



# Environmental Politics in the Anthropocene City

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# Towards a New European Bauhaus?

- With ongoing sustainability crises and in the wake of the global pandemic we find ourselves once again **asking how we can govern our cities towards a new green future.**
- Projects such as the one that has gathered us here today – **Advancing New European Bauhaus** – are seeking to resolve this puzzle which seems always just beyond our grasp
- We have been searching high and low for the levers to pull and the barriers to remove, and how to scale up experimental initiatives so that they can produce the far-reaching radical change we seek
- Yet **perhaps this is itself part of the problem** – the tendency to seek to control the city towards singular ends tends to reproduce modernist approaches towards managing the environment that may no longer be fit for purpose in the Anthropocene
- In this talk I want to explore these ideas and what this might mean for how a programme such as AdNEB.

# Ecologically Modern Climate Governance



# Climate Change Changed

Climate Change as discrete problem of end-of-pipe emissions, global commons & international institutions



Climate change as a systemic socio-economic, political & cultural, multi-actor, multi-sited issue



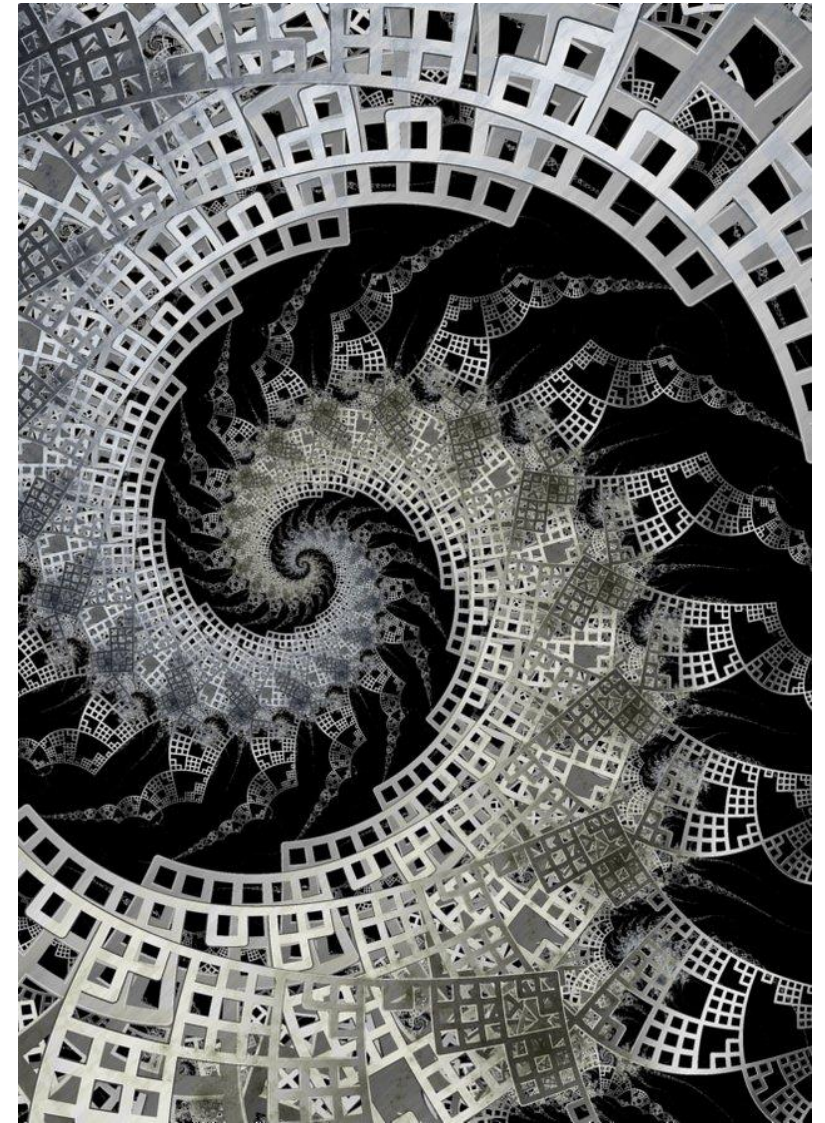
# Climate Urbanism

Co-benefits create multiple different objects for climate governance in the city

At the same time, shifting nature of climate problem from 'end of the pipe' to 'systemic decarbonisation' opens up what it means to govern the climate.

