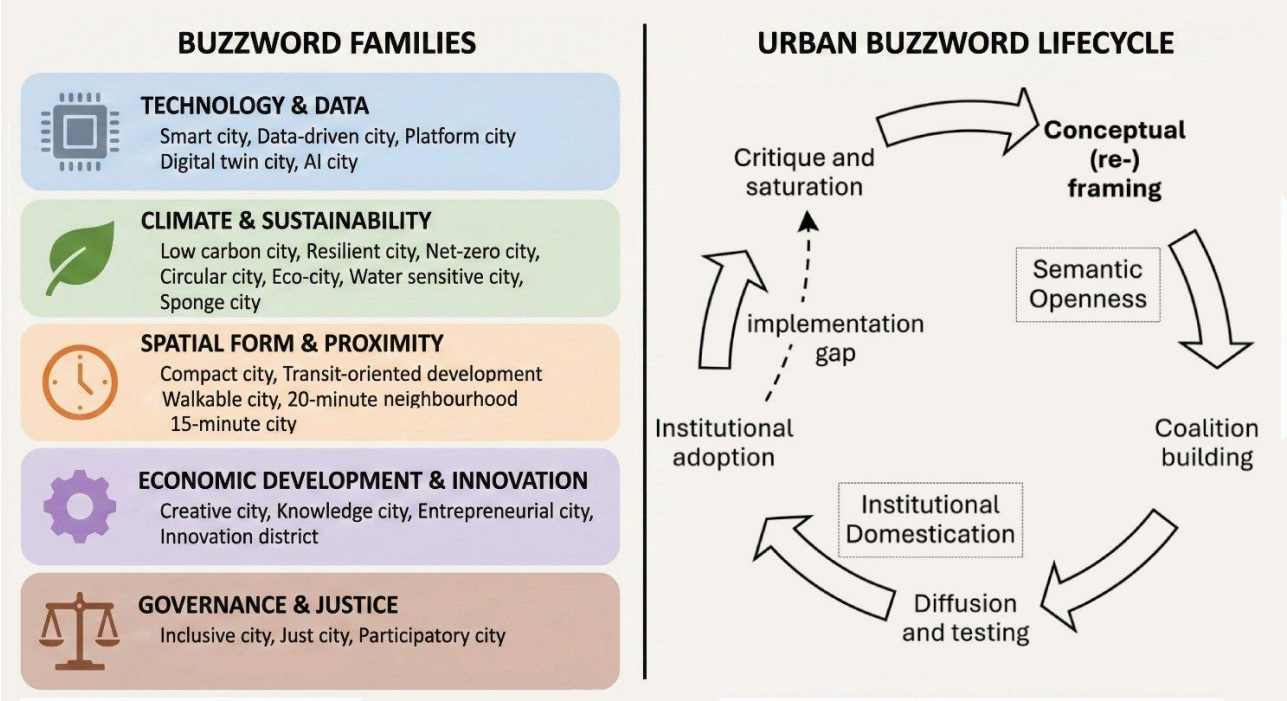
URBAN BUZZWORDS IN PRACTICE: RHETORIC, METHOD AND THE POLITICS OF DIFFUSION

Aristotelis Vartholomaios[1]

[1]Assistant Professor, University of Thessaly, Department of Planning and Regional Development, Pedion Areos, 383 34, Volos, Greece

avartholomaios@uth.gr

Graphical abstract



Abstract

Over the past two decades, new terms have proliferated in urban planning discourse at an accelerating pace, often claiming to reframe how cities are understood, designed and governed. This article examines 24 widely used urban "buzzwords" as discursive devices, grouped into five thematic families: technology and data; climate and sustainability; spatial form and proximity; economic development and innovation; and governance and justice. Their propagation appears to depend on relatively open definitions, which allow adoption across institutional and professional contexts without prior consensus on objectives or instruments. New terms tend not to displace earlier ones but to layer onto them, producing cumulative planning vocabularies. The recurring patterns are interpreted through a five-stage lifecycle shaped by two cross-cutting properties: semantic openness during propagation and institutional domestication during adoption, the latter also potentially operating as a process of depoliticisation. The more productive direction for research lies less in refining definitions of emerging concepts than in examining how they shape attention, legitimacy and resource allocation within planning systems.

Keywords: Urban planning, urban governance, buzzwords, terminology, innovation, communication in planning

1. Introduction

Urban planning is a vocabulary-heavy discipline. Planning policies, briefs, academic studies and technical reports rely on recurring terms, or buzzwords, to communicate ideas about cities. Buzzwords play a significant role in signalling a problem and indicating a course of action (Allmendinger, 2009; Hall, 2014). Since the early 2000s the field has seen a proliferation of new urban labels (Sharifi, 2022; Meerow et al., 2016). Terms such as “smart city”, “resilient city”, “15-minute city”, “circular city”, “innovation district”, and “inclusive city” now circulate widely in academic literature, policy documents and political statements (Moreno, 2019). New formulations appear faster than earlier ones consolidate or retire (Wiig, 2016; Söderström et al., 2014).

The basic function of a buzzword is to compress an argument. A single phrase like smart city can imply a diagnosis (the city is inefficient), a goal (digital optimisation) and a stance (technology is the answer), without any of these being made explicit (Joss et al., 2019; Cugurullo, 2021; Cowley et al., 2018). This compression is what makes buzzwords useful in policy briefs, planning statements, funding applications and political speeches, where space is limited and the audience is mixed. The persuasive effect is not accidental. Buzzwords are designed, or at least selected, to align with values already widely shared in planning theory and elsewhere, such as innovation, sustainability, fairness or urgency (Hollands, 2008; Angelidou, 2015). Ambiguity is part of the appeal. A precise definition would tie the term to one constituency, whereas a vague one allows technologists, environmentalists, social planners and politicians to all claim it (Jacobs, 2012).

Comparable dynamics have been identified in development studies, where “governance”, “participation” and “sustainability” have been characterised as “magic concepts” because their breadth allows coordination among actors with divergent objectives (Pollitt and Hupe, 2011; Mosse, 2004; Cornwall, 2007; Leach et al., 2012). The same semantic openness has long been theorised as constitutive of political coalition-building (Laclau and Mouffe, 1985; Scholte, 2011; Metzger et al., 2015).

Consider the smart city (Batty, 2012). The mind quickly evokes imagery of a sensor-laden street, digital dashboards in city hall, citizens interacting with city services using their smartphones. Similarly, the “resilient city” draws on a different vocabulary, one closer to civil engineering than information technology: flood barriers, nature-based solutions, social solidarity, networks built to keep running when one node fails. The picture of the “compact city” describes form rather than infrastructure, with dense blocks, mixed uses and transportation within walking distances of 10 or 15 minutes (Meerow and Newell, 2016; Bibri and Krogstie, 2017; Sharifi, 2022). Three buzzwords, three pictures, three planning traditions speaking through them. Each one treats the city as something that can be envisioned in concrete terms, while leaving considerable scope for variation in interpretation and implementation (Pozoukidou and Angelidou, 2022; McFarlane, 2011; Luque-Ayala and Marvin, 2015).

Prior work has examined small sets of urban concepts together, typically focusing on their political premises or governance implications (Hatuka et al., 2018). The most systematic comparative work to date has come from a series of bibliometric studies. De Jong et al. (2015) mapped twelve city labels in the academic literature 1996–2013 and demonstrated that, despite extensive overlap, each retained a conceptually distinct identity. Schraven et al. (2021) extended this to 35 labels across 1990–2019 (11,337 articles), confirming the dominance of the 'sustainable city / smart city' duopoly while revealing the emergence of a third cluster oriented towards inclusion and safety. Similar work has focused on specific clusters (e.g. Ahvenniemi et al., 2017; Bibri and Krogstie, 2017; Ramírez López and Grijalba Castro, 2020; Cugurullo, 2021).

Certain buzzwords have received considerable attention in urban studies. Research on smart, resilient and creative cities has examined their emergence, governance implications and implementation gaps (Hollands, 2008; Joss et al., 2019; Veloso et al., 2024). Longitudinal reviews identify tensions between stated ambitions and practical outcomes (Cowley et al., 2018). However, this literature has tended to treat each label in isolation, often within its own thematic silo (e.g. Bibri and Krogstie, 2017; Myeong et al., 2022; Allam et al., 2021).

