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Who Matters in Residential Building Reuse? Navigating Conflicts and Collaborations Through Stakeholder–Issue Mapping

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Abstract

The reuse of vacant residential buildings offers a strategy for revitalizing "shrinking cities" and advancing urban sustainability by transforming underutilized spaces into community assets. However, the decision-making process involves stakeholders from diverse disciplines with conflicting perspectives, which creates significant challenges that hinder progress. This study therefore identifies these key stakeholders and maps their interrelations with reuse challenges, addressing the question: Who are the key stakeholders involved in the challenges and conflicts of interest that hinder the decision-making in residential building reuse? A semi-systematic literature review followed by thematic analysis was employed to identify stakeholder groups, supplemented by stakeholder–issue mapping to analyze their interrelations. The study identified five key groups: property owners, investors, government representatives and regulators, building professionals, and users, community, and civic society. The findings demonstrate that challenges are highly interconnected across multiple stakeholders, revealing patterns of conflict and opportunities for collaboration. The study underscores the role of government in initiating and steering the process and identifies emerging roles for other actors, such as building professionals acting as mediators. Existing research adopts a narrow disciplinary lens and focuses less on residential buildings, risking an overlooking of crucial actor dynamics. By offering a holistic perspective on the stakeholders and their interrelations with reuse challenges, this study provides vital insights for researchers, policymakers, and practitioners seeking to manage urban vacancies as resources in "shrinking cities" and advance a circular built environment.

Keywords

building reuse; circular built environment; shrinking cities; urban regeneration; urban shrinkage

1. Introduction

"Shrinking cities" are a global phenomenon characterized by population decline driven by political, economic, and demographic factors. A major consequence of this process is urban vacancy, manifested in vacant buildings and unused land, which undermines the economic, social, and environmental aspects of urban development (Fu, Zhou, Ma, et al., 2025; Lee et al., 2018). Residential vacancies are particularly significant in "shrinking cities" (Fu, Zhou, Sun, et al., 2025). Neglect by property owners often accelerates building deterioration, increases maintenance costs, limits business opportunities, and diminishes the overall attractiveness and vitality of urban areas (Fu, Zhou, Sun, et al., 2025; Han, 2014; Lee et al., 2018; Molloy, 2016; Son et al., 2015).

Despite the negative impacts commonly associated with vacancy in "shrinking cities," recent perspectives suggest that, if managed effectively, vacancies can be transformed into valuable resources for communities (Dubeaux & Cunningham Sabot, 2018). This reflects a paradigm shift in urban planning, where principles of reuse align with the circular economy, rather than demolition or abandonment (Cellucci, 2021; Della Spina et al., 2023; Dell'Ovo et al., 2021; Eray et al., 2019; Young, 2008). Moreover, emerging trends such as rapid digitalization, the rise of remote work, and ongoing housing crises in many cities further strengthen the recognition of such vacancies as potential valuable resources (Knippschild & Zoellter, 2021).

Accordingly, the reuse of residential buildings offers a promising strategy for revitalizing "shrinking cities." However, the process is complex, as it involves stakeholders from diverse disciplines with differing perspectives and conflicting interests, often creating challenges and slowing progress (Aigwi, Egbelakin, et al., 2019; Aigwi, Phipps, et al., 2021; Amato et al., 2021; Armstrong et al., 2023; Cullingworth & Caves, 2013; Eray et al., 2019). In such contexts, where many actors are involved, stakeholder analysis becomes essential for identifying solvable problems, restructuring them, and developing technically feasible, politically acceptable solutions that serve the common good (Bryson, 2004; Crosby & Bryson, 2005; Ginige et al., 2018). Identifying relevant stakeholders, their stakes, and their interrelations is therefore crucial for the sustainable implementation of reuse, as it enables participants to understand how interests intersect and how these interconnections shape the dynamics of the process (Aigwi, Phipps, et al., 2021; Ginige et al., 2018).

Despite the growing attention to building reuse in fields such as cultural heritage, urban regeneration, urban vacancies, and the circular economy, existing research often remains siloed, adopting narrow disciplinary perspectives and paying limited attention to residential buildings. Such fragmented approaches risk excluding insights from other fields and hindering interdisciplinary collaboration (Lanz & Pendlebury, 2022; van Heur, 2025). This article directly addresses this gap by building upon a previous study (Ghoz, 2025) as part of a comprehensive research project. Whereas Ghoz (2025) established a multidisciplinary categorization of the challenges of residential building reuse, the present article identifies and categorizes the key stakeholder groups involved. It then integrates these two dimensions—challenges and stakeholders—to conduct a stakeholder–issue mapping that examines their complex interrelations. To the best of the researcher's knowledge, this is the first study to systematically identify stakeholders from diverse disciplines and map their interactions with the challenges of reuse, specifically in the context of residential buildings.

This study analyzed data from 11 academic articles and identified five key stakeholder groups in the reuse of residential buildings: (a) property owners, (b) investors, (c) government representatives and regulators, (d) building professionals, and (e) users, communities, and civic society. The stakeholder–issue analysis reveals that reuse challenges are interconnected across these groups, producing both conflicts and opportunities for collaboration. The findings position government representatives and regulators to play a central role in initiating and steering reuse processes. Meanwhile, other actors could evolve beyond their conventional roles; for instance, building professionals could expand beyond their traditional technical functions to roles as mediators and facilitators. The findings also highlight the need for new types of actors who recognize the social, cultural, and environmental value of reuse, in addition to its economic potential. Embracing this broader value proposition could shift the perception of reuse from a narrow, economically driven process toward a more sustainable, circular economy practice. While this reframing offers a new context and overarching goal for negotiation, it does not presuppose the alignment of all stakeholder interests, which may remain in tension. Furthermore, although property owners and users often exhibit lower engagement, they retain decisive influence through mechanisms such as ownership rights and a dependence on financial incentives, which can significantly determine the feasibility of reuse projects.

The findings of this study contribute to sustainable development by supporting the adoption of reuse practices, revitalizing "shrinking cities," advancing circular approaches in the built environment, and generating environmental, social, and economic benefits (Bullen & Love, 2011; Pintossi et al., 2021a; Yung & Chan, 2012). Furthermore, mapping stakeholder–challenge interrelations makes these dynamics visible and provides a clearer foundation for developing more effective management strategies (Bryson, 2004). To this end, the stakeholder–issue mapping developed in this article presents a generalized model that, while directly relevant to debates on "shrinking cities," is also applicable to other urban contexts that are dealing with residential vacancies. This establishes a foundation for the future context-specific analysis of the framework, through geographically-specific data called for by scholars like Gentili and Hoekstra (2019). Ultimately, the dynamics identified offer valuable insights to foster collaborative decision-making among researchers, educators, policymakers, and practitioners involved in residential building reuse. Policymakers can be better guided by community expectations, initiators and stakeholders can recognize potential areas of cooperation, and overall, the findings can strengthen awareness and promote more organized networking in support of sustainable reuse.