Urban climate governance becomes a matter of ... roads, sewers, lightbulbs, roofs, parks, backyard chickens, smart meters, supermarket fridges ...

"... the apparatuses of [government] ... have a constant tendency to expand; they are centrifugal. New elements are constantly being integrated ... [governing] therefore involves organizing, or anyway allowing the development of ever-wider circuits" Foucault 2009: 44-45





# Governing the Anthropocene City?

“The Anthropocene city demands a ‘new normal’  
“in which modern urban governance based on a  
human/nature separation and modern ideas of  
mastery and control ... come from a world  
passing away” and “proponents now call for a  
mixture of diverse, modular, and interlaced  
systems-based designs working at multiple sites  
and scales to reconnect urban fragments”

Wakefield 2021: 336



# Governing Indeterminate Urban Futures

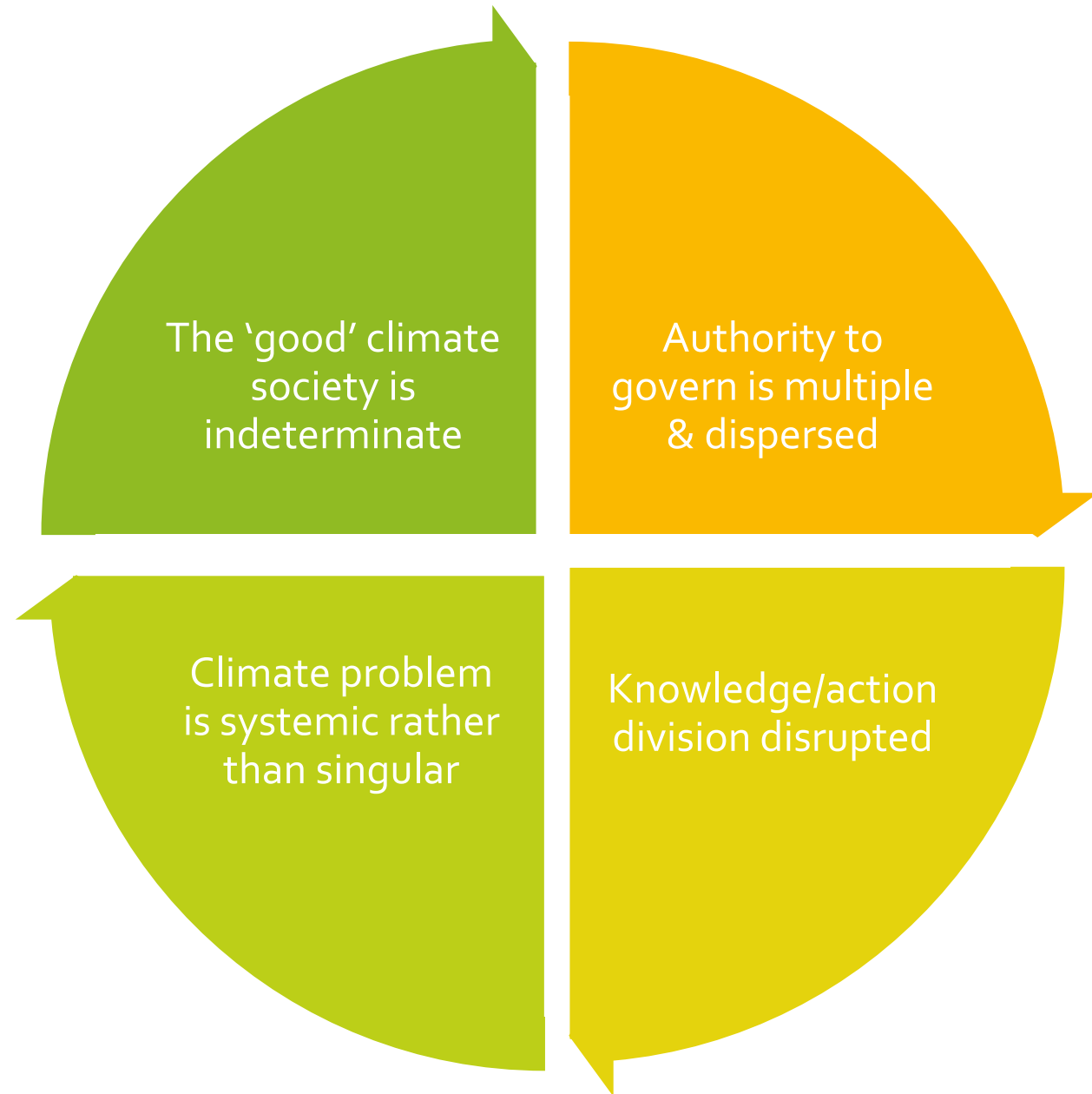
*“As a milieu of liberal government **the city becomes a sort of laboratory of conduct.** Its government comes to be seen as essentially problematic, so the city becomes a plane of indetermination – a dense, opaque, unknown, perhaps ultimately unknowable place; a domain **where the criteria and techniques of good government were no longer self-evident**”*