This article examines 24 urban buzzwords that have remained visible in planning, urban studies and related policy fields since the early 2000s. Each term is approached as a discursive device that bundles a diagnosis of urban conditions, a set of valorised practices and a horizon of intended outcomes. The analysis considers how such terms are conceived and how they circulate across institutional and professional settings. A buzzword lifecycle model is proposed to describe how urban buzzwords gain traction, become institutionally adopted and embedded in planning practice and finally recede from active use or get rebranded.

2. Methodology

The study takes the form of an interpretive, conceptually-oriented review rather than a systematic literature review. Terms were selected purposively against three criteria: (i) sustained visibility in planning, urban studies and related policy literatures since the early 2000s; (ii) circulation across more than one institutional or professional domain (e.g., academic, governmental, consultancy, advocacy) and (iii) explicit reference to the city or to urban districts as the object and scale of intervention. The 24 resulting terms are not exhaustive of the contemporary urban lexicon, but they capture the labels that have most consistently structured planning discourse over the past two decades.

The bibliometric mappings of De Jong et al. (2015) and Schraven et al. (2021) provide the most comprehensive quantitative coverage of urban concept-labels to date. The present study takes an interpretive approach that complements them in three respects: (i) it includes design-based labels (compact city, creative city, transit-oriented development) that bibliometric criteria sometimes marginalise; (ii) it extends to post-2019 entrants (the AI city, the digital twin city) and (iii) it interprets the mechanisms (i.e. semantic openness, institutional domestication, depoliticisation) that drive the trajectories traced empirically by previous bibliometric studies.

For each term, an anchoring set of references was identified through targeted reading of the founding sources, the principal programmatic statements and the main critical responses. Key references are listed in Table A1 (see Appendix) and provide the evidentiary base for the analysis

107 presented in sections 3 to 7. Sources were read for the diagnostic claims advanced by each term, the
108 practices and instruments it promotes and the actors it brings into play.

109 The 24 terms are organised into five thematic families: technology and data; climate and
110 sustainability; spatial form and proximity; economic development and innovation; and governance
111 and justice. The families were derived inductively from the corpus and reflect the dominant problem-
112 framings around which the terms cluster. Placement was determined by the framing most consistently
113 emphasised in the anchoring references. The final column of Table 1 distinguishes normative terms,
114 which articulate value-laden visions of how cities ought to be, from descriptive or technical terms,
115 which denote specific tools, targets or analytical frames.

116 The umbrella term "sustainable city" is deliberately not included in the corpus. It functions at
117 a higher level of abstraction than the terms examined here, functioning as a meta-category that
118 includes several of the climate and sustainability buzzwords analysed below. Similarly, design
119 movements such as the "garden city", "New Urbanism" and the "urban village" are not included in
120 the corpus. Although they have circulated widely and influenced planning practice, their context is
121 fixed by published charters, manifestos or design codes, which constrains the kind of interpretive
122 flexibility this study takes as constitutive of a buzzword.

123

124 **Table 1.** Overview of key buzzwords by theme.

Theme	Term	First Appearance (approx.)	Key Actors	Discursive Property
Technology and data	Smart city	Mid 2000s	Corporate / academia	Descriptive/Technical
	Data-driven city	Early 2010s	Academia	Descriptive/Technical
	Platform city	Late 2010s	Urban studies	Descriptive/Technical
	Digital twin city	Late 2010s	Tech industry	Descriptive/Technical
	AI city	Early 2020s	Corporate	Descriptive/Technical

Theme	Term	First Appearance (approx.)	Key Actors	Discursive Property
Climate and sustainability	Low carbon city	Late 2000s	Academic	Descriptive/Technical
	Resilient city	Late 2000s	International organisations	Normative
	Net-zero city	Mid 2010s	Central governments	Descriptive/Technical
	Circular city	Mid 2010s	Academia / EU policy	Descriptive/Technical
	Eco-city	Late 1980s	Mixed	Normative
	Water sensitive city	Mid 2000s	Australia	Descriptive/Technical
	Sponge city	Mid 2010s	Chinese government	Descriptive/Technical
Spatial form and proximity	Compact city	Early 1990s	Academic	Descriptive/Technical
	Transit-oriented development	Mid 1990s	Planning	Descriptive/Technical
	Walkable city	Mid 2000s	Mixed	Descriptive/Technical
	20-minute neighbourhood	Late 2010s	Policy (Australia)	Descriptive/Technical
	15-minute city	Late 2010s	Academic	Descriptive/Technical
Economic development and innovation	Creative city	2000s	Academia / policy	Normative
	Knowledge city	2000s	Academia	Normative
	Entrepreneurial city	1990s	Academia	Descriptive/Technical
	Innovation district	Mid 2010s	Think tanks	Descriptive/Technical
Governance and justice	Inclusive city	2010s	UN / international organisations	Normative

Theme	Term	First Appearance (approx.)	Key Actors	Discursive Property
	Just city	2010s	Academia	Normative
	Participatory city	2010s	NGOs / urbanists	Normative

3. Technology and data-related buzzwords

Since the late 2000s, urban planning discourse has increasingly incorporated terminology associated with data and digital technologies (Batty, 2012; Townsend, 2013). Advances in urban analytics (Kandt and Batty, 2021) combined with the ubiquity of the internet, mobile broadband, smartphones, cloud computing, sensor networks and GNSS positioning drove the rise of a new lexicon. Terms such as smart city, data-driven city, platform city, digital twin city, and AI city entered planning vocabulary in close succession (Batty, 2012; Mohanty et al., 2016; Caprotti et al., 2022). These terms function as a shared vocabulary that articulates expectations about the role of the digital age in reshaping urban governance, analysis and management (Kitchin, 2014; Cugurullo, 2021).

The smart city has achieved the widest recognition within this technological lexicon (Batty, 2012; Angelidou, 2014; Albino et al., 2015). Schraven et al. (2021) showed that smart-city articles overtook sustainable-city articles in 2014 and by end-2019 accounted for 46% of the entire urban-labels corpus across 35 labels and 30 years. Its diffusion is closely linked to technology vendors, demonstration projects, academic research and policy initiatives that focused on urban applications (Söderström et al., 2014).

Earlier formulations placed emphasis on real-time monitoring through sensor networks and digital dashboards (Nam and Pardo, 2011; Harrison et al., 2010). Over time, the scope widened to include urban mobility, infrastructure management, digital services and urban governance (Barns, 2020; Calzada, 2021). In planning practice, the “smart” label has been attached to a wide spectrum of initiatives, from technology procurement to open data portals and performance indicator

frameworks, frequently situated within broader narratives of innovation and modernisation (Kitchin, 2016; Viitanen and Kingston, 2014).

Subsequent terms can be understood as refinements of the smart city (Kandt and Batty, 2021; Trencher, 2019). The data-driven city places greater emphasis on analytics, performance metrics and evidence-based decision-making (Kitchin, 2014; Thakuriah et al., 2017). In practical terms, this has often involved the digitisation of previously analogue materials, such as historical maps and archives, alongside the development of online data portals (Batty, 2013; Goodchild, 2022).

The platform city shifts attention from data as a resource toward platform-mediated coordination as a mode of urban governance (Barnard-Wills and Ashenden, 2010). This framing highlights the role of digital intermediaries and the power asymmetries associated with platform ownership. Online platforms like "Airbnb", "Uber", "Amazon", "Google" and "Wolt" provide digital services that disrupt how cities traditionally operate (Kaplan and Haenlein, 2019; Morozov and Bria, 2018). The term serves primarily as an interpretive lens for understanding how such innovations create new challenges and opportunities for cities.

The digital twin city is more closely associated with technical approaches (Tao et al., 2019). Originating in engineering and simulation, it denotes virtual representations of urban systems connected to ongoing data streams (Jones et al., 2020; Dembski et al., 2020). Its use in planning discourse remains loosely defined (Mohammadi and Taylor, 2021; Deprêtre et al., 2022). Depending on the case, it may refer to sophisticated urban simulation models, integration of GIS and geospatial intelligence, 3D modelling, or consolidated urban data platforms (Lehtola et al., 2022; Batty, 2020).

