Bridging silos through governance innovations: the role of the EU cities mission

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Cities and local governments are increasingly under pressure to accelerate transformative change in energy and climate transitions. To help cities in their climate actions, the European Commission (EC) has established the EU Cities Mission, which aims for climate neutrality by 2030 for participating cities. The literature argues that one of the main obstacles to accelerating decarbonization lies in organizational divisions and other forms of structural silos. One of the possible ways to address these challenges and accelerate transformation is through governance innovations. The EU Cities Mission is a governance innovation that aims to incentivize and support climate and energy transitions in cities. In this paper, we critically assess the EU Cities Mission's framework and implementation plan in terms of its potential and possible gaps in addressing different types of silos. To do so, we develop an analytical framework based on academic literature that outlines types of silos and strategies for addressing them. Our results show that key EU Cities Mission documents include several strategies to bridge silos, but that some silos are less frequently addressed. This is particularly the case for silos that rely on political leadership. The paper concludes by drawing out the implications of our findings for the scholarly literature and practice.

KEYWORDS

silos, governance, missions, city mission, bridging silos

1 Introduction

The key role of cities in managing sustainability transitions is acknowledged in both policy and practice (Hölscher et al., 2019a; Hölscher et al., 2019b; Allen et al., 2023). With most of the global population living in cities, they play a catalytic role in social transformations (Ziervogel, 2019) and driving innovation (Marshall and Dolley, 2019). In general, sub-national or local level institutions are considered well-placed to reduce greenhouse gas emissions faster than national governments (Romero-Lankao et al., 2018). However, while cities and sub-national actors can be well-positioned to implement climate and sustainability-related policies, they are often constrained by and dependent on national regulation, legislation, and resources (Betsill and Bulkeley, 2007; Byrne et al., 2007; Granberg and Elander, 2007; Lundqvist and Biel, 2013; Coenen and Menkveld, 2013). Given these constraints, cities must increasingly innovate to overcome obstacles and achieve change (Romero-Lankao et al., 2018).

While many cities have joined transnational networks and worked in various ways to take climate action for years, one barrier to more effective action is the presence of silos,

as they can lead to policy inconsistencies and sub-optimal outcomes (Oseland, 2019). Especially in the context of climate action and sustainable development, different forms of silos and fragmentations in policy and institutional arrangements add constraints. Since climate change and sustainable development are complex problems, not isolated to one sector or sphere, they need to be addressed in cooperation (Al-Zubi, 2016; Harris et al., 2010; Baleta et al., 2019). Yet, cross-disciplinary and cross-sectoral communication about common goals can be challenging because of competing priorities, division of responsibilities, and mandates, which would also require the involvement of various institutions, actors, and different levels and scales of governance (Elsässer et al., 2022; UNDESA, 2018; Breuer et al., 2019; Bruyninckx et al., 2012). Addressing silos is thus an important research and policy objective.

In this paper, we investigate the potential for bridging silos in the context of city-level climate action by looking at how the EU Cities Mission initiative aims to support cities in addressing silos. We define silos in broad terms, beyond institutional boundaries and structures created by mandates or issue-area specialization. A silo implies an inability or unwillingness to communicate across lines of differences (Bento et al., 2020). There exist several broad underlying causes of silos, e.g., bureaucratic politics, path dependencies, standard operating procedures, knowledge and resource constraints, different organizational cultures and political systems that decentralize and redistribute power (Van de Walle and Hammerschmid, 2011; Scott, 2020; de Waal et al., 2019; Göpfert et al., 2019). Literatures on sociological institutionalism and organizational culture, for example, describe how different organizational logics and structures can create silos that can hinder effective joint problem solving (Høiland and Klemsdal, 2022). Such silos can be internal to a bureaucracy when multiple units are involved, or they can exist between actors and levels of governance (Göpfert et al., 2019). In some contexts, however, silos can be beneficial, for example, when it comes to specialized governmental agencies providing public goods; thus, breaking them would hinder that work (Scott and Gong, 2021).

Given the challenges that this siloed governance poses for climate and sustainability action, there are ongoing calls in research and public discourse to break silos, bridge silos or even "teach silos to dance" to create holistic, systemic, and integrative approaches to solving complex problems (Birner et al., 2024; Niestroy and Meuleman, 2016). Breaking silos refers to breaking down siloed structures. Conversely, bridging silos allows for silos to exist while fostering cooperation to counter the negative consequences of silos. Meanwhile, "teaching silos how to dance" refers to making silos "more flexible, permeable, interactive and transparent" (Niestroy and Meuleman, 2016). In other words, the term emphasizes learning across silos, to become aware and flexible when it comes to coordination, collaboration and dialogue. In this sense, the concept is closer to bridging silos, as it emphasizes that certain silos are necessary to keep but work around. As bridging silos is a broader term for describing ways of addressing silos without breaking them to keep some of their beneficial outcomes, we elect to use the terminology of bridging silos in the remainder of the paper.

The aim of this paper is twofold; (1) To build an analytical framework to understand what bridging silos entails and how they can be bridged, and, (2) To assess the extent to which the EU Cities Mission initiative launched by the European Commission (EC) in 2021 and housed under the Horizon Europe proposes to bridge silos to accelerate decarbonization in cities by 2030. This initiative follows a previous approach launched by the EC, known as lighthouse initiatives[1], that highlighted common European interests and provided an umbrella for coordinated activities. The EU Cities Mission can be defined as a form of governance innovation to increase the abilities of cities to address complex societal challenges. Given that the EU Cities Mission is the latest iteration of long-standing initiatives to achieve sustainability transitions, it is important to critically examine its design, potential, and challenges. Thus, the focus of this paper is on the design of the EU Cities Mission, rather than on how this policy is currently being implemented at the city level. In other words, the analysis provides insights into the aims and objectives of the EU Cities Mission and, therefore, describes its potential rather than evaluates its effects.

The EU Cities Mission represents an interesting case for our study on bridging silos since it has a boundary-spanning nature by bringing actors together in governing toward the same goal (Janssen et al., 2023). While based on voluntary participation, it appears that the Cities Mission aspires to bridge both horizontal (across departments and stakeholders) and vertical (across governance levels) silos (Quitzau et al., 2022). More specifically, the EC includes the following principles in the initiative: "(a) a holistic approach fostering systemic innovation instead of the present silo-based and fragmented approach–leading to integrated planning, (b) a multi-level governance and (c) a deep and continuous collaboration with citizens and between all stakeholders" (European Commission, 2020, p. 14). As such, the EU Cities Mission could be considered a most likely case for silo bridging.

The mission approach as a governance approach aims to bring together actors across different sectors, disciplines, and governance scales to stimulate innovation to solve a societal problem (Mazzucato, 2018b). It has historically been employed in various contexts, typically characterized by having a purpose of reaching a clear goal, such as putting a man on the moon. Contemporary missions differ since they often aim to address broader societal challenges, such as health (Sampat, 2012), energy (Anadón, 2012), or climate (Shabb et al., 2022). This makes societal missions more complex than earlier missions since they entail a long-term commitment (Foray et al., 2012) and "are less clearly defined and must be co-defined by many stakeholders" (Mazzucato, 2018a). Thus, whether the EU Cities Mission can fulfil the potential of bridging silos is an open question.

