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REVIEW ARTICLE



A research agenda for studying evidence-informed practice in urban planning

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ABSTRACT

This article reviews empirical studies of evidence-based policy and proposes an agenda for studying evidence-informed practice in planning along three directions and overarching questions: What does 'evidence' mean to practitioners in different contexts and how do practitioners prioritize and use different forms of evidence? What is the effect of individual, institutional, systemic and political factors on evidence use? How can pragmatic evidence use be facilitated for deliberative practice, what is the efficacy of different approaches, and what are the procedural outcomes of cases of evidence use? This agenda could contribute towards a more systematic and integrated understanding of evidence-informed practice.

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Research agenda; evidence-informed practice; urban planning; pragmatism; deliberation

Introduction

Besides the normative ideals of planning, global challenges (e.g. climate change, rapid urbanization, economic uncertainty, social inequality, political polarization, and environmental and infrastructural degradation) require planners to use sound evidence when tackling wicked urban problems (Intergovernmental Panel on Climate Change, 2023; Evans *et al.*, 2025). However, the notion of 'evidence-based policy' has been criticized in planning for its narrow focus on the instrumental use of scientific evidence. Planning is contextual, multifaceted, mediated and regulated. Due to unique contexts and conflicting rationalities and objectives, even good scientific evidence seldom translates directly into a specific decision, policy or plan (Davoudi, 2006, 2012, 2015a; Faludi & Waterhout, 2006; Marais & Matebesi, 2013).

However, as regards 'evidence-based practice' (Krizek *et al.*, 2009), Davoudi (2006, 2012) has argued that if it is reconsidered as evidence-informed practice, it may still be relevant in planning in that evidence can inform the broader decision-making landscape of planning. The same argument has been put forward in public policy (Nutley *et al.*, 2003; Head, 2008, 2015; Newman, 2020; Durrant *et al.*, 2024), conservation science (Rose *et al.*, 2019) and tourism geography (Garcia *et al.*, 2025).

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Thus, evidence-informed practice introduces different forms and uses of evidence. In public policy, ‘evidence’ may include scientific, practical and political knowledge (Nutley *et al.*, 2003; Head, 2008). In planning, it may include scientific and practical knowledge (Davoudi, 2012, 2015a; Forester, 2012; Behrend, 2024; Geertman & Witte, 2024), as well as local (Forester, 2012) and indigenous knowledge (Porter, 2017; Intergovernmental Panel on Climate Change, 2023). In public policy, ‘scientific evidence’ generally means ‘the best available’ fundamental research or applied research such as statistics, monitoring and evaluation (Organisation for Economic Co-operation and Development [OECD], 2020, p. 12, as cited in Raymaekers *et al.*, 2025). Applied research in planning includes an even wider range of methods that span the physical, social, perceptual, functional, temporal, morphological, visual and governance dimensions of planning and design (Krizek *et al.*, 2009; Carmona, 2021). Research can be used for instrumental *and* conceptual or political purposes (Davoudi, 2015b; Newman, 2017). Moreover, trends, such as increased knowledge production, translation and mobilization, digitization, and greater societal participation, now provide planners with unprecedented access to evidence.

The different forms and uses of evidence, as integral to planning as they may have become, raise several epistemological, procedural and ethical issues that require further study. For example, different knowledges are not equally validated or prioritized (Rydin, 2007; Marshall, 2012) and are subject to different institutional and political dynamics (Healey, 2008). Global South and developing countries face additional resource constraints on the use of evidence (Tonnarelli & Weaver, 2026), while the advent of digital planning has profound implications not only in terms of reach and efficacy (Kandt & Batty, 2021) but also ethics (Sanchez *et al.*, 2025; Guadagnoli, 2026). Various factors influence practitioners’ ability to use evidence in complex ways, which makes identifying, implementing and evaluating approaches for evidence use difficult. Moreover, the desired outcome of evidence use is open to question, both in procedural and substantive terms.