The more recent AI city extends these narratives into the early 2020s (Allam and Dhunny, 2019; Cugurullo, 2021). Currently, it acts as a future-oriented descriptor for speculated applications of generative AI (text, code, sound, image, video) and agentic swarm systems in municipal decision support (Veloso et al., 2024). The term signals a shift from digital monitoring networks toward autonomous decision-making (Rathore et al., 2021; Zuboff, 2019). Initial formulations are often

171 shaped by corporate actors, startups and innovators with academics and consultants subsequently
172 translating these ideas into planning discourse (Greenfield, 2013).
173
174 **4. Climate and sustainability-related buzzwords**
175 Environmental terminology has always been at the core of modern urban planning, from Patrick
176 Geddes' views of city as an organism and the Garden City movement to the post-war ecological turn.
177 Eco-city was already in circulation by the late 1980s. Low-carbon city arrived with the Kyoto-era
178 policy focus on climate change. Resilient city came in after the 2000s, partly through the Rockefeller-
179 funded "100 Resilient Cities programme". Other terms include circular city, net-zero city, sponge city
180 and water-sensitive city. Each new term tends to track whichever environmental anxiety happens to
181 be politically active at the time (While and Whitehead, 2013; Hodson and Marvin, 2010; Bulkeley et
182 al., 2014). Some of these terms originate from urban ecology, others from climate policy and energy
183 (McCann and Ward, 2012; Voytenko et al., 2016). Their common denominator is that environmental
184 limits and long-term system behaviour are integral to urban development (Beatley, 2000; Davoudi,
185 2012; Bulkeley et al., 2010).
186 The eco-city is the oldest term in the group. Coined by Richard Register in Ecocity
187 Berkeley (1987), it described a city redesigned around ecological balance, urban metabolism and
188 integration with its bioregion (Register, 1987; Roseland, 1997; Beatley, 2000). The eco-city of this
189 period was more of a vision; it did not say what density a city should reach, what mix of land uses
190 qualified, or how outcomes were to be assessed. These specifics came later, through the compact city
191 and sustainable urban form studies, which translated the ecological aspirations into density
192 thresholds, land-use mix indices and energy performance metrics (Jenks et al., 1996; Jabareen, 2006).
193 Low-carbon city and net-zero city arrived with the post-2000 climate policy infrastructure.
194 The low-carbon framing keeps emissions as the variable of interest and treats the city as one node
195 within national or international climate accounting (Bulkeley and Betsill, 2003; Bulkeley et al., 2010).
196 The net-zero framing shifts to reduction of energy demand and proliferation of renewables (Bulkeley

et al., 2014; Hölscher et al., 2018). Both terms communicate efficiently because they can be easily quantified (Acuto, 2013; Jordan et al., 2015).

Almost all environmental terms imply that the city can be brought into a stable equilibrium with nature. The resilient city is an exception to this rule (Folke, 2006; Davoudi, 2012; Meerow et al., 2016). It treats disturbance as the normal condition of urban systems and asks how the city keeps functioning when shocks arrive. By the mid-2010s resilience was already adopted by international organisations, national strategies and local plans. It addresses a series of urban challenges such as floods, heatwaves, infrastructure failure, social fragility, fiscal stress and pandemic preparedness in an interconnected manner (Elmqvist et al., 2018; Rockefeller Foundation, 2015). The resilient city has also been criticised by academics. A frequent critique is whether the systems prioritised for protection truly benefit the populations that are most exposed to environmental, social and economic shocks (Davoudi, 2012; Meerow and Newell, 2016).

The circular city descends from industrial ecology and urban metabolism, where the city is interpreted as a system of material and information flows (Girardet, 1992; Kennedy et al., 2007; Prendeville et al., 2017). Most policy uptake has come through the EU's Circular Economy Action Plan (European Commission, 2015, 2020a), embedded since 2019 within the European Green Deal (European Commission, 2019) and enabled at the building-stock scale through the Renovation Wave (European Commission, 2020b). Here, the critique focuses on whether a radical restructure of the urban metabolism towards circularity is feasible in the current economic environment and can be actively pursued (Jensen and Remmen, 2017).

Sponge city and water-sensitive city are the most technical terms in the section. Both are about urban water (Wong, 2006; Brown et al., 2009; Jia et al., 2017). The water-sensitive city is a framework for integrating stormwater, land use and ecology at the catchment scale in Australian engineering and planning practice (Brown et al., 2009; Fletcher et al., 2015). The sponge city was formulated in China with thirty pilot cities designated in 2015 under a national programme (Jia et al., 2017). Engineering and design solutions seem to converge: permeable pavements, bioswales, green roofs, retention

basins, rain gardens and restored watercourses interconnected to reduce urban flooding and maximise water reuse. Implementation logic, however, diverges: the water-sensitive city advanced through professional reform within Australian water authorities while the sponge city through a centrally funded national programme in China.

5. Spatial form and proximity-related buzzwords

This third group of buzzwords includes the compact city, the walkable city, transit oriented development (TOD), the 15-minute city and the 20-minute neighbourhood. What ties them together is density, mixed land use and close proximity to services and public transportation (Hill et al., 2024; Banister, 2008; Geurs and van Wee, 2004). Compared with the technological and climate vocabularies in the previous sections, these terms point to either a recognisable pre-existing urban form, or to a simple empirical rule like a walking distance or a population density. Experts, decision-makers and citizens can all use these terms without much translation overhead (Pozoukidou and Chatziyiannaki, 2021; Honey-Rosés et al., 2020).

The compact city is the oldest term in the group, going back to early-1990s European planning debates (Jenks et al., 1996; Burton, 2000; Williams et al., 2000). Spatial concentration is the organising idea: Higher densities, mixed uses, shorter trips, viable public transport, less greenfield development. The compact city has received its own share of critique, especially regarding the environmental trade-offs and its effectiveness in eliminating car dependency (Neuman, 2005; Banister, 2008).

The walkable city narrows the focus to pedestrians (Banister, 2008; Palència et al., 2020). Streets get reorganised around short distances, low traffic speeds and a mix of uses, on the assumption that walking will replace short car trips. Walkability interventions tend to land in central, already advantaged or tourist-facing districts and the wider effects on metropolitan segregation are difficult to detect. Barcelona's superblock programme is the case usually cited. The Poblenou superblock pilot opened in 2016 and the redesign delivered cleaner air, less noise and more pedestrian space inside the

intervention areas. It also coincided with rising rents and short-term rental pressure in the same neighbourhoods, in a city where affordable housing was already an issue (García-López et al., 2020).

TOD brings back together land-use planning and transport planning which were separated for most of the twentieth century (Calthorpe, 1993; Bertolini, 1999). TOD is often presented as a low-conflict win for both mobility and densification, but comparative reviews keep finding the same pattern: land values around stations rise, lower-income residents are gradually priced out and the redistribution that the policy was supposed to enable does not happen on its own (Curtis et al., 2009; Geurs and van Wee, 2004). Critiques stress that TOD tends to reproduce the inequality it claims to address unless it's co-developed along with affordable housing policies (Banister, 2008).

The 15-minute city and the 20-minute neighbourhood have both been interpreted as a re-formulation of Clarence Perry's 1929 neighbourhood unit, updated to contemporary mobility patterns and focusing on temporal rather than spatial thresholds. (Moreno et al., 2021; Allam et al., 2021; Pozoukidou and Chatziyiannaki, 2021; Pozoukidou and Angelidou, 2022). The COVID-19 pandemic, with its social distancing, remote working and the temporary collapse of mass transit rattled the foundations of the compact city (Batty, 2020). The 15-minute city offered a way to keep the compactness argument alive by reframing it as a problem of accessibility to essential services and everyday needs (Moreno et al., 2021; Allam et al., 2021).

6. Economic development and innovation-related buzzwords

The economic vocabulary of urban planning shifted in the late 1990s. As the de-industrialisation of the global North and competition for mobile capital became the operating condition of urban governance, a new family of labels arrived to make sense of it (Landry, 2012; Carrillo, 2004; Florida, 2002). Creative city, knowledge city, entrepreneurial city and innovation district are terms that treat urban space as an economic asset and planning as a mechanism to grow it (Harvey, 1989; Landry, 2012; Carrillo, 2006; Katz and Wagner, 2014).