This paper, therefore, contributes new insights into the EU Cities Mission by examining its potential to bridge silos to achieve climate neutrality, and it is structured as follows. The next section outlines our methods and describes the empirical material. Then, we present an overview of the literature looking at "silos" in climate and sustainability governance at the city or municipal level, and based on that, introduce a framework on silos and strategies to overcome them. Next, we apply the framework to investigate to what extent the EU Cities Mission Implementation Plan and the Climate Contract guidelines aim to bridge these silos. Finally, we conclude by drawing out the implications of our findings for the scholarly literature and practice.

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1   https://smart-cities-marketplace.ec.europa.eu/projects-and-sites

2 Materials and methods

This paper is based on two methodological steps: a literature review to build the analytical framework of different types and approaches to silos and a qualitative content analysis of EU Cities Mission documents. The literature review included two phases. In the first phase we conducted a search in Google Scholar using the words bridging/breaking organizational silos, bridging/breaking silos politics, bridging/breaking silos governance, silos interaction, silos coordination issues, and institutional barriers. We prioritized the most relevant results at the top of the list of the Google Scholar search and used titles and abstracts for the initial screening.

The aim of the initial scoping review was to identify the most prominent silos to inform our framework. Our aim was thus not to conduct a systematic literature review but target the most relevant literature for our framework development. Therefore, we found Google Scholar to be a useful search engine as it provides a wide array of academic and grey literature in its search engine and generates the most cited research. We looked for literature that had a local or city focus on understanding how silos function in and impact cities. We particularly focused on journals of planning, development, governance, and policy. We paid specific attention to research on sustainability, Sustainable Development Goals (SDGs), climate, environment, energy, and green transitions. Then, we followed Lecy and Beatty's (2012) approach by using a constrained snowball sampling method based on the construction of the publication network obtained through citation referrals. As a result, we gathered 23 relevant articles for the review.

In the second phase, we received feedback on the initial literature review from stakeholders that are part of the research project's advisory group, including municipal representatives and researchers, and consequently expanded the search terms to institutional barriers, bridging boundary objects, policy integration, coordination, and collaboration in combination with "municipality" and "sustainability" filters. After the second round, the literature review resulted in 44 relevant peer-reviewed articles, book chapters, and reports. While we primarily looked for studies that directly referenced silos, we took a broad view of silos and included multiple meanings, such as fragmentation, barriers, isolated or separated constellations, boundaries that divide, and other phenomena that hinder communication and cooperation. The final selection of articles included mainly European literature because of its relevance to our case. However, a few studies from other regions – (North America and Africa) were also included since they appeared in the literature review search, and EU Cities Mission includes some non-EU cities as well. Based on this database of 44 readings, we constructed the analytical framework as described in the next section.

For the second methodological step, the analytical framework guided the qualitative content analysis applied to the EU Cities Mission implementation plan and the guidelines for the Climate City Contract (CCC). The latter consists of three documents: an action plan, a commitments document, and an investment plan (see Table 1). These documents were chosen for the analysis because they provide a detailed overview of the Cities Mission approach and represent a description of its structure, process, and mechanisms of implementation, thus serving as a good source to understand its governance framework and potential to address silos.

TABLE 1 Analyzed documents employing the developed analytical framework.

Document name	Abbreviation	Number of pages	Description
Implementation plan	IP	62	Published by the EU Commission in September 2021
CCC action plan	CCC(A)	45	Published on the NetZeroCities platform
CCC commitments document	CCC(C)	7	Published on the NetZeroCities platform
CCC investment plan	CCC(I)	17	Published on the NetZeroCities platform

The climate city contract resource pack provides tailor-made resources for cities to develop action plans. Thus, we expect the CCCs guidelines to elaborate more on the role of the local-level authorities and actors in the governance process. It is important to emphasize that our analysis examines how the EU Cities Mission would work by design, which can differ from practice. However, this analysis is also important because it can inform future policy designs. We searched these documents for themes identified by the developed framework and for the absence or presence of the description of silos and silos bridging strategies. As in the literature review, we took a broad view of silos beyond direct mentions of the phenomenon. Based on the results, we discuss which strategies for bridging silos are prioritized and the potential of the Cities Mission approach in bridging silos to achieve decarbonization.

3 Literature review

The purpose of this literature review section is to describe where silos are found, what forms the silos take and the strategies to bridge such silos. These three structural elements will compose the analytical framework (section 4) that aims to explore whether the EU Cities Mission can fulfil the potential of bridging silos. It is important to highlight that some silos and strategies for bridging them overlap and/or reinforce each other. Therefore, it is sometimes challenging to establish analytically distinct demarcations.

3.1 Understanding siloed structures

The literature review shows that in the context of climate and sustainability action, silos exist across and within different governance structures and institutions, more specifically, across governance levels (international/national/subnational or local), across institutions and actor groups (within a jurisdiction), across departments (within an organization), and across economic sectors.

Studies argue that in decentralized (or polycentric) systems, vertical coordination across administrative levels can be characterized by silos and gaps in goals and policy activities (Fuhr et al., 2018; Kern, 2019; Birner et al., 2024). Meanwhile, multi-level governance relations

are shown to be important in addressing sustainability issues at the city level, and therefore, there is a need for close coordination of goals and policy activities **across levels of government** (Aall et al., 2007; Breuer et al., 2019; Bruyninckx et al., 2012). Within a geographical boundary (e.g., a city), studies mention silos between policymakers, the private sector, and the local community working with climate change mitigation (Birner et al., 2024; Li and Lange, 2022), or between government and non-government actors (Klijn and Koppenjan, 2012) - in other words, **cross-institutional silos**.

Another silo exists **within organizations**, municipalities, and government ministries (Bouwer et al., 2021; Oseland, 2019). It includes silo thinking, which, to be overcome, requires increased collaboration (Niestroy and Meuleman, 2016; Scholz et al., 2016) and changes in the hierarchical organization to achieve urban transformation (Kern, 2023).

Sectoral silos are also frequently mentioned in the literature (Birner et al., 2024; Boulton, 2010; Wong and van der Heijden, 2019; Carmen et al., 2023). While sustainability solutions span across multiple sectors of the economy and society, including transportation, agriculture, heating, fossil fuels, finance, and energy efficiency, they lack synergies (Sanderink and Nasiritousi, 2020). Shabb and McCormick (2023) argue that in the context of local climate action, policymaking is connected to questions of urban consumption, SDGs, and social justice, among other things.

