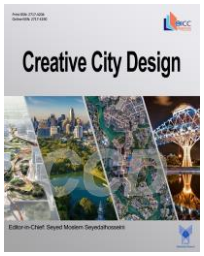

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Review Article

Elucidating Issue Identification in Urban Planning: Insights from a PRISMA-Based Systematic Review

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Abstract

Aims: This study elucidates how issue identification in urban planning integrates theoretical frameworks (e.g., wicked problems, narrative policy analysis) and tools (e.g., fuzzy models, participatory governance) to enable context-sensitive, adaptive, sustainable outcomes. It examines urban issue nature, classification, challenges, socio-political and computational processes, and gaps to propose interdisciplinary directions for urban design.

Methodology: A PRISMA 2020-compliant systematic review analyzed 28 peer-reviewed English articles (1967–2024) from Scopus, Web of Science, ScienceDirect, and Google Scholar. Inclusion: peer-reviewed, DOI, centrality to issue identification. Two reviewers applied a relevance rubric (0–10, $\kappa = 0.91$) and MMAT v2018 ($\kappa = 0.88$). Thematic analysis used a six-phase framework: familiarization, inductive coding (214 codes), theme generation (5 themes), review, definition, reporting. Inter-coder reliability: $\kappa = 0.82$ (code level), $\kappa = 0.91$ (theme level). Counts based on primary coding in Results/Discussion (n=28).

Findings: Urban issues are multidimensional and context-dependent, with wicked problems dominant (42.9%, n=12). Issue identification is socio-political, shaped by discourse and power. Network governance (25%, n=7) and participatory approaches (42.9%) enable adaptation; fuzzy models (7.1%, n=2) improve precision. Geographical disparities (10.7%) stress localized frameworks, especially in the Global South.

Conclusion: Effective issue identification requires integrative frameworks combining theoretical rigor, socio-political insights, collaboration, and computational tools. These enable urban designers to create responsive, inclusive environments such as modular public spaces, co-design platforms, and fuzzy-based zoning bridging theory and practice amid complex, evolving urban challenges.

Keywords: Issue identification, Urban issues, Urban planning, Narrative policy analysis, Network governance, PRISMA

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1. Introduction

Cities face multifaceted challenges rapid urbanization, climate change, and socio-economic inequalities that profoundly impact sustainability and urban life quality [1]. Urban planning is a critical, systematic, and adaptive tool to address these challenges, yet its effectiveness hinges on accurate issue identification. Historically, the development of solutions has taken precedence in urban planning scholarship over the systematic process of issue identification, thereby constraining the capacity to effectively address complex urban challenges [2].

Urban issues are complex, multidimensional, and context-specific, involving uncertainty, competing interests, and

long-term consequences that resist linear planning approaches [3, 4]. The concept of wicked problems characterized by interconnectedness and context-dependent dynamics underscores the need for innovative analytical and participatory frameworks. Issue identification is a socio-political process shaped by institutional frameworks, discursive practices, and collaborative governance [5, 6]. Despite its importance, gaps in conceptualizing and operationalizing issue identification persist, particularly in integrating theoretical and technological approaches [8].

This study addresses how issue identification can move beyond traditional approaches by integrating theoretical frameworks (e.g., wicked problems, narrative policy analysis) and methodological tools (e.g., computational and participatory approaches) to achieve context-sensitive, sustainable outcomes.

A PRISMA-based systematic review of 28 peer-reviewed studies (1967–2024) employs transparent inclusion/exclusion criteria and thematic analysis (inter-coder reliability, $\kappa = 0.82$) to synthesize knowledge.

To align with urban design practice, this study explores how issue identification informs responsive built environments. For example, participatory governance can shape flexible public spaces accommodating diverse stakeholder needs, while computational tools enable adaptive spatial planning.

These insights enhance the creation of inclusive, sustainable urban environments. This research examines the nature, classification, and challenges of urban issues, investigates theoretical and methodological tools, and proposes directions for interdisciplinary research to foster adaptive urban futures.

This study contributes to urban planning and design scholarship by offering a procedurally transparent synthesis that integrates policy theories with computational and participatory tools, thereby operationalizing issue identification as a foundation for creating more adaptive and inclusive built environments.

2. Theoretical framework

The theoretical framework not only clarifies how urban issues emerge but also explains how diagnostic processes influence spatial decision-making. By linking socio-political dynamics to physical outcomes, it establishes the conceptual foundations through which planning theories can inform design strategies. This section delineates the conceptual underpinnings of urban issues and their identification processes, drawing on established theories in urban planning, sociology, and public policy. By examining the nature of urban challenges and the mechanisms for their recognition, it establishes a framework for understanding the complexities inherent in contemporary urban environments.

2.1. Nature and characteristics of urban issues

Urban issues are complex phenomena arising from discrepancies between existing urban conditions and desired outcomes, affecting social, economic, and physical functionalities [2]. Sociologically, they emerge when communal values or norms are threatened, resulting in collective discontent [7]. Unlike scientific problems with defined parameters and solutions, urban issues exhibit blurred boundaries, conflicting interests, uncertainty, and context-specific dynamics [3, 8].

The concept of wicked problems captures their multifaceted nature, characterized by systemic interconnectedness, interpretive ambiguity, and resistance to definitive resolutions [4]. In rapidly urbanizing contexts, these issues are amplified by institutional rigidity and a state of societal anomie defined here as the breakdown of social norms and shared values that weakens collective trust and complicates consensus-building in planning processes [9, 10]. This normlessness directly hinders issue identification by fragmenting stakeholder perceptions and reducing the legitimacy of formal planning institutions, thereby necessitating adaptive, non-linear, and participatory strategies to restore social cohesion and enable effective problem framing [11]. These characteristics demand participatory planning and enhanced governance to effectively address stakeholder conflicts and urban complexities.

2.2. Processes and frameworks for issue identification

Issue identification is a critical socio-political process in urban planning, involving diagnostic assessment, problem definition, and strategic selection shaped by stakeholders' values and narratives [12]. It transcends purely technical analysis, requiring methods that address complexity, such as Issue Generating Assessment (IGA), which emphasizes socio-political dynamics in problem framing [13], and fuzzy logic, which quantifies ambiguity in issue classification [14]. Systems modeling facilitates scenario simulation and participatory engagement, particularly in underperforming urban contexts [15]. The Narrative Policy Framework (NPF) provides a structured analytical lens for this systematic review by examining how narrative elements settings, characters, plots, and moral solutions shape the legitimacy and prioritization of urban issues in the literature [16]. Similarly, fuzzy logic and systems modeling serve as methodological filters to identify studies that operationalize ambiguity and interconnectedness in issue identification. This theoretical triad (NPF, fuzzy

logic, participatory methods) guides the review's thematic coding and synthesis, enabling a multidimensional analysis of how urban issues are defined, represented, and addressed across contexts. In practice, NPF analyzes discursive practices to reveal power dynamics in issue framing, while participatory methods foster stakeholder inclusion in problem definition. Fuzzy logic complements these by offering computational tools to model uncertainty. Together, these frameworks form an integrated analytical approach for the review, particularly valuable in Global South cities where localized, adaptive frameworks are essential [11].

3. Research background

The concept of urban issue identification has evolved from classical systems-based perspectives toward participatory, flexible, and data-driven approaches [17]. Early theoretical foundations were established by Rittel and Webber [3], who introduced the notion of wicked problems, and by Chadwick [18], who advanced a systems perspective that conceptualized cities as dynamic entities amenable to mathematical modeling and simulation. These seminal works underscored the inherent complexity and indeterminacy of urban issues. Over time, scholars have emphasized the multi-dimensionality of urban challenges, the conflict of interests among stakeholders, and the necessity of holistic and participatory approaches. For example, Daneshpour [19] proposed a classification framework distinguishing structured, semi-structured, and unstructured issues, while Habib and Shokoohi [14] applied fuzzy logic to address ambiguity in urban issue identification. More recent contributions highlight participatory and context-sensitive models [11, 15, 20], stressing the importance of local communities, social realities, and evidence-based processes. Despite these advancements, several gaps remain. Much of the literature remains conceptual or theoretical, with limited operationalization in real-world contexts. In Iran, studies often address narrow domains and fail to reflect the diversity and complexity of urban environments. Moreover, while participation is frequently emphasized, practical mechanisms for institutionalizing stakeholder involvement are underdeveloped, referring to a lack of structured frameworks in the literature for integrating stakeholder input into formal planning processes. Another significant limitation lies in the static treatment of issue identification, which overlooks its inherently dynamic and evolving nature. These gaps highlight the need for systematic approaches that inform urban design, such as participatory processes that shape adaptive public spaces or computational models that enhance spatial planning precision [21]. These research gaps underscore the need for a systematic and replicable synthesis, which is addressed in the following methodology through a PRISMA-based protocol and thematic analysis that operationalize the theoretical constructs outlined above.