The entrepreneurial city is the oldest of these and the one with the stronger academic roots. Harvey introduced it in 1989 as a diagnostic term, not a policy proposal. The argument was that urban governance had moved away from the postwar managerial mode (delivering services, redistributing resources) toward an entrepreneurial mode focused on growth, public-private partnerships and privatisations (Harvey, 1989; Jessop and Sum, 2000). Cities had started behaving and competing like companies. The term has not really left urban geography and even in planning it is chiefly used as an analytical lens and rarely as a policy or a plan.

The creative city and the knowledge city work differently. They are policy visions, not critical analytical lenses. Charles Landry's *The Creative City* (2000) and Richard Florida's *The Rise of the Creative Class* (2002) gave urban administrations a vocabulary for repositioning around cultural production, knowledge work and the supposed location preferences of educated mobile professionals (Landry, 2012; Florida, 2002; Carrillo, 2006). Both terms spread with the help of city rankings, "best practices", consultancy reports and conference circuits. However, there was an under-specification of planning instruments related to these aspirations. A city could declare itself creative or knowledge-based without changing its zoning, its capital budget or its regulatory framework and many did (Landry, 2012; Katz and Wagner, 2014). The branding was the policy.

The innovation district is the most recent and the most spatially specific. The term was popularised by a Washington think tank report (Katz and Wagner, 2014) and it refers to geographically clustered research institutions, start-ups and technology firms. The typical settings are recognisable: a university campus, a brownfield retrofitted for startups, or a greyfield converted to a tech-and-research orientation. The framing combines economic development objectives with the kind of urban qualities the proximity tradition has always cared about, namely density, walkability, mixed use and connectivity (Katz and Wagner, 2014; Centre for London, 2016). In this sense the innovation district is a hybrid. It pulls a New Urbanist physical template into the service of a knowledge-economy growth strategy.

It is worth noting that all four rest on assumptions about what generates urban prosperity and have received significant critique. The creative-class thesis has been criticised for increasing gentrification in the cities that adopted it (Peck, 2005; Comunian, 2010; Pratt, 2011). The entrepreneurial-city diagnosis has been criticised for over-generalising from a small set of Anglo-American cases (MacLeod, 2002). The innovation-district model is still too recent for a settled assessment, although early evaluations flag definitional ambiguity, uncertain economic effects (Drucker and Kayanan, 2023) and displacement pressures on adjacent neighbourhoods (Zandiatashbar and Kayanan, 2020).

7. Governance and justice-related buzzwords

Terms such as inclusive city, just city and participatory city are often used to address equity in governance, social justice and participation in urban planning (Healey, 1997; Miraftab, 2009; Purcell, 2006). They appear most often in academic papers, international organisation reports, in advocacy and policy programmes (Harvey, 2008; Brenner et al., 2012; UN-Habitat, 2016). This family of buzzwords is primarily concerned with how goods are distributed and what interests are represented in formal planning processes (Davoudi, 2012; Fainstein, 2014).

The just city rejects economic growth for the sake of growth and focuses instead on equity and diversity (Fainstein, 2010; Marcuse et al., 2009). It is invoked to assess whether planning decisions equally redistribute resources and mitigate inequalities and to expand the political rights and voice of disadvantaged groups (Fainstein, 2010; Soja, 2010). In planning debates, the just city works as a critical lens to judge plans and institutions often without specifying a certain urban configuration (Marcuse et al., 2009; Fainstein, 2014). References to the just city in formal plans or policy documents tend to signal an ethical orientation rather than concrete procedures for implementation (Campbell, 2006; Fainstein, 2014).

UN-Habitat and the World Bank advance the inclusive city as a policy framework centred on equal access to services, goods and governance (UN-Habitat, 2010; World Bank, 2013). The

325 “inclusive city” focuses on removing the barriers constraining different social groups from
326 participating in economic, social and civic life. It focuses on expanding access across housing,
327 mobility, public space and service provision (UN-Habitat, 2016). Plans and strategies frequently
328 invoke “inclusion” as a guiding principle, yet they provide limited specification of how inclusiveness
329 is to be realised (Miraftab, 2009; Campbell, 2006).

330 Finally, the participatory city provides a vision of urbanism in which residents are
331 systematically involved in shaping decisions about the places they live and work in (Arnstein, 1969;
332 Fung, 2006). The participatory city supports the notion that residents, such as tenants or even
333 squatters, have legitimate claims over their neighbourhoods irrespective of property ownership status.
334 Additionally, residents often have first-hand experience of the places they live in, hence community
335 participation and co-design results in a more effective outcome as well (Healey, 1997; Cornwall,
336 2008).

337 The participatory city is advanced by networks of activists, NGOs, community groups and
338 sympathetic officials who experiment with tools such as participatory decision-making,
339 neighbourhood forums and co-design processes (Ostrom, 1996; Fung, 2006; Miraftab, 2009). These
340 initiatives address democratic deficits in conventional planning processes and promote active
341 citizenship (Arnstein, 1969; Swyngedouw, 2005; Zakhour, 2020). Within this framework,
342 participation has become the primary language through which urban policy negotiates community
343 empowerment and manages conflict (Cornwall, 2008).

344 Arnstein's (1969) “ladder of citizen participation” distinguished between genuine citizen
345 power, tokenism and non-participation. Cardullo and Kitchin (2018) examined Dublin's smart-city
346 programme and found that much of what is presented as participation amounts to information-giving
347 and consultation rather than substantive citizen power. Similar patterns have been documented in
348 corporate stakeholder engagement, where broader participation can be associated with increased
349 symbolic compliance rather than substantive change (Hu et al., 2026). It can be assumed that the

participatory city inherits a structural tension between its ambition and the institutional capacity required to make participation consequential.

Comparative reviews of urban governance suggest that similar terminology, when transposed across jurisdictions, can yield different outcomes depending on administrative capacity and political traditions (da Cruz et al., 2018). The inclusive city and the participatory city do not specify a uniform institutional template. Yet they provide a vocabulary that local actors adapt to existing structures, with consequences for implementation that are highly context dependent.

8. Discussion

The previous sections show that urban buzzwords create a multi-layered planning vocabulary as older concepts are not displaced by new ones but instead overlap and co-exist. Propagation and persistence are driven less by intrinsic novelty than by adaptability. Open-ended buzzwords accommodate disparate agendas across technology, environmental sustainability, spatial design, economic strategy and governance. Thus, they remain relevant across contexts without demanding precise consensus. Actors with divergent priorities deploy the same terminology while attaching different meanings to it. Ambiguity, in this respect, functions as a property that enables circulation across segmented governance structures and even conflicting interests.

This clustering pattern is also visible bibliometrically. Both De Jong et al. (2015) and Schraven et al. (2021) demonstrate that urban labels cluster rather than substitute. Parallels can be drawn between Schraven et al.'s “eco-cluster”, “techno-cluster” and “socio-cluster” with the five families presented here. The additional families, namely spatial form and proximity, and economic development and innovation, extend the picture to include design-based and economic vocabularies that prior bibliometric analyses tend to underweight.

A recurring pattern across the buzzwords examined is the limited connection between terminology adoption and shifts in planning practice. Buzzwords rebrand already existing ideas such as inequality, accessibility or environmental impact, in terms that appear better aligned with current

policy priorities, technologies or public expectations. By doing so, they attract the attention of experts and decision-makers to both new and already existing planning principles that are presented as urgent. Whether a term then translates into established planning activities depends on external considerations, namely sustained political commitment, institutional capacity, regulatory coherence and accessible resources. The appearance of a buzzword in formal plans, without the institutional scaffold required to implement it, is likely a poor predictor of outcomes on its own.

The recurring patterns observed in the previous sections can be interpreted as a five-stage lifecycle of urban planning buzzwords (Figure 1): conceptual (re-)framing, coalition building, diffusion and testing, institutional adoption, and critique and saturation. Two cross-cutting properties shape its progression: *semantic openness* sustains broad uptake during the propagation stages of coalition building and diffusion, when buzzwords function as coordination devices rather than prescriptive blueprints. *Institutional domestication* then progressively narrows ambitious interpretations to fit established planning structures and the power configurations they embed (Flyvbjerg, 1998; Yiftachel, 2009). Where buzzwords carry conflicting agendas, the interpretations tend to align with prevailing distributions of political and economic influence. Their visionary or content tends to be diluted in this process, while the technical, procedural or design components are more readily absorbed into established practice. Domestication, in this sense, can also function as a process of *depoliticisation*.