This article is structured into five sections. Following this introduction, the first section reviews the definitions and frameworks employed in this research, including stakeholders and stakeholder analysis (Section 1.1), as well as the challenges associated with the reuse of residential buildings (Section 1.2). The second section outlines the methodology, including the methods for data collection and analysis. The third section presents the results, detailing the identified stakeholder groups and the findings from the stakeholder–issue mapping analysis. The fourth section provides a discussion of these results, offering reflections and formulating propositions. Finally, the fifth section presents the conclusions and provides recommendations for future research.

1.1. Stakeholders: Definitions

In both academic research and practice, the term "stakeholder" is defined in various ways. Mitchell et al. (1997), for instance, distinguish between narrow and broad approaches. The narrow definition limits stakeholders

to individuals or groups directly relevant to an organization or issue, often shaped by constraints of time and resources. A broader definition, in contrast, includes all actors who influence or are influenced by the organization or issue, viewing them as participants in exchange relationships.

The broad definition of a stakeholder aligns with perspectives from the public and nonprofit sectors, where stakeholders are understood as all parties affected by the outcomes of an organization's strategy or those with the power to influence, negotiate, or shape an organization's strategy (Bryson, 1995; Eden & Ackermann, 2001; Nutt & Backoff, 1992). However, this view continues to privilege actors with power, thereby excluding those who lose or lack it. To address this limitation, other scholars advocate for a more inclusive definition that also acknowledges individuals, groups, or organizations that are nominally powerless (Bryson, 2004). This study adopts Bryson's (2004) inclusive definition, as it aligns with the public policy context in which broad stakeholder engagement is essential, highlighting that sustainable policies, plans, and programs require wide stakeholder support to build and sustain effective coalitions.

Stakeholder analysis is central to this research, as the decision-making of reuse of buildings typically involves multiple actors and conflicting interests. It helps identify interlinked interests and supports more collaborative approaches (Aigwi, Phipps, et al., 2021; Bryson, 1995; Crosby & Bryson, 2005; Eden & Ackermann, 2001). Consequently, this study employs Bryson's (2004) stakeholder–issue mapping method, which structures problems to facilitate solutions that are technically feasible, politically acceptable, and aligned with the common good.

1.2. Challenges of Reuse of Buildings

The reuse of buildings is characterized by its multifaceted nature, generating challenges that are intrinsically multidisciplinary and require the integration of knowledge from diverse fields and their respective stakeholders (Aigwi, Egbelakin, et al., 2019; Aigwi, Phipps, et al., 2021; Amato et al., 2021; Armstrong et al., 2023; Eray et al., 2019; Foster, 2020; Pintossi et al., 2021b; Zeadat, 2024). Furthermore, these challenges are not isolated; they are profoundly interrelated and mutually dependent (Dauda & Ajayi, 2022; Pintossi et al., 2021b).

Given these multidisciplinary challenges, scholars consistently argue that effective building reuse demands collaborative, cross-disciplinary responses. Foster (2020) characterizes reuse as an urban "nexus issue," inherently requiring such integrated approaches. Similarly, Nocca et al. (2021) and Amato et al. (2021) emphasize the need for transdisciplinary strategies that actively engage both multidisciplinary experts and societal stakeholders. Along these lines, Lanz and Pendlebury (2022) warn that a narrow, discipline-specific focus risks excluding valuable insights from other fields and limiting the interdisciplinary connections. They argue instead for broader, more inclusive frameworks that can advance both theory and practice when addressing the challenges of building reuse.

The challenges inherent in building reuse transcend tangible technical and regulatory concerns, which dominated early academic focus (Lou et al., 2020; Lucchi & Delera, 2020; Pintossi et al., 2021b). Significant intangible barriers include negative societal attitudes and a lack of public interest, which can critically impede or entirely prevent reuse projects (Amato et al., 2021; Velthuis & Spennemann, 2007). Furthermore, an overemphasis on financial viability can be counterproductive. As Rossitti et al. (2022) contend, a purely

economic approach to heritage reuse risks alienating local communities and diminishing social value. Consequently, they advocate for a balanced consideration of both community and economic interests to ensure sustainable and meaningful outcomes.

To effectively map the interrelationships between stakeholders and the challenges of building reuse, this research must first synthesize challenges identified across diverse disciplinary fields. Existing literature often addresses these challenges through a limited disciplinary lens. For instance, studies by Zeadat (2024), Jiang et al. (2023), and Yang et al. (2019) concentrate on cultural heritage dimensions, while others, such as Lucchi and Delera (2020) and Dauda and Ajayi (2022), prioritize architectural and technical concerns like retrofitting. Further perspectives, exemplified by Friedrich and Roessler (2023), analyze reuse through the framework of urban regeneration, emphasizing the social dimensions.

To overcome these siloed approaches, the present study employs the multidisciplinary categorization challenges framework developed by Ghoz (2025). This framework is interdisciplinary by design, synthesizing data from various fields to identify 75 sub-challenges categorized within 10 overarching themes: (a) economic viability and financial challenges, (b) building conditions, (c) design-technical challenges, (d) location challenges, (e) decision-making, (f) policy and regulations, (g) knowledge, capacity, and skills, (h) culture, perception, and awareness, (i) surrounding community, and (j) timeline. Its comprehensive nature aligns directly with this study's aim of facilitating a holistic stakeholder analysis.

2. Methodology

This research follows a two-stage methodology, as shown in Figure 1, to address the research question. The first stage focuses on identifying potential stakeholders involved in the challenges of building reuse, while the second stage maps the interrelations between each stakeholder and the relevant challenges.

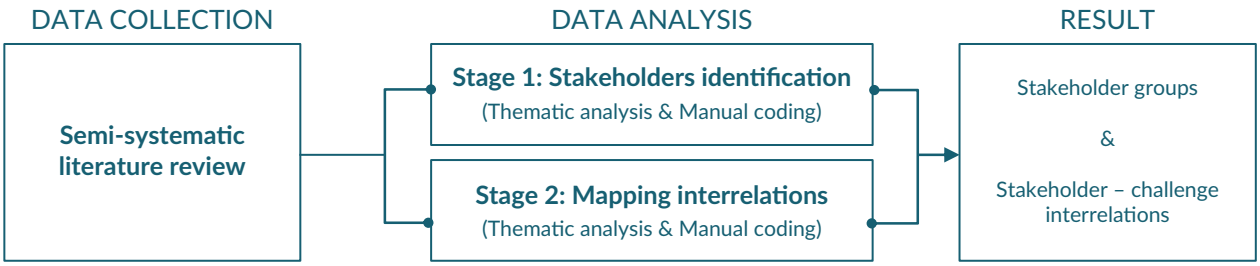

Figure 1. Overview of the methodological approach.

2.1. Stage 1: Identifying Potential Stakeholders

The objective of the first stage is to identify all potential stakeholders involved in the challenges and decision-making processes of residential building reuse across different disciplines. This directly addresses the research question: Who are the key stakeholders involved in the challenges and conflicts of interest that hinder the decision-making in residential building reuse? To answer this, stakeholders must be identified across multiple disciplines connected to residential building reuse, including the circular economy, urban revitalization, and cultural heritage. Adopting a multidisciplinary perspective ensures a comprehensive understanding of the diverse actors influencing and affected by reuse decisions.

