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# Urban governance arrangements for sustainability and justice – linking theory with experience

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## Abstract

The Leipzig Charter highlights the need for integrated, place-based participatory governance approaches to achieve more sustainable and just urban futures. In this article, we provide a synthesis of our transdisciplinary analysis of ten EU projects which were selected from over 100 EU-funded urban sustainability and justice projects. Through analysing these cases according to the question of ‘How can city makers design governance processes for just and sustainable outcomes?’, we identify six Enabling Governance Arrangements which are considered of high relevance to the integration of urban sustainability and justice through both municipality and community-led initiatives. Each Enabling Governance Arrangement was not only observed at play in multiple initiatives but was also further consolidated and confirmed in dedicated workshops with over 60 city makers of different backgrounds. This highlights their potential to stir place-specific debates around the governance of sustainable and just cities. Overall, we provide empirically grounded, actionable insights for policymakers, practitioners, and researchers on how to achieve integrated urban sustainability and justice through Enabling Governance Arrangements.

## Highlights

- Formulates six arrangements for sustainable and just governance that can help municipalities and communities
- Arrangements are based on an analysis of governance processes that contributed to more sustainable and just cities
- Consolidated and confirmed the potential of these arrangements in workshops with over 60 city makers
- This demonstrates their potential to stir place-specific debates for the governance of sustainable and just cities

**Keywords:** Sustainable and just cities, Integrated governance, Visioning, Adaptability, Intermediaries, Participation, Community networks, Alternative financing



### **Policy and practice recommendations**

- Set up and continuously support a network of community initiatives who work on sustainability and justice issues
- Support local initiatives which contribute to a stronger culture of public engagement and your city's wider vision
- Provide fewer-strings-attached funding options for local initiatives to increase flexibility to experiment
- Create 'bridging' platforms for local initiatives to use (e.g., open community spaces, interactive web forums)

### **Justice in urban sustainability governance in the European Union**

The need for integrated urban sustainability and justice governance has long been acknowledged in academia (Amorim Maia et al. 2020) and EU policy frameworks such as the Leipzig Charter (EU2020 2020b). Cities must address climate change while simultaneously overcoming urban injustices. Urban heat adaptation measures, for instance, need to reach all affected residents, just as participation in climate planning needs to extend beyond privileged groups. Tackling this broad range of matters requires holistic, intersectional approaches to governance, yet it remains challenging to integrate justice and sustainability in urban governance frameworks (Amorim Maia et al. 2020). Through the New Leipzig Charter on sustainable urban development, the European Union (EU) acknowledges that "urban governance aiming for the common good is necessary to transform all cities into just, green and productive urban systems" (EU2020 2020b, 7). The New Leipzig Charter furthermore highlights the need for ecologically, socially and economically integrated, place-based participatory governance approaches to achieve more sustainable and just urban futures. This resonates with the principles of the EU's Urban Agenda, which will implement the New Leipzig Charter over multiple levels of governance in European institutions, member states, regional and local authorities and functional areas of all sizes (Slovenian Presidency of the Council of the European Union 2021). While such EU urban sustainability frameworks provide "key principles, dimensions and specific fields of actions" (EU2020 2020b, 11) for sustainable and just urban governance, the implementation of these actions remains very challenging in practice.

Much research has focused on teasing out the causes of urban social injustice and ecological unsustainability, on understanding the connections, tensions and contradictions between the two, and identifying possible solutions (Anguelovski et al. 2022; 2019; Anguelovski et al. 2018; UrbanA 2022b; van der Jagt et al. 2021; Liotta et al. 2020; Wüstemann et al. 2017; Rigolon 2016; Gilbert 2014). "Reflexive urban governance arrangements" (van der Jagt et al. 2021, 1) could help create more sustainable and just cities by connecting actors, institutions and practices. Yet, compartmentalised administrations or 'silo-thinking' prevents necessary exchange between diverse stakeholders individually working on these topics, while meaningful exchange between academia and practice is often missing. Therefore, the need to consolidate and effectively communicate this knowledge and experience remains. The EU-funded Horizon 2020 project, UrbanArena for Sustainable and Just Cities (2019–2022) (UrbanA), aimed to take up this challenge by

synthesising and brokering knowledge generated by prior research and innovation projects, drawing and discussing lessons with practitioners and translating them into action.

The UrbanA project in part focused on the governance of initiatives that work towards sustainable and just cities. Narrowed down from a list of over 100 EU-funded research projects, and an in-depth analysis of ten European urban sustainability and justice initiatives and confirmed in discussions with many practitioners and fellow researchers, we identified six Enabling Governance Arrangements (EGAs) as tools to facilitate discussions around the governance of sustainable and just cities. Their creation was guided by the question: *How can city makers design governance processes for just and sustainable outcomes?* Thus, our goal was to identify common enablers of positive change in various initiatives for urban sustainability and justice in Europe. Adopted reflexively, they can help both municipal and community-led projects in their daily practices and long-term strategies to improve outcomes for both environmental sustainability and justice. In this paper, we took on the perspective of practitioners and their understanding of governance challenges for sustainable and just cities and mobilised the literature to that effect.

We first illustrate the need for more practical research on integrating justice concerns into urban sustainability efforts based on a literature overview. Next, we explain how the UrbanA project allowed for the unique co-production of the EGAs with practitioners and researchers from across Europe. Following this, we elaborate on the EGAs, briefly exemplify them through two case studies and discuss their practical use for municipalities and their potential for enabling further academic-practitioner exchange on the governance of sustainable and just cities.

### **Justice in urban sustainability governance in the academic debate**

While the consideration of justice issues in environmental and sustainability policies is of key concern in contemporary multi-level governance debates, this paper addresses the challenge of integrative sustainability governance at an urban level. Generally, policy integration can be understood as the formulation and following of “coherent policy goals” accompanied by “consistent policy instruments” to reach said goals (Domorenok et al. 2021, 60). In other words, policy integration aims at governance processes that allow for simultaneous achievement of goals, systematically avoiding trade-offs (e.g., environmental sustainability versus justice) and blind spots (Banik 2021).

There is a wide array of current research on policy integration at various governance levels: for example at the international (Kettner and Kletzan-Slamanig 2020; Venghaus et al. 2019; Azizi et al. 2019), national (von Lüpke and Well 2020; Chinseu et al. 2018; Matti, Petersson, and Söderberg 2021) and municipal level (Khan et al. 2020; Yin, Rader Olsson, and Håkansson 2016; Rode 2019).

Within the scope of literature on policy integration and environmental sustainability, topics covered include: climate policy integration (Medina Hidalgo, Nunn, and Beazley 2021; Matti, Petersson, and Söderberg 2021; Kettner and Kletzan-Slamanig 2020); environmental policy integration (Sheng 2021; Yin, Rader Olsson, and Håkansson 2016; Azizi et al. 2019; Hogl et al. 2016), energy policy integration (von Lüpke and Well 2020); food policy integration (Sibbing et al. 2021) and urban planning (Rode 2019), among others. A specific focus on the inclusion of justice concerns in these frameworks, though, is quite rare.