Different stages of the cycle align with the coordination needs of distinct constituencies. Technology vendors, consultancies and international organisations are more visible in the propagation stages of diffusion and testing, while critical scholars dominate the critique and saturation stage. Adoption, by contrast, is mediated by a more dispersed mix of administrative, regulatory and funding actors that the cases examined here do not consistently trace.

The lifecycle proposed here is consistent with the stages identified by Schraven et al. (2021): infant, growth and mature stages. While their analysis describes trajectories empirically, the model

offered here identifies the discursive mechanisms that shape why labels follow such trajectories in the first place.

Whether the proliferation of buzzwords over the past two decades will produce saturation or fatigue remains unclear. The question has not been systematically examined and the empirical picture is thin. There is limited understanding of how repeated rebranding affects credibility and uptake, or of when terminology loses its ability to coordinate action across different actors.

A similar pattern has been described outside urban planning. Corporate sustainability disclosures are now routinely scored by environmental, social and governance (ESG) rating agencies, yet the scores produced by different agencies for the same firm often diverge sharply. This gap has been explored by recent work on *carbon greenwashing* (Zhong et al., 2025) and *investor-led activism* (Hu et al., 2026). The lesson can be transferred to urban planning. Once a term's credibility is in doubt, its appearance in plans, reports and strategies functions as a marker of alignment with prevailing rhetoric, with limited bearing on the practices pursued.

This gap suggests a reorientation of research priorities. Rather than refining definitions of emerging concepts, the more pressing task is to examine how their adoption reshapes attention, legitimacy and funding within planning systems, and how trust in planning vocabularies is built, eroded and signalled across different audiences.

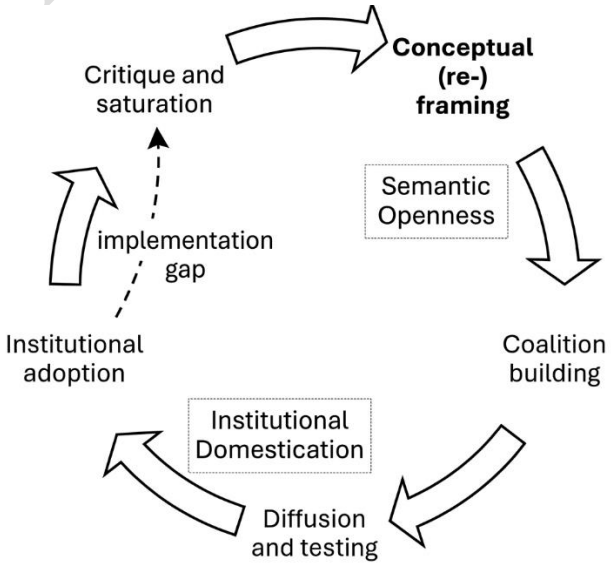


Figure 1. The urban buzzword lifecycle.

9. Conclusions

This article has argued that urban planning buzzwords can be understood through a five-stage lifecycle that starts and ends at conceptual (re-)framing. Two cross-cutting properties appear to shape its progression: semantic openness during propagation, and institutional domestication during adoption. Semantic openness sustains broad uptake by allowing diverse stakeholders to converge on a shared term without prior agreement on its content. At these stages buzzwords function as coordination devices rather than prescriptive blueprints. Institutional domestication then narrows ambitious interpretations to fit established planning structures and the power dynamics they embed (Flyvbjerg, 1998; Yiftachel, 2009). The two properties may help account for the rapid expansion of the urban planning vocabulary since the early 2000s.

The cycle is not politically neutral. Successive waves of vocabulary may shift attention, visibility, legitimacy and funding without addressing the institutional structures and power configurations they appear to challenge. Whether this pattern persists indefinitely, or eventually produces audience fatigue and credibility loss, remains an open empirical question. Either way, the productive direction for future research in tracing how the appearance of new terms reshapes the distribution of attention and authority in planning systems whose institutional arrangements predate them.

Acknowledgments

The author used ChatGPT (OpenAI, GPT-5.2) for proofreading and language refinement during the preparation of this manuscript. All content was reviewed, verified and revised by the author, who retains full responsibility for the originality, accuracy and integrity of the work.

The author is grateful to the two anonymous reviewers, whose substantive feedback considerably improved the manuscript.

446 **References**

447 Acuto M. (2013), Global Cities, Governance and Diplomacy: The Urban Link, Routledge, London.

448 Ahvenniemi H., Huovila A., Pinto-Seppä I. and Airaksinen M. (2017), What are the differences
449 between sustainable and smart cities?, Cities, 60, 234–245, DOI: 10.1016/j.cities.2016.09.009.

450 Albino V., Berardi U. and Dangelico R.M. (2015), Smart cities: Definitions, dimensions, performance
451 and initiatives, Journal of Urban Technology, 22(1), 3–21.

452 Allam Z. and Dhunny Z.A. (2019), On big data, artificial intelligence and smart cities, Cities, 89, 80–
453 91.

454 Allam Z., Moreno C., Chabaud D. and Pratlong F. (2021), Proximity-based planning and the '15-
455 minute city': A sustainable model for the city of the future, in Brinkmann R. (ed.), The Palgrave
456 Handbook of Global Sustainability, Palgrave Macmillan, Cham, pp. 1–20, DOI: 10.1007/978-
457 3-030-38948-2_178-1.

458 Allmendinger P. (2009), Planning theory, 2nd edition, Palgrave Macmillan, Basingstoke.

459 Angelidou M. (2014), Smart city policies: A spatial approach, Cities, 41, S3–S11.

460 Angelidou M. (2015), Smart cities: A conjuncture of four forces, Cities, 47, 95–106.

461 Arnstein S.R. (1969), A ladder of citizen participation, Journal of the American Institute of Planners,
462 35(4), 216–224.

463 Banister D. (2008), The sustainable mobility paradigm, Transport Policy, 15(2), 73–80.

464 Barnard-Wills D. and Ashenden D. (2010), Public sector engagement with online identity
465 management, Identity in the Information Society, 3(3), 657–674.

466 Barns S. (2020), Platform urbanism: Negotiating platform ecosystems in connected cities, Palgrave
467 Macmillan.

468 Batty M. (2012), Smart cities, big data, Environment and Planning B, 39(2), 191–193.

469 Batty M. (2013), The new science of cities, MIT Press, Cambridge, MA.

470 Batty M. (2020), The Coronavirus crisis: What will the post-pandemic city look like?, Environment
471 and Planning B: Urban Analytics and City Science, 47(4), 547–552.

Beatley T. (2000), Green Urbanism: Learning from European Cities, Island Press, Washington, DC.

Bertolini L. (1999), Spatial development patterns and public transport: The application of an analytical model in the Netherlands, Planning Practice and Research, 14(2), 199–210.

Bibri S.E. and Krogstie J. (2017), Smart sustainable cities of the future: An extensive interdisciplinary literature review, Sustainable Cities and Society, 31, 183–212.

Brenner N., Marcuse P. and Mayer M. (eds) (2012), Cities for People, Not for Profit: Critical Urban Theory and the Right to the City, Routledge, London.

Brown R.R., Keath N. and Wong T.H.F. (2009), Urban water management in cities: historical, current and future regimes, Water Science and Technology, 59(5), 847–855.

Bulkeley H. and Betsill M.M. (2003), Cities and Climate Change: Urban Sustainability and Global Environmental Governance, Routledge, London.

Bulkeley H., Broto V.C., Hodson M. and Marvin S. (eds) (2010), Cities and Low Carbon Transitions, Routledge, London, DOI: 10.4324/9780203839249.

Bulkeley H., Broto V.C. and Maassen A. (eds) (2014), Governing Climate Change: The Politics of Urban Experiments, Routledge, London.

Burton E. (2000), The compact city: Just or just compact?, Urban Studies, 37(11), 1969–2006.