4. Research methodology

This study employed a systematic review methodology to synthesize evidence on issue identification in urban planning, following common qualitative systematic review practices reported in recent related studies [22]. Data were analyzed using qualitative thematic analysis [23]. The review adhered to PRISMA 2020 reporting guidelines to ensure transparency, replicability, and traceability [25]. It is noteworthy that PRISMA 2020 serves solely as a reporting guideline and not an analytical framework. In this study, PRISMA was used to ensure transparency in search, selection, and result reporting processes, while data analysis was conducted independently through qualitative thematic analysis following Braun & Clarke [23]. No artificial intelligence (AI) or large language models (LLMs) were used in data extraction, coding, analysis, or manuscript preparation.

4.1. Search strategy

Searches were conducted in Scopus, Web of Science Core Collection, and ScienceDirect, supplemented by Google Scholar for broader coverage. The search period spanned 1 January 1967 to 1 January 2025. Only peer-reviewed English journal articles with DOIs were included. Full, replicable search strings using database-specific syntax are presented in Table 1. Systematic snowballing (forward and backward citation chaining, 2 generations) was conducted using Scopus citation tracker, Web of Science citation report, and Google Scholar "cited by" features. All snowballing-identified records were independently screened by two reviewers. Of the final 28 included studies, 5 were identified through snowballing.

4.2. Selection process

Study selection followed the PRISMA 2020 flow diagram in four stages: identification, screening, eligibility, and inclusion. All stages were performed independently by two reviewers. Disagreements were resolved through consensus. Inter-rater reliability (Cohen's κ [24]):

- Title/abstract screening: $\kappa = 0.88$
- Full-text eligibility: $\kappa = 0.85$
- Final inclusion scoring: $\kappa = 0.91$

From 82 eligible full-text articles, a final inclusion stage used a predefined relevance scoring rubric (0–10 scale) with four operationalized criteria (Table 2).

Studies scoring ≥ 8/10 were included. This yielded 28 studies. The 54 excluded studies comprised:

- n = 52: Issue identification was peripheral (defined as: mentioned only in introduction or future research suggestions, without dedicated results or discussion sections on issue identification; score < 8)
- n = 2: Lacked clear, dedicated findings or conclusion sections

The complete selection process is summarized in Table 3. A detailed visual representation of the selection process, including all record flows and exclusion reasons, is provided in Figure 1.

Table 1. Full replicable search strings by database

titles	details
core keywords	issue identification / wicked problems / urban issues / urban planning / policy agenda
extended keywords	issue generating assessment / urban governance / fuzzy models / stakeholder collaboration
search operators	"and" and "or"
covered topics	wicked problems / issue identification / issue generating assessment / urban governance / stakeholder collaboration / policy agenda / fuzzy modeling / urban complexity / socio-political processes / spatial inequalities / contextual analysis
scopus	title-abs-key (("issue identification" or "issue generating" or "wicked problem*" or "urban issue*" or " "urban problem*") and ("urban planning" or "urban governance" or "urban design" or "policy agenda" or "stakeholder collaboration")) and (limit-to (doctype, "ar")) and (pubyear > 1966 and pubyear < 2025)
web of science	ts= ("issue identification" or "wicked problem*" or "urban issue*" or "urban problem*") and ts= ("urban planning" or "urban governance" or "urban design" or "policy agenda" or "stakeholder collaboration") and document types=(article) and publication years=1967-2024
sciencedirect	title-abstr-key ("issue identification" or "wicked problem*" or "urban issue*" or "urban problem*") and title-abstr-key ("urban planning" or "urban governance" or "urban design" or "policy agenda") limit-to (doctype, "ar") and pubyear aft 1966 and pubyear bef 2025
google scholar	phrase searches using core terms; first 200 results screened for relevance and forward/backward citation chaining of key papers.
search period	01/01/1967 – 01/01/2025
search language	english (including official english translations from peer-reviewed journals)
included document types	peer-reviewed academic articles
excluded document types	dissertations, conference proceedings, editorials, book chapters, non-peer-reviewed reports, news articles, retracted sources
search date	01 january 2025

Table 2. Relevance scoring rubric for final inclusion

Criterion	Description	Score Range
Centrality of Issue Identification	Explicit focus as primary research theme (not peripheral)	0–4
Theoretical Contribution	Depth in applying key frameworks (e.g., wicked problems, NPF, fuzzy models)	0–3
Methodological Rigor	Clear design, data collection, analysis (aligned with MMAT v2018 ≥4/5)	0–2
Contextual Relevance	Contribution to urban planning contexts (e.g., Global South, socio-ecological)	0–1
Total Threshold	≥ 8/10 for inclusion	0–10

Table 3. PRISMA 2020 study selection process

Stage Action	Description	Results
	Identification	
Sources identified from databases	Searches conducted in Scopus, Web of Science Core Collection, ScienceDirect, complemented by Google Scholar, using full replicable search strings (Table 1).	Total sources identified: 1250
Sources identified through other methods	Systematic snowballing (forward and backward citation chaining, 2 generations) using key studies (e.g., [3]; [13]).	Additional sources: 80 Total sources identified: 1330

Table 3. PRISMA 2020 study selection process (Continued)

	Screening	
Removal of duplicate sources	Manual deduplication by two independent reviewers using EndNote reference manager and spreadsheet comparison (1330 records reviewed).	Duplicates removed: 360 Sources after duplicate removal: 970
Initial screening based on title and abstract	Review based on inclusion criteria (peer-reviewed English articles with DOIs, 1967–2025, centrality to issue identification in urban planning) and exclusion criteria (dissertations, conference papers, editorials, non-academic reports, retracted sources).	Sources excluded (irrelevant to urban/planning contexts or non-peer-reviewed): 520 Sources excluded (lacking clear research design or theoretical grounding): 220 Sources remaining for full-text review: 230
	Eligibility	
Full-text review of sources	Evaluation of 230 sources based on methodological rigor (MMAT v2018 ≥4/5) and content relevance (explicit focus on urban issues, governance, or socio-political processes). Two independent reviewers; κ = 0.85.	Sources excluded (lacking historical or content value): 48 Sources excluded (lacking peer-reviewed references): 100 Eligible sources: 82
	Included	
Sources selected for thematic analysis	Final selection using predefined relevance scoring rubric (0–10) by two independent reviewers (κ = 0.91). Only articles scoring ≥ 8/10 included (see Table 2).	Sources excluded (lacking clear results): 2 Sources excluded (lacking content alignment – issue identification not central): 52 Final sources analyzed: 28