A semi-systematic literature review was chosen as the data collection method, as it allows for a structured yet flexible exploration of relevant studies across multiple disciplines (Prasetyani et al., 2023; Snyder, 2019; Wong et al., 2013), without the restrictive inclusion criteria of fully systematic reviews (Snyder, 2019; Uttley et al., 2023). Moreover, instead of directly searching for articles that address key stakeholders, the search strategy focused on identifying studies discussing the challenges of building reuse, from which stakeholders would later be extracted through thematic analysis. Therefore, this study builds upon the same comprehensive bibliographic corpus that was established and described in the previous work (Ghoz, 2025), which identified challenges to residential building reuse. This deliberate choice ensures methodological consistency and allows for a direct analysis between the mapped challenges (the "issues") and the stakeholders involved.

The construction of the original corpus was as follows: The Web of Science database was selected due to its comprehensive multidisciplinary coverage of a wide array of scholarly publications and advanced search functionality (Norris & Oppenheim, 2007). The search strategy utilized essential terms like "challenges," "reusing," "residential buildings," and "multidisciplinary," expanded with relevant synonyms as detailed in Figure 2. The key term "challenges" was broadened to encompass terms such as "barriers," "hinders," "conflicts," "obstacles," and "impediments," and similarly, the remaining key terms were also broadened. In the case of "multidisciplinary," rather than using direct synonyms, terms reflecting various disciplines were added, including "economic," "ownership," "cultural," "legal," "regulatory," "technical," "social," and "demographic." Due to the limited results initially generated by the term "residential buildings," the search was extended to incorporate related terms like "buildings" and "built environments."

To ensure a comprehensive investigation of disciplines related to building reuse, an initial screening of titles and abstracts from the preliminary search results was carried out. As a result, further key terms—such as "urban revitalization," "urban regeneration," "vacancy," "building vacancy," "underuse," and "underutilized"—were identified, helping to expand the multidisciplinary scope of the review. These newly identified key terms were then incorporated to develop additional search strings. The search was performed between April 18 and May 7, 2024, and was limited to English-language publications. It covered the title, abstract, and keyword fields. This process resulted in the identification of 927 documents.

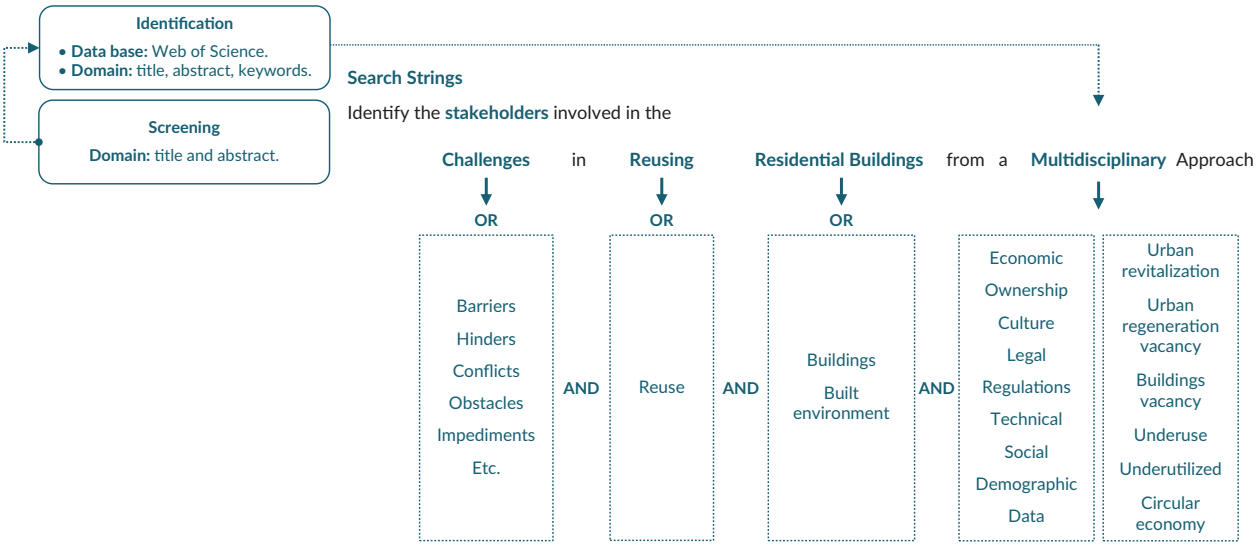

Figure 2. Diagram illustrating the development of the search strategy. Source: Adapted from Ghoz (2025).

Table 1 presents the search strings used, the dates of each search, and the filters applied in the search engine.

Table 1. Search strings used in identification of articles.

Date	Search string	Search filters
18/04/2024	((barriers OR hinders OR conflicts OR obstacles) AND (reuse) AND (buildings OR built environment))	Open access, Document type: article
26/04/2024	((ownership OR economic OR social OR culture OR legal OR regulations OR technical OR demographic OR data) AND (barriers OR hinders OR conflicts OR obstacles) AND (reuse) AND (buildings OR built environment))	Open access, Document type: article
28/04/2024	((ownership OR economic OR social OR culture OR legal OR regulations OR technical OR demographic OR data) AND (impediments) AND (reuse) AND (buildings OR built environment))	Open access, Document type: article
29/04/2024	((urban revitalization OR urban regeneration) AND (barriers OR hinders OR conflicts OR obstacles OR impediments))	Open access, Document type: article
04/05/2024	((reuse) AND (vacancy OR buildings vacancy OR underuse OR underutilized))	Open access, Document type: article
06/05/2024	((urban revitalization OR urban regeneration) AND (barriers OR hinders OR conflicts OR obstacles OR impediments) AND (reuse))	Open access, Document type: article
07/05/2024	((circular economy) AND (barriers OR hinders OR conflicts OR obstacles OR impediments) AND (reuse) AND (buildings OR built environment))	Open access, Document type: article
	Total no. of identified articles = 927	

Source: Adapted from Ghoz (2025).

While the source data (the identified 927 documents) remains the same as the previous study (Ghoz, 2025), the analytical focus and exclusion criteria for this study were distinct. The corpus was re-analyzed to target literature that explicitly identified or discussed the roles, interests, and influences of actor groups, thereby identifying and categorizing key stakeholders. This shift in focus is reflected in the specific thematic analysis applied to the corpus, as detailed in the following sections.

A two-phase manual screening process was conducted. In the initial phase, titles, abstracts, and conclusions of the 927 identified documents were reviewed, leading to the exclusion of 846. Subsequently, a full-text review of the remaining 81 documents was performed, resulting in the exclusion of 70 and the inclusion of 11 articles, as shown in the flow diagram in Figure 3. Both the initial and full-text screening phases aimed to identify articles addressing or mentioning stakeholders involved in the challenges and decision-making processes of building reuse. The inclusion criteria for these phases were as follows:

a) The definition of "reuse": The study included articles that addressed the reuse of buildings as functional spaces, encompassing reuse for the same, new, or mixed functions. Articles addressing reuse at the component or material level were excluded. The emphasis lies on the articles addressing reuse of buildings regardless of the specific terminology or disciplinary context used by the authors, such as adaptive reuse, rehabilitation, or urban regeneration.

b) Typology and function of the building: To maintain a clear focus on residential reuse, this study excluded articles that addressed the reuse of industrial heritage, market buildings, or other explicitly non-residential functions. Cultural heritage includes a wide range of building types—such as places of worship, royal residences, commercial and industrial sites, offices, civic structures, and military buildings (Foster, 2020; Gravagnuolo et al., 2024). Therefore, articles discussing cultural heritage buildings without a clearly defined function were included, along with those addressing the reuse of buildings that are either residential or had no specified function.
c) Relevance to addressing the research questions: The contribution of the article was assessed based on its relevance to identifying stakeholders involved in the challenges of reuse of residential buildings. For this study, a "stakeholder" is defined as any party that is either affected by, or has the ability to affect, these challenges (Nutt & Backoff, 1992).
d) Additional criteria for selection included the use of the English language, and open access availability.