This makes climate change an issue that is "embedded in the working of the economy, socio-technical systems, urban infrastructure, and the cultures, routines, and practices of daily life" (Bulkeley, 2022, p. 267). In this regard, Burch's (2010) study on climate action in Canadian cities highlights the siloing of climate change and infrastructure challenges. In the context of sustainability goals, Birner et al. (2024) argue for the need to address systematic interdependencies between social, economic, and environmental problem areas. Ultimately, complex societal problems cannot be compartmentalized along sectoral lines, but require contingent coordination, collaborative governance, and network approaches (Ansell, 2011).

3.2 Identifying forms of silos

The literature highlights that in addition to recognizing the existence of fragmentation across different structural lines, it is important to pay attention to the specific forms and effects of silos and the underlying mechanisms that perpetuate them.

3.2.1 Mandates and responsibilities

Silos can take the form of separation between areas of specialization defined by different mandates and responsibilities (Briody and Erikson, 2016), including departments (Fitzgerald and Laufer, 2017). These types of silos are not inherently bad. For example, tasking different governmental agencies with specialized tasks is a cornerstone of the provision of public services. The separation of mandates and responsibility becomes an issue when the problem that requires addressing crosses over those boundaries. According to Quitzau et al. (2022), this is the case in Nordic municipalities with technical and environmental departments. Crossing those boundaries can sometimes be needed in climate adaptation projects (Kern, 2023).

Silos can also emerge between those who are responsible for different parts of the process. Studies have found that there is often a divide between planning and operations departments and professions, and the difference in how and at what scale they approach problem-solving (Scott and Gong, 2021; Burch, 2010; Oseland, 2019; Boehnke et al., 2019). For example, those in charge of planning often adopt a longer-term perspective, and those on implementation work more short-term (Wälitalo et al., 2023; Burch, 2010). Furthermore, factors such as different tasks, departmental focus, expertise availability, and professional background of the planners and policymakers can play a role and reinforce separation (Oseland, 2019).

3.2.2 Knowledge and mental silos

The siloing of mandate and responsibility can contribute to knowledge silos. By making climate and sustainability the responsibility of, for example, environmental departments, the expertise and knowledge on those issues can become isolated. The physical separation of departments can lead to further unintentional fragmentation of knowledge and information (Cashmore and Wejs, 2014; Scott, 2020; Leck and Simon, 2012; Wong and van der Heijden, 2019; Niestroy and Meuleman, 2016), as well as to intentional silos when individuals develop a reluctance toward sharing knowledge and data with other departments (Meuleman, 2021). However, knowledge silos and fragmentation across disciplines and expert communities are not always the result of deliberate withholding of information and can also result from inadequate communication, for example, between national and local levels of government (Leck and Simon, 2012; Allen et al., 2023). Niestroy and Meuleman (2016) argue for the need to address mental silos, and related 'tunnel views' against change. It includes the willingness to learn about and accept different types of knowledge.

3.2.3 Goals and policies

In addition to being tasked with different mandates, departments and institutions sometimes have goals and priorities that conflict. Carmen et al. (2023) argue that "multiple goals, assumptions, expectations and power asymmetries can exacerbate fragmentation between and within policy domains." Bouwer et al. (2021) and Leck and Simon (2012) exemplify these situations in South Africa. Oseland's (2019) among Norwegian municipalities and Burch (2010) between cities in Canada. In this regard, Shaw et al. (2014) found that Canadian communities focus on either mitigation or adaptation strategies rather than integrating both approaches. Silos thus can develop around specific policy issues and limit the ability to take a holistic view of the challenges (Boulton, 2010; Carmen et al., 2023). Silos and fragmentation can lead to duplication, absence of action, and contradictions between policies (Weitz et al., 2017); limit understanding of barriers and hinder progress toward goals (Eppel, 2017); and increase the potential for unintended or negative social, cultural, and political consequences (Eriksen et al., 2011).

3.2.4 Funding resources

The literature mainly mentions fragmentations in financial or funding resources, including municipal budgets (Burch, 2010). Municipalities may struggle to access budgets or make use of available budgets due to fragmentation (Krantz and Gustafsson, 2021; Oseland, 2019; Hawkins et al., 2016). However, Olsson et al. (2006) note that a fragmented funding landscape may also diversify funding opportunities, which in some cases could increase access to funding and make projects less dependent on one source. Adequate budgeting

and ease of accessing funds are thus key for advancing action. For example, studies in Sweden noted the importance of mobilizing funding from a variety of different international, national, and local sources for a municipal organization to achieve its goals (Hahn et al., 2006; Schultz et al., 2007).

3.3 Strategies for bridging silos

The key strategies emphasized in the literature that play a crucial role in bridging silos are agency (leadership) and collaboration. Ways for bridging silos are often interlinked. Some studies emphasize social ties and networks, which could be initiated through, for example, inter-departmental workshops or community-building events, which, in turn, could result from strong leadership. Given the different ways of bridging silos, the extent to which the silos can be overcome could differ. For instance, some processes may be of a more temporary nature, while others create more long-lasting effects as elaborated on below.

3.3.1 Policy integration

Several studies point to the need for integrating policies to address the complexities of sustainability and climate transformations (Steurer, 2010; Visseren-Hamakers, 2015; Baleta et al., 2019). In the context of SDGs governance, Song and Jang (2023) argue for the need of comprehensive and systemic approach to policy integration that overcomes the selectivity and unidirectionality of earlier approaches to environmental policy integration (also see Bornemann and Weiland, 2021; Nilsson and Persson, 2017; Stafford-Smith et al., 2017). Thus, policy integration is seen as increasingly important for bridging the silos of bureaucracies to deliver coherence across goals and targets (Breuer et al., 2019). Carmen et al. (2023) use the term policy synergy and emphasize the process-perspective to policy integration, including aspects such as addressing the normative dimensions of policy processes. Stafford-Smith et al. (2017) argue that national sustainable development strategies, national development plans, and green economy plans, can also link across sectors and actors. Others emphasize the need for a national legal framework to help promote cooperation and coordination between sectors in climate change work (Al-Zubi, 2016).

3.3.2 Institutional arrangements and collaborative processes

Institutions that contribute to integration offer meeting spaces between horizontally, vertically, and sectorally differentiated policy arenas, and enable interaction, information exchange, and cooperation between actors. Examples of types of institutional arrangements can vary - from creating a separate/new institution, a process, a norm, or a coordination body and societal dialogue to changes within organizational structures and processes (Stafford-Smith et al., 2017; Tosun and Leininger, 2017; Mathis et al., 2022). For instance, Scott and Gong (2021) found that rotating staff between departments can play a critical role in bridging silos. Below we outline four different commonly mentioned forms of institutions and processes that aim to bridge silos and achieve collaboration.

First, a frequently mentioned strategy relates to **formal and informal networks** (Khan, 2013; Brown et al., 2013), such as Eurocities, Local Governments for Sustainability (ICLEI), and the Climate Alliance. These networks facilitate exchange of knowledge, experiences, and promote learning (Kern, 2019). These can operate across different governmental levels (Van der Heijden, 2019). Also see Abbott et al. (2016) and Homsey and Warner (2015), or at the national level, as the New Dialogue Group in Germany (Birner et al., 2024).