Therefore, this article proposes a research agenda for studying evidence-informed practice in urban planning. This agenda is grounded in the normative position that evidence can be used pragmatically for deliberative practice. Based on Ansell and Geyer’s (2017) notion of ‘pragmatic complexity’, pragmatic evidence use can be regarded as situated and adaptive, navigating uncertainty and plurality rather than linear, technocratic solutions. Although pluralist, pragmatism is not relativist – different forms of evidence should still be validated (Rydin, 2007), prioritized (Marshall, 2012; Tate, 2020) and considered reasonable within a context (Kay, 2011). Using Forester’s (2012, 2022) notion of ‘deliberative practice’, evidence should be used to support critical, inclusive and creative policy- and plan-making (i.e. procedural outcomes), which in turn could contribute towards more sustainable, just and equitable cities (i.e. substantive outcomes).

Sustainable Development Goal 17 highlights evidence-informed policy-making as a means to promote sustainable development through partnerships (Garcia *et al.*, 2025). Evidence-informed policy-making has therefore received focus in public policy and has become central to the agendas of the European Commission and the OECD (Raymaekers *et al.*, 2025). Further, Stead (2016) has argued that research funding agencies increasingly require co-production, and that further studies on the planning

research–practice nexus are therefore necessary, including how co-production may support evidence-informed practice.

This article first reviews existing empirical studies of evidence-based policy across public policy sectors as a wider backdrop, followed by empirical studies of evidence-based practice in urban planning. Thereafter, the article summarizes existing research agendas for studying evidence-informed policy in related disciplines. The gaps identified and insights gained are then synthesized into a research agenda along three directions and overarching questions. The article later on adopts the term ‘evidence-informed practice’ in planning as the setting for both policy- and plan-making. While policy-making is at a higher scale and involves broader priorities and frameworks, plan-making translates these into specific spatial strategies and actions. Both, however, involve the use of evidence in overlapping ways (Krizek *et al.*, 2009).

Existing empirical studies

Empirical studies of evidence-based policy across public policy sectors

The literature on evidence-based policy is substantial across various public policy sectors, including housing and urban development. This section provides a meta-review of three recent reviews of empirical studies about evidence-based policy across these sectors (Newman, 2020; Capano & Malandrino, 2022; Nelson *et al.*, 2023). The three reviews were located through a Scopus search using keyword variations of ‘evidence-based policy’ AND ‘public policy’ AND ‘review’. Empirical studies are typically ‘knowledge utilisation’ (Hertin *et al.*, 2009, p. 1187) or ‘research utilization’ (Newman, 2017, p. 211) studies, and have generally taken ‘evidence-based policy’ to mean the use of research in policy-making, especially fundamental research or applied research conducted by semi-autonomous agencies such as statistical bureaus and science councils. The three reviews, covering studies conducted between 1990 and 2022, therefore focussed on the use of research for policy-making (Capano & Malandrino, 2022; Nelson *et al.*, 2023), and how research use could be improved in government (Newman, 2020). Most studies in Nelson *et al.*’s review were from England and Australia, with some from the United States and Canada, revealing the dominance of Global North and Anglophone countries.

Studies were criticized for overtheorizing the debates about research use (Newman, 2020) and were described as either ‘objectivist’ (seeing knowledge as something that is external to policy-making) or ‘subjectivist’ (seeing knowledge as inextricably part of policy-making), and hence subject to the dynamics of policy-making (Capano & Malandrino, 2022, p. 399). Policy-makers used research irregularly and mostly for conceptual purposes (e.g. gaining personal understanding and framing problems) and to a lesser extent for instrumental or political purposes (e.g. making or legitimizing decisions) (Nelson *et al.*, 2023; see also Newman, 2017). As shown later, this irregular and conceptual use of research is similar to the use of research in planning.