(Osborne and Rose, 1999: 740, emphasis in the original)



# Beyond modern environmental governance?

“In the search for new ways to secure the environmental, infrastructural, and social lifelines of liberal society amidst the crises the latter generates, governance is being recalibrated.”  
(Wakefield 2021: 332)





# Governing Through Experimentation

- Historically, the planning and administration of cities has been shaped by experimental practices e.g. urban sanitation in the 19th century, social disorder in the early 20th century, and sustainability in the 21st century (Evans 2016).
- Experimentation has emerged as a way for societies to “act in an increasingly complex environment, **where the challenges they encounter overflow institutional, regional and ontological boundaries**” (Kullman 2013: 879)







## Experimentation between control & contingency

- Experimentation has to be “flexible enough to allow for reconfiguration so as to sustain their transformative potential but also controlled enough to hold together” (Kullman 2013: 885).
- Focus has been on experiments as sites of control – testbeds, demonstration projects, living laboratories
- As a form of ‘inquiry’ (after Dewey) experimentation is also a response to the indeterminate – a key practice through which situations are problematised and made to cohere, whilst also sustaining an ongoing openness to contingency
- As such “experiments might not simply serve as one-off trials to provide evidence and justification for new low-carbon policies, regulations, and service provision through existing circuits of policymaking and regulation. Instead, these activities are emerging as a new mode of governance in themselves” generating a “city of permanent experiments” (Karvonen 2018) where multiple actors are experimenting in the city often to different and conflicting ends.



# Urban Experimentation with Nature-Based Solutions

“inspired & supported by nature, which are cost-effective ... provide environmental, social and economic benefits and help build resilience. ... bring more, and more diverse, nature ... into cities, landscapes and seascapes ...[and] benefit biodiversity”

European Commission 2020

“Nature-Based Solutions employ nature at a meaningful scale, for multiple benefits”

Resilient by Nature, Chicago



# Contributing to Urban Sustainability?

Nature-based solutions have the potential to contribute to climate and nature goals whilst promoting health and well-being

## Mitigation

- Reduce energy demand through passive cooling and heating
- Reduce embodied carbon in infrastructure
- Carbon sequestration

## Adaptation

- Storm water & flooding management
- Reduce impact of heatwaves – cooling city & population health
- Coastal protection

## Nature

- Protect & Conserve biodiversity
- Enhance water, soil and air quality
- Create new connections and values for nature

## Well-Being

- Support physical & mental health
- Enable community empowerment
- Foster social inclusion & diversity



# Urban Nature Atlas

Captures 1000 nature based solutions being developed in 100 cities across Europe. Uses secondary data and provides a summary of each initiative as well as its key characteristics. Recently expanded with international cases.