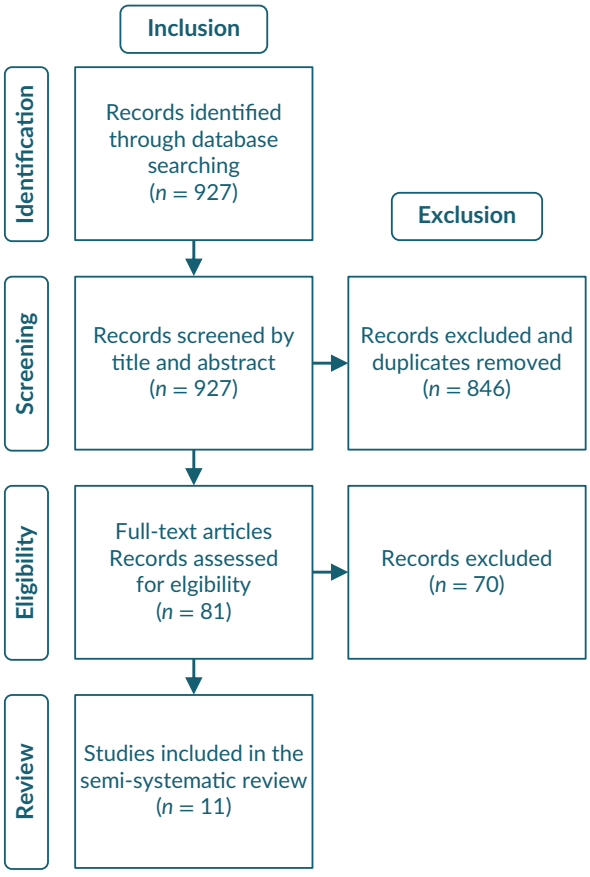

Figure 3. Flow diagram of the semi-systematic literature review.

Following the screening process, data were extracted from each of the 11 selected articles to address the research question. The extracted data included:

a) Bibliographic details, such as author, year of publication, title, and journal;
b) Contextual information, such as building type, whether the building was repurposed or retained its original function, and the geographical region;
c) Excerpts from the text that mention stakeholders involved in the challenges of building reuse.

Each excerpt was then manually coded using inductive thematic coding to develop categories representing stakeholder groups. In this context, stakeholders refer to any individual or group with an interest (direct/indirect or formal/informal) in the processes or outcomes of reusing residential buildings (Aigwi, Egbelakin, et al., 2019; Aigwi, Phipps, et al., 2021; van den Hove, 2006). Thematic analysis was chosen as it enables the systematic identification, organization, and description of key themes within a dataset by coding relevant statements into categories that reflect the phenomenon of interest (Creswell, 2014; Nowell et al., 2017; Nzimande, 2023).

The coding process involved the iterative categorization of the text, during which descriptive labels (codes) were manually assigned by the author to stakeholders mentioned in the extracted text. As the analysis progressed, recurring stakeholder groups were identified and iteratively grouped based on shared interests or roles. This iterative process helped refine the coding framework and improve consistency in both coding and categorization, as illustrated in Figure 4. Importantly, this iterative process also clarified the rationale for the final sample size: After the analysis of 11 articles, no new stakeholder categories emerged, indicating that data saturation had been reached. We therefore proceeded with the analysis based on this saturated sample.

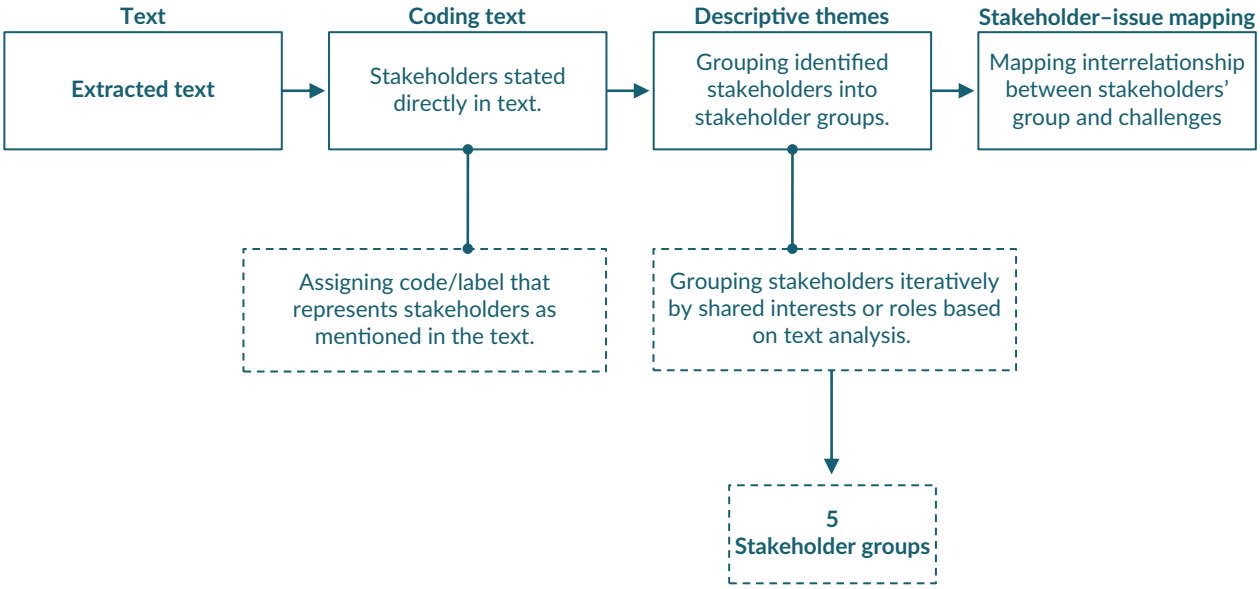

Figure 4. Diagram illustrating the steps for thematic synthesis.

The results were ultimately organized into five stakeholder groups, which will be discussed in detail in the following section. All extracted information was systematically recorded in an Excel spreadsheet (see Supplementary File), and a summary is provided in Table 2.

Table 2. Overview of extracted data from the selected articles used for stakeholder identification.