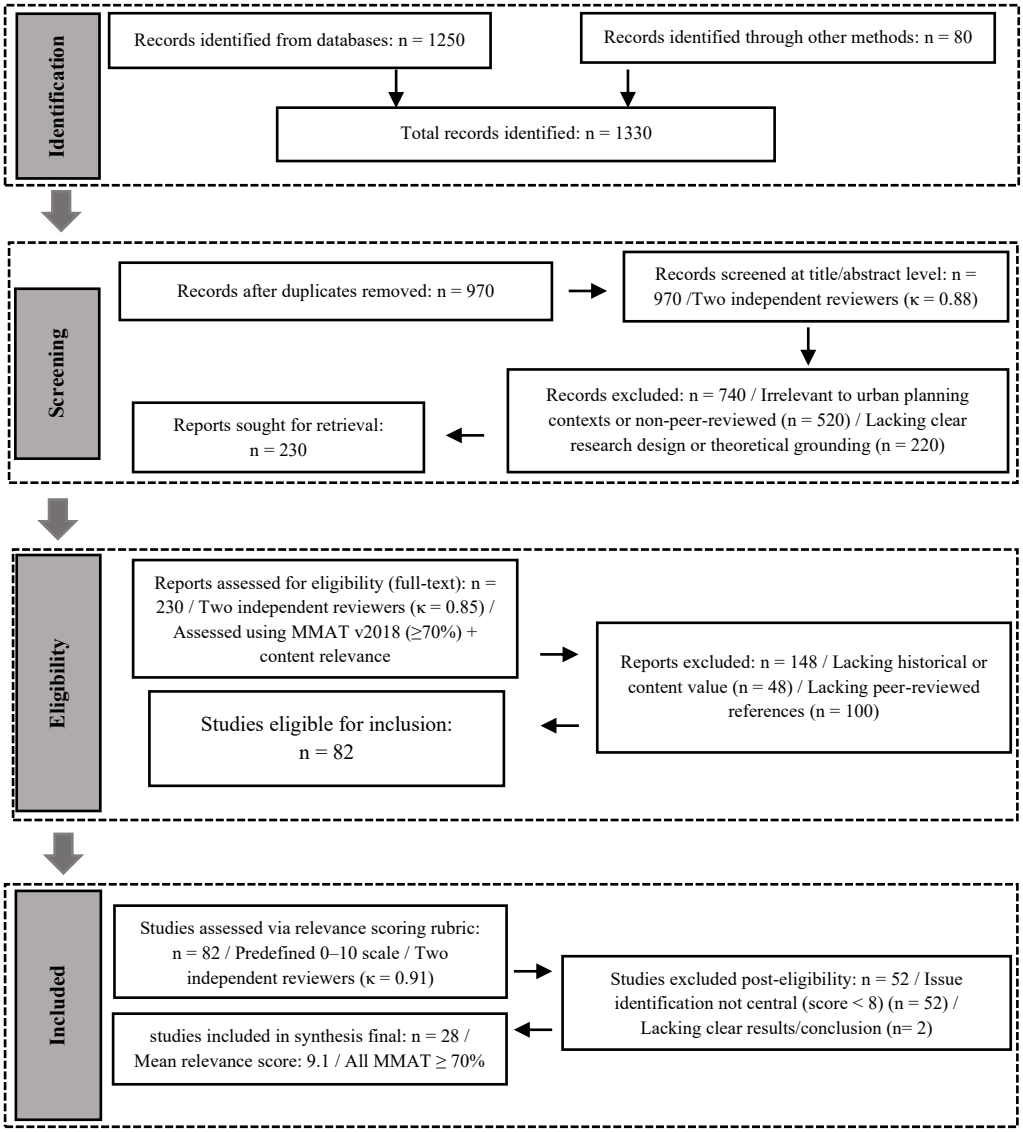

Figure 1. PRISMA 2020 flow diagram

4.3. Data extraction process

A standardized Excel form was piloted on three studies. Two independent reviewers extracted data from all 28 studies. The form captured pre-specified items (Table 4).
For frequency counts (e.g., percentages), a study was counted as addressing a theme if the theme was explicitly reported in the "Results" or "Discussion/Conclusion" sections (not merely as an example or theoretical mention). A study could contribute to multiple themes. Percentages were calculated based on n=28 (e.g., 12/28 = 42.9%).
Discrepancies resolved through consensus. Inter-rater reliability: $\kappa = 0.90$. Missing data coded as "not reported" and excluded from counts.

Table 4. Data extraction process

Data Item	Description
Study identification	First author, year, title, DOI
Study characteristics	Publication year, journal, country of corresponding author
Methodological approach	Qualitative, quantitative, mixed, conceptual/theoretical
Theoretical framework	Wicked problems, narrative policy framework, fuzzy logic, etc.
Issue identification process	Recognition, definition, classification, prioritization
Analytical tools	IGA, fuzzy models, systems modeling, discourse analysis
Stakeholder involvement	Level (indirect, participatory, transdisciplinary)
Context	Global North/South, socio-ecological, urban identity, etc.
Key findings	Main results related to issue identification
Implications for planning/design	Practical or policy recommendations

4.4. Study quality and risk of bias assessment

All 82 eligible full-text articles were assessed using the Mixed Methods Appraisal Tool (MMAT) v2018 [26], applied during the eligibility stage to support inclusion decisions. Two independent reviewers assessed each study, with inter-rater reliability: $\kappa = 0.88$ (almost perfect agreement).
MMAT v2018 Criteria (5 items, each yes/no/unclear):

- Is the research question clear?
- Is the methodology appropriate?
- Is data collection rigorous?
- Is analysis appropriate?
- Are findings coherent with data?

Quality scoring:

- High quality: 4–5 "yes" (n = 36)
- Moderate quality: 3 "yes" (n = 38)
- Low quality: ≤2 "yes" (n = 8): excluded during eligibility

Final 28 included studies:

- All MMAT ≥4/5 (high quality), Mean score: 4.6/5
- MMAT scores informed but did not override the relevance rubric (≥8/10 threshold); final inclusion prioritized content centrality.

Sensitivity analysis: Excluding the three studies with any "unclear" responses did not alter the thematic synthesis, confirming robustness of findings.

4.5. Synthesis methods

Data from the 28 included studies were synthesized using qualitative thematic analysis following the six-phase framework of Braun & Clarke [23]. NVivo 14 software facilitated coding, theme development, and audit trailing. The process was conducted independently by two coders to enhance rigor and reduce bias.
Step-by-Step Thematic Analysis Procedure:

- Familiarization with data: Both coders read all 28 full-text articles in their entirety.
- Initial coding: Line-by-line coding generated 214 initial codes (e.g., "wicked problem framing", "fuzzy classification", "stakeholder discourse").
- Searching for themes: Codes were grouped into 12 preliminary sub-themes (e.g., "contextual adaptation", "computational tools").
- Reviewing themes: Sub-themes were refined in consensus meetings, resulting in 5 main themes: Nature and classification of urban issues, Processes of issue identification, Methodological tools, Stakeholder participation, Contextual and geographical variations.
- Defining and naming themes: Final themes were clearly defined and linked to research objectives.
- Producing the report: Themes were quantified (frequency counts) and narratively synthesized.

Inter-rater reliability for coding:

- Code level: $\kappa = 0.82$
- Theme level: $\kappa = 0.91$

No quantitative meta-analysis was performed due to conceptual and methodological heterogeneity of included studies. Subgroup analysis was conducted by geographical context. Sensitivity analysis excluded the three studies with any "unclear" MMAT responses, with no change in thematic structure.

5. Findings

This systematic review synthesizes findings from 28 studies (1967–2024) using qualitative thematic analysis [23]. The selection and screening of studies followed PRISMA 2020 guidelines to ensure transparency and replicability [25]. The findings are organized around three core themes aligned with the research objectives:

- Nature and classification of urban issues (including wicked problems)
- Processes of issue identification and representation
- Practical applications across diverse settings

This structure enables comparative analysis of theoretical, methodological, and contextual dimensions, revealing trends toward integration and adaptation, while identifying gaps in quantitative methodologies and Global South representation, with direct implications for urban design practice.

5.1. Nature and classification of urban issues

Urban issues are complex, multifaceted, and resistant to straightforward resolution, often classified as "wicked problems" following Rittel and Webber's framework [3], which identifies ten characteristics: unclear boundaries, context-dependent definitions, relative outcomes, irreversible effects, uniqueness, and direct accountability for planners.

Churchman [30] and Hartmann [4] incorporate normative dimensions, specifically the ethical responsibility of planners to recognize diverse societal expectations and stakeholder values, advocating "clumsy solutions" that embrace imperfection. Recent extensions [27, 28] emphasize adaptive strategies in socio-ecological systems, prioritizing flexibility amid uncertainty.

Classifications have evolved to operationalize this complexity.