On a more informal level, social and personal networks, relationships and social capital are seen as key mechanisms that encourage collaboration and knowledge exchange (Bouwer et al., 2021; Mattes et al., 2015; Carmen et al., 2023). Developing strong interpersonal relations between actors from different departments can help create shared values, beliefs, and goals (Bouwer et al., 2021). Pasquini and Shearing (2014) also argue that dense social networks and social capital are crucial for bridging silos.

Second, studies identify various **participatory processes** as effective methods to bridge silos among actors and institutions. These processes can provide a platform for engagement, information, tools that actors can utilize to work toward a common goal, and a sense of ownership of the process (Gustafsson et al., 2015). The literature largely focuses on establishing participatory practices among citizens. It can even help to empower communities (Li and Lange, 2022). Some examples are participatory budgeting (Cabannes, 2021) and citizen juries or assemblies (Ross et al., 2021). Kern (2023) highlights the importance of formalizing or institutionalizing participatory processes. However, these processes must not be overrun by strong interests and productively address underlying conflicts (Hofstad et al., 2022). Therefore, participation among different types of actors and stakeholders is important (Gustafsson et al., 2015; Li and Lange, 2022).

The literature also emphasizes other types of **joint fora and experiments**, such as workshops, working groups, and training programs among different stakeholders, including politicians, that can play an important role as a meeting ground where information is communicated and shared, and social ties and networks can be built (Christensen et al., 2016; Sánchez Gassen et al., 2018; Vedeld et al., 2021; Meuleman, 2021). Cross-departmental workshops in Nordic municipalities have proven to be successful (Quitzau et al., 2022, p. 7). In instances where workshops were not held, respondents expressed a need for the climate leaders to organize seminars and workshops as a platform for intersectoral coordination dialogue (Al-Zubi, 2016). Other collaborative platforms include knowledge products such as reports, joint conferences, events, advocacy efforts, and projects (Carmen et al., 2023; Sanderink and Nasiritousi, 2020).

Collaborative platforms can also be arranged online. In Sweden, Shabb and McCormick (2023) found that digital tools facilitate collaboration and engagement. Moreover, Christensen and Lægreid (2007) argue for a whole-of-government approach to get people on the ground at different levels to work together; as in public-private partnerships. In addition, Kern (2023) highlights the role of experiments and pilot projects in bringing forward innovative solutions, and facilitating cooperation between local businesses, research organizations, and making solutions visible to citizens.

3.3.3 (Political) leadership

Political and other forms of leadership are also mentioned as a crucial factor in bridging silos. Leaders play an important role in facilitating and coordinating several of the other aspects that have been mentioned as central to bridging silos. For example, they can facilitate workshops and training sessions and communicate

important information. Oseland (2019) study argues that when a sectorally divided institution is working with a plan that deals with a cross-sectoral issue, it is crucial to ensure ownership of that plan; and political interactions can help coordinate actors to increase their capacity for achieving common goals.

Pasquini and Shearing (2014) found that a strong political leadership can create an organizational mind-set to avoid isolated organizational or policy sense. Li and Lange (2022) highlight political leadership by local authorities playing a role "bridging government initiatives into local actions," communicating policies to communities and engaging with different networks of actors (also see Peters et al., 2010; Gudde et al., 2021). Other studies also emphasized the importance of national political leadership in communicating goals and activities implemented by national agencies to bridge or avoid discrepancies in the work of national governments and local authorities (Sánchez Gassen et al., 2018).

Leadership can also be achieved via personnel tasked to establish and maintain relationships across departments (Fitzgerald and Laufer, 2017). This can take place through a formal process or certain individuals unofficially adopting the leadership role, e.g., individual frontrunners (Brown et al., 2013). Li and Lange (2022) identified facilitators who helped the community sustain a local identity and green energy ownership in the knowledge exchange between public and private sectors. Birner et al. (2024) found that the creation of sustainability coordinator positions in ministries has increased the attention to sustainability in individual ministries and created new capacities for deeper exchange between them.

3.3.4 Shared ideas and visions

Ideas and visions refer to normative and cognitive constructs that motivate and orient actors in their interactions. While ideas and visions can be divisive and thus need to be implemented in parallel with strong leadership and collaborative processes, ideas can break down "mental silos," enable the formulation of shared interpretations of problems—across horizontal, vertical, and sectoral differences—and provide policymakers with commonly shared normative foundations (Niestroy and Meuleman, 2016). While sustainability, by virtue of its wide scope, has always been seen as an idea and vision that could bring together actors with different backgrounds and orientations (Amsler, 2009), the 2030 Agenda has further strengthened this integrative claim by emphasizing a systemic approach based on the indivisibility of goals (Bornemann and Christen, 2021).

One way to guide and spur a participatory process is by creating a thematic goal that different groups can work toward (Briody and Erikson, 2016). Similarly, Carmen et al. (2023) reported that shared concepts were identified as an opportunity to help build synergistic outcomes between policy domains. In this sense, the creation of a thematic goal can facilitate cooperation across an organization where silos run the risk of creating competition and "turf wars" (Lencioni, 2006).

3.4 Analytical framework for understanding silos

We present the findings of the literature review in Figure 1, which attempts to organize and structure the literature review into an analytical framework; and it is almost inevitable that the question

arises whether strategies can be linked to specific siloed structures and types of silos. In other words, which strategy can bridge which silos? We assume that siloed structures, types of silos and strategies to bridge silos are interconnected and interdependent, meaning that strategies to bridge one type of silo will affect others directly or indirectly. We can reflect to some extent on expected outcomes of strategies and how these link to types of silos.

For example, policy integration is focused on cutting across policy fields and therewith can address cross-sectoral silos, as well as goals and policies as a type of silo, through creating interlinked targets (Göpfert et al., 2019). Institutional arrangements, on the other hand, can play an important role in bridging knowledge and mental silos across governance levels. For example, transnational networks can bring together actors at various levels for knowledge exchange and capacity building. However, consolidating these links would require empirical studies, for which this framework provides a starting point. In addition, we see silo-bridging strategies as part of policy and planning cycles at various levels, which involve iterative and cyclic patterns of feedback loops and learning both horizontally and vertically, both within urban governance systems and potentially beyond them (e.g., creating feedback to the Cities Mission at EU level or national networks and platforms in the mission set-up).

Finally, as mentioned at the beginning of this section some silos and strategies for bridging them can overlap and/or reinforce each other (positively or negatively). In addition, the implementation of some bridging strategies can encounter limits related to political will and inflexible governance structures. Furthermore, strategies' implementation can require favorable conditions that only exist in specific contexts. This is particularly the case for collaborative and network approaches, which often require additional funding, and economic and human resources that are not available in every local climate governance context. Additionally, strategies such as rotating personnel to promote cross-sectoral collaboration can affect continuity and disrupt efficiency in some departments or areas where a high level of expertise is required.