Three critical factors influencing research use included political and systemic factors such as ideology, relationships and capacity (Capano & Malandrino, 2022), while individual factors (e.g. skills, attitudes towards research, and information-search behaviour) and institutional factors (e.g. institutional culture, leadership support, and access to resources) also influenced research use (Nelson *et al.*, 2023). However, the studies lacked

clarity about how research use could be improved, while policy-makers generally opted for co-production (Newman, 2020). Newman questioned whether co-production would necessarily be the most effective approach, citing three studies that specifically found that a lack of co-production was not the most limiting factor (see Kothari *et al.*, 2005; Bowen *et al.*, 2009; Flitcroft *et al.*, 2011, as cited in Newman, 2020). Moreover, Nelson *et al.* (2023) identified only three studies that evaluated the outcome of research use, two of which yielded conclusive results of positive outcomes, whereas one yielded inconclusive results.

Studies generally acknowledged the dynamic and politicized nature of policy processes and the complex and subjective role of knowledge within these processes, but suggested that research was still important regardless of ‘post-normal science’ and ‘post-truth politics’ (Nelson *et al.*, 2023, p. 1480). Therefore, gaps have been identified that are relevant to the agenda proposed in this article, particularly in terms of studying research use in planning practice.

Further research could draw from studies in cognitive and social psychology on information choice, decision-making and individual or organizational learning (see also Nutley *et al.*, 2003, and the study by; Mazzoleni & Zubani, 2026 reviewed later on). It could focus more on practitioners who do use research and the types of policy and planning problems for which research could be used (Newman, 2020; Nelson *et al.*, 2023). Importantly, further research should be more integrated to better understand the effect of different factors on research use (Capano & Malandrino, 2022). Usage should be measured in a more consistent manner to enable generalization and comparison across different geographical and institutional contexts (Nelson *et al.*, 2023). Pragmatic frameworks and approaches for research use should be identified, while innovative experiments or interventions could evaluate the efficacy of different approaches, including co-production (Newman, 2020; Capano & Malandrino, 2022). The outcome of research use should also be assessed in terms of the extent to which it improved deliberative practice (Nelson *et al.*, 2023). Finally, more studies from the Global South and non-Anglophone countries are necessary.

Empirical studies of evidence-based practice in urban planning

This section provides an integrative review of empirical studies about evidence-based practice in planning, specifically practitioners’ use of research and other forms of evidence. Special journal issues on the planning research–practice nexus (Wu & Brooks, 2012; Hurley *et al.*, 2016b; Whitzman & Goodman, 2017; Sanchez, 2021; Heinrich *et al.*, 2022) and evidence-based planning (Campbell, 2002; Faludi, 2006) served as a starting point. From these issues, relevant empirical studies were selected, as were additional studies located through backward and forward citation searches. To verify and augment the selection of studies, a Scopus search was conducted using keyword variations of ‘research use’ OR ‘evidence use’ AND ‘urban planning’. Contrary to the review of Nelson *et al.* (2023) of public policy studies, planning studies were found to be mostly from Australasia, Europe and to a lesser extent other parts of the world, although Global North and Anglophone countries still dominated. Studies were grouped based on similar methodologies, which included citation analyses, field research and surveys, case studies of spatial planning, and constructivist studies.

Citation analyses, field research and surveys focussed on practitioners' use of research, more so than other forms of evidence. Normative arguments about planning research indeed problematize the planning research–practice nexus as a gap that should be bridged through greater interaction and reflection to yield research that is more relevant and useable for practitioners (see journal editorials by Campbell, 2012; Forester, 2015; Porter, 2015; Forsyth, 2019; Nadin, 2023; a review essay by Troy, 2013; and edited book introductions by Harris, 2015; Sanchez, 2018 in addition to the special journal issues cited above).

Two studies based on citation analyses focussed on practitioners' use of fundamental research compared to other forms of evidence. Only 10% of references in South African provincial growth and development strategies included research (Marais & Matebesi, 2013), whereas references to research were even more limited in local plans in England (Liu, 2026). Instead, strategies and plans, especially local documents and self-conducted or commissioned research, cited applied research. Still, the link between cited sources and policy decisions appeared weak (Marais & Matebesi, 2013, see also the report on the use of evidence in spatial planning by the UK Department of Communities and Local Government, 2007, as cited in Davoudi, 2012), while co-production was considered key to improving research use (Marais & Matebesi, 2013; Liu, 2026). These two studies, however, did not analyse the function of citations, for example, whether citations legitimized decisions or merely fulfilled procedural expectations. Citation analyses would also not reveal any indirect ways in which practitioners might engage sources.