Habrel [29] introduces "atypical urban problems," categorizing them by nature (fundamental, applied, design, managerial), structure (deterministic/probabilistic, direct/inverse, discrete/continuous, linear/static/dynamic), and evaluation criteria (single/multi-criteria). This systemic-structural approach, augmented by fuzzy modeling, enhances decision-making precision. Similarly, Habib and Shokoohi [14] propose a fuzzy-based spectrum, differentiating issues by objectives (e.g., identity preservation, functional/technological), creativity/technology ratios, content (alternative selection, optimization, social/economic/communicative), and complexity levels (risk, ambiguity/uncertainty). These frameworks represent a methodological advancement over earlier tame-wicked dichotomies [3, 30] by integrating quantitative tools.

"Super wicked problems," such as climate change [31, 32], amplify challenges with urgency, weak authority, and future discounting, demanding interdisciplinary adaptations. A thematic frequency count (Table 5) revealed that 'wicked problems' was the primary thematic focus in 12 of the 28 studies (42.9%). Percentages were calculated based on primary thematic coding by two independent coders (inter-coder reliability $\kappa = 0.82$), using the pre-defined data extraction form (Section 4.3). Articles contributing to multiple categories were counted only once in the primary theme to avoid double-counting. Disagreements were resolved through consensus meetings. Atypical and super wicked classifications remain emergent (14.3% and 7.1%, respectively). This synthesis reveals that fuzzy/quantitative innovations (7.1%) directly enable precision in ambiguity, supporting adaptive urban design strategies such as flexible public spaces that respond to socio-ecological uncertainty.

5.2. Processes of issue identification and representation

Issue identification in urban planning is a dynamic, socio-political process encompassing recognition, definition, classification, and prioritization [3, 13]. Theoretically, it is value-driven and discursive: Rochefort and Cobb [33] highlight how issue framing influences policy agendas through power dynamics, while Barbehön et al. [36] analyze "urban problem discourses" shaped by historical and spatial contexts, which influence outcomes by prioritizing certain issues over others in policy agendas. Churchman [30] adds an ethical layer, arguing that framing limits solution spaces, necessitating normative awareness.

Methodologically, practical tools enhance this process. Feitelson [13] develops Issue Generating Assessment (IGA), a qualitative-systematic method for early-stage detection, validated in contexts like Jerusalem but contingent on institutional factors. Habrel [29] and Habib & Shokoohi [14] advance fuzzy and data-driven classifications to mitigate ambiguities. In contrast, Weber and Khademian [6] and Watson [11] advocate collaborative, localized approaches, particularly for Global South challenges like poverty and informality, where conflicting stakeholder priorities require participatory methods to resolve tensions. Analytically, discursive/narrative perspectives (7.1%) complement participatory approaches (25%), reflecting a shift toward integration (Table 5).

Stakeholder participation is predominantly indirect (50%), but high-engagement models (7.1%) like transdisciplinary teams [34] address super wicked complexities [32].

These processes enable urban design by integrating diverse narratives into spatial planning, demonstrating that effective identification requires blending socio-political insights with adaptive tools to fill quantitative gaps (7.1%) and support inclusive urban agendas.

Percentages were derived from primary thematic coding by two independent coders (inter-coder reliability $\kappa = 0.82$), using the pre-defined data extraction form (Section 4.3). Articles contributing to multiple categories were counted only once in the primary theme. Disagreements were resolved through consensus.

5.3. Practical applications and contexts

The reviewed studies apply these classifications and processes across varied contexts, illustrating adaptability while exposing contextual dependencies. In socio-ecological settings, Tietjen and Jørgensen [27] address rural-urban decline in Denmark through adaptive strategies, prioritizing awareness over resolution. Campbell and Zellner [35] tackle urban sustainability imbalances, advocating systems thinking. Global South examples, such as Watson's analysis [11] of informality and poverty, underscore context-specific frameworks reconciling local rationalities with global pressures.

Super wicked applications, like climate policy [31, 32], highlight urgency-driven adaptations, while urban identity issues [36] reveal discursive influences on socio-economic responses.

Table 5 quantifies this diversity: socio-ecological issues comprise 21.4% (6 studies), with wicked problems pervasive. Methodological tools vary qualitative/conceptual dominate (39.3%), but scenario/assessment (10.7%) and fuzzy models (7.1%) enable practical implementation.

This theme ties to urban design by demonstrating how issue identification informs responsive spatial solutions, such as modular public spaces for socio-ecological challenges or participatory processes for urban identity [21, 37]. Collaborative governance leads (28.6%), informing agenda-setting (21.4%) and localized planning (14.3%). Gaps in Global South representation and quantitative tools suggest opportunities for methodological diversification to enhance adaptive, context-sensitive urban planning.

Table 5. Aggregated analysis of studies on urban issues and issue identification in urban planning (1967–2024)

Indicator			
Category	Number of Studies	Percentage (%)	References
Type of Issue Identification Approach			
Conceptual/ Theoretical	7	25.0	[3]; [30]; [31]; [38]; [39]; [40]; [41]
Participatory/ Collaborative	7	25.0	[4]; [6]; [34]; [35]; [42]; [43]; [44]
Discursive/ Narrative	2	7.1	[33]; [36]
Quantitative/ Fuzzy	2	7.1	[14]; [29]
Strategic/ Policy-Oriented	5	17.9	[13]; [27]; [32]; [45]; [46]
Historical/ Philosophical	2	7.1	[47]; [48]
Contextual/ Adaptive	3	10.7	[11]; [28]; [49]
Nature of Issues Examined			
Wicked Problems	12	42.9	[3]; [4]; [6]; [14]; [30]; [39]; [40]; [41]; [42]; [45]; [47]; [48]
Super Wicked Problems	2	7.1	[31]; [32]
Socio-Ecological/ Sustainability	6	21.4	[35]; [49]; [43]; [34]; [27]; [28]
Urban Identity/ Socio-Economic	4	14.3	[11]; [36]; [38]; [44]
Atypical Urban/ Public Policy Issues	4	14.3	[13]; [29]; [33]; [46]
Level of Stakeholder Participation			
Indirect (Theoretical)	14	50.0	[3]; [14]; [29]; [30]; [31]; [32]; [33]; [38]; [39]; [40]; [41]; [45]; [47]; [48]
Participatory (Local/Policy Stakeholders)	12	42.9	[4]; [11]; [13]; [27]; [28]; [35]; [36]; [42]; [43]; [44]; [46]; [49]
High (Transdisciplinary Teams)	2	7.1	[6]; [34]

Table 5. Aggregated analysis of studies on urban issues and issue identification in urban planning (1967–2024) (Continued)

Analytical and Methodological Tools			
Qualitative/ Conceptual	11	39.3	[3]; [4]; [28]; [30]; [34]; [38]; [39]; [40]; [41]; [44]; [49]
Policy/ Discourse Analysis	5	17.9	[31]; [32]; [33]; [36]; [42]
Systems/ Network Analysis	4	14.3	[6]; [27]; [35]; [43]
Fuzzy/ Quantitative Models	2	7.1	[14]; [29]
Scenario/ Assessment Analysis	3	10.7	[13]; [45]; [46]
Historical/ Philosophical Analysis	3	10.7	[30]; [47]; [48]
Impact on Urban Policy-Making and Planning			
Theoretical Foundation	7	25.0	[3]; [30]; [38]; [39]; [40]; [41]; [47]
Policy Design/ Agenda-Setting	6	21.4	[13]; [33]; [36]; [42]; [45]; [46]
Collaborative/ Sustainable Governance	8	28.6	[4]; [6]; [31]; [32]; [34]; [35]; [43]; [49]
Localized/ Contextual Planning	4	14.3	[11]; [27]; [28]; [44]
Methodological Improvement	3	10.7	[13]; [14]; [29]

Table 5 synthesizes 28 studies (1967–2024) across five independent indicators. Each indicator was analyzed separately, and articles could contribute to multiple categories within a single indicator if they addressed multiple aspects.

Percentages are calculated relative to the total of 28 studies per indicator, ensuring methodological rigor and preventing cross-indicator inflation.

This approach is standard in systematic reviews and reflects the complexity of issue identification. The results highlight:

- Approaches: Conceptual/theoretical (25%) and participatory/collaborative (25%) approaches are foundational, while quantitative/fuzzy models (7.1%) indicate innovation.
- Nature of Issues: Wicked problems dominate (42.9%, 12 studies), followed by socio-ecological/sustainability issues (21.4%). Super wicked problems (7.1%) are underexplored.
- Participation: Indirect/theoretical engagement prevails (50%), with participatory designs (42.9%) gaining traction.
- Methodologies: Qualitative/conceptual analyses lead (39.3%), with fuzzy models (7.1%) emerging for precision.
- Policy Impacts: Collaborative governance (28.6%) and theoretical grounding (25%) are influential, followed by agenda-setting (21.4%).