Bibliographic information	Context	``Quoted text''
Author	Type of building	"The text mentioning stakeholders involved in the challenges of building reuse."
Year of publication	Same function/New function	
Title	Region	
Journal		
Topic/Aim		

2.2. Stage 2: Stakeholder–Issue Interrelations Mapping

The second stage focused on mapping the identified stakeholders in the previous stage to the relevant key challenges of reuse of buildings using the stakeholder–issue interrelations method developed by Bryson (2004). This method facilitates the identification of which stakeholders have interests in specific issues and reveals how stakeholders are interconnected through these shared challenges. The resulting stakeholder–issue interrelations diagram offers valuable structuring of the problem area, making visible potential areas for cooperation or conflict among stakeholders. To apply this method, the following steps were undertaken:

a) Identify all stakeholders through brainstorming or based on previous analyses (Bryson, 2004). In this study, stakeholders were identified in stage 1 of the methodology through an iterative inductive thematic analysis. This involved refining the extracted data and focusing on the role of each stakeholder and their relationship to building reuse challenges.
b) Identify the key issues or challenges present in the situation (Bryson, 2004). In this research, these issues concern the reuse of buildings, drawing on a previous study (Ghoz, 2025) that outlined 10 overarching themes representing the main difficulties in residential building reuse.
c) Place the identified challenges and arrange the involved stakeholders around them, as illustrated in Figure 5. Note that a stakeholder may be involved in multiple issues, with arrows indicating which stakeholder has a stake in which challenge (Bryson, 2004).

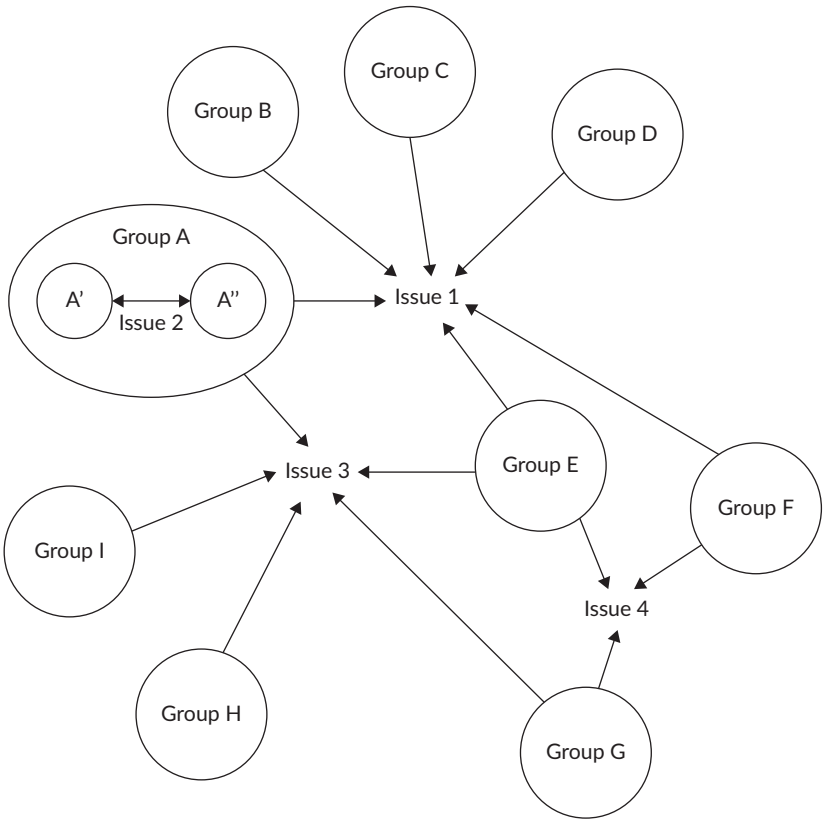

Figure 5. Stakeholder–issue interrelations diagram. Source: Bryson (2004), adapted from Bryant (2003, pp. 196, 264).

3. Results

This section presents the results of the thematic analysis, outlining the five main stakeholder groups that emerged from the data, along with their definitions and associated roles. It also reports the findings of a further analysis examining the relationships between these stakeholder groups and the key challenges related to the reuse of residential buildings, offering insights into their interconnections.

3.1. Identified Stakeholder Groups

Through an iterative coding process applied to the extracted text of 11 articles, this study identified five stakeholder group categories. These categories are: S.1 Property Owners; S.2 Investors; S.3 Government Representatives and Regulators; S.4 Building Professionals; and S.5 Users, Community, and Civic Society, as illustrated in Figure 6. Each category encompasses individuals or groups who share common interests or roles in the context of reuse of residential buildings. In the following subsections, each stakeholder category is defined, and the specific individuals or groups it comprises are described in detail.

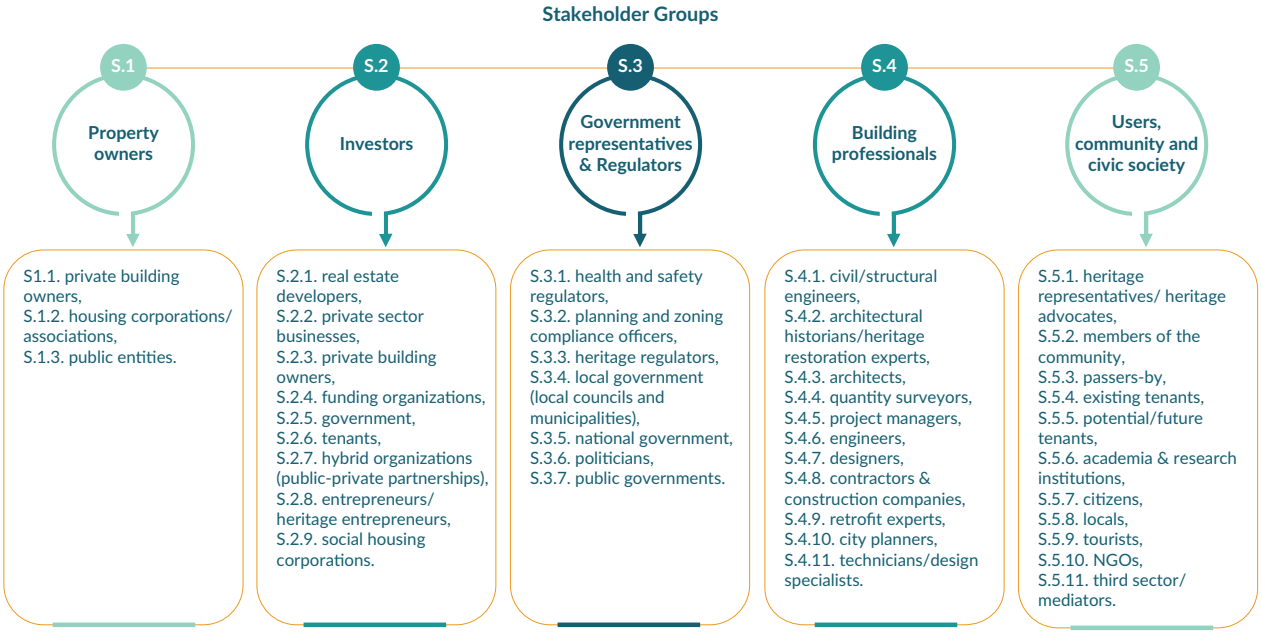

Figure 6. Diagram illustrating the identified stakeholder categories in reuse of residential buildings.