Fully searchable online with a database version available for analysis.

[www.naturvation.eu/atlas](http://www.naturvation.eu/atlas)





# Designing Programmes for Multiple Sustainability Challenges?

- Most frequently projects in the UNA address 3-6 challenges. **Only 14% focus exclusively on environmental issues:** 80% address social challenges & >40% also targeted economic issues.
- Projects led by non-governmental actors and smaller in scale more likely to address challenges related to social cohesion and equity, mental health.
- Larger-scale, government-led or co-governed projects more often address water management, regeneration and land-use objectives, cultural heritage preservation, climate adaptation, habitat restoration as well as tourism support and job creation.
- Projects that were led or co-led by non-government actors were more likely to consider environmental, social and economic challenges in an integrated manner, and as a result deliver such benefits.
- Relatively high correlation (73%) among aims & the actual impacts they achieved or expected to achieve. **Many projects delivered impacts without initially considering them in the planning and goal setting phases,** indicating that NBS projects often fail to consider the full spectrum of benefits they could deliver.

# Climate Urbanism in Practice

## Overflowing Existing Solutions, Indeterminate Futures

“We were looking at again sort of grey solutions, concrete pumping stations this time and storage but it was proven to be very difficult to find the location where we could install big bits of pipework and shaft within the [housing] estate to pump out. And at the time we were working with the Environment Agency looking at the impact any solution would have on fluvial flood risk ... So, they took the opportunity to update their model and update their flood risk plans and I think hydraulically a pumping station wouldn't significantly impact on the upstream and downstream catchment of the Ouseburn but we were very concerned about how we would be able to build this ... And then we in a brainstorming exercise when we were looking at alternatives one of the ideas that came up was to divert the Ouseburn and then create a swale [(a form of SUDS)] to attenuate the surface water naturally in the natural environment.”