These findings inform urban design by guiding the creation of adaptive spatial solutions, such as modular public spaces for socio-ecological issues or participatory processes for urban identity, aligning with computational urban morphology [21].

Persistent gaps in quantitative methodologies (7.1%) and Global South representation highlight opportunities for integrated frameworks to advance adaptive urban planning.

6. Discussion and analysis

A critical stage in a systematic review is the analytical evaluation and synthesis of selected studies. The findings of this systematic review indicate that issue identification in urban planning is a social, political, and discursive process, extending beyond technical analysis. This section analyzes the results in light of theoretical and empirical discussions, exploring their implications for urban planning research and practice, with a focus on actionable insights for urban design.

6.1. Synthesis of the literature: trends, consensus, and divergence

As shown in Table 6, the literature on urban issues and issue identification spans multiple perspectives, highlighting strengths and limitations. Percentages throughout this section represent the proportion of the 28 studies addressing each theme, based on initial thematic coding (as described in Section 3), allowing for multi-theme assignments per study, with inter-coder agreement verified at 85% through independent review by two coders. This table underscores the multifaceted nature of the literature, balancing theoretical depth with practical hurdles. This analysis reveals that the wicked problems framework [3] is robust but challenged by difficulties in translating abstract concepts into practical policies, necessitating imperfect solutions and expectation management [4, 41].

Issue identification as a socio-political process aids policy agenda-setting [33], but dominant discourses may marginalize issues, particularly where Issue Generating Assessment (IGA) identifies key issues without selecting options [13]. To organize the findings, this review adopts a thematic approach (Table 7).

Table 6. Critical analysis and synthesis of studies

Aspect	Strengths	Limitations and Challenges
Conceptual Framework of Wicked Problems	Provides a robust theoretical foundation for understanding urban complexities [3, 30].	Difficulty in operationalizing abstract concepts into practical policies, due to the absence of definitive solutions and the risk of irreversible consequences [41, 48].
Issue Identification and Representation	Emphasizes the role of socio-political processes in defining issues [33, 36].	Power biases and dominant discourses may render some issues invisible, especially in local contexts where discourses shape urban distinctions [13].
Network Governance	Highlights collaborative capacity and collective design in addressing complexity [6, 35].	Challenges in coordinating diverse actors and conflicting interests, which can lead to inefficiencies in socio-ecological systems [42].
Analytical and Technological Tools	Utilizes fuzzy and quantitative models for classifying urban issues [14, 29].	Risk of reducing socio-political issues to purely quantitative variables, particularly in the Global South where cultural complexities are overlooked [11].

Table 7. Thematic review of the literature

Theme	Sample Sources	Description
Wicked Problems and Their Characteristics (42.9%, 12 studies)	[3]; [4]; [28]	Urban issues are multidimensional, lack definitive solutions, and require expectation management, with a focus on awareness, acceptance, and adaptation in socio-ecological systems.
Issue Identification and Representation (7.1%, 2 studies)	[33]; [36]	Issue definition is a discursive process that shapes policy agendas and highlights urban distinctions through historical and spatial contexts.
Network Governance and Collaboration (25%, 7 studies)	[6]; [42]	Collaborative capacity and multilevel governance serve as tools for managing wicked problems, addressing knowledge gaps and conflicts through participatory capacity-building.
Geographical and Contextual Differences (10.7%, 3 studies)	[27]; [11]	Urban issues manifest differently across contexts, particularly in the Global South, where clashes of rationalities between formal and informal systems are prominent.

This table organizes the dominant themes, revealing that wicked problems and collaborative approaches form the core of the discourse, while contextual factors add nuance. This thematic review indicates that wicked problems (42.9%) and issue identification processes dominate, with network governance and contextual analyses making significant contributions [6, 11]. A descriptive overview of publication periods (Table 8) shows a chronological distribution of studies from foundational theory (1967–1990) to applied and technologically oriented research (2010–2024). This table illustrates a progression in research focus over time, shifting from conceptual groundwork to actionable implementations. This period-based categorization demonstrates that early literature focused on theoretical foundations [3], while more recent studies emphasize operationalization, case studies, and the use of innovative technologies [14, 29]. This pattern reflects a progression from theoretical abstraction to practical and technological applications, where super wicked problems, such as climate change, require adaptive approaches [32].

One of the objectives of a systematic review is to compare studies to identify areas of consensus and divergence. Table 9 presents this comparison.

This table highlights that while there is consensus on theoretical definitions, practical application varies due to contextual factors, guiding directions for future research. As the table illustrates, studies largely agree on the theoretical definition of wicked problems [3, 4]. However, there is divergence regarding the feasibility of operationalizing this framework and the effectiveness of network governance across different contexts [11, 41]. This diversity of perspectives enriches the literature and delineates directions for future research.

Table 8. Temporal review of the literature (1967–2024)

Time Period	Research Orientation	Description
1967–1990	Theoretical Foundation	Introduction of wicked problems in planning [3, 30, 46].
1990–2010	Conceptual Expansion	Focus on issue identification and policy agendas [33]; development of network governance theory [6, 31].
2010–2020	Operationalization and Case Studies	Practical applications in urban governance, sustainability, and climate change [4, 27, 28, 34, 35].
2020–2024	Innovation and Technology	Use of fuzzy and data-driven models for classifying urban issues [14, 29].

Table 9. consensus and divergence in studies

Comparison Criterion		
Areas of Consensus	Areas of Divergence	Analytical Explanation
Definition of Wicked Problems		
Lack of definitive solutions, multidimensionality [3, 4].	Feasibility of operationalizing the framework, especially for atypical problems [41].	While the theoretical definition is widely accepted, its practical application remains debated, highlighting the need for imperfect solutions.
Urban Governance		
Importance of networks and collaborative capacity [6].	Effectiveness of collaboration across different contexts, such as the Global South [11, 27].	Geographical context is a determining factor, and conflicting interests can make coordination challenging.
Analytical and Technological Tools		
Capability of fuzzy models in classification [14].	Risk of oversimplifying social issues [11].	Technological tools must be integrated into socio-political frameworks to avoid reductionism.

6.2. Limitations of traditional planning approaches

The seminal works of Rittel and Webber [3] and Churchman [30] emphasize that urban issues, particularly in modern and globalized contexts, are characterized as wicked problems (42.9% of studies, Table 3) with features such as unclear definitions, irreversible consequences, and the absence of definitive solutions.

These characteristics render linear and traditional planning methods, which rely on instrumental rationality, ineffective [3].

Hartmann [4] introduced the concept of "clumsy solutions," demonstrating that managing expectations and adopting relative solutions, rather than seeking definitive ones, is more effective.

This perspective is further developed in more recent studies, such as Xiang [28] and Frame [49], which highlight adaptability, flexibility, and interactive learning as key to managing wicked problems within socio-ecological systems (10.7% of studies, Table 3). Additionally, super wicked problems, such as climate change (7.1%, 2 studies, Table 3), characterized by time scarcity, weak central authority, and future discounting, impose further challenges on traditional approaches, necessitating interdisciplinary and adaptive strategies [32].

6.3. Issue identification as a socio-political process

The findings indicate that the definition of urban issues is the outcome of a socio-political process shaped by discourses and institutional power, with discursive/narrative approaches representing 7.1% of studies (Table 3). Rochefort and Cobb [33] argue that the way issues are defined determines their entry into the policy agenda and the selection of policies. Barbehön et al. [36], focusing on "urban problem discourses," demonstrate that the representation of issues is contingent on historical and spatial contexts, which can either highlight or obscure certain problems.

Similarly, Feitelson [13] introduced the concept of "Issue Generating Assessment" (IGA) as a qualitative-systematic tool for identifying key issues without selecting options, bridging the gap between postmodernist theories and modernist practices. This suggests that issue identification is not merely a preliminary step but a strategic socio-political act of agenda-setting the deliberate prioritization

of certain issues over others through discourse, institutional framing, and stakeholder influence [13, 33].