Studies based on field research and surveys also focussed on practitioners' use of fundamental research. While there was noticeable co-production and conceptual use of research in Germany (Hellmich & Lange, 2016), it was less so in Australia, New Zealand (Taylor & Hurley, 2016; Goodman *et al.*, 2017) and Turkey (Aksümer, 2023), while research use was irregular and compliance-oriented in Croatia, Cyprus, Italy and Portugal (Psathiti & Charalambous, 2026). Australian, Croatian, Cyprian, Italian and Portuguese practitioners preferred grey literature, professional networks and applied research, while factors influencing their research use were similar to those identified in public policy studies (Taylor & Hurley, 2016; Psathiti & Charalambous, 2026; see also the commentary by Stead, 2016). Although practitioners generally considered fundamental research to be less relevant, they expressed concern over a lack of evidence in practice and called for greater co-production (see also the commentaries by Phibbs, 2016; Rowe, 2016; Stead, 2016). German practitioners, however, added that co-production would not necessarily improve research use.

In fact, while high-level co-production was crucial in spatial strategy-making in Italy, the Netherlands and UK, it was strongly mediated by institutional contexts and dynamics (Healey, 2008). A qualitative evaluation of the efficacy of co-production for green infrastructure in Australia suggested that support for research use could improve co-production (whereas studies cited earlier suggested the reverse – that co-production improved research use). Yet, 'tensions and caveats' were likely to remain due to enduring professional and epistemic differences between researchers and practitioners (Hurley *et al.*, 2017, p. 508).

The UK government's renewed emphasis on evidence-based policy has also been questioned in the context of planning. Interviews with practitioners in England

revealed a possible retreat to ‘positivist’ decision-making that might favour ‘hard evidence’ (i.e. research) over practical and local forms of knowledge (Ludwig *et al.*, 2024, p. 136; see also the interpretivist critique of positivist spatial planning by Davoudi, 2012, and the phronetic critique of smart cities by Cook & Karvonen, 2024).

Case studies of spatial planning had a wider take on evidence besides research. Despite the renewed emphasis on evidence-based policy and an increase in evidence, evidence use in local development frameworks in England lacked a ‘well-established or uniform practice’ (Lord & Hincks, 2010, p. 477). Yet, Kandt and Batty’s (2021) review of empirical studies of big data highlighted its potential for smart urbanism, urban analytics and pragmatic rather than instrumental decision-making. Urban analytics for the greater Sydney region plan, however, remained mediated by institutional priorities, organizational dynamics and co-ordination challenges, which influenced evidence use (Daniel & Pettit, 2025). Still, the notion of ‘good enough evidence’ emerged in case studies of Global South cities such as Bosaso (Somalia), Durban (South Africa) and Khorog (Tajikistan). Practitioners mobilized partial and locally embedded data under resource constraints, showing that pragmatic use of evidence was crucial for Southern smart urbanism (Tonnarelli & Weaver, 2026). The *ex post* use of evidence in Greek spatial planning has also been shown to be pragmatic (Kafkalas & Pitsiava, 2023).

Constructivist studies also had a wider take on evidence, but considered the context of epistemic communities or regulatory regimes and their influence on decision-making (see, e.g. Cowell & Lennon, 2014; Dunlop, 2014; Rydin *et al.*, 2018). Rydin *et al.* studied renewable energy projects in England and Wales to determine how regulatory regimes handled contested knowledge claims while presenting decisions as evidence-based. Using the concept of ‘black-boxing’ from science and technology studies, they showed how evidence was assembled, stabilized and rendered authoritative in order to close down debates around certain knowledge claims and enable a decision to be made. Evidence was not necessarily neutral or purely technical, but actively constructed through institutional processes, documentation practices and regulatory expectations.

Planning studies identified similar and additional gaps to those identified in public policy studies. Ludwig *et al.* (2024) argued for a better epistemological understanding of planning in terms of the possibility of different forms of evidence to support deliberative practice (see also Taylor & Hurley, 2016). Thus, the concept of ‘evidence’ and what would be regarded as evidence require greater clarity, while individual practitioners’ use of evidence should be explored over and above institutional and citation practices.