From a more critical viewpoint, while the literature review has allowed the identification of relevant strategies to bridge silos, most of them are examples from contexts with favorable conditions, such as in Western Europe and Canada, and thus it should be noted that context matters when considering ways to understand and address silos. With this in mind, while the EU Cities Mission is no panacea and cannot be expected to address all silos, its ambitious aim and broad scope can lead to the expectation that bridging silos is one of the Mission's important contributions.

4 Results: how the EU cities mission discusses silos

This section presents the assessment of the EU implementation plan and the Climate City Contract (CCC) guidance documents by outlining how the EU Cities Mission discusses silos and strategies for bridging them. Since its launch, the EU Cities Mission has selected 112 cities (100 from the EU and 12 from countries associated with Horizon Europe) to encourage them to act as experimentation and innovation hubs and inspire other cities to become climate neutral. By providing the selected cities with tailor-made advice, opportunities for funding and financing, networking, and learning, the Cities Mission

FIGURE 1
Analytical framework on silos and strategies for bridging silos.
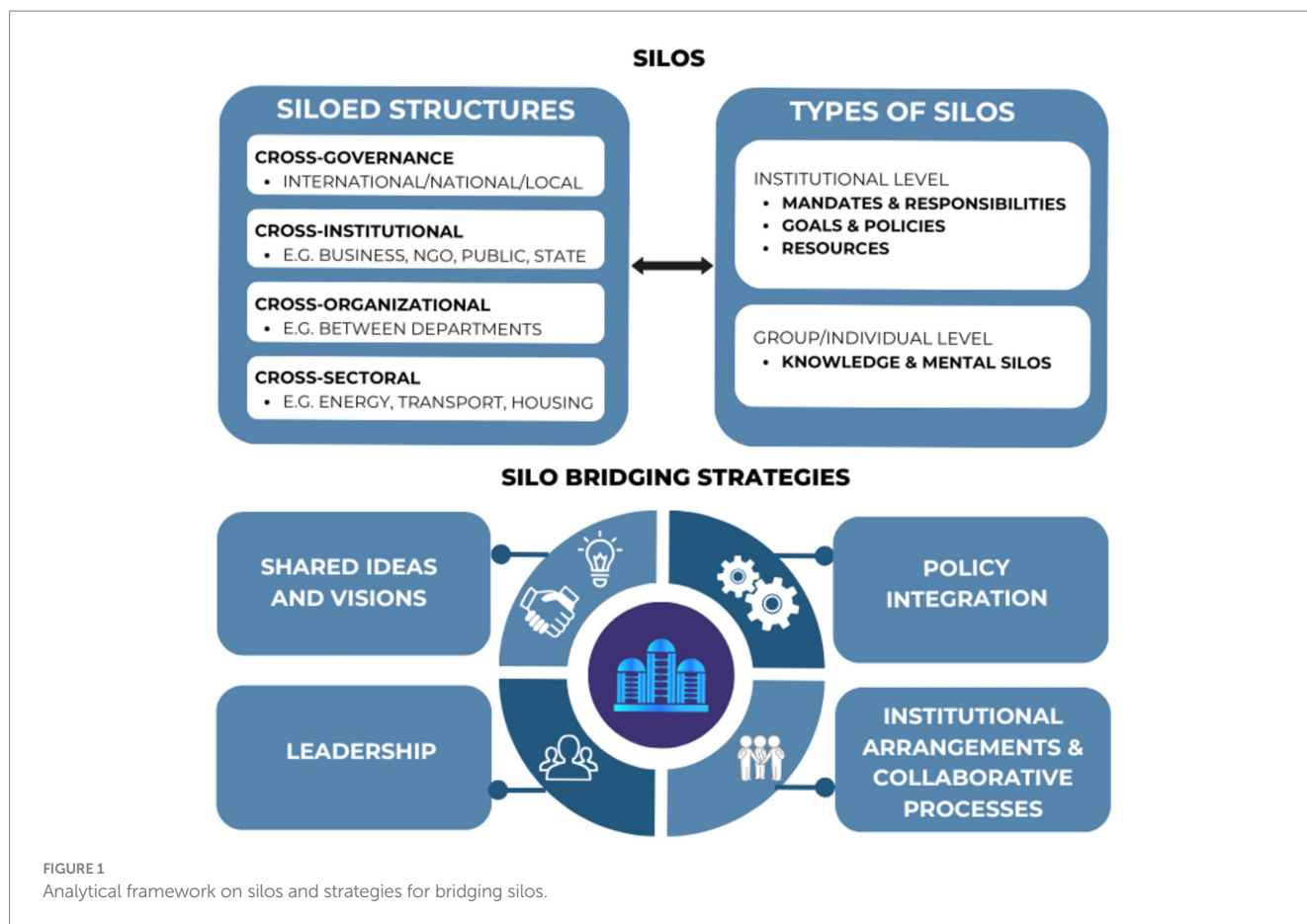
encourages cities to develop innovative climate solutions and governance and citizen engagement for achieving climate neutrality by 2030.[2] Below we present the results of the analysis of the documents listed in Table 1 in the methods section. In this section, silos and strategies are presented in the same order as they are described in the analytical framework section.

4.1 Where are silos found, and in what form?

Silos are only mentioned explicitly in the EU Cities Mission implementation plan (IP) four times and twice in the CCC documents. Still, there are numerous references to fragmentation or the need for synergies and connections, implying the presence of silos. The documents focus primarily on ways in which silos can be bridged rather than identifying what silos exist. However, we do find references to silos as identified in the literature.

Cross-governance silos are mentioned when describing the need for better synergies between EU, national, regional, and local levels, and the necessity of the buy-in from regional and national level authorities and the role of the Cities Mission in the process. This is

described to take place via synergies with other Missions and Horizon Europe partnerships, bringing European-level programs closer to the local level. Climate city contracts need to be developed with support from European, national, and regional authorities. The CCC(A) highlights the need to improve "the effectiveness and efficiency of multi-level governance for climate neutrality, i.e., with regional, national, and EU level" (p. 38). CCC(C) states that climate city contract signatories should include national and regional governments.

Cross-institutional silos appear in the IP in the context of working across different actor groups mobilizing funding and investments, including property owners, utilities, businesses, other stakeholders, and citizens (p. 8). Furthermore, the Cities Mission also aims to bring together "research organizations, academia, industry including social entrepreneurs, the financial sector including impact financiers, investors, philanthropists, NGOs, national and local authorities and citizens" (IP, p. 22). The role of citizens is emphasized more than any other actor; the mission mandates development of climate city contacts that focus on "innovative multi-level governance models with a particular focus on involvement and commitment from citizens themselves" (IP, p.45). CCC(A) also mentions the need for involvement of diverse city stakeholders and for cities to map all relevant stakeholders at "different levels of governance throughout the whole policy cycle" (p. 20).