Similarly, although justice in urban sustainability governance is a growing field of research (Sekulova et al. 2021; Corning 2021; Kotsila et al. 2021; Khan et al. 2020; Toxopeus et al. 2020; Hughes and Hoffmann 2020; Gilbert 2014), for example with a focus on nature-based-solutions and in the context of the just urban transition (Hughes and Hoffmann 2020; Gilbert 2014), it seems that municipalities often fail to address issues of justice in their sustainability policies in practice (Sibbing et al. 2021). Research conducted through the UrbanA project has identified factors which are further increasing the divide between environmental sustainability and social justice in cities. Based on UrbanA's meta-analysis of EU-funded projects, three of the most prevalent injustices in the context of urban sustainability in European cities include "Unquestioned economic growth and austerity urbanism, [an] exclusive access to the benefits of urban sustainability infrastructure, [and] the lack of meaningful participation processes" (Kotsila et al. 2020, 14). Oftentimes only middle or upper-class areas of a city benefit from new green initiatives such as parks, green roofs or community gardens. Green gentrification—increasing prices caused by urban greening—is shown to displace poorer residents. Concerns over such issues are not new, yet they seem more relevant than ever today. Looking back to 2010, Pearsall and Pierce (2010, 569) feared that environmental justice efforts are side-lined in macro-scale sustainability debates. While more recently, Khan et al. (2020, 382) conclude that "much remains to be done for eco-social policy integration to materialise at the urban level". There is a wide body of literature that highlights difficulties in combining environmental and justice efforts in urban governance, especially around Nature-based-solutions and with regards to power relations, intersectionality, green gentrification and the distributional, procedural and recognition (in)justices related to such processes (see e.g. Sekulova et al. 2021). However, there is a lack of action-oriented literature focused on how city makers (e.g., municipalities and community initiatives) can govern local initiatives that integrate justice and sustainability.

We therefore aim to fill this research gap by asking: How can city makers design local governance processes for just and sustainable outcomes?

The object of this is twofold: Firstly, to identify which arrangements have previously proven successful at incorporating justice concerns in urban sustainability initiatives. Secondly, to demonstrate how the application of such arrangements to integrate justice and sustainability ultimately benefits the initiative.

### **Linking theory with experiences**

To analyse the integration of sustainability and justice in urban governance, we scanned a selection of over 100 EU-funded urban sustainability and justice projects with a high transformative potential (Avelino et al. 2019), previously co-creatively compiled from the EU CORDIS project database by the UrbanA project (Avelino et al. 2019). From this selection, we identified ten initiatives for an in-depth analysis based on: availability of detailed documentation, especially on governance, their range in topical scope (e.g. housing, energy, green space), geographical scope (e.g. northern and southern Europe), scale, and governance mode. While not representative of all European urban sustainability and justice initiatives, we believe this selection gives a good overview based on the above-mentioned criteria (see Table 1).

**Table 1** Overview over the researched initiatives

Initiative	Scale	Sector	Governance mode
<b>Gentrification resistance;</b> Trastevere, Rome, Italy	Neighbourhood, City	Housing	Hybrid
<b>Foodsharing;</b> Berlin, Germany	City	Food	Community-Led
<b>Community—led affordable housing;</b> Anderlecht, Molenbeek, and Schaarbeek, Brussels, Belgium	Neighbourhood, City	Housing	Hybrid
<b>Superblocks</b> Barcelona; Spain	City	Mobility, Transport	Government-led
<b>Biodiversity Protection;</b> Serra de Collserola, Barcelona, Spain	Peri-urban Park	Nature-based-solutions	Community-Led
<b>Co-creation of a sustainable neighbourhood;</b> Vauban, Freiburg, Germany	Neighbourhood	Urban development	Hybrid
<b>Inner-city community energy;</b> Lambeth Borough, London, England	Neighbourhood	Energy	Community-Led
<b>Ekostaden Augustenborg;</b> Augustenborg, Malmö, Sweden	Neighbourhood	Neighbourhood development	Hybrid
<b>Citizen energy cooperative;</b> Berlin, Germany	City	Energy	Community-Led
<b>Neighbourhood regeneration;</b> Carnisse, Rotterdam, Netherlands	Neighbourhood	Urban regeneration	Hybrid

We next analysed the ten initiatives' success factors using a framework to parse out purpose, governance and outcomes.<sup>1</sup> We specifically focused on actor constellations (e.g., responsibilities and interactions between actors, influential individuals, participation processes) and institutional settings (e.g., policies, local political culture, financial support). We also noted specific obstacles the initiative faced, and how they were overcome. Desk research was deepened through subsequent semi-structured interviews.<sup>2</sup> Using the assembled data, we then synthesised common patterns of positive governance processes and settings into the six Enabling Governance Arrangements. In other words, common governance processes which appeared to contribute to positive justice and sustainability outcomes. In this process of synthetization, we asked "What key governance elements from each intervention enabled them to come to fruition?" Multiple researchers in our team reviewed each initiative so that a variety of perspectives were considered, limiting bias. Afterwards, we clustered these elements into more comprehensive categories, which finally, after a detailed feedback round of the UrbanA consortium were developed into the descriptions of Enabling Governance Arrangements. For a detailed description of the methods used to create the EGAs see Pages 11–17 in Silverton and Späth (2021). Afterwards, the EGAs were reviewed and strengthened through input from more than 60 participants at an online conference (Arena) in March 2021 as well as multiple interactive pre-arena webinars as part of the UrbanA project (Silverton 2021).

<sup>1</sup> The guiding framework for this analysis, as well as the answers for all 36 questions to that framework for each case study, can be found at this [link](#) to the governance section of the UrbanA open-source wiki.

<sup>2</sup> We did an interview on nine out of the ten cases (the only case not included being Serra de Collserola in Barcelona as we found the documentation to be comprehensive enough and had to prioritise for capacity reasons). In six cases (including Brixton and Augustenborg) we interviewed project proponents, in three cases we interviewed a researcher (beyond our consortium) that has studied the project in-depth. These researchers were closely involved with the projects over many years and we conducted interviews with them when the primary project proponents were not easily available.

This online arena belonged to a three-year collaborative process with the goal of accelerating transitions towards more just and sustainable urban futures with participants from academia, municipalities, civil society, policy makers, and beyond. At the March 2021 Arena specifically, each of the six EGAs was presented, and, in small groups, participants were asked to share their experience regarding: which aspects they consider important, which barriers exist for their implementation in practice, and to provide examples of the EGAs from their context. Participants recorded their insights on a collaborative online whiteboard tool, which was later the main data source for finalising the EGAs.

