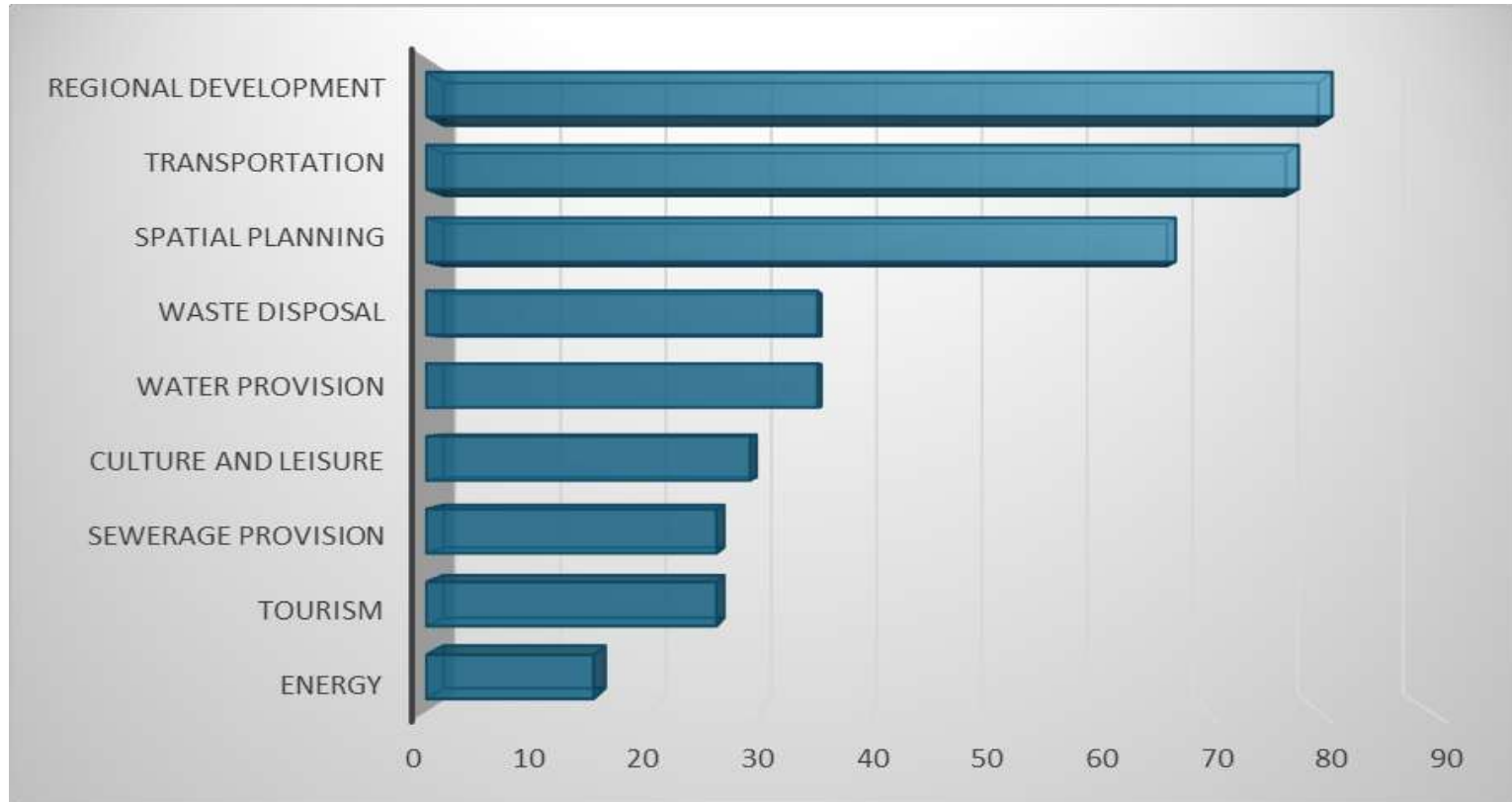


Source: <http://www.real-estate-in-switzerland.ch/leg-content/uploads/2011/03/Urban-and-rural-planning-in-switzerland.pdf> (From Raumkonzept Schweiz, Bundesamt für Raumentwicklung ARE from 2011, downloaded 2014/02/17)



# Thematic fields of cooperation

(in percentage of all OECD metropolitan areas, 2014. OECD)



# Integrating housing on MA level

## Greater London Authority (UK)

- The **London Plan** serves as a strategic spatial development framework, **integrating housing, transport, and land-use planning** at the metropolitan level.
- The plan ensures **coordinated development between neighbourhoods and sets affordable housing targets, regeneration priorities, and sustainability benchmarks**. The Mayor's office leads the strategy but works in partnership with neighbourhoods and housing associations.