3.1.1. Property Owners

This stakeholder category includes any individual, group, or entity that holds ownership rights over a residential building within the reuse process. It comprises S.1.1. Private building owners, S.1.2. Housing corporations/associations, and S.1.3. Public entities (Aigwi, Egbelakin, et al., 2019; Aigwi, Ingham, et al., 2020; Amato et al., 2021; Foster, 2020; Guo et al., 2021; Nocca et al., 2021; Pintossi et al., 2021b; Zeadat, 2024). Property owners are typically involved in challenges related to policies and regulations, particularly those concerning ownership and property rights. Their role can vary, ranging from that of a passive owner to an active or potential investor. When acting as investors, property owners are also engaged in issues linked to economic and financial challenges. Although some studies, such as Aigwi, Ingham, et al. (2020), categorize

them under the broader group of investors, this study considers them as a distinct group due to their significant influence—particularly in cases where unclear property rights or unknown ownership can delay or obstruct reuse projects (Guo et al., 2021).

3.1.2. Investors

This stakeholder category comprises individuals, groups, or entities that have the potential to, or currently do, provide financial investment or support for the reuse of residential buildings. It includes S.2.1. Real estate developers, S.2.2. Private sector businesses, S.2.3. Private building owners, S.2.4. Funding organizations, S.2.5. Government, S.2.6. Tenants, S.2.7. Hybrid organizations (public–private partnerships), S.2.8. Entrepreneurs/heritage entrepreneurs, and S.2.9. Social housing corporations (Aigwi, Egbelakin, et al., 2019; Aigwi, Ingham, et al., 2020; Aigwi, Phipps, et al., 2021; Amato et al., 2021; Pintossi et al., 2021b; Yang et al., 2019; Zeadat, 2024). As noted by Aigwi, Ingham, et al. (2020), investors can also include building owners or government representatives, highlighting that some stakeholders may play multiple roles in the reuse process. While the primary objective of most investors is financial return and profit, in some cases their goals may also include the preservation of cultural value, or a combination of both. In this sense, Pintossi et al. (2021b) describe a new type of investor, the "heritage entrepreneur," who recognizes the cultural significance of heritage assets, their specificity, and the potential of their reuse.

3.1.3. Government Representatives and Regulators

This stakeholder category encompasses individuals and entities involved in, and responsible for, creating and enforcing regulations and policies, ranging from granting building regulation consents to overseeing planning and zoning regulations. They represent the government at both local and national levels. This group includes S.3.1. Health and safety regulators, S.3.2. Planning and zoning compliance officers, S.3.3. Heritage regulators, S.3.4. Local government (local councils and municipalities), S.3.5. National government, S.3.6. Politicians, and S.3.7. Public governments (Aigwi, Egbelakin, et al., 2019; Aigwi, Ingham, et al., 2020; Aigwi, Phipps, et al., 2021; Amato et al., 2021; Guo et al., 2021; Nocca et al., 2021; Pintossi et al., 2021b; Yang et al., 2019; Zeadat, 2024).

The role of the "Government representatives and regulators" group is not limited to ensuring that other stakeholders comply with regulatory procedures; rather, they also play a significant and influential role in creating stimuli and facilitating reuse processes (Aigwi, Ingham, et al., 2020; Aigwi, Phipps, et al., 2021; Pintossi et al., 2021b). This can be achieved through financial incentives (Zeadat, 2024) or through diversified funding mechanisms, such as public–private partnerships (Amato et al., 2021; Boniotti, 2023).

3.1.4. Building Professionals

This stakeholder category comprises individuals and groups involved in both the preparation and implementation of the reuse process, particularly at the technical scale of the building. These professionals often carry concerns raised by other stakeholder groups (Aigwi, Phipps, et al., 2021), placing them in a central position to orchestrate and navigate the diverse interests involved. Their role is to coordinate and mediate among stakeholders to achieve the shared goal of building reuse (Aigwi, Ingham, et al., 2020; Dauda & Ajayi, 2022). For example, a retrofit expert may be required to balance the preservation of a building's cultural value while improving functionality (Dauda & Ajayi, 2022).

This stakeholder group includes: S.4.1. Civil/structural engineers, S.4.2. Architectural historians and heritage restoration experts, S.4.3. Architects, S.4.4. Quantity surveyors, S.4.5. Project managers, S.4.6. Engineers, S.4.7. Designers, S.4.8. Contractors and construction companies, S.4.9. Retrofit experts, S.4.10. City planners, and S.4.11. Technicians/design specialists (Aigwi, Egbelakin, et al., 2019; Aigwi, Ingham, et al., 2020; Aigwi, Phipps, et al., 2021; Amato et al., 2021; Dauda & Ajayi, 2022; Foster, 2020; Nocca et al., 2021; Pintossi et al., 2021b).

3.1.5. Users, Community, and Civic Society

This stakeholder group comprises individuals, groups, and entities who are current or potential users of a reused building, as well as residents of the surrounding area, the broader society, and organized civic groups or movements. Their cultural, social, and spatial contexts both influence, and are influenced by, the processes of building reuse. This stakeholder group includes S.5.1. Heritage representatives and advocates, S.5.2. Members of the community, S.5.3. Passers-by, S.5.4. Existing tenants, S.5.5. Potential future tenants, S.5.6. Academia & research institutions, S.5.7. Citizens, S.5.8. Locals, S.5.9. Tourists, S.5.10. NGOs, and S.5.11. Third sector/mediators (Aigwi, Egbelakin, et al., 2019; Aigwi, Ingham, et al., 2020; Aigwi, Phipps, et al., 2021; Zeadat, 2024).

Despite their strong direct and indirect influence on reuse strategies—through their perceptions, awareness, and engagement—this stakeholder group is often overlooked in reuse projects (Aigwi, Phipps, et al., 2021; Amato et al., 2021). Limited participation leads to an incomplete understanding of their current social and cultural needs, while other groups, such as tourists, may benefit more from reuse projects than users, communities, and civic society (Pintossi et al., 2021b). This suggests a potential mediator role for civic organizations, such as NGOs, in connecting users with government stakeholders and supporting the continuity of reuse processes (Pintossi et al., 2021b).

3.2. Stakeholders and Their Relations to Each Challenge

This section examines and maps the interrelations between the identified stakeholder groups and the challenges of reusing residential buildings, as illustrated in Figure 7. The mapping structures the problem area by showing how stakeholders are connected to specific challenges and to one another, thereby making potential areas of cooperation or conflict more apparent (Bryson, 2004).

The participation of users, communities, and civic society as a stakeholder group is often overlooked, despite its importance (Aigwi, Phipps, et al., 2021; Amato et al., 2021; Mısırlısoy & Günçe, 2016). This group is linked to three thematic categories of challenges. First, the theme of culture, perception, and awareness, where their attitudes shape reuse strategies; for instance, limited awareness and negative perceptions can hinder effective implementation (Aigwi, Phipps, et al., 2021; Pintossi et al., 2021b). Second, the theme of surrounding community challenges, reflected in concerns about reuse strategies, changing spatial needs, and detachment from place (Nocca et al., 2021; Pintossi et al., 2021b; Zeadat, 2024). Finally, their relation to the decision-making process may be direct or indirect, although their participation remains rare and often overlooked (Aigwi, Ingham, et al., 2020; Aigwi, Phipps, et al., 2021).