In summary, the EGAs in their final form are the outcome of multiple discussion and feedback rounds over three years within the UrbanA consortium and Community of Practice during (pre-) Arena events, project meetings, and other communications. Each EGA was observed at play in several community and municipality-led initiatives aiming at sustainable and just outcomes and was co-created with over 60 individuals of different professional backgrounds, which highlights their potential to stir place-specific debates around the governance of sustainable and just cities.

### **Six enabling Governance arrangements**

The following six Enabling Governance Arrangements are shown to be highly relevant to the integration of sustainability and justice in cities through both municipality and community-led initiatives. Below, we first briefly explicate how each arrangement integrates sustainability and justice, followed by its connection to current EU frameworks and priorities, particularly the New Leipzig Charter for sustainable urban development, and then make connections to relevant current literature. Lastly, the EGA itself is summarised, which constitutes our conclusions from case study research and subsequent dialogue with diverse practitioners in the Community of Practice at the interactive online Arena in March 2021 (Fig. 1).

#### **Creating a comprehensive vision of change**

A shared, comprehensive vision of change can be used as a tool for tackling injustice by integrating diverse voices and equity concerns in urban sustainability projects and in grassroots community initiatives. It can additionally enable a wider urban transformation process by highlighting possibilities for collaboration between initiatives. This also entails greater solidarity between previously siloed environmental sustainability and justice causes. Visioning can include both abstract processes to address fundamental questions, as well as more tangible processes to work out practical details.

One of the core ideas of urban development in the European Union is its integrated, multi-level governance approach based on a “simultaneous and fair consideration of all concerns and interests” (EU2020 2020b, 6). Reaching sustainability objectives requires a commonly shared, and actionable vision which serves as a baseline for any type of urban development. Prevalent in urban planning since the 1980s-1990s (Dixon et al. 2018), “visioning” is a “technique that develops goals for the future of a city through consensus-based meetings, open to all parties” (McCann 2001, 208). Visions, or “desirable future state[s]” (McPhearson, Iwaniec, and Bai 2016, 35), are the basis of strategic development and therefore crucial for the success of the European Union’s sustainability goals. While there has been a lack of long-term “analytically sound” city visions on sustainability until



**Fig. 1** Illustration of six enabling Governance arrangements (Carlotta Cataldi, 2021)

relatively recently (Wiek and Iwaniec 2014), some municipal planning departments have started to develop them (Dixon et al. 2018). It is especially important for disempowered groups and communities to gain ownership over their city's future by participating in visioning processes (McPhearson et al. 2016). Through their analysis of successful urban sustainability transformations, Ortegon-Sanchez and Tyler (2016) identify that a shared vision connecting individual projects and policies was the key starting point for many successful transformations, thus showing the high potential that successful sustainability visioning processes can yield.

In the UrbanA arena process, "Creating a comprehensive vision of change" was similarly identified as a success-factor for local initiatives working on urban sustainability and justice. We found that positive change is most likely when visions developed for different governance scales or sectors overlap and complement each other. Interaction between different scales of urban planning and policy making is key (See how Ekostaden Augustenborg's re-development was influenced from other interdisciplinary national and international visions at the time in Chapter 5.6). A comprehensive vision can be further strengthened through integration in policy and by law. Meanwhile, community-based organisations can also generate grassroots visions of change by collecting residents' ambitions and images of the future. This process fosters personal connections, a greater connection to place, and generates momentum towards positive change. For municipal and community-led initiatives alike, we found that small, tangible successes in the short term are needed to maintain engagement and motivation for achieving long-term overarching visions (see Chapter 5.6). As guides for the future, visions need to include as many voices as possible. We found that inclusive safe spaces allow for different groups to collectively express their ideas and wishes. For example, artistic visioning techniques can help create such spaces and overcome language and education barriers. Although different stakeholders may have conflicting visions of an area, or an initiative, it is important to avoid zero-sum game situations. Instead, we observed that successful initiatives work towards a solution that addresses social priorities without compromising ecological sustainability. In the Augustenborg case, for example, giving residents responsibility over certain project aspects addressed a social priority while simultaneously leading to ecological improvements (e.g., additional green roofs and gardens) (see Chapter 5.6). In short, visioning is about balancing different topics and needs of diverse people in creating sustainable and just cities.

### **Making space for adaptation and experimentation**

In complex urban systems, change is a constant. Transformation to more sustainable and just societies therefore requires adaptation to account for unforeseen, changing circumstances. Experimentation, meanwhile, is key for re-thinking and testing novel ideas that allow cities to break free of simultaneously unjust and unsustainable structures.

Adaptability and experimentation are key terms in EU sustainability frameworks. Flexible urban governance, for example, is mentioned in the New Leipzig Charter as helping cities to be more robust against external factors like climate change (EU2020 2020b). Furthermore, the strength of the multi-level and multi-stakeholder Partnerships within the Urban Agenda lies within its "flexible, 'experimental' nature" (EU2020 2020b, 2), with cities regarded as "test beds for social innovation".



Previously holding a negative connotation, flexibility in urban planning is now positively regarded (Tasan-Kok 2008). New developments in an increasingly diverse (Taşan-Kok et al. 2017) and complex urban system (Gurr and Walloth 2014) cannot always be foreseen by planners. Steering away from rigid plans, towards adaptive approaches accounts for this.

Therefore, flexibility and adaptability have become more prominent in urban planning. Planners need to find new ways to include groups that were traditionally excluded in planning, participation and decision-making processes, which requires flexibility in comparison to more standardized participation processes implemented in the past (Tasan-Kok 2008). Finally, there is an increasing need to understand governance arrangements around experimental interventions by municipalities and other actors, e.g. in discussions around local climate change politics (Castán Broto 2017).

In the UrbanA arena process, we learned that adaptability within initiatives for sustainable and just cities entails leaving space for careful modifications and detours along their path to fulfilling overarching visions. Furthermore, “[Making space for adaptation and experimentation](#)” was identified as a success-factor for local initiatives working on urban sustainability and justice. In other words, initiatives benefit from continuously and collectively deciding how much they are willing to adapt their plans based on new information and circumstances. This could mean dynamic external political, social, ecological and economic conditions as well as on new developments and knowledge from within the project. Furthermore, long-term goals may also need adaptation to reflect the priorities and opinions of different stakeholder groups (e.g., concerns about gentrification from urban greening processes). Openness to adaptation entails striking a balance between sticking rigidly to pre-set agendas and a lack of persistence with former decisions – an approach that helps initiatives remain viable while sticking to their transformative ideas. In many cases, adaptability was reportedly essential to keeping initiatives afloat in difficult circumstances, such as the removal of important subsidies (see the case of Brixton energy in Chapter 5.3). In others, we observed that short-term flexibility enabled initiatives to take advantage of beneficial windows of opportunity. Pushing beyond simply reactive adaptability, many initiatives benefit from proactively adopting an experimental ‘probe and learn’ approach to project design, implementation and general organisational culture. This allows room for mistakes and new developments, while still working towards long-term visions. Celebrating ‘mistake culture’, normalises failure as a natural part of experimentation and innovation. We found that a critical mass of initiative supporters who uphold an experimental ethos will allow for more learning opportunities and creative ways to tackle seemingly unchangeable injustices and unsustainable practices (see Chapter 5.6).