<https://www.london.gov.uk/programmes-strategies/planning/london-plan>



# Urban food systems and metropolitan food sovereignty

## Why it matters at Metropolitan Level

**Climate resilience:** Local food systems reduce transport emissions and buffer supply chains.

**Health equity:** Food deserts and nutritional inequality are metropolitan challenges.

**Circular economy:** Food waste valorization, composting, and urban-rural biocycles are key NBS.

**Land use policy:** Peri-urban agriculture competes with housing expansion—thus, it's a **planning issue**.



☑ **Develop a Metropolitan Food Strategy**, including protection of peri-urban farmland, urban agriculture zones, food access mapping, and food waste reduction.

# Metropolitan food and soil strategy

☑ **Recommendation:** Support **peri-urban agriculture**, urban food production zones, and short food supply chains. Protect fertile land from urban sprawl.

☑ **Actionable via voluntary zoning coordination:**

Municipalities can adopt land-use clauses protecting soil and zoning areas for local farming or food forests.

📌 **Example Lyon Métropole:**

The innovativeness of the Metropolitan Food Strategy lies in **adopting the perspective of metropolitan metabolism**. Its crucial element is the food system that encompasses various dimensions, including social, health, economic, and environmental aspects (integrated approach). The creation of the food governance system involves various stakeholders, i.e., institutions and officials, food producers, processors, the food industry, the gastronomic sector and consumers. (Source: Metropolis of Lyon Interreg MECOG-CE D.1.2. P.17)

📌 **Example:**

**Milan Urban Food Policy Pact** and regional land-use planning around food sustainability.

<https://www.milanurbanfoodpolicyact.org/>



# Metropolitan climate adaptation and resilience strategy

Make environment a cross-cutting axis, not just a thematic one.

Create an **open environmental data platform** with maps of green space, heat islands, emissions, etc.



- ✗ **Map** climate risks: urban heat, flood zones, air quality hotspots.
- ✗ **Prioritize** vulnerable areas and groups in adaptation measures.
- ✗ **Link** to public health and spatial equity.

***Feasible under voluntary cooperation:***

Municipalities can jointly create a risk atlas and share costs of resilience projects (e.g., flood retention areas, heat-mitigation zones).

**Example:**

- ✗ **Paris Métropole** adopted a “Heatwave Action Plan” shared across municipalities, including tree canopy targets and green corridors.
- ✗ **C40 Cities** and Adaptation Resource Guide (Paris case) <https://www.c40.org/>

# Integration of circular economy and waste reduction into planning

## ☑ Recommendation:

- ✗ Adopt shared goals for **municipal waste reduction**, circular procurement, repair/reuse hubs.
- ✗ Joint policies for **construction and demolition waste** in metropolitan development.

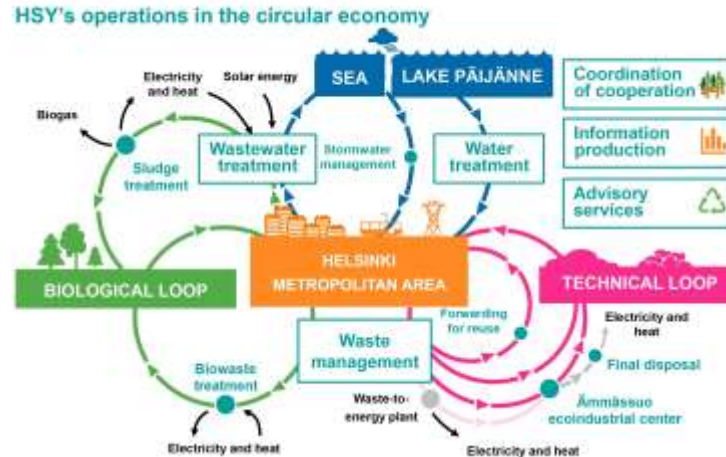
## ☑ *Voluntary coordination:*

Standardize local regulations and promote regional reuse marketplaces.

## 📌 Example:

**Helsinki Metropolitan Area (HSY)** runs a shared recycling/reuse system, public procurement platform, and building material exchange across municipalities.

<https://www.hsy.fi/en/environmental-information/circular-economy/0>



# Embedding a “green equity” lens into environmental projects

## ☑ Recommendations:

- ☐ Establish a **Green Transition Platform**: municipalities + NGOs + academia + business.
- ☐ Prioritize **environmental investments in underserved or marginalized neighborhoods** (e.g., tree planting, noise barriers, safe water access).
- ☐ Combine environmental data with **social vulnerability indicators**.

☑ *Feasible via joint mapping and co-funded pilot projects.*

## 📌 Example:

**Barcelona Metropolitan Area** uses an “Urban Environmental Justice Atlas” to prioritize investments in green infrastructure. <https://www.bcnuej.org/>

Global Atlas for Environmental Justice <https://ejatlas.org/>





# Age-Friendly Metropolitan Planning

## ☑ Recommendations:

- ✗ Embed age-friendliness into **metropolitan spatial and transport planning**:
- ✗ Barrier-free public space, walkability, safe crossings.
- ✗ Public transport adapted to older users (seating, visual displays, request stops).
- ✗ Inter-municipal coordination of care facilities and service accessibility.