Calthorpe P. (1993), The Next American Metropolis: Ecology, Community and the American Dream, Princeton Architectural Press, New York.

Calzada I. (2021), Smart City Citizenship, Elsevier, Amsterdam.

Campbell H. (2006), Just planning: The art of situated ethical judgment, Journal of Planning Education and Research, 26(1), 92–106.

Caprotti F., Chang I.C.C. and Joss S. (2022), Beyond the smart city: a typology of platform urbanism, Urban Transformations, 4, 4.

Cardullo P. and Kitchin R. (2018), Being a "citizen" in the smart city: up and down the scaffold of smart citizen participation in Dublin, Ireland, GeoJournal, 84(1), 1–13.

Carrillo F.J. (2004), Capital cities: a taxonomy of capital accounts for knowledge cities, Journal of Knowledge Management, 8(5), 28–46, DOI: 10.1108/1367327041058738.

Carrillo F.J. (2006), Knowledge Cities: Approaches, Experiences and Perspectives, Butterworth-Heinemann, Oxford.

Centre for London (2016), Spaces to Think: Innovation Districts and the Changing Geography of London's Knowledge Economy, Centre for London, London.

Comunian R. (2010), Rethinking the creative city, Urban Studies, 48(6), 1157–1179, DOI: 10.1177/0042098010370626.

Cornwall A. (2007), Buzzwords and fuzzwords: Deconstructing development discourse, Development in Practice, 17(4–5), 471–484.

Cornwall A. (2008), Unpacking "participation": Models, meanings and practices, Community Development Journal, 43(3), 269–283.

Cowley R., Joss S. and Dayot Y. (2018), The smart city and its publics: insights from across six UK cities, Urban Research & Practice, 11(1), 53–77.

Cugurullo F. (2021), Frankenstein Urbanism: Eco, Smart and Autonomous Cities, Artificial Intelligence and the End of the City, Routledge.

Curtis C., Renne J.L. and Bertolini L. (eds) (2009), Transit Oriented Development: Making it Happen, Ashgate, Farnham.

da Cruz N.F., Rode P. and McQuarrie M. (2018), New urban governance: A review of current themes and future priorities, Journal of Urban Affairs, 41(1), 1–19.

Davoudi S. (2012), Resilience: A bridging concept or a dead end?, Planning Theory & Practice, 13(2), 299–307.

De Jong M., Joss S., Schraven D., Zhan C. and Weijnen M. (2015), Sustainable–smart–resilient–low carbon–eco–knowledge cities; making sense of a multitude of concepts promoting sustainable urbanization, Journal of Cleaner Production, 109, 25–38, DOI: 10.1016/j.jclepro.2015.02.004.

Dembski F., Wössner U., Letzgus M., Ruddat M. and Yamu C. (2020), Urban digital twins for smart cities and citizens: The case study of Herrenberg, Germany, Sustainability, 12(6), 2307.

Deprêtre A., Jacquinod F. and Mielniczek A. (2022), Exploring digital twin adaptation to the urban environment: comparison with CIM to avoid silo-based approaches, ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences, V-4-2022, 337–344, DOI: 10.5194/isprs-annals-V-4-2022-337-2022.

Drucker J. and Kayanan C.M. (2023), Innovation Districts: Assessing Their Potential as a Strategy for Urban Economic Development, Urban Affairs Review, 60(3), 802–834, DOI: 10.1177/10780874231173618.

Elmqvist T., Bai X., Frantzeskaki N., Maddox D., McPhearson T., Parnell S., Romero-Lankao P., Simon D. and Watkins M. (eds) (2018), Urban Planet: Knowledge towards Sustainable Cities, Cambridge University Press, Cambridge.

European Commission (2015), Closing the Loop: An EU Action Plan for the Circular Economy, European Commission, Brussels.

European Commission (2019), The European Green Deal, European Commission, Brussels.

European Commission (2020a), A new Circular Economy Action Plan for a Cleaner and More Competitive Europe, European Commission, Brussels.

European Commission (2020b), A Renovation Wave for Europe: Greening our Buildings, Creating Jobs, Improving Lives, European Commission, Brussels.

Fainstein S.S. (2010), The Just City, Cornell University Press, Ithaca, NY.

Fainstein S.S. (2014), The just city, International Journal of Urban Sciences, 18(1), 1–18.

Fletcher T.D., Shuster W.D., Hunt W.F., Ashley R., Butler D., Arthur S., Trowsdale S., Barraud S., Semádeni-Davies A., Bertrand-Krajewski J.-L., Mikkelsen P.S., Rivard G., Uhl M., Dagenais D. and Viklander M. (2015), SUDS, LID, BMPs, WSUD and more: The evolution and application of terminology surrounding urban drainage, Urban Water Journal, 12(7), 525–542.

Florida R. (2002), The Rise of the Creative Class, Basic Books, New York.

548 Flyvbjerg B. (1998), Rationality and Power: Democracy in Practice, University of Chicago Press,
549 Chicago.
550 Folke C. (2006), Resilience: The emergence of a perspective for social-ecological systems analyses,
551 Global Environmental Change, 16(3), 253–267.
552 Fung A. (2006), Varieties of participation in complex governance, Public Administration Review,
553 66(s1), 66–75.
554 García-López M.À., Jofre-Monseny J., Martínez Mazza R. and Segú M. (2020), Do short-term rental
555 platforms affect housing markets? Evidence from Airbnb in Barcelona, Journal of Urban
556 Economics, 119, 103278.
557 Geurs K.T. and van Wee B. (2004), Accessibility evaluation of land-use and transport strategies:
558 Review and research directions, Journal of Transport Geography, 12(2), 127–140.
559 Girardet H. (1992), The Gaia Atlas of Cities: New Directions for Sustainable Urban Living, Gaia
560 Books, London.
561 Goodchild M.F. (2022), Elements of an infrastructure for big urban data, Urban Informatics, 1, 3,
562 DOI: 10.1007/s44212-022-00001-5.
563 Greenfield A. (2013), Against the Smart City, Do projects, New York.
564 Hall P. (2014), Cities of tomorrow: An intellectual history of urban planning and design since 1880,
565 4th edition, Wiley-Blackwell, Chichester.
566 Harrison C., Eckman B., Hamilton R., Hartswick P., Kalagnanam J., Paraszczak J. and Williams P.
567 (2010), Foundations for smarter cities, IBM Journal of Research and Development, 54(4), 1–
568 16.
569 Harvey D. (1989), From managerialism to entrepreneurialism: The transformation in urban
570 governance in late capitalism, Geografiska Annaler B, 71(1), 3–17.
571 Harvey D. (2008), The right to the city, New Left Review, 53, 23–40.
572 Hatuka T., Rosen-Zvi I., Birnhack M., Toch E. and Zur H. (2018), The political premises of
573 contemporary urban concepts: The global city, the sustainable city, the resilient city, the creative

574 city and the smart city, Planning Theory & Practice, 19(2), 160–179, DOI:
575 10.1080/14649357.2018.1455216.
576 Healey P. (1997), Collaborative Planning: Shaping Places in Fragmented Societies, Macmillan,
577 Basingstoke.
578 Hill D., Bruno M., Melo H.P.M., Takeuchi Y. and Loreto V. (2024), Cities beyond proximity,
579 Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering
580 Sciences, 382(2285), 20240097, DOI: 10.1098/rsta.2024.0097.
581 Hodson M. and Marvin S. (2010), Urbanism in the anthropocene: Ecological urbanism or premium
582 ecological enclaves?, City, 14(3), 298–313.
583 Hollands R.G. (2008), Will the real smart city please stand up?, City, 12(3), 303–320.
584 Hölscher K., Frantzeskaki N., McPhearson T. and Loorbach D. (2018), Tales of transforming cities:
585 Transformative climate governance capacities in New York City, U.S. and Rotterdam,
586 Netherlands, Journal of Environmental Management, 231, 843–857, DOI:
587 10.1016/j.jenvman.2018.10.043.
588 Honey-Rosés J., Anguelovski I., Chireh V.K., Daher C., Konijnendijk van den Bosch C., Litt J.S.,
589 Mawani V. and Nieuwenhuijsen M.J. (2020), The impact of COVID-19 on public space: A
590 review of the emerging questions, Cities and Health, 5(sup1), S263–S279.
591 Hu T., Zhao L., Huang Y., Yan H. and Chen X. (2026), The dark side of retail investors' green activism:
592 evidence from corporate greenwashing, International Journal of Bank Marketing, advance
593 online publication, DOI: 10.1108/IJBM-04-2025-0280.
594 Jabareen Y.R. (2006), Sustainable urban forms: Their typologies, models and concepts, Journal of
595 Planning Education and Research, 26(1), 38–52.
596 Jacobs J.M. (2012), Urban geographies I: Still thinking cities relationally, Progress in Human
597 Geography, 36(3), 412–422.
598 Jenks M., Burton E. and Williams K. (eds) (1996), The Compact City: A Sustainable Urban Form?,
599 E and FN Spon, London.