Similar to public policy studies, planning studies suggest that research should be more integrated to better understand the effect of different factors on evidence use. They too imply that usage should be measured in a more consistent manner to enable generalization and comparison across different geographical and institutional contexts (Hellmich & Lange, 2016; Taylor & Hurley, 2016; Goodman *et al.*, 2017; Aksümer, 2023). Mazzoleni and Zubani’s (2026) study is an example of how planning can use conceptual frameworks from the social sciences in a more structured postpositivist paradigm. They used two frameworks from political science to explain evidence use in Italian spatial planning, including the Credibility, Relevance and Legitimacy (CRELE) and Applicability, Comprehensiveness, Timing and Accessibility (ACTA) frameworks. These

frameworks helped illustrate that practitioners integrated politics and different forms of evidence in a pragmatic manner rather than viewing them as competing dynamics.

Planning studies too suggest that pragmatic frameworks and approaches for evidence use should be identified (Lord & Hincks, 2010; Taylor & Hurley, 2016; see also the commentary by Forsyth, 2016, and the example by Karimi *et al.*, 2025). Such frameworks could consider deliberative rather than instrumental rationalities (Kandt & Batty, 2021), the governance of data, the integration of local and indigenous knowledge, and the boundaries of ‘good enough evidence’ (Tonnarelli & Weaver, 2026). Many studies called for co-production, but again, the efficacy of co-production requires evaluation (see, e.g. Hurley *et al.*, 2017). Constructivist studies point to the need to also assess the outcome of evidence use in terms of the extent to which it improves deliberative practice (see, e.g. Rydin *et al.*, 2018 on the inclusion of marginalized knowledge in decision-making). As with public policy studies, more planning studies from the Global South and non-Anglophone countries are necessary.

Existing research agendas in related fields

Research agendas for studying evidence-informed policy have been set in the fields of conservation science (Rose *et al.*, 2019) and tourism geography (Garcia *et al.*, 2025), which provide insights for the agenda proposed in this article. Rose *et al.* (2019) argue that barriers and solutions to evidence use are well known, but that the implementation of solutions is slow. Further research could therefore focus on overcoming implementation challenges through transdisciplinarity and other forms of co-production – the benefits of which they deem to be obvious. As pointed out earlier, however, the efficacy of co-production requires evaluation. Although barriers are well known, there is scope for planning studies to explore and compare practitioner experiences more carefully through in-depth qualitative research across public and private sectors, especially in Global South and non-Anglophone countries (see also Varzeshi *et al.*, 2026).

Garcia *et al.* (2025) identify four issues in evidence-informed policy requiring further research. First, research could clarify the concept of ‘evidence’ and identify different forms of evidence (see also Nutley *et al.*, 2003; Krizek *et al.*, 2009; Head, 2010; Lord & Hincks, 2010). In fact, Tate (2020) argues that planners should consider creating ‘evidence matrices’ (p. 635). Second, research could focus on politics, policy and governance processes and policy-makers themselves (see also Nutley *et al.*, 2003), while distinguishing between rationalist/normative analyses (how policy-making *should* happen) and constructivist/descriptive analyses (how policy-making *is* happening) (see also Head, 2015; Newman, 2017). Third, research could evaluate how co-production is implemented in practice and perceived by stakeholders (see also Krizek *et al.*, 2009). And fourth, research could evaluate the efficacy of co-production and assess the outcome of evidence use (see also Head, 2010; Newman, 2020; Nelson *et al.*, 2023; Raymaekers *et al.*, 2025), especially through cross-national comparisons (see also Hurley *et al.*, 2016a; Raymaekers *et al.*, 2025). The gaps identified in the reviews and agendas mentioned above are subsequently synthesized into a research agenda for studying evidence-informed practice in planning.