## 📌 Example:

### Manchester's Age-Friendly City Region

Manchester was the first city to join WHO's **Age-Friendly Cities Network** and **expanded this to the Greater Manchester level**. Their strategy includes inclusive design, senior-led urban audits, and transport reform.

<https://www.greatermanchester-ca.gov.uk/what-we-do/ageing>



### **Greater Manchester Age-Friendly Strategy 2024-2034**

The Greater Manchester Age-Friendly Strategy 2024-2034

# Coordinated Health & Social Care at Metro Scale

## ☑☑ Recommendation:

Coordinate **mobile care teams, memory centers, and social services** across municipalities—especially for small towns and villages.

## 🔗 Example:

### Flanders Care (Belgium)

A region-wide aging innovation strategy that includes home care, mobility services, dementia coordination centers, and digital health pilots.

<https://www.flanderscare.be/> and <https://www.departementzorg.be/en>

**Care Living Labs:** These are real-life test environments where new care concepts, services, and products are co-created and evaluated. The labs bring together stakeholders from various sectors, including healthcare providers, researchers, and end-users, to ensure user-centered and effective



<https://healthcarelivinglab.cat/>

# Towards stationary, resilient metropolitan areas

Urban change based on **optimising, exploiting and transforming the existing infrastructure**

- applying **new mobility strategy across the whole urban region**, based on **accessibility** instead of mobility
- linking **energy efficient renovation on housing areas with other resiliency goals** (eg less parking to allow more green)
- addressing **social problems innovatively**, as during the pandemic: eradicate **homelessness** (conversion of buildings) and **poverty** (minimum income)

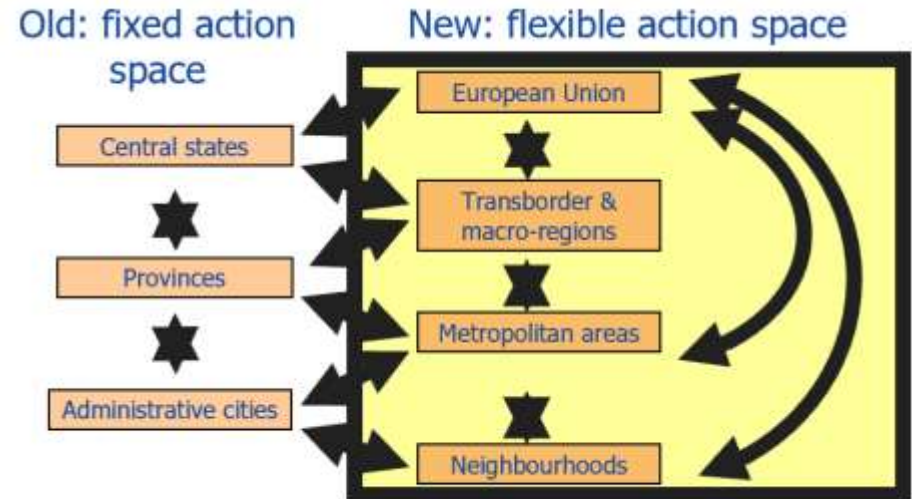
Emerging examples: **Girona (FUA of 131,000)**. Leftist-municipalist party experiments with “**postgrowth metropolitan policy**”: **integral renaturalization**, increase of tree cover, urban gardening, wetland restoration, in terms of **environmental justice**.

# The potential role of metropolitan governance

*Metropolitan governance is a strategic realignment of governance structures to match the dynamic and interconnected nature of metropolitan life, allowing governments to deliver common goods at the most appropriate scale, within the planetary boundaries.*

## Main goals

- Ensuring inter-municipal collaboration
- Aligning local needs with broader programmes
- Providing platform for inter- and transdisciplinary cooperation
- Supporting cities in their paths to prosperity & sustainability



Adapted from Jacquier, 2010

# Metropolitan areas to enable a resilient urban future

- **Cities and metropolitan areas should play key role** in the resilient, inclusive, post-growth-oriented transition, cooperating with civil society and innovative governance: **visionary strategic planning** is needed
- **Countries** can act innovatively, mobilising production capacity towards democratically decided goals, **limiting the influence of capital over the national economy.**
- **New EU wide policies** are needed: while continuing Green Deal, **strengthening the frameworks for resiliency** (no more land take, taxonomy), **environmental and social justice and democracy in general.**
- **New enabling conditions** might help to achieve **more coordinated changes** on national and metropolitan/urban area level. **The Agenda for Cities** should include a metropolitan chapter...

Thanks for your attention!



Ivan Tosics

[tosics@mri.hu](mailto:tosics@mri.hu)

<https://tosics.eu/>