Jensen J.P. and Remmen A. (2017), Enabling circular economy through product stewardship, Procedia Manufacturing, 8, 377–384.

Jessop B. and Sum N.-L. (2000), An entrepreneurial city in action: Hong Kong's emerging strategies in and for (inter)urban competition, Urban Studies, 37(12), 2287–2313.

Jia H., Wang Z., Zhen X., Clar M. and Yu S.L. (2017), China's sponge city construction: A discussion on technical approaches, Frontiers of Environmental Science & Engineering, 11(4), 18.

Jones D., Snider C., Nassehi A., Yon J. and Hicks B. (2020), Characterising the digital twin: A systematic literature review, CIRP Journal of Manufacturing Science and Technology, 29, 36–52, DOI: 10.1016/j.cirpj.2020.02.002.

Jordan A., Huitema D., Hildén M., van Asselt H., Rayner T.J., Schoenefeld J.J., Tosun J., Forster J. and Boasson E.L. (2015), Emergence of polycentric climate governance and its future prospects, Nature Climate Change, 5(11), 977–982, DOI: 10.1038/nclimate2725.

Joss S., Sengers F., Schraven D., Caprotti F. and Dayot Y. (2019), The smart city as global discourse: Storylines and critical junctures across 27 cities, Journal of Urban Technology, 26(1), 3–34.

Kandt J. and Batty M. (2021), Smart cities, big data and urban policy: Towards urban analytics for the long run, Cities, 109, 102992, DOI: 10.1016/j.cities.2020.102992.

Kaplan A. and Haenlein M. (2019), Siri, Siri, in my hand: Who's the fairest in the land?, Business Horizons, 62(1), 15–25.

Katz B. and Wagner J. (2014), The Rise of Innovation Districts: A New Geography of Innovation in America, Brookings Institution, Washington, DC.

Kennedy C., Cuddihy J. and Engel-Yan J. (2007), The changing metabolism of cities, Journal of Industrial Ecology, 11(2), 43–59.

Kitchin R. (2014), The real-time city? Big data and smart urbanism, GeoJournal, 79(1), 1–14.

Kitchin R. (2016), The ethics of smart cities and urban science, Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences, 374(2083), 20160115.

Laclau E. and Mouffe C. (1985), Hegemony and socialist strategy: Towards a radical democratic politics, Verso, London.

Landry C. (2012), The Creative City: A Toolkit for Urban Innovators, 2nd edition, Earthscan, London.

Leach M., Rockström J., Raskin P., Scoones I., Stirling A. and Smith A. (2012), Transforming innovation for sustainability, Ecology and Society, 17(2), 11.

Lehtola V.V., Koeva M., Oude Elberink S., Raposo P., Virtanen J.-P., Vahdatikhaki F. and Borsci S. (2022), Digital twin of a city: Review of technology serving city needs, International Journal of Applied Earth Observation and Geoinformation, 114, 102915, DOI: 10.1016/j.jag.2022.102915.

Luque-Ayala A. and Marvin S. (2015), Developing a critical understanding of smart urbanism?, Urban Studies, 52(12), 2105–2116.

MacLeod G. (2002), From Urban Entrepreneurialism to a 'Revanchist City'? On the Spatial Injustices of Glasgow's Renaissance, Antipode, 34(3), 602–624, DOI: 10.1111/1467-8330.00256.

Marcuse P., Connolly J., Novy J., Olivo I., Potter C. and Steil J. (eds) (2009), Searching for the Just City: Debates in Urban Theory and Practice, Routledge, London.

McCann E. and Ward K. (2012), Assembling urbanism: Following policies and 'studying through' the sites and situations of policy making, Environment and Planning A: Economy and Space, 44(1), 42–51, DOI: 10.1068/a44178.

McFarlane C. (2011), The city as assemblage: Dwelling and urban space, Environment and Planning D: Society and Space, 29(4), 649–671.

Meerow S. and Newell J.P. (2019), Urban resilience for whom, what, when, where, and why?, Urban Geography, 40(3), 309–329, DOI: 10.1080/02723638.2016.1206395.

Meerow S., Newell J.P. and Stults M. (2016), Defining urban resilience: A review, Landscape and Urban Planning, 147, 38–49, DOI: 10.1016/j.landurbplan.2015.11.011.

Metzger J., Allmendinger P. and Fehrenbach S. (eds) (2015), Planning against the political: Democratic deficits in European territorial governance, Routledge, London.

651 Miraftab F. (2009), Insurgent planning: situating radical planning in the global South, Planning
652 Theory, 8(1), 32–50.
653 Mohammadi N. and Taylor J.E. (2021), Knowledge discovery in smart city digital twins, Sustainable
654 Cities and Society, 73, 103090.
655 Mohanty S.P., Choppali U. and Kougianos E. (2016), Everything you wanted to know about smart
656 cities, IEEE Consumer Electronics Magazine, 5(3), 60–70.
657 Moreno C. (2019), La ville du quart d'heure, M@ppemonde, 126, 1–10.
658 Moreno C., Allam Z., Chabaud D., Gall C. and Pratlong F. (2021), Introducing the "15-minute city":
659 Sustainability, resilience and place identity in future post-pandemic cities, Smart Cities, 4(1),
660 93–111.
661 Morozov E. and Bria F. (2018), Rethinking the smart city, Rosa Luxemburg Stiftung, New York.
662 Mosse D. (2004), Is good policy unimplementable? Reflections on the ethnography of aid policy and
663 practice, Development and Change, 35(4), 639–671.
664 Myeong S., Park J. and Lee M. (2022), Research models and methodologies on the smart city: A
665 systematic literature review, Sustainability, 14(3), 1687, DOI: 10.3390/su14031687.
666 Nam T. and Pardo T.A. (2011), Conceptualizing smart city with dimensions of technology, people
667 and institutions, Proceedings of the 12th Annual International Digital Government Research
668 Conference, 282–291.
669 Neuman M. (2005), The compact city fallacy, Journal of Planning Education and Research, 25(1),
670 11–26.
671 Ostrom E. (1996), Crossing the great divide: coproduction, synergy and development, World
672 Development, 24(6), 1073–1087.
673 Palència L., León-Gómez B.B., Bartoll X., Carrere J., Díez È., Font-Ribera L., Gómez A., López
674 M.J., Marí-Dell'Olmo M., Mehdipanah R., Olabarría M., Pérez G., Puig-Ribera A., Rico M.,
675 Rojas-Rueda D., Vásquez-Vera H. and Pérez K. (2020), Study protocol for the evaluation of the
676 health effects of Superblocks in Barcelona: The 'Salut Als Carrers' (Health in the Streets)

project, International Journal of Environmental Research and Public Health, 17(8), 2956, DOI: 10.3390/ijerph17082956.

Peck J. (2005), Struggling with the creative class, International Journal of Urban and Regional Research, 29(4), 740–770.

Pollitt C. and Hupe P. (2011), Talking About Government: The role of magic concepts, Public Management Review, 13(5), 641–658, DOI: 10.1080/14719037.2010.532963.

Pozoukidou G. and Angelidou M. (2022), Urban planning in the 15-minute city: Revisited under sustainable and smart city developments until 2030, Smart Cities, 5(4), 1356–1375, DOI: 10.3390/smartcities5040069.

Pozoukidou G. and Chatziyiannaki Z. (2021), 15-Minute City: Decomposing the new urban planning eutopia, Sustainability, 13(2), 928.