Cross-organizational silos are not prominent. The IP mainly focuses on the city as one unit. A few instances include reference to the need for the whole city administration to be involved in radical change, the need to have staff with a broad range of skills, and that

delivering on some objectives requires working across departments. The CCC(A) is somewhat more detailed on the importance of cities' internal organization, encouraging municipalities to identify all relevant departments and organizations that the city would involve in the process of planning and implementing the climate contract and to improve the "horizontal governance of climate neutrality, i.e., the organizational set-up within municipal administrations" (p. 38).

Cross-sectoral silos are mentioned in the context of existing EU programs that support cities in climate neutrality, but they are not yet organized into a holistic and innovative strategy. Thus, the Cities Mission aims to support cities in developing innovative solutions across different sectors, by "encouraging relevant regional or national stakeholders (e.g., regional transport companies, national energy producers, national research institutions, etc.) to join in the preparation of the CCC" (IP, p. 29). The CCC(I) also emphasizes an integrated approach to planning, "capturing all emitting sectors and assets across the entire city, including the built environment, waste and circular economy, energy systems, transport, green infrastructure, nature-based solutions, and others" (p. 6).

A large part of the IP is focused on the fragmentation of the funding landscape and refers to silos in funding resources by mentioning the fact that funding for climate-neutral solutions for cities is sectoral and fragmented across the value chain of city investments. Finance comes from a variety of sources and, therefore, is diffused. Also, there is no integrated and portfolio-wide EU program focused on helping cities achieve climate neutrality, which the Cities Mission aims to overcome. There is an acknowledgement to help cities get access to funding and develop innovative investment strategies, which would involve getting access to private finance and national and regional programs. The CCC(I) encourages cities and the climate neutrality transition teams to have greater input on financial policies so "they do not operate in a silo for the 2030 ambition" (p. 15).

The IP also emphasizes the importance of experimentation and learning, especially across cities, thus alluding to knowledge and mental silos. In terms of goals and policies, we find that the Cities Mission directs participating cities toward a shared principle of sustainability, supported by the EU Green Deal and the existing EU initiatives geared toward achieving EU-wide climate neutrality. For instance, the IP states that the "Mission also aims to take on board the New European Bauhaus's principles of sustainability, inclusiveness, and aesthetics into climate-neutral urban transformation" (p. 21). It is unclear, however, whether such emphasis on the common framework aims to address the lack of policy coherence across cities or whether it mainly highlights the available policy tools for cities, should they require them. There is a lack of references to silos in mandates and responsibilities.

4.2 How are silos bridged?

4.2.1 Integrated policy

The need to deliver integrated policies and develop synergies with existing EU initiatives is mentioned as an objective of the Mission, e.g., between the EU Cities Mission and other EU Missions and EU programs and partnerships. The focus is also on finding synergies in funding sources and collaborations across sectors and policies, such as connecting policies on energy, building, transportation, and others. For example, the IP refers to finding connections to the EU cohesion

policy, European Urban Initiative (EUI), Energy Systems Integration policy, Zero Pollution Action Plan, Education for Climate Coalition, Driving Urban Transition (DUT), Industry Alliances, Important Projects of Common European Interests and European Innovation Partnerships, and many others. Policy integration is also referred to in the context of improving national strategies, potentially creating a better link between local and national strategies.

For example, "the Mission will coordinate its work closely with the National Energy and Climate Plans, which include priority areas for reforms and investments such as the renovation of the building stock and access to affordable housing, decarbonization of industry and renewable energy, sustainable mobility and energy system integration including infrastructure, batteries and renewable hydrogen" (IP, p. 11). Regarding synergies with other Missions, Adaptation Mission is particularly highlighted as central to the EU Cities Mission and linking mitigation and adaptation work to address climate neutrality (IP, p. 15). The Mission also aims to build connections with regional smart specialization strategies (IP, p. 20) and build bridges between CCCs and local Green Deals (IP, p. 53). Cities will also be responsible for aligning their CCCs with EU policies, such as the Green City Accord and the relevant elements of the Zero Pollution Action Plan.

4.2.2 Institutional arrangements and collaborative processes

One of the institutional arrangements established as part of the Cities Mission implementation is the Mission Platform, operated by NetZeroCities, which represents a network (and a collaborative digital platform) that brings different actors together and serves various supporting purposes. The platform is said to have multiple goals, such as connecting and coordinating actors and supporting cities with access to resources and funding. Among different networks that form the Cities Mission, the platform aims to "support a network of national contacts in the Member States that will have the responsibility of helping the cities in their countries to commit to the objectives of the Mission through an alignment of relevant national/regional initiatives and programs" (IP, p.39). The Mission Platform also serves to provide "the necessary innovative technical, regulatory and financial expertise and assistance to cities in developing and implementing their CCC" (IP, p. 4).

Other support activities include "a window for large scale demonstrators, support for tailor-made investment plans, innovative city governance models and citizens' engagement and a common framework for monitoring, reporting and verification" (IP, p. 21). It also aims to involve "research organizations, academia, industry including social entrepreneurs, the financial sector including impact financiers, investors, philanthropists, NGOs, national and local authorities and citizens" (IP, p. 22). This means it has potential to address knowledge silos. The platform will also help cities pair up with each other and develop a "community social network" to facilitate peer learning between cities (IP, p. 22) and facilitate connections with the Smart Cities Marketplace and link to many other initiatives at the EU level, such as the Covenant of Mayors, Living-in.eu, and CIVITAS.

Another network that is part of the Cities Mission is a Mission Core Network between EU-level actors and complementary national, regional, and local actors to set the basis for governance and implementation of the Missions' concept at the national and regional levels through sharing experiences and aligning national initiatives to the upcoming Missions. The Cities Mission also aims to provide cities

with access to EU-wide skills and expertise and help cities connect in international networks, e.g., Global Covenant of Mayors and URBACT. Similarly, the Mission plans to establish a Center for Cities and Climate to connect cities inside and outside of Europe, which aims to build on the knowledge of international cities' networks such as Global Covenant of Mayors, C40, ICLEI, and Mission Innovation.

Besides presenting opportunities to engage in new networks and collaborations, the CCC(A) also encourages cities to work within their existing governance structures to achieve their goals and re-use and incorporate existing information into their plans. At the same time, it suggests that developing new processes and bridging institutions might be necessary—"this may involve developing a Transition team, building collaborative governance structures and networks, and strengthen buy-in and mutual commitments with other governance levels" (p. 13). Thus, cities are encouraged to further connect across different governance levels. This, however, points to a certain degree of ambiguity in the directionality of the Mission.

Regarding participatory processes, the IP largely focuses on the need to involve citizens, more than any other actor group, in the process of development, implementation, and monitoring of climate city contracts that constitute the core governance mechanism of the EU Cities Mission. The contract represents an agreement between the city and its citizens. Examples of engagement mechanisms mentioned include the European Climate Pact to help engage the citizens in the process of design and implementation of CCCs and the Energy System Integration strategy, which supports citizens in becoming active energy consumers and can be aligned with the Cities Missions. CCC(A) also emphasizes that climate neutrality action planning should be based on the co-creation process by mobilizing key stakeholders and engaging citizens. However, specific participatory processes are not outlined.