### **Building bridges between separate stakeholder groups**

Justice-oriented urban sustainability initiatives activate a diverse group of stakeholders. Setting up various informal or formal roles to intermediate between these stakeholders helps enable communication, build trust and increase mutual understanding. Importantly, intermediary roles help broker different knowledge types, including technical, procedural, social, ethical and others, which is central to simultaneously achieving sustainability and justice objectives.

The New Leipzig Charter accordingly promotes an integrated approach to urban development that involves debate and mediation through multi-stakeholder partnerships (EU2020 2020b). Dialogue between multi-level governance stakeholders in the EU's Urban Agenda, meanwhile, "relies on simultaneous and fair consideration of all concerns and interests relevant to urban development" (EU2020 2020a, 6).

Bridge-like intermediaries can take different forms: e.g., transnational organisations like the ICLEI city network (Frantzeskaki et al. 2019), municipalities themselves (Gustafsson and Mignon 2020), cultural intermediaries (Phil and Beth 2019), various platforms (Dignum 2018), non-profit organisations (Nickels and Rivera 2018) or planning consultancies (Stapper et al. 2020). In discussions around sustainable urban environments, intermediaries are deemed a "fundamental governance activity" (Frantzeskaki and Bush 2021, 1) due to their ability to link actors, sectors and knowledge-types over multiple levels of complex governance (e.g. May and Perry 2017: 35). Perry and Smit (2022: 4) specifically understand intermediation as active knowledge brokerage between different stakeholders with the "aim of urban justice in mind". In the UrbanA arena process, researchers and practitioners identified "Building bridges between separate stakeholder groups" as a success-factor for local initiatives working on urban sustainability and justice. We found that such bridging roles can be filled by diverse actors (e.g., a project manager, a committee, a dedicated organisation, esteemed community member) who are sensitive to the needs and perspectives of others, self-reflective of both their own privilege as well as their intermediary role, and generally possess a humble personality. Community members, for example, were seen as important intermediaries due to their familiarity with local dynamics and continued presence after a project's conclusion (see Repowering London's "Estate Mamas" in Chapter 5.3). Additionally, civil society groups play important roles as intermediaries between local governments and community members by brokering knowledge about political activities and community priorities. In some cases, local governments can serve as intermediaries between different stakeholders in a community (see Lambeth council's role in Repowering London case, Chapter 5.3).

Furthermore, bridge-building roles were seen as helpful in avoiding repeated mistakes that often come with short-term thinking and planning. Intermediaries who know their city, its history and inhabitants well carry over knowledge and experience about what has and has not worked in the past. This improves collaboration between residents and municipalities as well as between different municipal departments, and lessons-learned are better able to cross-pollinate between projects.

Additional to an actor's role as a bridge, conferences like UrbanA arenas, virtual and local forums or platforms, and face-to-face community gatherings (e.g., children's and neighbourhood parliaments, food and arts festivals) were also all suggested as ways to build bridges. At its core, building bridges is about connecting, knowledge-sharing and idea-building in a manner that supports the interdisciplinary and highly collaborative process of building sustainable and just cities.

### **Committing to a meaningful participation process**

Sustainability transitions will only meet the needs of all, rather than the privileged few, if justice concerns are voiced and heard. Meaningful participation in sustainable urban

development is a non-trivial endeavour, requiring motivational and safe environments where communities trust that their inputs will be taken seriously.

Drawing from diverse knowledge-types while engaging with local actors not only strengthens progress towards sustainable and just cities but also forwards local democracy overall (EU2020 2020b). In the New Leipzig Charter, governance for the common good is based on participatory approaches with an active encouragement of “new forms of participation [...] including co-creation and co-design in cooperation with inhabitants, civil society networks, community organisations and private enterprises” (EU2020 2020b, 6).

For participatory co-creation to be just, it must critically assess whose voices get heard and who is able to participate (Leino and Puumala 2021). The question of participatory process accessibility is frequently posed in the literature (Bryson et al. 2013; Schlozman et al. 2012; Young 2000). More recently, digital participation methods like mapping (Kahila-Tani et al. 2019), citizen feedback apps (Wilson et al. 2019), or public participation GIS (Rall, Hansen, and Pauleit 2019) have gained traction, but not without critique over exclusion effects, especially in regards to the smart city (de Hoop et al. 2022; Späth and Knieling 2020; Shelton and Lodato 2019). Discussions around co-creation and digital participation alike remain confronted with lines of inclusion and exclusion and scholars (e.g. Yeh 2020) thus still ask: what can meaningful participation in sustainable urban developments look like?

In the UrbanA arena process, “Committing to meaningful participation processes” was identified as a success-factor for local initiatives working on urban sustainability and justice. Meaningful participation values inclusivity and diverse perspectives in the practice of urban sustainability and justice, rather than merely ‘on paper’. Consequently, participants’ inputs visibly shape initiative outcomes, and actually influence the status quo in urban sustainability and justice. Attention to inclusivity and diversity entails consideration of race, gender, age, and class among others. It requires confronting and accepting multiple points of view and listening to people’s concerns and experiences, thus avoiding feelings of tokenization. Here, practitioners emphasised the value in “doing rather than saying”. Practical, hands on participation opportunities, for example, broaden the range of people who feel comfortable getting involved. To maintain enthusiasm and engagement, participation processes also include sharing a meal, learning useful skills, keeping a positive outlook, and producing concrete and tangible outcomes (see such tangible outcomes in Augustenborg, Chapter 5.6). Fun and creative participatory mechanisms such as art, music or games were seen as bringing different people, especially children and teenagers, together and building trust in a common endeavour.

Municipality-led projects especially require a culture of participation with mutual respect between municipal actors and residents as project partners. Depending on the issue, we found that participants may be empowered to shape outcomes in various ways. For technical endeavours like building a storm-water system (see Chapter 5.6) residents can share their concerns, clarify understandings and possibly take on shared responsibility for specific aspects. An especially meaningful participation process may include giving decision-making roles to affected groups, for example, through participatory budgeting processes. It is important that people feel a sense of empowerment and ownership of an initiative.

Crucially, we found that trust is strengthened through long-term (e.g., beyond a short project lifespan), consistent participation processes, transparency, clear responsibilities and expectations and a culture of admitting mistakes. Commitment to trust-building through meaningful participation processes conveys that inclusivity is essential to implementing positive changes towards sustainable and just futures.

#### **Tapping into existing community networks**

Existing community networks, both within and between different cities, can contribute to increased efficiency, trust, and legitimacy along journeys to more sustainable and just cities. Firstly, integrating sustainability and justice concerns is highly complex, and, by learning from each other, actors in similar fields make the most efficient use of their limited resources. Secondly, initiatives for sustainable and just cities gain trust and legitimacy by collaborating with those closest to grassroots level realities.