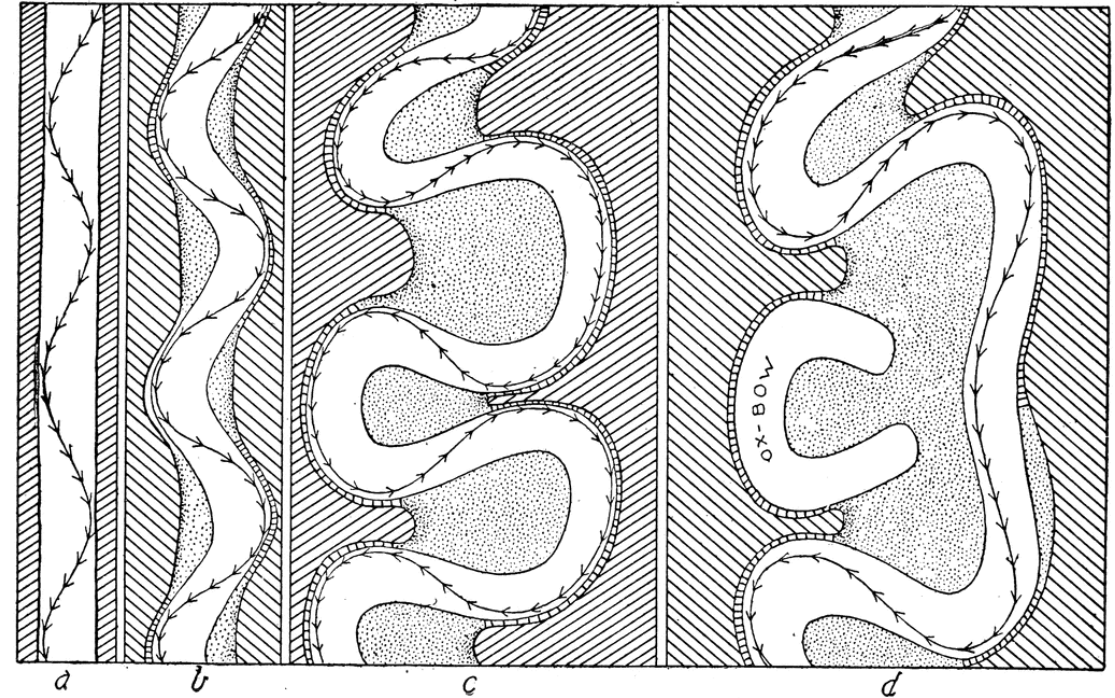


# Towards Transformative Change

Commonly assumed experimentation is only useful as an interim measure – that it needs to be 'scaled up' to be of consequence

Understanding experimentation as a response to indeterminacy and recognising the importance of sustaining its contingent qualities suggests that seeking to 'scale' sustainability experiments is unlikely to work

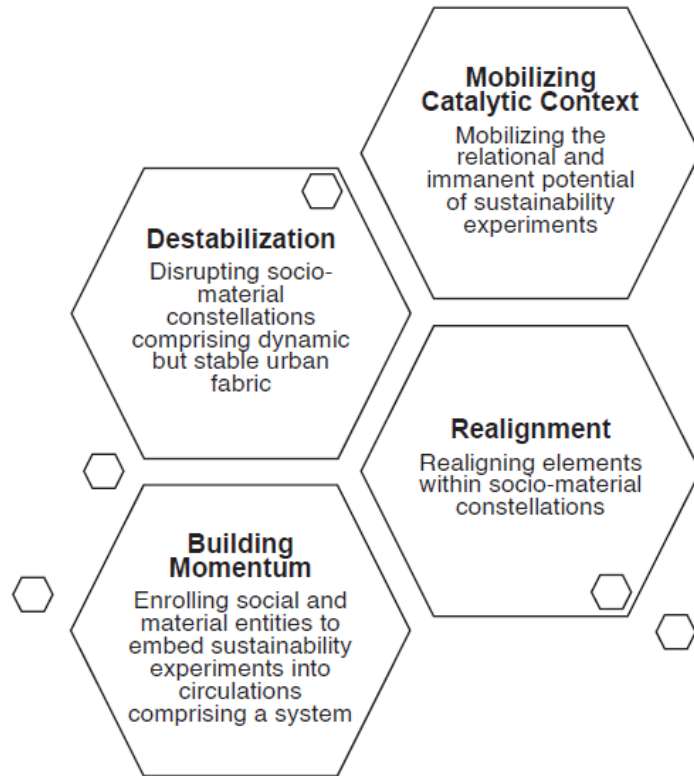
Instead, experimentation works where it creates or works with openings or 'ruptures' in existing orders – providing new configurations that disrupt/re-establish 'normal' (Castan-Broto & Bulkeley 2018)





# Towards Transformative Change

- Patterson et al. (2021: 4) term these openings **fuzzy action moments** “a ‘bundle’ of connected activities occurring over a continuous period of time linked to a certain decision or initiative”.
- Jensen et al. (2016: 557) suggest they are **junctures**: “sites where conventional boundaries and interdependencies among material systems and social practices are transgressed, where the established order and identity of the urban fabric has become unstable.”
- At these junctures: “specific actors or actor constellations engage in ***navigational activities*** as they attempt to enact alternative boundaries and relationships among conflicting urban assemblages in order to stabilize the situation and the relationships among actors.” (Jensen et al., 2016).



**Fig. 1.** Catalyzing systemic change using stepping stones: in the right context, stepping stones can collectively destabilize and realign socio-material orders if they generate enough momentum to overcome the inertia of existing systems and normalize experiments as mainstream responses to sustainability challenges.