Specific ways of collaboration across stakeholder groups, for example joint fora and experiments, are not specified in the analyzed documents (aside from the Mission platform). CCC(A) broadly highlights that collaboration with stakeholders is necessary, and stakeholders may include "citizens, interest groups, experts, political leaders, representatives from universities, private companies, utilities, city departments, energy supplies, investors, and financial institutions" (p. 24). The document also encourages exploring opportunities for innovative organizational and governance methods to bring these stakeholders together, to "reduce the 'silo mentality' that causes fragmentation and to build inclusiveness, trust, and legitimacy of the necessary actions" (p. 38). However, specific innovative methods are not discussed. Regarding the experiments, the IP highlights that the EU Cities Mission's objective is to invest in research and innovation and to use cities to pilot innovative solutions, "ideally working across thematic areas and functional silos" (p. 22). It is argued that pilots should be designed to work across all urban systems, including mobility, energy systems and the built environment, material and resource flows, natural areas, cultural/social/financial/institutional systems, and accessible public spaces, as well as with the engagement of citizens.

Digital and smart solutions use is promoted, arguing that they represent horizontal enablers across a range of actions. For example, digital finance for citizens is promoted to help citizens make payments, invest, and get insured, potentially leading to better participation. The Digital Europe Program will support cities in developing data platforms to enable the management of cross-sectoral data flows and engagement of stakeholders. The NetZeroCities platform also

represents a digital data bank with a city dashboard compiling relevant data for a given city, including its CCC, progress on metrics, an innovation readiness self-assessment tool and a smart repository of relevant knowledge (data, reports, good practices); an annual barometer synthesizing progress achieved by all willing cities (IP, p. 22).

4.2.3 Engaged leadership

The IP outlines the Mission's leadership structure, including the EU, national, and local level actors. For example, some of the actors in the management structure include the Missions Owners Group, consisting of the representatives of the European Commission DGs, which defines and proposes research and innovation needs for the Missions, and the Mission Manager and deputy, who are "responsible in particular for the preparation of the implementation plan, the coordination of the project portfolio, the synergies and coordination of activities which are relevant for a Mission, citizen engagement and communication activities, the coordination of Member State and regional initiatives as well as monitoring the overall progress of the Mission" (p. 39). Other actors in the governance structure include national contacts and representatives of cities or the "cities agora" as defined by the IP (p. 39). However, the IP does not mention the importance of leadership as such, and a lot will depend on member states' decisions on who to appoint for these positions.

Overall, the IP mentions that the Cities Mission represents an opportunity for the EU to communicate the European Green Deal to the Europeans "by linking it to initiatives at the local level and drawing out the political and societal, as well as the purely technological, relevance of research and innovation," alluding to the EU leadership role in the green transition (p. 18). On the local level, the CCC(I) highlights the facilitative role of city administrations in the processes of managing public and private investments needed to implement the climate contract. As such, city administration (and regional and national governments) could be seen as leaders that can shape "market conditions to support the development and implementation of new business models for climate neutrality" (p. 6). However, it is unclear the extent to which any of these actors aim to represent critical leadership positions or mainly provide coordination and support for the implementation of a multi-level initiative.

4.2.4 Shared ideas and visions

The Cities Mission, by establishing "a common framework for understanding what climate neutrality means for cities" (IP, p.41), arguably creates a shared idea and vision, which in turn can bridge different silos. The ideas that IP and CCCs express on policy integration, institutional arrangements and collaboration, and engaged leadership – are all ideas which underpin the broader vision of the Cities Mission and how to work toward the goal. Similarly, cities that will gain a "Mission label" will become a part of a shared commitment to climate neutrality. By focusing attention on a set target, the Cities Mission is clear on the end goal of the Mission – becoming climate neutral – while allowing cities to decide the pathway to reach the target.

5 Discussion

The results of this paper suggest that the EU Cities Mission represents an attempt to facilitate silo bridging as it takes a comprehensive wide overview of silos and aims to work across multiple

levels of governance and sectors to address climate change, although with varying emphasis on different types of silos and strategies. Specifically, there is considerable emphasis on sectoral silos, whereby the studied EU Cities Mission documents emphasize the need to work across different initiatives/sectors to create a holistic approach toward climate neutrality. The need for multi-level governance is also discussed, and for buy-in from regional and national levels, although bridging of cross-governance silos between the local and national level governments are not discussed in detail. This may indicate a limitation of the EU's ability to influence and dictate national-level politics.

Thus, in contemporary EU settings characterized by multi-level governance, the bridging of cross-governance silos via a top-down approach orchestrated by an EU policy is probably unlikely. However, potentially cross-governance silos could be overcome via a proxy by bridging cross-sectoral silos. As sectors, businesses, and governments are forced to collaborate to address climate change, by extension they are forced to talk across jurisdictions and levels of government as well. It is important to note that the EU Cities Mission encourages a creation of national platforms that support cities in their climate work, but it is unclear to what extent the political representatives are encouraged to participate in these platforms, signaling that the silos are more likely to be bridged on the operational or bureaucratic level, rather than political level.

Notably, cross-organizational silos are not mentioned in depth either and thus, silos internal to municipal organizations are not addressed in any significant way. While re-organization of local authorities may be the main priority for bridging policy and addressing siloed ways of working within local governments, it appears to represent a blind spot and shortcoming of the EU Cities Mission. However, this finding could be indicative of the nature of analyzed documents. Future studies could investigate individual cities' CCC and how they refer to cross-organizational municipal silos.

While the CCC(A) mentioned the possibility and need of creating new organizational innovations in city governments and a Transition Team, it is unclear how these new arrangements could function and be successful when considering existing structures, how novel and different from existing architecture they can be, and what could be their added value. The lesser emphasis on cross-governance and cross-organizational silos may indicate the political sensitivities involved, i.e., the more structural issues that are not easily resolved by closer collaboration due to power imbalances and competing interests (Patterson et al., 2024). It is thus unclear whether and how the EU Cities Mission aims to bridge silos that may rely on political initiatives.

In terms of strategies for bridging silos, a key emphasis is on the Mission Platform (and its digital format) as a way of facilitating the creation of networks, synergies, and peer-to-peer learning. The platform can be used for potentially bridging knowledge and mental silos by sharing information, best practices, and allowing for collaborative learning. The platform also showcases possibilities of exploiting synergies with other EU-supported activities and policy initiatives. As such, it can be seen as a tool for supporting policy integration and coherence. However, from a critical point of view, the platform may be limited in its ability to provide hands-on enhanced collaborative learning and knowledge production. To work in practice, such processes typically need to be locally embedded and engage local stakeholders, for collaboration and learning to generate transformative change (Wolfram, 2016; Van Mierlo and Beers, 2020).