Within the New Leipzig Charter's good urban governance principles, cooperation between various local actors is highlighted as central in the shift towards more sustainable and just cities. The Charter supports transformation through a "place-based" approach (EU2020 2020b, 1) in which "inhabitants, civil society networks, community organisations and private enterprises" (EU2020 2020b, 6) are involved. Here, civil society networks and community organisations are particularly helpful due to being embedded in the local, neighbourhood level. At this scale, urban challenges are more directly visible. Therefore, actors that are connected and involved at the community level are seen as innovators for urban development (EU2020 2020b, 3).

Several literature fields feature the importance of (community) networks. Studies on social capital, for example, correlate social trust and strong local ties with environmentally responsible behaviour (Atshan et al. 2020) and sustainable community development (Dale and Newman 2010). Furthermore, the field of inter-city sustainability networks is both established and lively, thus highlighting the potential of learning from other cities (see Meagher et al. 2021; Mocca 2017; Mejía-Dugand et al. 2016; Keiner and Kim 2007). A distinct gap, however, exists for research on formal intra-city or inter-neighbourhood networks for sustainability. Lastly, urban sustainability transitions research frequently celebrates the role of civil society initiatives in creating new relations and processes (e.g. Frantzeskaki et al. 2016). Studies on urban transitions initiatives have emphasised the value of interdependence, cooperation, learning and partnership (Ehnert et al. 2018; Hartz-Karp and Gorissen 2017). Collaboration between such local initiatives is "crucial for accelerating sustainability transitions" (Ehnert et al. 2018, 11), since learning and replication of each other's experience eliminates the need to entirely reinvent the wheel.

In the UrbanA arena process, "Tapping into community networks" was identified as a success-factor for local initiatives working on urban sustainability and justice. We found that tapping into existing community networks can involve sharing tools, resources, and knowledge about problem solving and organisational structures both within and between local communities and cities. As indicated, learning and connecting amongst communities that are working towards sustainable and just cities was seen dually as an efficient use of human and financial resources, and as a path for trust and legitimacy building. We found that both longstanding and emerging initiatives greatly benefit from tapping into existing intra- and inter-community networks that are working on similar

or complementary issues. Emerging projects with minimal resources benefit through learning, financial and in-kind support, legitimacy and political and public visibility. Established initiatives, too, have much to gain by sharing their knowledge and resources within communities: they benefit from strengthened networks and may also receive additional financial support (see the Repowering London example that benefitted from community networks both in its conception and after it was already established, Chapter 5.3). Connecting with intra-city networks of local community organisations was particularly seen as a requisite for building the trust and legitimacy needed in articulating and integrating justice concerns into sustainability initiatives. Such networks are valuable resources for local governments and other larger-scale initiatives, since they likely have better knowledge of local contexts, personal community connections, and can be good catalysts for innovation and change. We furthermore found that local networks of civil society actors can offer local governments an outward view of current civic engagement across the city and help develop stronger, trust-based relationships for future knowledge exchange and collaboration. Building alliances and good, durable relationships between municipalities and civil society groups was seen as having the potential to balance top-down and bottom-up approaches and foster more successful and integrated sustainability and justice initiatives in the future.

#### **Developing alternative financial models and expanding definitions of value**

Financial resilience is essential for any project, yet community-led initiatives for sustainable and just cities are particularly reliant on intermittent public and private funding (subsidies, grants, etc.) to carry out their activities. Since changing political and institutional priorities and economic crises can restrict funding, this reliance poses existential challenges to dependent organisations. Therefore, sustainability initiatives which develop alternative financial models are better positioned to be both more financially resilient and economically inclusive—in other words, able to continue their work without restricting their benefits to more privileged groups.

Finance is a key enabler of cities' transformative power according to the Leipzig Charter. Through its "Place-Based" approach to good urban governance, the Charter indicates that urban funding instruments should be based on an analysis of local specificities such as the stakeholders involved, their limitations, and overall benefits and risks (EU2020 2020b, 7), but makes no mention of alternative financial funding methods to increase community projects' financial resilience and social inclusion.

Current literature highlights a need for alternative financing arrangements for non-profit initiatives. For example, in a study of long-term survivability of UK charities, dependence on grant funding was associated with greater vulnerability (Green et al. 2021). While public grant funding is crucial for many community-based sustainability initiatives and can integrate them into governing processes (Dinnie and Holstead 2018), it can also be riddled with administrative hurdles (Dinnie and Holstead 2018; Creamer 2015) and force misaligned output timeframes upon grant recipients (Creamer 2015). Inclusive and adaptive business models (e.g. Rosenstock et al. 2020) including social business models (e.g., Hysa et al. 2018) and techniques like (civic) crowdfunding (e.g., Gooch et al. 2020; Sedlitzky and Franz 2019), (Sedlitzky and Franz 2019) provide alternatives to grant dependency and are used for sustainable and inclusive financial

management in community initiatives. Alternative financial arrangements can thereby make under-funded, grant-reliant sustainability and justice projects more resilient, while simultaneously opening possibilities for meaningful participation.

In the UrbanA arena process, “[Developing alternative financial models and expanding definitions of value](#)” was spotlighted as an important enabler of viability for urban sustainability and justice initiatives. A financing arrangement with a well-thought-out value proposition, viable mechanisms for delivery and capture and risk assessment will make an initiative more financially resilient in the face of austerity (see Repowering London’s reaction to crucial subsidy elimination, Chapter 5.3). Meanwhile, still honouring the initiative’s social and environmental values and goals and avoiding projectification from reliance on short-term funding. UrbanA practitioners stated that interventions, for example installing concrete barriers to create pedestrian zones, can also be relatively low-cost, or even free, which reduces investment risks and administrative burdens without undermining potential positive impacts. We furthermore found that income diversification through events, membership fees, etc., along with co-financing and adopting social impact business models like cooperatives, and even demonetization strategies like ‘sweat equity’ and time banking schemes are important ways in which organisations can diversify their revenue streams. UrbanA participants emphasised that expanded definitions of “value” can validate projects’ social impact: for example, value definitions that consider externalities (e.g., reduced burden on social safety nets) or economic assessments of non-monetary community resources can help to justify funding. However, our research also revealed the shared belief of the public sector’s responsibility for more stable, long-term financing of sustainability and justice initiatives. UrbanA participants indicated that, through procurement and partnership, governments can provide structures for alternative financial models to thrive and sustain projects over longer periods of time.

### **Enabling Governance arrangements in practice**

The six Enabling Governance Arrangements above are derived from empirical examples of European initiatives with positive urban sustainability and justice outcomes. Two such examples are the Repowering London community energy (UK) and Ekostaden Augustenborg (Sweden). Together they illustrate all six EGAs in practice, therefore demonstrating their value for just and sustainable governance (Fig. 2).