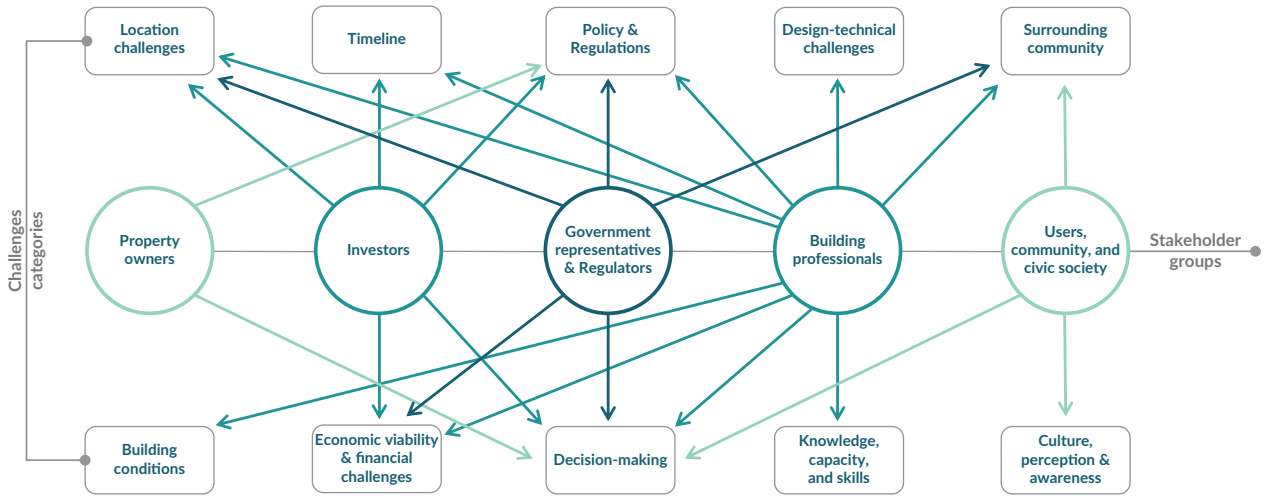

Figure 7. Stakeholder–issue interrelationships diagram showing the identified stakeholder groups and challenge categories in the reuse of residential buildings. Grey lines indicate the categorisation of stakeholder groups (horizontal) and challenge types (vertical).

Due to the nature of their role, the building professionals stakeholder group is often perceived as being primarily associated with technical challenges, since they are directly responsible for the technical aspects of reuse projects—a link frequently highlighted in the literature (Aigwi, Phipps, et al., 2021; Dauda & Ajayi, 2022). However, their involvement extends well beyond the technical dimension, as they are connected to nine thematic categories of challenges: surrounding community, design and technical issues, policy and regulations, project timeline, location-related constraints, economic and financial viability, decision-making processes, knowledge and capacity, and the physical condition of buildings (Aigwi, Egbelakin, et al., 2019; Aigwi, Ingham, et al., 2020; Dauda & Ajayi, 2022). For example, their role in design, building conditions, timelines, and policy implementation ranges from balancing the preservation of cultural and historical value with modernization, minimizing structural damage, and ensuring safety, to complying with regulations and addressing delays caused by lengthy approval or closure procedures (Aigwi, Egbelakin, et al., 2019; Aigwi, Ingham, et al., 2020; Dauda & Ajayi, 2022; Nocca et al., 2021). In addition, their limited knowledge, capacity, or skills can significantly hinder the reuse process (Foster, 2020). Their involvement across most categories also underscores their important role in decision-making, particularly in mediating diverse interests and working toward shared project goals (Aigwi, Phipps, et al., 2021).

Government representatives and regulators play a central role in governing and streamlining the decision-making process in building reuse projects (Amato et al., 2021). This stakeholder group is closely connected to the themes of policy and regulations as well as decision-making, since they are responsible for developing, enacting, and enforcing relevant policies and regulations (Aigwi, Egbelakin, et al., 2019; Aigwi, Phipps, et al., 2021; Pintossi et al., 2021b). They are also involved in surrounding community challenges and location challenges, for instance they establish planning regulations in response to such challenges (Aigwi, Phipps, et al., 2021; Pintossi et al., 2021b). Furthermore, they contribute to the economic and financial challenges by providing incentives or simplifying regulatory frameworks, which can facilitate reuse projects, or, if absent, hinder them and increase costs (Aigwi, Ingham, et al., 2020; Zeadat, 2024).

Investors, in contrast, are primarily concerned with financial returns and are therefore strongly associated with the themes of economic viability and financial challenges (Aigwi, Egbelakin, et al., 2019; Aigwi, Ingham, et al.,

2020; Zeadat, 2024). The investor stakeholder group is also connected to location, policy and regulatory, and time-related challenges, all of which affect their willingness to participate in the reuse process and shape their decision-making (Aigwi, Egbelakin, et al., 2019; Eray et al., 2019).

Property owners also hold a decisive position in the reuse process, primarily through their rights and responsibilities within the policy and regulation theme. Unclear ownership or disputes over property rights can obstruct the process entirely, highlighting their critical role in decision-making (Guo et al., 2021). In addition, a lack of financial incentives may discourage property owners from supporting reuse, thereby hindering the reuse process (Zeadat, 2024).

From the stakeholder–issue mapping shown in Figure 7, it is clear that all stakeholder groups are involved in and contribute to the decision-making process, either directly or indirectly, through their different stakes and perspectives, which collectively shape decisions on building reuse. Therefore, it is essential to take into account all stakeholder interests, even those that may initially seem irrelevant.

4. Discussion and Reflections

This study identified the key stakeholders involved in the reuse of residential buildings and mapped their interrelations with the challenges of reuse. Decision-making in reuse projects involves stakeholders from diverse disciplinary backgrounds, each bringing a different perspective on both the potential of reuse and the challenges it entails (Amato et al., 2021; Hong & Chen, 2017). For example, government representatives, building professionals such as architectural historians, and heritage advocates often approach reuse from the perspective of preserving culturally and historically valuable buildings (Aigwi, Egbelakin, et al., 2019). Investors and property owners, in contrast, view reuse through the lens of economic profitability, considering factors such as project timelines and return on investment (Aigwi, Egbelakin, et al., 2019). Meanwhile, structural engineers focus on ensuring the building's structural integrity and preventing potential damage or failure (Aigwi, Egbelakin, et al., 2019; Dauda & Ajayi, 2022). Recognising these diverse contributions underscores residential vacancy as a dynamic field of stakeholder interaction, aligning with emerging perspectives that conceptualise vacancy as an active process within urbanisation (O'Callaghan, 2024).

As a result of the multidisciplinary nature of the stakeholders, they are engaged at different phases of the project (Nocca et al., 2021). However, this raises concerns about unequal representation, as those entering the process later may have limited capacity to shape outcomes. Furthermore, although some groups may appear to lack direct influence on decision-making, overlooking their interests risks reinforcing misinformed narratives about their needs and priorities (Aigwi, Phipps, et al., 2021; Amato et al., 2021). For instance, cultural factors such as evolving spatial requirements or perceptions of reuse could influence the attractiveness of reuse projects for current and potential users as well as the surrounding community acceptance (Aigwi, Phipps, et al., 2021). Neglecting such aspects not only privileges certain groups, such as tourists, over long-term residents (Pintossi et al., 2021b), but may also undermine the social sustainability of reuse projects in the long term.