6.4. Network governance and collaborative capacity

A central theme in the reviewed literature is the pivotal role of network governance in addressing wicked problems, with participatory/collaborative approaches comprising 25% of studies and transdisciplinary teams 7.1% (Table 3). Weber and Khademian [6] and Head and Alford [42] emphasize that collaborative capacity and knowledge management within multilevel networks are critical for advancing relative solutions.

Campbell and Zellner [35] demonstrate that sustainable urban governance in a complex world requires multi-actor decision-making and the acceptance of "imperfect decisions" to balance conflicting objectives, such as economic growth, environmental protection, and social justice.

This perspective aligns with Hocking et al.'s [43] concept of "collaborative design" and Norris et al.'s [34] emphasis on transdisciplinary teams in socio-ecological systems, all of which underscore the need for broad coalitions and cross-sectoral capacity-building, contributing to collaborative governance as a leading policy impact (28.6%, Table 3).

The conceptual model (Figure 2) is adapted from the collaborative rationality frameworks of Innes & Booher [5] and Weber & Khademian [6].

Its five components Boundary Setting, Feedback Loops, Learning, Synergy, and Governance were selected to reflect the thematic findings of this review (Table 3), highlighting adaptive planning and stakeholder engagement, with its five components explicitly mapped to the thematic findings in Table 3 as follows:

Boundary Setting aligns with Issue Identification and Representation (7.1%); Feedback Loops with Wicked Problems' emphasis on adaptation (42.9%); Learning with Network Governance and Collaboration (25%); Synergy with Analytical and Technological Tools (7.1%); and Governance with Geographical and Contextual Differences (10.7%).

This mapping was conducted during the synthesis phase of the PRISMA-based review (Section 3), ensuring direct derivation from the coded themes without introducing external elements.

The model includes five components: Boundary Setting (dynamic issue redefinition), Feedback Loops (system delays), Learning (adaptive experimentation), Synergy (integrating narrative policy and computational tools), and Governance (collaborative networks). These components foster sustainable, inclusive planning.

6.5. Technological, contextual, and geographical dimensions

While theoretical discussions have focused on social and political dimensions, contemporary research highlights the role of data-driven technologies and computational models in urban issue identification, with fuzzy/quantitative models representing 7.1% of studies (Table 3). Habrel [29] and Habib and Shokoohi [14] demonstrate that fuzzy approaches and quantitative tools, such as machine learning algorithms and spatial clustering analysis, enable more precise classification and analysis of urban issues. These tools, by integrating input/output metrics and modeling system behaviors, facilitate the identification of atypical problems (e.g., control or multi-objective issues) [14].

However, Watson [11] cautions that reducing socio-political issues to quantitative variables may overlook cultural and contextual complexities, emphasizing the need for interdisciplinary approaches that integrate qualitative and quantitative frameworks.

The findings suggest that geographical and social contexts play a determinative role in the nature and intensity of urban issues, with contextual/adaptive approaches comprising 10.7% of studies (Table 3).

Tietjen and Jørgensen [27] explored challenges stemming from population decline in rural Denmark, while Watson [11] highlighted that urban issues in the Global South are compounded by structural poverty, informality, and clashes of rationalities between formal systems and survival strategies of marginalized communities. This contextual diversity indicates that universal frameworks for issue identification are insufficient, and localized solutions are essential [11, 27].

6.6. Research Gaps and Directions for Development

Identifying research gaps is a key outcome of a systematic review, illuminating pathways for future research. This review, based on the analysis of 28 sources, indicates that the literature on issue identification in urban planning faces challenges such as an overemphasis on Global North cities, a disconnect between quantitative and qualitative approaches, and a lack of field-based validation [11, 29, 41]. Table 10 summarizes the main research gaps and proposed directions for development.

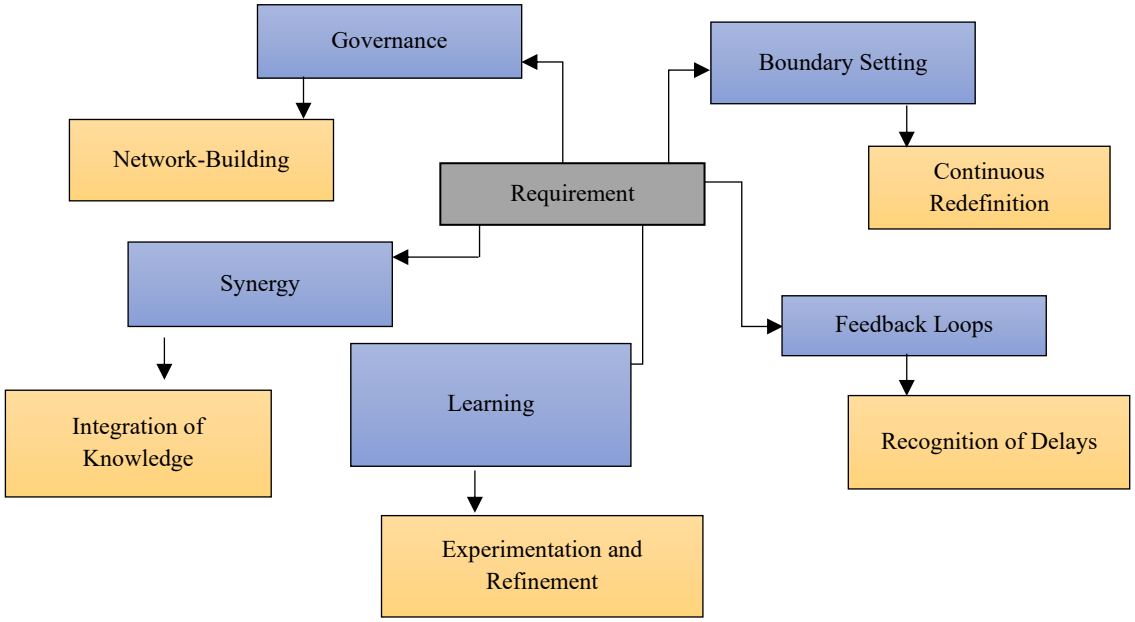

Figure 2. Systemic issue identification model for wicked problems in urban planning (Adapted from: [5, 6])

Table 10. Research gaps and directions for development

Research Gap			
Description of Gap	Future Research Directions	Rationale	Suggested Sources
Lack of Field Studies in the Global South			
Overemphasis on European and North American cities, limiting generalizability to Global South cities.	Expand field-based and comparative studies in African and Asian cities.	Localizing frameworks is essential to address context-specific challenges.	[11]; [27]
Absence of Integrated Frameworks			
Disconnect between quantitative and qualitative methods, with limited validation using real-world data.	Develop mixed-methods frameworks integrating quantitative, qualitative, and spatial data.	Comprehensive analysis of wicked problems requires method integration.	[14]; [29]
Challenges in Operationalizing Wicked Problems			
Gap between theory and practice, particularly in addressing irreversible consequences.	Design operational policy tools based on the wicked problems framework.	Bridging theory and practice is critical for managing urban complexities.	[3]; [41]
Dynamic and Temporal Evolution of Urban Issues			
Static typologies fail to capture the dynamic and evolving nature of issues.	Implement longitudinal studies and dynamic modeling to track issue evolution.	Urban issues are fluid and context-dependent; static frameworks have limited efficacy.	[29]
Limited Transferability of Typologies			
Existing typologies are context-specific and lack global applicability.	Develop frameworks adaptable to diverse socio-economic and cultural dynamics.	Current focus on physical form overlooks social dimensions.	[29]

This table identifies critical voids in the literature, emphasizing the need for more inclusive and integrated research. These gaps underscore the need for dynamic, interdisciplinary, and context-specific frameworks that enhance generalizability to Global South cities, and strengthen the linkage between theory and practice [3, 14]. Future research should focus on localizing frameworks, integrating quantitative-qualitative methods, and validating findings with real-world data to improve the efficacy of issue identification in urban planning. These gaps highlight the need for innovative approaches to urban issue identification, particularly in understudied areas such as participatory methods and field-based data validation. Future research should prioritize the development of dynamic and interdisciplinary frameworks to enhance generalizability and practical applicability. Overall, this systematic review clarifies that:

- Traditional planning approaches are ineffective for addressing wicked problems, requiring relative and adaptive solutions [3, 4].
- Issue identification is a socio-political process shaped by urban discourses and institutional power [33, 36].
- Network governance and collaborative capacity are essential for managing complex issues [6, 35].
- Emerging technological and analytical tools, when integrated with qualitative frameworks, can aid in issue identification and classification [14, 29].
- Geographical and contextual differences necessitate the localized application of theoretical and practical frameworks [11, 27].