We also conclude that the EU Cities Mission approach aims to strengthen the creation of shared ideas and goals through the Climate City Contracts. As such, the approach offers an overarching framework for different actors to align around. However, the EU Cities Mission does not problematize how this alignment may occur in practice or discuss the possible challenges that may arise. Importantly, the Cities Mission requires cities to decarbonize faster than EU-level and member state climate targets, which points to potential coordination challenges between the different levels of governance. Our analysis finds more emphasis on the potential synergies rather than offering strategies that may be useful toward effectively addressing potential negotiations and trade-offs in driving faster decarbonization. This finding is in line with previous studies on the Cities Mission (Shabb and McCormick, 2023).

Furthermore, there is a lack of attention to how to encourage stronger and more ambitious leadership on climate change (Betsill and Bulkeley, 2007). The literature on bridging silos highlights the importance of leadership, both on its own and as a facilitator for other strategies (e.g., creating networks). While the EU Cities Mission has created a structure with key roles involving EU-level expertise, national networks, and city representatives, there is no clear strategy to encourage particular forms of leadership, and it is unclear how such leadership can be facilitated. Given that the EU Cities Mission is under Horizon Europe (a funding mechanism), this may be a problem as clear and ambitious political leadership of the European Commission is also key. For the EU Cities Mission to succeed, it may need more direct political attention. Regarding leadership on the city level, the CCC(I) highlights the role of municipalities in facilitating the creation of well-functioning markets and support systems for other public and private actors. However, limitations that cities experience in influencing policy (e.g., national regulatory frameworks) are not mentioned.

Will the EU Cities Mission be enough to address the key silos hindering cities to achieve decarbonization? We can conclude that there is an ambiguity inherent in the EU Cities Mission, namely the roll out of a centralized idea/ideal, i.e., endorsing a top-down mission approach, which has been critiqued as a prolongation of new public management ideals, while decentralizing the responsibilities and actions for creating acceptance of the idea and the implementation of it. Thus there is an apparent lack of focus on bridging cross-governance silos. The EU Cities Mission departs from the assumption that national and local level actors are supportive of this centralized idea and will seek to work toward a climate-neutral city by 2030, and perhaps just as importantly, have the resources and financing to do so.

However, there are reasons to question this fundamental assumption. For example, while the EU Cities Mission relies on political leadership being aligned between local and national levels, often local and national politics have different priorities. On the one hand, the EU Cities Mission can help cities overcome national-level politics and connect to partners and finance on the EU level. On the other hand, the lack of requirement of commitment by national-level leadership weakens the possibilities of the EU Cities Mission, as it relies on synergies with national action, funding and regulatory frameworks. While there are requirements of commitment by national actors, there are no mechanisms to hold them responsible and accountable. Yet, as this paper has demonstrated, the EU Cities Mission tries to address silos by promoting multi-level and cross-boundary governance, which is much needed to tackle complex societal challenges.

6 Conclusion

This paper provides a contribution to the fields of European climate policy and governance, with a focus on the adoption and implementation of the EU Cities Mission to bridge silos. It creates an understanding of existing silos in city climate action and the potential of governance innovations such as the EU Mission approach to bridge these. We show that pathways toward climate neutrality face barriers that include various silos. The EU Cities Mission can be viewed as a governance innovation to address and bridge these. Through the Mission Platform, climate city contracts and other measures, the EU Cities Mission aims to create new forms of cooperation, commitments, resources and resource allocation, and actions to achieve climate-neutral cities by 2030. Whether or not it achieves this aim will depend on many factors. Here, we have examined whether it has provided guidelines for bridging silos comprehensively. By conducting a literature review, we identified that silos are embedded in siloed structures at different levels (cross-governance, cross-institutional, cross-organizational, and cross-sectoral). Within these structures, silos can be found in the form of mandates and responsibilities, goals and policies, resources, and knowledge and mental silos. Strategies to bridge these silos include policy integration, institutional arrangements and collaborative processes, (political) leadership, and shared ideas and visions.

In our analysis of the EU Cities Mission documents, we noted a clear lack of emphasis on certain silos and strategies for bridging them. We noted an absence of emphasis on national responsibility for climate action and bridging the national and local level interaction as part of the EU Cities Mission. While national research institutions and government agency representatives are included in the Climate City Contracts, national governments have no political responsibility to work with cities to enable their climate work. The EU Cities Mission seems to assume that subnational, national and EU levels are aligned, without providing a mechanism to ensure it. A commitment by the national government to facilitate the work of cities, or at the very least a forum where representatives from the local, national and EU levels could meet to discuss climate action as part of the EU Cities Mission could have helped in bridging the key silos. Without such mechanisms in the EU Cities Mission, the work of cities risks being undermined.

In the presence of these shortcomings, what can the case of the EU Cities Mission tell us about whether and how silos in other settings could be overcome? Given that the EU Cities Mission represents a most likely case for silo bridging and yet fails to discuss and provide tools for addressing certain silos, the findings provide a sobering view on the chances of bridging silos more broadly. However, the framework developed here, and the findings provide a deepened understanding for addressing silos in the future. Particularly, by highlighting the different types of silos and the different levels that they can occur on provides a framework for actors to continuously examine the need for bridging silos and possible strategies to use to address these. Bridging silos should thus be understood as a reflexive and dynamic exercise that involves continuous learning and developing new ways of working that maintain democratic processes of pluralistic and multi-level decision-making.

This analysis has also demonstrated that the proposed framework has proven to be a useful tool for empirical analysis, which can be used by other researchers and for other governance innovations as well. Simultaneously, there are some areas in which the framework could be further developed. Stand-alone, the framework might suggest that all silos need to be bridged and does not distinguish between beneficial and hindering silos. As mentioned in the literature review, there is a distinction in some studies between bridging, breaking, and teaching silos to dance – knowing which silos are hindering progress and collaboration could help understanding which strategies are needed. In addition, the framework distinguishes structures and types of silos systematically, as well as strategies to bridge these, but it does not provide detail on how these are interlinked, nor indicates the iterative character of the work that is needed to bridge silos.

More empirical studies are necessary to learn about contextual factors that might shape silos and the potential impact of strategies on specific silos. There is also a need to address the context in which silos operate. While this study has provided a primarily 'static' snapshot of silos and where they exist, contextual factors impact the presence of them, and it is "important to recognize that missions are products of particular governance arrangements that evolve over time" (Janssen et al., 2021). Just as the governance arrangements change over time, so does the presence of silos and how they interact over the duration of the EU Cities Mission. Related to this, such empirical studies may also help to further develop the idea of teaching silos how to dance as a more nuanced approach to bridging silos. Such an approach could reflect on progress linked to the EU Cities Mission in terms of learning, flexibility and adaptability across silos. This paper provides a useful entry point for future studies on adopting a mission approach and bridging silos at different levels of climate policy and governance, within and beyond the EU Cities Mission.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author/s.

Author contributions

AB: Writing – original draft, Writing – review & editing. NN: Writing – original draft, Writing – review & editing. JB: Writing – original draft, Writing – review & editing. LS: Writing – original draft, Writing – review & editing. BW: Writing – original draft, Writing – review & editing. CC: Writing – review & editing. KM: Writing – review & editing.

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Conflict of interest

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