Towards a research agenda for studying evidence-informed practice in urban planning

Evidence-informed practice is an important, complex and multifaceted – but also problematic – phenomenon that could be studied from various angles, for various purposes, and using various methodologies. To ensure more systematic and integrated research, the agenda presented here is incremental, and centres around practitioners, practices and, in particular, evidence use. It is primarily rationalist in assuming that evidence can and should be used pragmatically for deliberative practice. Still, it acknowledges contextuality and accepts constructivist critiques of the subjectivity and limitations of evidence use, while identifying these limitations as areas for possible improvement (Krizek *et al.*, 2009; Head, 2010, 2015; Newman, 2017; Saltellia & Giampietroa, 2017; Garcia *et al.*, 2025; Mazzoleni & Zubani, 2026). **Diagram 1** synthesizes the literature review in terms of three gaps and directions for further research. **Table 1** then outlines each direction in terms of its concomitant foundational, theoretical and methodological considerations (see, e.g. Du Toit, 2015 regarding cohesive research design in planning).

Direction 1 aims to explore practitioners' *subjective* understanding of 'evidence'. This would include their prioritization and use of different forms of evidence (over and above their use of research that has been studied), and the factors that appear to influence evidence use. Thus, more in-depth qualitative research is necessary within an interpretivist paradigm, especially in Global South and non-Anglophone countries (see also Varzeshi *et al.*, 2026). Indigenous or postcolonial planning frameworks that challenge Western epistemologies of evidence could help frame the research in Global South and developing countries (see, e.g. Watson, 2009; Porter, 2017; Tonnarelli & Weaver, 2026). The voices of practitioners are crucial, and can be captured through phenomenological studies (the different meanings that 'evidence' has for practitioners), narrative inquiries

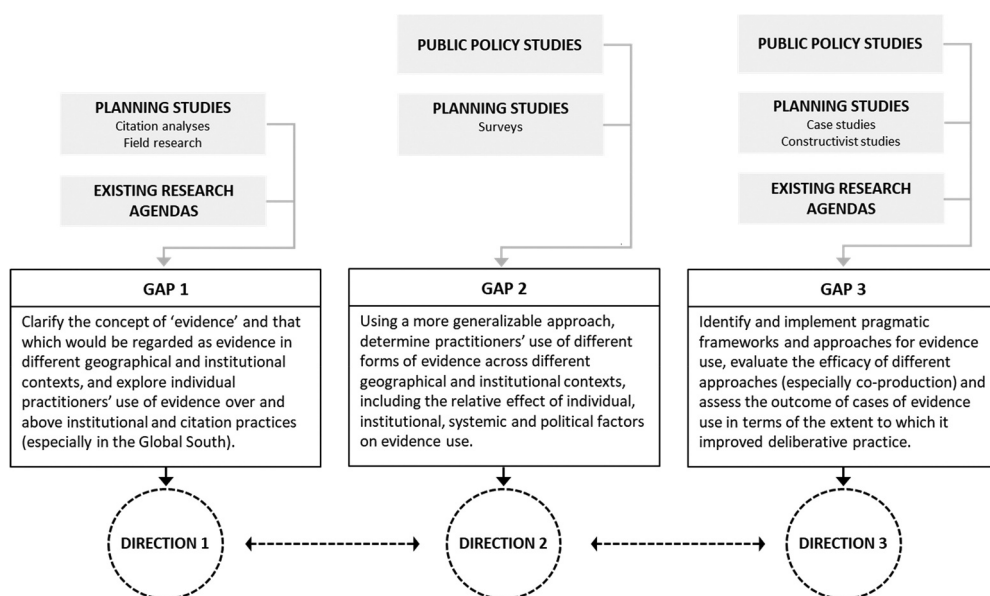


Diagram 1. Synthesis of literature review.

Table 1. A research agenda for studying evidence-informed practice in urban planning.