Within a multidisciplinary environment characterized by diverse perspectives, building professionals, universities, and civic society actors can play a facilitator role in mediating and coordinating the diverse interests involved in reuse. Building professionals, in particular, are often regarded as the key actors responsible for translating reuse from concept to reality, especially in its technical aspects (Aigwi, Phipps,

et al., 2021). However, the stakeholder–issue mapping diagram (Figure 7) shows that they are involved in the majority of challenges, providing them with a broad perspective on the interests of other stakeholders and positioning them as potential orchestrators throughout the reuse process. Similarly, universities and civic society actors can act as mediators between government actors and users or surrounding communities (Pintossi et al., 2021b), while also raising awareness about the benefits of reuse across economic, social, cultural, and environmental dimensions.

Reuse of buildings requires not only reviewing stakeholders' roles beyond their typical responsibilities but also considering new types of actors. Pintossi et al. (2021b) highlight one such example: the "heritage entrepreneur," an investor who recognizes both the cultural value and complexities of heritage reuse and looks beyond purely economic considerations. Building on this idea, the perspective on building reuse can be expanded beyond economic or cultural heritage considerations to include environmental aspects. From this viewpoint, reuse can be understood as a circular economy strategy that preserves resources and the embedded energy within the built environment. Adopting such a broader approach could shift the perspective on building reuse beyond narrow economic and cultural concerns toward a more sustainable, circular economy approach.

The diverse interests and stakes involved in the reuse process require a strong role from government representatives and regulators in governing and managing the entire decision-making process (Amato et al., 2021). In addition, they play a crucial role in addressing economic and financial challenges. It is strongly recommended that governments create financial incentives—whether through dedicated funds, public–private partnerships, or easing regulations—to reduce time, minimize financial risks, and lower costs for potential investors or property owners (Aigwi, Egbelakin, et al., 2019; Aigwi, Phipps, et al., 2021; Amato et al., 2021; Dauda & Ajayi, 2022; Dell'Ovo et al., 2021; Hamida et al., 2023; Nocca et al., 2021).

In conclusion, the stakeholder–issue mapping demonstrates that the challenges of residential building reuse are not isolated but interconnected across multiple actors. These interconnections highlight not only areas of conflict but also opportunities for cooperation that can serve as leverage points. For example, investors and government actors frequently intersect in challenges related to policy, regulation, and economic viability. Here, collaboration could take the form of supportive policies, regulatory adjustments to incentivize investors, or public–private partnerships to finance reuse projects. Similarly, users, communities, civic society groups, government actors, and building professionals are often linked to challenges concerning the surrounding community. In such cases, cooperation could involve building professionals acting as mediators between communities and government, or civic representatives facilitating dialogue to balance different interests.

At the same time, the stakeholder–issue mapping also reveals challenges that appear more strongly associated with a single stakeholder group, creating opportunities for new forms of collaboration. For instance, in the areas of cultural perception, awareness, and knowledge capacity, greater involvement from government or joint initiatives with investors could provide meaningful support. Such efforts might include awareness campaigns, training programs to build technical expertise, or city walks to highlight underused building assets. Finally, while regulators and building professionals emerge as central actors across multiple challenges, other stakeholders—such as property owners—may appear less involved overall but nonetheless retain decisive influence. This is particularly the case when it comes to ownership rights and the lack of financial incentives or support, which can discourage their engagement in reuse processes.

Furthermore, although the stakeholder–issue mapping findings are highly relevant to "shrinking cities," they also provide a valid framework for understanding residential vacancy in other urban contexts, including those experiencing growth. However, as Gentili and Hoekstra (2019) argue, a critical pathway to deeper insight is through context-specific calibration using geographically-based data. Therefore, the intended next step in this research is to build upon this generalized framework by integrating such localized data to test how the identified stakeholder dynamics manifest, vary, and intensify in contrasting urban settings.

5. Conclusions

The reuse of residential buildings involves stakeholders from diverse disciplines. This research identified five key stakeholder categories: property owners, investors, government representatives and regulators, building professionals, and users, communities, and civic society. While some of these groups, such as users, communities, and civic society, may not always be directly involved in decision-making, their involvement is nevertheless crucial for the long-term success of reuse projects.

Through the stakeholder–issue mapping, this study revealed areas of both conflict and potential cooperation. For example, opportunities for collaboration exist between governments and investors in addressing challenges of economic viability and policy regulation. Similarly, in challenges related to knowledge, capacity, and community engagement, meaningful collaboration could emerge between governments, building professionals, users, and civic society actors. These findings highlight the value of rethinking not only where conflicts lie, but also how they can be transformed into leverage points for cooperation. It is crucial to note, however, that these findings are based on a generalized, theoretical perspective. Their specific dynamics are likely to vary in real-world settings. Therefore, further empirical research across diverse urban contexts is essential to examine how these stakeholder patterns manifest, vary, and intensify under different local conditions.

The decision-making process for building reuse requires a reconsideration of the roles typically assigned to stakeholder groups. For instance, the role of building professionals could extend beyond technical responsibilities to include mediation and coordination. In addition, innovative roles—such as that of the "heritage entrepreneur"—are needed, as they connect the value of reuse not only to economic value but to other dimensions such as heritage preservation. Nevertheless, government representatives and regulators remain central in governing and managing the reuse decision-making process and can provide critical financial incentives.

Finally, the reuse of residential buildings should not be understood solely through economic or cultural heritage preservation lenses. It should also be framed within environmental and circular economy approaches. Reuse has the potential to preserve resources and embedded energy, reduce waste, and contribute to urban sustainability. Reframing reuse in this way could shift perceptions from viewing it primarily as a costly and complex challenge toward recognizing it as a valuable strategy that aligns with broader sustainable urban development goals.

Building upon the previous discussion, future research could focus on four main areas. First, the development of decision-support tools to coordinate the diverse interests of stakeholders and enhance their ability to identify common ground. Second, exploring the linkage between the reuse of residential buildings

and housing policies, including housing challenges, which could strengthen the societal relevance of reuse strategies. Third, examining mechanisms for transforming areas of conflict in building reuse into opportunities for collaboration among stakeholders. Finally, assessing the broader impacts of residential building reuse, not only in economic and cultural terms but also in relation to circular economy principles and environmental sustainability.

6. Research Limitations

This study identifies key stakeholders and their roles in the challenges and decisions of residential building reuse. A core difficulty was consolidating multidisciplinary data from varied sources into a coherent overview. Consequently, while the findings provide a thorough analysis, they are necessarily limited, underscoring the topic's inherent complexity and dependence on specific contexts.

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Conflict of Interests

The author declares no conflict of interests.

Data Availability

The original contributions presented in the study are included in the Supplementary File; further inquiries can be directed to the corresponding author.

LLMs Disclosure

ChatGPT was used as a paraphrasing aid to refine wording while ensuring clarity and coherence, with the author making all final revisions.

Supplementary Material

Supplementary material for this article is available online in the format provided by the author (unedited).

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