# Governing for Catalytic Change

**Transformative change** or pathways are not predetermined routes, but instead are **assembled through the alignment and coherence of key interventions**.

Governance capacity for a new way of doing things is achieved when technical, social, political, legal etc. elements are cohered together such that they gain legitimacy to exercise authority (McGuirk and Dowling, 2021).

Key interventions - **stepping stones** - mediate new connections and capacities emerging through experimentation. They successfully create sustainability pathways when they cohere and generate sufficient momentum to cascade through the systems in which the experiment is embedded (Tozer et al. 2022)

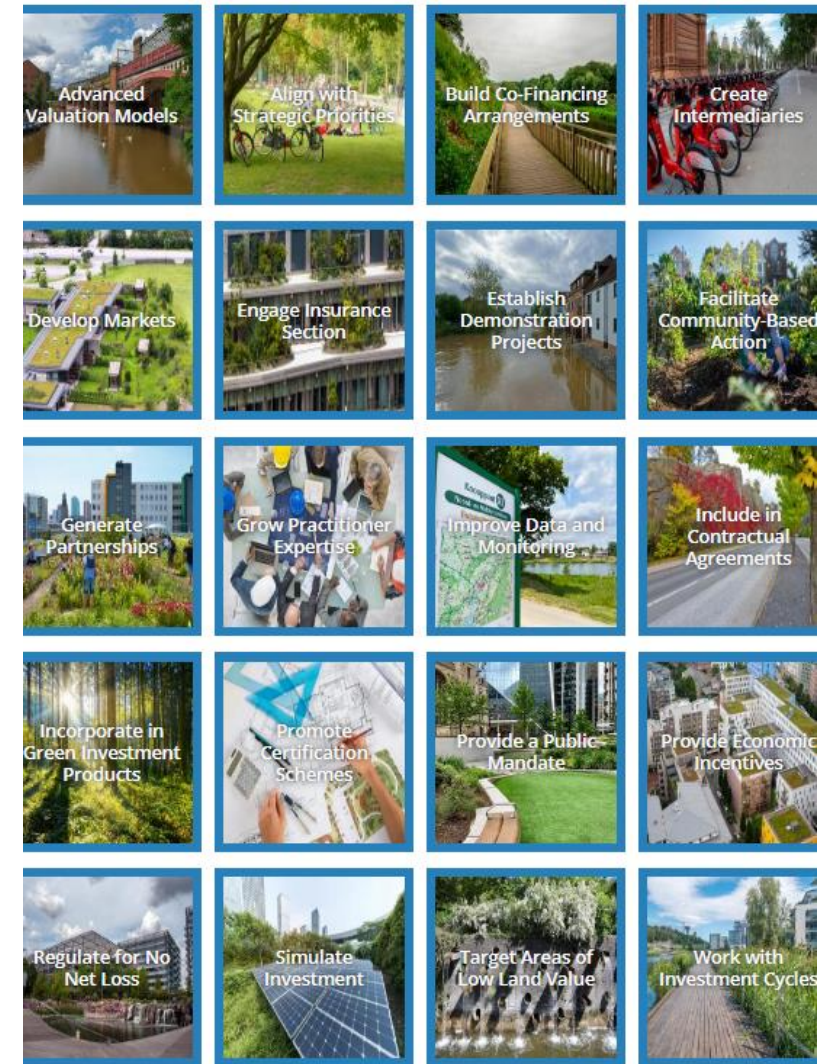


# Stepping Stones in Action

We found that stepping stones can actively initiate the emergence of other ones. The green roof case in the Netherlands showed that generating partnerships and creating intermediaries supported a set of other stepping stones, including providing economic incentives, improving data and monitoring, engaging the insurance sector etc.