Consideration	Direction		
	1	2	3
Overarching research question	<i>What does ‘evidence’ mean to practitioners in different contexts, how do they prioritize and use different forms of evidence, and which factors appear to influence evidence use, especially in the Global South?</i>	<i>To what extent do practitioners use different forms of evidence in different contexts, what is the relative effect of individual, institutional, systemic and political factors, and what are the implications for facilitating evidence use?</i>	<i>How can pragmatic evidence use be facilitated for deliberative practice, and what is the efficacy of different approaches and outcome of cases of evidence use?</i>
Research purpose	Exploratory	Explanatory	Evaluative Descriptive (Reflective)
Unit of analysis	Practitioners	Practitioners	Practices
Conceptual or theoretical framework	Indigenous or postcolonial planning theory (in Global South contexts)	Systems Theory Institutional Theory Diffusion of Innovations Norm of Evidence and Research in Decision-Making Credibility, Relevance and Legitimacy Applicability, Comprehensiveness, Timing and Accessibility	Governmental models Governance Theory Urban Politics
Mode of reasoning	Inductive (theory-generating)	Deductive (theory-testing)	Abductive (praxis; theory refinement)
Methodological paradigm	Interpretivist	Postpositivist	Pragmatist Critical realist (Constructivist)
Methodological approach	Qualitative	Quantitative	Multi-/mixed-method
Research design	Phenomenological study Narrative inquiry Auto/institutional ethnography Grounded theory	Survey	Implementation and evaluation research (Comparative) Case study

(practitioners’ accounts of evidence use) or institutional ethnographies (institutional ideology, culture, norms and values around evidence use). A critical gap is autoethnography – practitioners conducting research on their own perspectives, beliefs, experiences and practices around evidence use (Tate (2020) being an exception).

Direction 1 could contribute towards a more nuanced understanding of evidence-informed practice and help to identify the types of problems for which evidence could be used pragmatically (Nelson *et al.*, 2023). Its inductive reasoning could help to define and frame the role of evidence in planning practice, and may generate theory or identify applicable conceptual and theoretical frameworks for Direction 2.

Direction 2 aims to explain practitioners’ use of evidence in terms of the effect of individual, institutional, systemic and political factors. It therefore requires standardized quantitative surveys among practitioners to enable generalization and comparison between different contexts. Possible theoretical frameworks that are more structure-based include Systems Theory (Cherney & Head, 2011), Institutional Theory (Nutley *et al.*, 2003; McLeod & Babb, 2025) or New Institutionalism (Rydin, 2021). These frameworks could be useful to analyse how institutional, systemic and political factors influence evidence use, thereby helping to address criticisms of prior studies that regarded knowledge as objective or external to policy-making (Capano & Malandrino, 2022).

Possible conceptual frameworks that are more agency-based include Diffusion of Innovations (DOI) (Nutley *et al.*, 2003), the Norm of Evidence and Research in Decision-Making (NERD) (Raymaekers *et al.*, 2025) and the CRELE and ACTA frameworks identified earlier (Mazzoleni & Zubani, 2026). These frameworks could be useful to analyse how practitioners' perceptions, strategies and decisions influence evidence use. DOI focuses on society's uptake of new technologies, which could explain practitioners' use of digital planning tools such as participatory mapping, planning support systems and artificial intelligence. While the NERD has been validated in a study of public officials in Belgium, only the CRELE and ACTA frameworks appear to have yet been validated in a study of planners. Structure- and agency-based frameworks can be combined for a more comprehensive understanding of the determinants of evidence use. The choice of framework may depend on insights from Direction 1 and the particular planning context and research question.

Direction 2 could contribute towards a more causal understanding of evidence use within a postpositivist paradigm. It helps to pin down and validate frameworks that are most likely to explain evidence use in planning practice. This direction could also guide possible interventions to improve evidence use (e.g. capacity building, knowledge mobilization and digital support) at individual, institutional or systemic levels where they are more likely to have an impact.