6.7. Practical implications for urban design and planning

The systematic review reveals actionable pathways for translating theoretical insights into adaptive, participatory, and context-sensitive urban design strategies, directly addressing the journal's mission to bridge theory and practice. Table 11 translates the thematic and quantitative insights from Table 3 into actionable urban design strategies, ensuring that findings from the systematic review inform adaptive, participatory, and context-sensitive planning interventions.

This table provides concrete strategies, linking review findings to real-world applications for urban professionals. In practice, urban designers can apply a standalone diagnostic checklist derived from the review:

- Is the issue boundary dynamically defined with stakeholders?
- Are feedback mechanisms (e.g., post-occupancy surveys) built into the design?
- Is experimentation enabled through pilot projects?
- Are narrative and computational tools integrated?
- Is governance structured as a collaborative network?

Table 11. Practical design strategies derived from systematic review findings

Strategy		
Evidence from Table 3	Design Response	Example Application
Modular & Adaptive Public Spaces		
Wicked Problems (42.9%)	Design reconfigurable spaces with iterative feedback mechanisms	Flood-prone square with movable seating, permeable surfaces, sensor-based drainage [28, 35]
Participatory Design Frameworks		
Participatory Approaches (42.9%) Indirect Engagement (50%)	Embed co-design workshops and digital platforms	Residents define identity issues via collaborative mapping, informing place-making [36, 44]
Computational Issue Modeling		
Fuzzy/Quantitative Models (7.1%)	Use GIS fuzzy logic or agent-based simulation to quantify ambiguity	Model density vs. accessibility trade-offs using fuzzy overlays to guide zoning [14, 21]
Network Governance Structures for Collaborative Decision-Making		
Collaborative Governance (28.6%) Transdisciplinary Teams (7.1%)	Establish cross-sectoral urban labs for co-governance	Systems mapping by planners, NGOs, and citizens to align socio-ecological goals [34]
Localized Design Toolkits		
Global South Underrepresentation	Develop context-specific guidelines integrating informality, culture, resilience	Use IGA to identify latent issues in informal areas, design incremental upgrades [11, 13]

These strategies transform theoretical dominance (25%) into operational tools, ensuring that issue identification directly informs resilient, inclusive, and computationally informed urban design [37].

7. Conclusion

This systematic review, conducted following PRISMA reporting guidelines, demonstrates that issue identification is not a neutral preliminary step, but a constitutive socio-political act that fundamentally shapes the direction, legitimacy, and inclusiveness of urban planning and design outcomes.

Urban issues, characterized by their multidimensional, ambiguous, and context-specific nature, transcend traditional planning frameworks. The concept of wicked problems identified in 42.9% of reviewed studies (Table 5) underscores the limitations of linear approaches, necessitating adaptive, participatory, and context-sensitive strategies.

This study demonstrates that integrating contemporary theoretical frameworks (e.g., wicked problems, narrative policy analysis) and methodological tools (e.g., fuzzy models, participatory governance) enables effective, context-sensitive, and sustainable planning outcomes. By analyzing 28 peer-reviewed studies (1967–2024) through the PRISMA framework, this research addressed its central question and objectives.

Examining the nature, classification, and challenges of urban issues provides a robust foundation for planning. Issue identification is a socio-political process shaped by discourses, institutional interactions, and policy coalitions [33].

This process directly informs urban design by guiding the creation of responsive spatial solutions, such as participatory design processes for inclusive public spaces or data-driven zoning for urban resilience [21, 37].

Network governance and collaborative capacity are critical for addressing urban complexities, as evidenced in 25% of studies (Table 5).

Collaboration among government bodies, civil society, and the private sector enables flexible solutions for challenges like climate change and spatial inequalities. Emerging technologies, such as fuzzy models and data-driven analyses (7.1%, Table 5), enhance precision and inclusiveness in issue identification. Geographical and cultural contexts (10.7%, Table 5) necessitate localized frameworks to address specific conditions, particularly in Global South cities [11].

To address identified theoretical, methodological, and contextual gaps, this study proposes several directions for future research:

- Developing integrated frameworks that combine quantitative, qualitative, and spatial data for a comprehensive issue identification process.
- Expanding empirical and field-based studies to identify practical and transferable methods for diverse urban contexts.
- Leveraging emerging technologies, such as artificial intelligence and computational modeling, in complement to participatory and discursive approaches.
- Examining the transferability and adaptability of issue identification frameworks across different socio-political and cultural settings.

The review's findings indicate that effective issue identification relies on integrating socio-political insights, collaborative governance, and technological tools to address urban complexity. This approach fosters adaptive urban planning and design, enabling planners to craft inclusive built environments that respond to evolving challenges like climate change or social inequity. By achieving its objectives examining issue nature, classification, theoretical frameworks, methodological tools, and gaps this study demonstrates that narrative policy analysis and fuzzy approaches provide adaptable, sustainable frameworks for issue identification, supporting inclusive and resilient urban plans.

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Authors Contribution

All authors contributed significantly to the development of this study. S. Mahdinezhad conceptualized the research framework, conducted the primary literature review, and led the fieldwork. M. Hassanzadeh was responsible for data analysis, interpretation of narrative mechanisms, and contributed to drafting the manuscript. K. Zakerhaghighi provided critical revisions, supervised the methodological design, and ensured the theoretical consistency of the work.

Availability of data and materials

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Conflict of interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

[1] Hosseini S-M, Ghadami M. Investigating factors affecting the lack of a futures-research approach in the regional planning process (Case study: Northern coastal provinces of Iran). *Geogr Q Land*. 2016;13(51):31-50. https://doi.org/10.22080/usfs.2020.18344.1946

[2] Asadi I. The complexity of issues in urban planning and approaches to addressing them. *Urban Manag*. 2003; 14:24–38. Available from: https://www.magiran.com/p1331201

[3] Rittel HWJ, Webber MM. Dilemmas in a general theory of planning. *Policy Sci*. 1973;4(2):155–169. Available from: https://link.springer.com/article/10.1007/BF01405730

[4] Hartmann T. Wicked problems and clumsy solutions: Planning as expectation management. *Plan Theory*. 2012;11(3):242–256. https://doi.org/10.1177/1473095212440427

[5] Innes JE, Booher DE. Planning with complexity: An introduction to collaborative rationality for public policy. London: Routledge; 2010. https://doi.org/10.4324/9780203864302

[6] Weber EP, Khademian AM. Wicked problems, knowledge challenges, and collaborative capacity builders in network settings. *Public Adm Rev*. 2008;68(2):334–349. https://doi.org/10.1111/j.1540-6210.2007.00866.x

[7] Mills CW. The Sociological Imagination. New York: Oxford University Press; 1991. https://doi.org/10.1007/s12108-020-09463-z

[8] Asadi D, Arbab P. Developing a framework for identifying wicked problems in urban planning. *Q J Geogr Res Urban Plan*. 2014;12(1):21–41. https://doi.org/10.22059/jurbangeo.2024.369158.1904

[9] Durkheim E. Suicide: A Study in Sociology. Glencoe (IL): Free Press; 1951. https://doi.org/10.4324/9780203994320

[10] Merton RK. Social structure and anomie. *Am Sociol Rev*. 1938;3(5):672–682. https://doi.org/10.2307/2084686

[11] Watson V. Seeing from the South: Refocusing urban planning on the globe's central urban issues. *Urban Stud*. 2009;46(11):2259–2275. https://doi.org/10.1177/0042098009342598

[12] Forester J. Learning to improve practice: Lessons from practice stories and practitioners' own discourse analyses (or why only the loons show up). *Plan Theory Pract*. 2012;13(1):11–26. https://doi.org/10.1080/14649357.2012.649905