In Germany, the provision of a public mandate was important in promoting adoption of green roofs in cities but is unlikely to catalyze the systemic change needed for sustaining high-quality green roofs. This comparison shows that in different contexts, different stepping stone clusters can enable the implementation of the same type of NBS, but with different outcomes in terms of destabilization, realignment, and building momentum to overcome the status quo

Tozer et al. 2022



# Towards the Good Anthropocene City?

- The 'good' climate changed city is indeterminate & always contested but clear that how interests are prioritized matters
- Nature-based solutions can generate multiple benefits but this does not always mean that they will - growing concern that they generate inequalities
- We find that strong economic development & financial Return On Investment (ROI) drive leads to exclusion & neglect of social benefits. This is different from the provision of other urban infrastructures which are driven by public purpose.

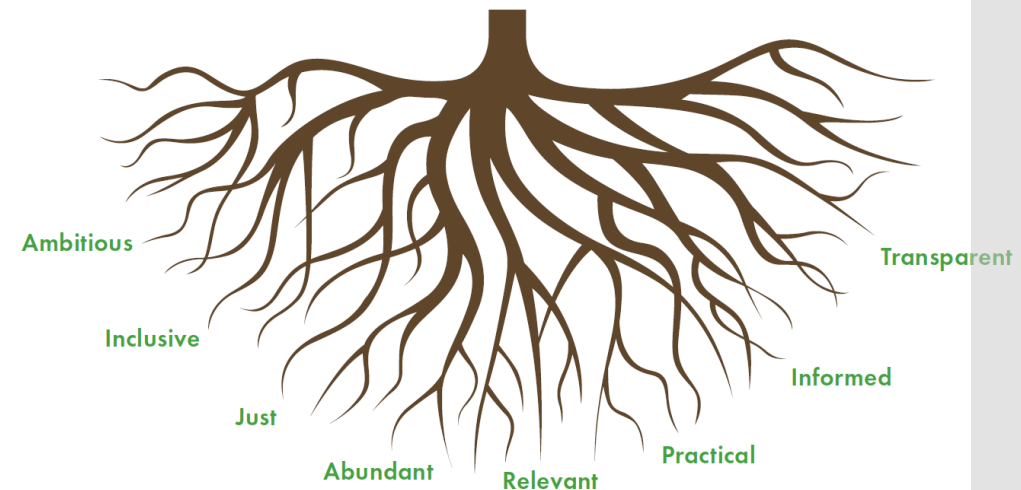
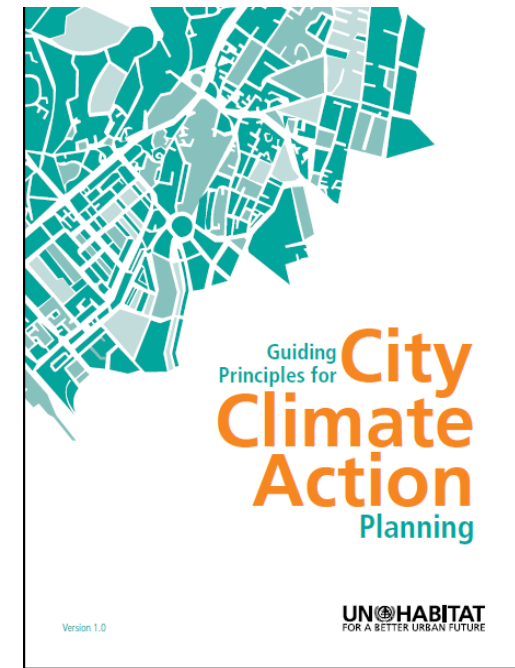


# Principles Not Prescriptions

Indeterminate, contingent & contested nature of sustainability transformations requires common goals but enabling experimentation, friction and failure – working with core principles can be a means through which to address these tensions and foster catalytic change.

This means moving from a 'prescriptive' mode and 'one size fits all' approach to an enabling mode where multiple approaches can be used to move towards desired outcomes & difference and conflict are recognized as inevitable part of urban transformation.

What success looks like can be measured through some core metrics together with contextually determined priorities and indicators and recognition also given to 'good failures' where lessons are learnt and groups and institutions are resilient enough to try again.







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