### **Context**

Born from the Brixton Transition Town initiative in 2007, Repowering London is a community-owned renewable energy initiative for multi-unit residential buildings. The initiative uses a community benefit society business model, where the purchase of shares by community members funds the installation of solar panels on their buildings. Low minimum investment amounts and discounts for resident investors compared to outsiders, enable local inclusion. By selling excess energy back into the UK grid through the previous Feed-In-Tariff program or directly back to the host buildings at a discount, its renewable assets generate returns for the shareholders and the remainder is invested into a community energy fund. This fund is used for various community energy projects like energy efficiency measures (North



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**Fig. 2** Volunteers in front of the North Kensington Community Energy solar array established by Repowering in 2020 (North Kensington Community Energy 2022a)

Kensington Community Energy 2023). Additionally, Repowering builds skills and knowledge about renewable energy via paid internships for local youth.

Beginning with three projects in Brixton between 2011 and 2013, Repowering now actively creates and manages replications of the original project throughout London. In May 2018, Repowering installed the world's first blockchain energy trade on a national grid. In 2020, new battery installations allowed residents to take part in a peer-to-peer energy trading system within their building, and the initiative is currently involved in projects with a more holistic focus on green and equitable heating, cool and electric vehicle charging, in addition to residential power (North Kensington Community Energy 2022b).

### Outcomes

As of Spring 2023, Repowering's accomplishments include: 707kWp of installed solar capacity, 779 tonnes of GHG emissions avoided so far, and £206.750 raised for communities to spend on related energy initiatives and 149 paid interns (North Kensington Community Energy 2023).

In 2014, it co-founded Community Energy UK, a not-for-profit which connects and enables community energy projects, as well as Community Energy London, which operates similarly within the city. It has furthermore advocated and advised at the federal governmental level and been recognised as a OneStepGreener Climate Leader at COP26 in 2021.

### **Enabling governance arrangements**

Several EGAs converged to help Repowering London launch and flourish. The following three take centre stage: ‘Building bridges between separate stakeholder groups’, ‘Developing alternative financial models and expanding definitions of value’ and ‘Tapping into existing community networks’.

#### ***Building bridges between separate stakeholder groups***

Bridge-building was crucial during Repowering London’s early and mature years. In the beginning, the area’s local government, Lambeth Council, ran a small group called ‘Low Carbon Zone’. This group was small and had minimal capacity but helped the emerging Repowering team organise themselves and contact other relevant local groups.

Beyond the early years, project proponents consistently interacted with both local and national governments, including the Department of Energy and Climate Change’s Community Energy Contact Group, which aimed to identify barriers and solutions for community energy. According to one of Repowering London’s co-founders, relations with the local council and the national authorities were challenging and frustrating, but necessary for the intervention to function.

More recently, Repowering proponents created an intermediary policy body called Community Energy UK which serves an important role connecting various projects so that they can learn from each other.

Repowering clearly benefited from building bridges between itself and various actors to learn, gain influence and cultivate mutual understanding that makes collective action possible.

#### ***Developing alternative financial models and expanding definitions of value***

The UK’S Feed-in-Tariff (FIT) program, enacted in 2010 and cancelled in 2019, significantly contributed to Repowering London’s early financial viability and then to its later financial innovation.. Although its early projects still enjoy the original 20-year guaranteed return on investment, the FIT phase-out forced Repowering to find other funding sources to rely on.

Their alternative financial models ranged from obtaining seed money through different funding schemes and grants, finding councils and local initiatives with money to invest in Repowering London’s expertise, applying to become a licensed electricity provider, and peer-to-peer energy trading. It remained important however, to maintain financial accessibility for local residents with low income.

According to Repowering co-founder Agamemnon Otero, the above ideas were a silver lining result of the volatile national renewable energy policy: “Since the policy was so unstable, we had to continuously look for new innovation. The only reason why we came up with all these innovations is because I wasn’t going to go out like that! What, because the government changes, and everything is changing, I’m going to roll over and die? No. You gotta come up with better solutions” (Otero, personal interview, July 2020). While alternative financial arrangements like peer-to-peer trading do not address the root causes of neoliberal austerity urbanism, they may lessen



### *Ekostaden Augustenborg*



**Fig. 3** The Sustainable Urban Drainage System developed through the initiative (World Habitat Awards 2010)

its impact on urban sustainability and justice by enabling initiatives like Repowering to remain financially viable and therefore able to advance their operations.

#### ***Tapping into existing community networks***

Repowering London's use of community networks have been credited with fuelling its launch, to some extent, and certainly to its later success.

The initiative's original solar project built off Transition Town Brixton and benefited from various community initiatives: Lambeth Council's Green Community Champions initiative (provided a platform for Brixton Energy to hold meetings and build connections), and the Hyde Farm Climate Action Network in London (created links with other sustainability initiatives). Another initiative shared a template for how to set up community energy and introduced proponents to other community energy groups. "Tapping into local community networks was even more essential to Repowering's later success. Project engagement and uptake resulted from concerted efforts to listen to local needs, engaging residents (especially youth) with solar panel-making workshops, offering paid internships and, notably, engaging with so-called "Estate Mamas" who were the beating hearts of the community life: "By supporting them, we could count on them with our projects and provide for the community. That is the only thing I have really learned, and they were my greatest teachers" (Otero, personal interview, July 2020).

Repowering London's strategy well illustrates how tapping into the resources of existing community networks can reinforce and strengthen local organisations and help broaden local engagement with sustainability efforts (Fig. 3).

#### **Context**

Ekostaden Augustenborg, was a holistic neighbourhood development programme based in Malmö's Augustenborg district. A desirable neighbourhood following its construction (1948–1952), the area declined in the 1970's, when flooding basements, high unemployment rates, and other issues reduced local quality of life. Between 1997 and 2002, the redevelopment initiative constructed an effective drainage system, energy retrofitted

buildings, and supported biodiversity efforts (Kazmierczak; Carter, 2010). Additional social, ecological, and economical topics were later adopted, including low carbon mobility efforts and the general idea to create and strengthen Augustenborg's identity as an eco-neighbourhood. Although the project was government-led, it was characterised by strong community engagement. Further eco-neighbourhood interventions continue to be implemented beyond the original regeneration sprint, e.g., a 2014 lighthouse project called Greenhouse Augustenborg; a high-rise building with passive-house energy standards.

### **Outcomes**

Augustenborg's redevelopment increased biodiversity by 50%, decreased carbon emissions and waste generation by 20%, reduced unemployment from 30 to 6% and tenancy turnovers by 50% while simultaneously increasing political interest and participation. Furthermore, reported floods have disappeared after the instalment of a nature-based storm-water system, which additionally increased the performance of the surrounding combined sewer system. Augustenborg also features the world's first botanical roof garden that provides around 9,000 m<sup>2</sup> of local habitat and rainwater absorption. Importantly, the World Habitats Award touts Augustenborg as an international example for incorporating participatory processes in urban regeneration processes (World Habitat Awards 2010) highlighting the holistic approach of combining environmentally sustainable goals with just procedures.