[13] Feitelson E. Issue generating assessment: Bridging the gap between evaluation theory and practice? *Plan Theory Pract*. 2011;12(4):549–568. https://doi.org/10.1080/14649357.2011.626305

[14] Habib F, Shokoohi A. Classification and resolving urban problems by means of fuzzy approach. *World Acad Sci Eng Technol Int J Soc Behav Educ Econ Bus Ind Eng*. 2010;4(6):1234–1240. Available from: https://publications.waset.org/

[15] Roshanali F, Andalib A. Issue identification in dysfunctional urban areas: The most critical step in engaging residents in successful renewal programs (Case study: Shahid Khoobbakht neighborhood, Tehran). *Urban Manag*. 2018; 52:93–108. Available from: https://ijurm.imo.org.ir/article-1-2307-fa.html

[16] Jones MD, McBeth MK. A narrative policy framework: Clear enough to be wrong? *Policy Stud J*. 2010;38(2):329–353. https://doi.org/10.1111/j.1541-0072.2010.00364.x

[17] Abedian Aval F, Lopes M, Ataee S, Bhandari S, Ganjali Khosroshahi M. Transformation of urban neighborhoods from the perspective of the public perception. *Creat City Des*. 2025;8(1):082505. https://doi.org/10.57647/j.ccd.2025.0801.05

[18] Chadwick G. A Systems view of planning: Towards a theory of the urban and regional planning process. Oxford: Pergamon Press; 1978. Available from: https://www.amazon.com/systems-view-planning-Towards-regional/dp/0080167993

[19] Daneshpour ZA. Introducing the step-by-step problem-finding/problem-solving approach: A preliminary proposal for testing a designed problem-finding method in Tehran. *J Fine Arts*. 2008; 36:5–16. https://doi.org/10.13140/RG.2.2.11253.58083

[20] American Planning Association (APA). Planning and urban design standards. Hoboken (NJ): John Wiley & Sons; 2006. Available from: https://www.just.edu.jo/~arabed/assets/files/UP-702-PlanningandUrbanDesignStandards.pdf

[21] Batty M. Inventing future cities. Cambridge (MA): MIT Press; 2018. https://doi.org/10.1080/02513625.2019.1671058

[22] Sharifkazemi S, Habib F, Ghalambor Dezfuly M. Formulating a conceptual framework for behavior resulting from the perception of participants in behavioral settings, with an emphasis on Barker's theory.

Creat City Des. 2025;8(3):082514. https://doi.org/10.57647/j.ccd.2025.0803.14

[23] Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol*. 2006;3(2):77–101. https://doi.org/10.1191/1478088706qp063oa

[24] Cohen J. A coefficient of agreement for nominal scales. *Educ Psychol Meas*. 1960;20(1):37–46. https://doi.org/10.1177/001316446002000104

[25] Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ*. 2021;372: n71. https://doi.org/10.1136/bmj.n71

[26] Hong QN, Fàbregues S, Bartlett G, Boardman F, Cargo M, Dagenais P, et al. The Mixed Methods Appraisal Tool (MMAT) version 2018 for information professionals and researchers. *Educ Inf*. 2018;34(4):285–291. https://doi.org/10.3233/EFI-180221

[27] Tietjen A, Jørgensen G. Translating a wicked problem: A strategic planning approach to rural shrinkage in Denmark. *Landsc Urban Plan*. 2016; 154:29–43. https://doi.org/10.1016/j.landurbplan.2016.01.009

[28] Xiang W. Working with wicked problems in socio-ecological systems: Awareness, acceptance, and adaptation. *Landsc Urban Plan*. 2013; 110:1–4. https://doi.org/10.1016/j.landurbplan.2012.11.006

[29] Habrel M. "Atypical" problems of urbanism classification, characteristics, and approaches to the solution. *Munic Econ Cities*. 2020;6(159):62–69. https://doi.org/10.33042/2522-1809-2020-6-159-62-69

[30] Churchman CW. Guest editorial: Wicked problems. *Manage Sci*. 1967;14(4): B141–B142. Available from: https://www.jstor.org/stable/2628678

[31] Lazarus R. Super wicked problems and climate change: Restraining the present to liberate the future. *Cornell Law Rev*. 2009; 94:1153–1233. Available from: https://scholarship.law.georgetown.edu/facpub/159/

[32] Levin K, Cashore B, Bernstein S, Auld G. Overcoming the tragedy of super wicked problems: Constraining our future selves to ameliorate global climate change. *Policy Sci*. 2012;45(2):123–152. https://doi.org/10.1007/s11077-012-9151-0

[33] Rochefort DA, Cobb RW. Problem definition, agenda access, and policy choice. *Policy Stud J*. 1993;21(1):56–71. https://doi.org/10.1111/j.1541-0072.1993.tb01453.x

[34] Norris PE, O'Rourke M, Mayer AS, Halvorsen KE. Managing the wicked problem of transdisciplinary team formation in socio-ecological systems. *Landsc Urban Plan*. 2016; 154:115–122. https://doi.org/10.1016/j.landurbplan.2016.01.008

[35] Campbell SD, Zellner M. Wicked problems, foolish decisions: Promoting sustainability through urban governance in a complex world symposium. *Vanderbilt Law Rev*. 2020; 73:1643–1685. Available from: https://scholarship.law.vanderbilt.edu/vlr/vol73/iss6/3

[36] Barbehön M, Münch S, Gehring P, Grossmann A, Haus M, Heinelt H. Urban problem discourses: Understanding the distinctiveness of cities. *J Urban Aff*. 2016;38(2):236–251. https://doi.org/10.1111/juaf.12206

[37] Portugali J. Complexity, cognition and the city. Berlin: Springer; 2011. https://doi.org/10.1007/978-3-642-19451-1

[38] Baum HS. Toward a post-industrial planning theory. *Policy Sci*. 1977;8(4):401–421. https://doi.org/10.1007/BF01727407

[39] Bishop R, Phillips J. The urban problematic. *Theor Cult Soc*. 2013;30(0):221–241. https://doi.org/10.1177/0263276413508154

[40] Peters BG. What is so wicked about wicked problems? A conceptual analysis and a research program. *Policy Soc*. 2017;36(3):385–396. https://doi.org/10.1080/14494035.2017.1361633

[41] Termeer CJ, Dewulf A, Biesbroek R. A critical assessment of the wicked problem concept: Relevance and usefulness for policy science and practice. *Policy Soc*. 2019;38(2):167–179. https://doi.org/10.1080/14494035.2019.1617971

[42] Head BW, Alford J. Wicked problems: Implications for public policy and management. *Adm Soc*. 2015;47(6):711–739. https://doi.org/10.1177/0095399713481601

[43] Hocking VT, Brown VA, Harris JA. Tackling wicked problems through collective design. *Intel Build Int*. 2016;8(1):24–36. https://doi.org/10.1080/17508975.2015.1058743

[44] Hoernig H, Leahy D, Zhuang ZX, Early R, Randall L, Whitelaw G. Planning for people: Integrating social issues and processes into planning practice. *Berkeley Plan J*. 2011;18(1). https://doi.org/10.5070/BP318111500

[45] Alford J, Head B. Wicked and less wicked problems: A typology and a contingency framework. *Policy Soc*.

2017;36(3):397–413.
https://doi.org/10.1080/14494035.2017.1361634

[46] Wiseman C. Selection of major planning issues. *Policy Sci*. 1978;9(1):71–86.
https://doi.org/10.1007/BF00137979

[47] Skaburkis A. The origin of "wicked problems". *Plan Theory Pract*. 2008;9(2):277–280.
https://doi.org/10.1080/14649350802041654

[48] Turnbull N, Hoppe R. Problematizing 'wickedness': A critique of the wicked problems concept, from philosophy to practice. *Policy Soc*. 2019;38(2):315–337.
https://doi.org/10.1080/14494035.2018.1488796

[49] Frame B. 'Wicked', 'messy', and 'clumsy': Long-term frameworks for sustainability. *Environ Plan C Gov Policy*. 2008; 26:1113–1128.
https://doi.org/10.1068/c0790s