Pratt A.C. (2011), The cultural contradictions of the creative city, City, Culture and Society, 2(3), 123–130, DOI: 10.1016/j.ccs.2011.08.002.

Prendeville S., Cherim E. and Bocken N. (2017), Circular cities: Mapping six cities in transition, Environmental Innovation and Societal Transitions, 26, 171–194.

Purcell M. (2006), Urban democracy and the local trap, Urban Studies, 43(11), 1921–1941.

Ramírez López L.J. and Grijalba Castro A.I. (2020), Sustainability and resilience in smart city planning: A review, Sustainability, 13(1), 181, DOI: 10.3390/su13010181.

Rathore M.M., Shah S.A., Shukla D., Bentafat E. and Bakiras S. (2021), The role of AI, machine learning and big data in digital twinning: A systematic literature review, challenges and opportunities, IEEE Access, 9, 32030–32052.

Register R. (1987), Ecocity Berkeley: Building Cities for a Healthy Future, North Atlantic Books, Berkeley, CA.

Rockefeller Foundation (2015), City Resilience Framework, The Rockefeller Foundation / Arup, New York.

Roseland M. (1997), Dimensions of the eco-city, Cities, 14(4), 197–202.

Scholte J.A. (2011), Towards greater legitimacy in global governance, Review of International Political Economy, 18(1), 110–120.

Schraven D., Joss S. and de Jong M. (2021), Past, present, future: Engagement with sustainable urban development through 35 city labels in the scientific literature 1990–2019, Journal of Cleaner Production, 292, 125924, DOI: 10.1016/j.jclepro.2021.125924.

Sharifi A. (2022), An overview and thematic analysis of research on cities and the COVID-19 pandemic, iScience, 25(11), 105297.

Söderström O., Paasche T. and Klauser F. (2014), Smart cities as corporate storytelling, City, 18(3), 307–320.

Soja E.W. (2010), Seeking Spatial Justice, University of Minnesota Press, Minneapolis.

Swyngedouw E. (2005), Governance innovation and the citizen: the Janus face of governance-beyond-the-state, Urban Studies, 42(11), 1991–2006.

Tao F., Zhang H., Liu A. and Nee A.Y.C. (2019), Digital twin in industry: State-of-the-art, IEEE Transactions on Industrial Informatics, 15(4), 2405–2415.

Thakuriah P., Tilahun N. and Zellner M. (eds) (2017), Seeing Cities through Big Data: Research, Methods and Applications in Urban Informatics, Springer, Cham.

Townsend A.M. (2013), Smart cities: Big data, civic hackers and the quest for a new utopia, W.W. Norton, New York.

Trencher G. (2019), Towards the smart city 2.0: empirical evidence of using smartness as a tool for tackling social challenges, Technological Forecasting and Social Change, 142, 117–128.

UN-Habitat (2010), State of the World's Cities 2010/2011: Bridging the Urban Divide, UN-Habitat, Nairobi.

UN-Habitat (2016), World Cities Report 2016: Urbanization and Development: Emerging Futures, UN-Habitat, Nairobi.

727 Veloso Á., Fonseca F. and Ramos R. (2024), Insights from smart city initiatives for urban
728 sustainability and contemporary urbanism, Smart Cities, 7(6), 3188–3209, DOI:
729 10.3390/smartcities7060124.
730 Viitanen J. and Kingston R. (2014), Smart cities and green growth: Outsourcing democratic and
731 environmental resilience to the global technology sector, Environment and Planning A:
732 Economy and Space, 46(4), 803–819, DOI: 10.1068/a46242.
733 Voytenko Y., McCormick K., Evans J. and Schliwa G. (2016), Urban living labs for sustainability and
734 low carbon cities in Europe: Towards a research agenda, Journal of Cleaner Production, 123,
735 45–54.
736 While A. and Whitehead M. (2013), Cities, urbanisation and climate change, Urban Studies, 50(7),
737 1325–1331.
738 Wiig A. (2016), The empty rhetoric of the smart city: From digital inclusion to economic promotion
739 in Philadelphia, Urban Geography, 37(4), 535–553, DOI: 10.1080/02723638.2015.1065686.
740 Williams K., Burton E. and Jenks M. (2000), Achieving the compact city through intensification: An
741 acceptable option?, in Jenks M. and Burgess R. (eds), Compact Cities: Sustainable Urban Forms
742 for Developing Countries, Spon Press, London, pp. 83–96.
743 Wong T.H.F. (2006), Water sensitive urban design: the journey thus far, Australasian Journal of Water
744 Resources, 10(3), 213–222.
745 World Bank (2013), Inclusion Matters: The Foundation for Shared Prosperity, World Bank,
746 Washington, DC.
747 Yiftachel O. (2009), Critical theory and 'gray space': mobilization of the colonized, City, 13(2–3),
748 246–263.
749 Zakhour S. (2020), The democratic legitimacy of public participation in planning: Contrasting
750 optimistic, critical, and agnostic understandings, Planning Theory, 19(4), 349–370, DOI:
751 10.1177/1473095219897404.

Zandiatashbar A. and Kayanan C.M. (2020), Negative Consequences of Innovation-Igniting Urban Developments: Empirical Evidence from Three US Cities, Urban Planning, 5(3), 378–391, DOI: 10.17645/up.v5i3.3067.

Zhong Y., Yan H. and Xia Z. (2025), Who is lifting the green veil? Climate physical risks and supply chain spillovers of corporate carbon greenwashing, Technology in Society, 85, 103203, DOI: 10.1016/j.techsoc.2025.103203.

Zuboff S. (2019), The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power, PublicAffairs, New York.

Appendix A.

Table A.1 Key references by Table 1 category.

Theme	Term	Key references
Technology and data	Smart city	Hollands 2008; Söderström et al. 2014; Albino et al. 2015; Kitchin 2014; Wiig 2016; Cowley et al. 2018; Batty 2012
	Data-driven city	Kitchin 2014; Batty 2013; Thakuriah et al. 2017; Goodchild 2022
	Platform city	Morozov and Bria 2018; Barns 2020; Caprotti et al., 2022
	Digital twin city	Tao et al. 2019; Dembski et al. 2020; Batty 2020; Lehtola et al. 2022
	AI city	Allam and Dhunny 2019; Cugurullo 2021; Veloso et al. 2024
Climate and sustainability	Low-carbon city	Bulkeley and Betsill 2003; Bulkeley et al. 2010; Acuto 2013
	Resilient city	Folke 2006; Davoudi 2012; Meerow et al. 2016; Meerow and Newell 2016; Elmqvist et al. 2018

Theme	Term	Key references
	Net-zero city	Bulkeley et al. 2014; Hölscher et al. 2018
	Circular city	Girardet 1992; Kennedy et al. 2007; European Commission 2015; Prendeville et al. 2017; Jensen and Remmen 2017
	Eco-city	Register 1987; Roseland 1997; Beatley 2000; Jabareen 2006
	Water - sensitive city	Wong 2006; Brown et al. 2009; Fletcher et al. 2015
	Sponge city	Jia et al. 2017
Spatial form and proximity	Compact city	Jenks et al. 1996; Burton 2000; Williams et al. 2000; Banister 2008; Neuman 2005
	Transit-oriented development	Calthorpe 1993; Bertolini 1999; Curtis et al. 2009
	Walkable city	Banister 2008; Palència et al., 2020; García-López et al. 2020
	20-minute neighbourhood / 15-minute city	Moreno 2019; Moreno et al. 2021; Allam and Moreno 2021; Pozoukidou and Chatziyiannaki 2021; Hill et al. 2024
Economic development and innovation	Creative city	Florida 2002; Landry 2012
	Knowledge city	Carrillo 2004; Carrillo 2006
	Entrepreneurial city	Harvey 1989; Jessop and Sum 2000
	Innovation district	Katz and Wagner 2014; Centre for London 2016
Governance and justice	Inclusive city	UN-Habitat 2010; UN-Habitat 2016; World Bank 2013
	Just city	Marcuse et al. 2009; Fainstein 2010; Soja 2010; Fainstein 2014; Campbell 2006

Theme	Term	Key references
	Participatory city	Arnstein 1969; Healey 1997; Fung 2006; Cornwall 2008; Miraftab 2009; Cardullo and Kitchin 2018

763