Drawing on insights from Direction 1 and Direction 2, Direction 3 aims to identify, implement and evaluate pragmatic frameworks or approaches for evidence use (Rose *et al.*, 2019), and to assess the outcome of cases of evidence use (Newman, 2020; Nelson *et al.*, 2023; Garcia *et al.*, 2025). It therefore implies two tiers of research and a multi- or mixed-method approach. The first is primarily pragmatist (in an epistemological sense) and includes implementation and evaluation research, in which a particular approach is implemented and evaluated for its efficacy, especially co-production approaches (see, e.g. Heinrich *et al.*, 2022 on urban living labs; Du Toit *et al.*, 2025 on transdisciplinary urban planning). Criteria for 'efficacy' should be adapted to the particular context, and may, for example, include the extent to which an approach improves practitioners' ability to (1) access, use and embed evidence in policies and plans, (2) influence decision-making based on evidence, and (3) institutionalize different forms of evidence as part of policy and planning processes (Nutley *et al.*, 2007). As the first tier aims to improve evidence use, governmental models would typically frame research in this tier (Rydin, 2021).

The second tier is primarily critical realist or constructivist, and includes case studies to assess the procedural outcome of cases of evidence use, especially in terms of the extent to which it improves deliberative practice. Again, criteria for 'deliberative practice' should be adapted to the particular context. It may, for example, include the extent to which evidence improves (1) attentive listening and understanding, (2) creative negotiation and joint problem-solving, (3) practical judgement and context responsiveness, (4) trust and legitimacy, and (5) adaptability and reflexivity (Forester, 2012, 2022). Because this tier critically reflects on evidence use, theoretical frameworks that critique rationality and governmental models, such as Governance Theory and Urban Politics (Rydin, 2021), could frame research here.

Direction 3 could contribute towards a more practical and critical understanding of evidence use, while its abductive reasoning of moving between theory and practice could

help refine pragmatic frameworks and approaches for using evidence in more deliberative ways.

Two important cross-cutting themes in this agenda include knowledge mobilization and digital planning. Knowledge mobilization, which involves research translation and brokering, is important for practitioners in local government where fundamental research seldom applies to unique contexts and implementation challenges. Successful knowledge mobilization is relational and inclusive of different forms of knowledge (especially local), and involves capacity building for evidence use at individual, institutional and systemic levels (Durrant *et al.*, 2024). Further research could explore how knowledge mobilization supports evidence use and deliberative practice, as well as the role of knowledge management (Rydin, 2021; Psathiti & Charalambous, 2026). Mobilization ensures knowledge reaches practice, while management ensures it is retained, organized and reused to strengthen long-term planning capacity.

Digital planning includes aspects of data governance, smart city infrastructure, big data analytics, planning support systems, artificial intelligence and digital participation. All of these have profound implications for practice, not only in terms of reach and efficiency but also ethics (see the journal editorial by Batty, 2023, and review essay by Sanchez *et al.*, 2025). Geertman and Witte's (2024) research agenda for digital planning focusses on improving decision-making through digital tools (see also Varzeshi *et al.*, 2026). They recommend developing digital approaches for diverse forms of knowledge and data while ensuring cross-sectoral collaboration. There is also a need to prioritize artificial intelligence and to test when and why certain tools work in practice.

The increasing reliance on digital tools could, however, reassert overly positivistic and technocratic decision-making and pose the risk of data bias and algorithmic opacity (Cook & Karvonen, 2024; Guadagnoli, 2026). Epistemic critiques of digital tools indicate that complex social and political realities tend to be reduced to quantifiable and comparable indicators (Cugurullo *et al.*, 2024). Yet, taking the normative position of deliberative practice, and answering Tate's (2020) call that planners should consider hierarchies of evidence, are ways to help mitigate some of these risks. Scientific evidence, especially modelled evidence, should be critically situated alongside practical (experiential), local and political knowledge (Davoudi, 2012, 2015a).

All three directions are equally important and are meant to be integrated, and all three could contribute towards a more systematic and integrated body of knowledge about evidence-informed practice. The agenda serves as a heuristic and questions from any one of the three directions could also be researched using methodologies from another direction, although a degree of methodological cohesion is important to avoid drift. Research within this agenda could eventually provide better guidance on how researchers could conceptualize and design fundamental research to balance theoretical rigour with practical relevance and actionable proposals. It could also provide practitioners with a clearer framework for using evidence, in which evidence helps protect space for more deliberative practice – thereby creating better conditions for pursuing, contesting and defending more sustainable, just and equitable cities.

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