### **Enabling governance arrangements**

The EGAs "[Commit to a meaningful participation process](#)", "Make space for adaptation and experimentation", and "[Create a comprehensive vision of change](#)" are of great importance to Ekostaden Augustenborg's success.

### ***Commit to a meaningful participation process***

The initiative's intentional and engaging participatory process was reportedly key to Ekostaden's positive outcomes. Proponents struck a good balance between short-term tangible change and ensuring long-term institutional commitment, so residents saw their time and energy contributing to broader and stable progress. Notably, all actions were proposed, discussed, and open to modifications by residents.

A variety of participation methods were used to engage diverse neighbourhood residents, including school children and non-Swedish speakers. Children were involved in planning new gardens, ponds, playgrounds and more. For non-Swedish speakers, flyers were printed in multiple languages and interpreters were hired for community gatherings. The participation process included extensive public consultation, regular meetings, permanent working groups, dialogues with experts, informal gatherings, and co-designing parts of the area. For example, the Café Summer, a café and meeting space for residents to discuss and share ideas and the Rabbit Hotel, an after-school centre that teaches children how to take care of and respect animals, were both co-created by residents. Here, they were considered as experts and bearers of territorially grounded knowledge. For more technical issues like the storm-water system, public participation was focussed on acceptance but still entered community dialogue, which occasionally led to new

ideas. For example, residents advocated for a stormwater system that was developed in a more natural way to increase biodiversity.

Overall, 20% of the neighbourhood's population actively participated in the project. The project leaders' concerted efforts to genuinely engage diverse resident groups is a prime example of how to practice recognition and procedural justice in urban sustainability efforts and enjoy creative and useful outcomes as a result.

#### ***Making space for adaptation and experimentation***

Ekostaden's redevelopment project, was to a large part, able to meet residents' needs due to adaptability in its design and implementation in response to changing social and economic conditions. For example, as the project progressed, participation fatigue set in and engagement began to decline. To maintain interest, the municipality adapted by giving residents more power in the neighbourhood's design. Thus, while the project was government-led, increasingly strong engagement of residents morphed it into a hybrid mode of governance. This shift in responsibilities was accompanied by a collective mindset of not being overly concerned about making mistakes, and a culture of learning from them. This experimental approach manifested itself in different project actions, e.g., giving school children planning power, or the implementation of unanticipated green roofs. The value of this experimental mindset, which sprouted from a certain informality of the relationship between actors, became evident after certain key individuals were no longer involved in the project due to changes in department heads. Once there was no longer a critical mass of people sharing this experimental mindset, its flexible and adaptive nature dissipated.

Ekostaden's case demonstrates how continuous adaptation and experimentation, especially when paired with meaningful participation, maintain the viability and local relevance of urban sustainability projects.

#### ***Create a comprehensive vision of change***

The interdisciplinary nature of Ekostaden Augustenborg, as well as its connectedness to both Swedish and international visions of sustainability, helped it overcome siloed thinking and increase inclusion as it progressed towards its environmental, social and economic goals.

As a project with multiple partners from different topical backgrounds (e.g. housing, energy, education) and sectors (e.g. municipality, private, civil society) it was reportedly crucial to have partners working towards a complementary future image of the neighbourhood. According to Ekostaden's project manager, the interest of key actors in a holistic vision of change was prevalent, regardless of whether it fell within their individual responsibilities on paper (Graham, personal interview, July 2020). This vision was tightly integrated into broader sustainability narratives in Sweden and beyond. Through Agenda 21 movements in the late 90's, a strong focus on environmental issues with a democratic dimension emerged. Social inclusion was a highly influential and popular narrative which translated into strong participatory processes in the governance of Ekostaden Augustenborg as specified earlier. There were also many socio-economic problems present specifically in Malmö, and in Sweden, such as shuttering shipyards, difficulty entering the labour market, and general economic decline. Consequently,

there was a collage of redevelopment projects and policies which attempted to address these issues holistically at different scales. Ekostaden Augustenborg was very much tied into the comprehensive vision of change for post-industrial Sweden and international sustainable development concepts. Motivated by a common vision, key actors reached across silos and generated a belief that change towards a sustainable and inclusive district was possible.

### **Actionable proposals to integrate sustainability and justice in urban governance**

The six Enabling Governance Arrangements' contribution to integrating urban sustainability and justice, as exemplified through Repowering London and Ekostaden Augustenborg, are the result of thorough desk research and several iterative and affirming discussions with over 60 practitioners from diverse professional backgrounds who confirmed their usefulness in practice.

While the six EGAs are familiar concepts in common discourse, they have not been previously synthesised in this manner. Their strength lies in their ability to holistically address governance tackling urban sustainability and justice challenges. Furthermore, they provide an empirically-grounded and co-created basis for the implementation of key EU sustainable urban development frameworks such as the New Leipzig Charter. As mentioned, the New Leipzig Charter aims to create just, green and productive cities through a place-based, integrated multi-level governance approach focusing on participation and co-creation, yet the implementation of these principles remains very challenging in practice. We believe that the EGAs can help municipalities and communities to operationalise these principles by providing concrete and therefore actionable inspiration for governance which integrates sustainability and justice based on ten real-world examples.

Furthermore, based on main messages from the EGAs, the UrbanA Community of Practice additionally co-created actionable proposals for municipalities in particular to govern for sustainability and justice together. For example:

- Set up and continuously support a network of community initiatives who work on sustainability and justice issues
- Support local initiatives which contribute to a stronger culture of public engagement and your city's wider vision
- Provide fewer-strings-attached funding options for local initiatives to increase flexibility to experiment
- Create 'bridging' platforms for local initiatives to use (e.g., open community spaces, interactive web forums)

Since municipalities hold more funding, capacity, and decision-making power than many local community initiatives, we find it important that they both consider the EGAs in their sustainability and justice efforts as well as make it possible for local initiatives to implement the EGAs in their operations through actions such as those above.

In addition to offering actionable inspiration for governance towards sustainable and just cities, UrbanA dialogues around the EGAs established a broad consensus on

the need for further critical reflection and exchange, with the arrangements themselves serving as a starting point. As mentioned, within our work we aimed to take on the perspective of practitioners and their understanding of governance challenges for sustainable and just cities. Although city-makers at UrbanA events confirmed that it is possible to identify generalizable, yet actionable, knowledge for the governance of sustainable and just cities, we acknowledge the challenges associated with drawing lessons from place-specific initiatives to produce generic and actionable outcomes. Thus, the governance arrangements likely oversee certain elements for integrating justice and urban sustainability. Therefore, more space and resources are needed for facilitating translocal learning with the aim of building upon the EGAs as integrated governance approaches for sustainable and just cities.

While the EU leaders have identified justice and environmental sustainability as priorities for our future societies, the local level must have the knowledge and resources to make this a reality. We hope that the governance arrangements presented in this paper are taken forward as an actionable contribution to this aim.

#### Abbreviations

EU	European Union
EGA	Enabling Governance Arrangement
UrbanA	UrbanArena
CoP	Community of Practice

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#### Authors' contributions

All authors made substantial contributions to the conceptualisation of the paper. JK and SS made substantial contributions to the collection of the data. JK made substantial contributions to the introduction and literature overview, the method section as well as the result (mainly EGA 1–4), discussion and conclusion section. SS made substantial contributions to the introduction, method section as well as the result (mainly EGA 5 and 6), discussion and conclusion section. PS made substantial contributions to each section in response to the first drafts done by JK and SS and made substantial contributions to the collection of the data. All authors read and approved the final manuscript.

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#### Availability of data and materials

The data supporting this article is publicly available at the UrbanArenas own wiki: [https://wiki.sustainablejustcities.eu/Just\\_Sustainability\\_Governance\\_Arrangements](https://wiki.sustainablejustcities.eu/Just_Sustainability_Governance_Arrangements).

Further information on the co-creation "miros" can be made available by contacting the corresponding author.

#### Declarations

##### Competing interests

The authors report that there are no competing interests to declare.

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## References

- Anguelovski I, Connolly J, Brand AL. From Landscapes of Utopia to the Margins of the Green Urban Life. *City*. 2018;22(3):417–36. <https://doi.org/10.1080/13604813.2018.1473126>.
- Anguelovski I, Connolly JJT, Garcia-Lamarca M, Cole H, Pearsall H. New Scholarly Pathways on Green Gentrification: What Does the Urban “Green Turn” Mean and Where Is It Going? *Prog Hum Geogr*. 2019;43(6):1064–86. <https://doi.org/10.1177/0309132518803799>.
- Anguelovski I, Connolly JJT, Cole H, Garcia-Lamarca M, Triguero-Mas M, Baró F, Martin N, et al. Green Gentrification in European and North American Cities. *Nat Commun*. 2022;13(1):3816. <https://doi.org/10.1038/s41467-022-31572-1>.
- Atshan S, Patrick Bixler R, Rai V, Springer DW. Pathways to Urban Sustainability through Individual Behaviors: The Role of Social Capital. *Environ Sci Policy*. 2020;112(October):330–9. <https://doi.org/10.1016/j.envsci.2020.07.005>.
- Avelino, Flor, Karlijn Schipper, Frank van Steenberg, Tom Henfrey, Sarah Rach, James Conolly, Isabelle Anguelovski, Matthew Bach, Marie Oltmer, and Giorgia Silvestri. 2019. ‘UrbanA-Mapping-Guidelines’. [https://urban-arena.eu/wp-content/uploads/2019/07/D3.1-UrbanA-Mapping-Guidelines\\_-\\_website.pdf](https://urban-arena.eu/wp-content/uploads/2019/07/D3.1-UrbanA-Mapping-Guidelines_-_website.pdf).
- Azizi D, Biermann F, Kim RE. Policy Integration for Sustainable Development through Multilateral Environmental Agreements: An Empirical Analysis, 2007–2016. *Global Governance: A Review of Multilateralism and International Organizations*. 2019;25(3):445–75. <https://doi.org/10.1163/19426720-02503005>.
- Banik, Dan. 2021. ‘Chapter 7 - The 2030 Agenda and the Push for Electrification in Africa: A Tale of Two Countries’. In *Environmental Sustainability and Economy*, edited by Pardeep Singh, Pramit Verma, Daniela Perrotti, and K. K. Srivastava, 121–36. Elsevier. <https://doi.org/10.1016/B978-0-12-822188-4.00011-7>.
- Broto C, Vanesa. Urban Governance and the Politics of Climate Change. *World Dev*. 2017;93(May):1–15. <https://doi.org/10.1016/j.worlddev.2016.12.031>.
- Bryson JM, Quick KS, Slotterback CS, Crosby BC. Designing Public Participation Processes. *Public Adm Rev*. 2013;73(1):23–34. <https://doi.org/10.1111/j.1540-6210.2012.02678.x>.
- Carlotta Cataldi 2021. Illustrations for Enabling Governance Arrangements in the Project UrbanArenas for sustainable and just cities. [https://wiki.sustainablejustcities.eu/Just\\_Sustainability\\_Governance\\_Arrangements](https://wiki.sustainablejustcities.eu/Just_Sustainability_Governance_Arrangements). Accessed 25 June 2024.
- Chinseu E, Stringer L, Dougill A. Policy Integration and Coherence for Conservation Agriculture Initiatives in Malawi. *Sustainable Agriculture Research*. 2018;7(4):51–62.
- Corning S. Climate Governance City to City: Case Studies of the Sierra Club Ready for 100 Network. University of Chicago. 2021. <https://doi.org/10.6082/uchicago.3148>.
- Creamer E. The Double-Edged Sword of Grant Funding: A Study of Community-Led Climate Change Initiatives in Remote Rural Scotland. *Local Environ*. 2015;20(9):981–99. <https://doi.org/10.1080/13549839.2014.885937>.
- Dale A, Newman L. Social Capital: A Necessary and Sufficient Condition for Sustainable Community Development? *Community Development Journal*. 2010;45(1):5–21. <https://doi.org/10.1093/cdj/bsn028>.
- de Hoop E, Boon W, van Oers L, Smith A, Späth P, Raven R. Deliberating the Knowledge Politics of Smart Urbanism. *Urban Transformations*. 2022;4(1):6. <https://doi.org/10.1186/s42854-022-00035-7>.
- Dignum, Marloes. 2018. ‘Urban Intermediaries and the Governance of Energy Transition: Two Case Studies in Amsterdam’. *Cities and Sustainable Technology Transitions*, June. <https://www.elgaronline.com/view/edcoll/9781783476763/9781783476763.00025.xml>.
- Dinnie E, Holstead KL. The Influence of Public Funding on Community-Based Sustainability Projects in Scotland. *Environ Innov Soc Trans*. 2018;29(December):25–33. <https://doi.org/10.1016/j.eist.2017.08.003>.
- Dixon T, Montgomery J, Horton-Baker N, Farrelly L. Using Urban Foresight Techniques in City Visioning: Lessons from the Reading 2050 Vision. *Local Econ*. 2018;33(8):777–99. <https://doi.org/10.1177/0269094218800677>.
- Domorenok E, Graziano P, Polverari L. Policy Integration, Policy Design and Administrative Capacities. Evidence from EU Cohesion Policy. *Policy and Society*. 2021;40(1):58–78. <https://doi.org/10.1080/14494035.2021.1930697>.
- Ehnert F, Frantzeskaki N, Barnes J, Borgström S, Gorissen L, Kern F, Strenchock L, Egermann M. The Acceleration of Urban Sustainability Transitions: A Comparison of Brighton, Budapest, Dresden, Genk, and Stockholm. *Sustainability*. 2018;10(3):612. <https://doi.org/10.3390/su10030612>.
- EU2020. 2020a. Implementing the New Leipzig Charter through Multi-Level Governance. Next Steps for the Urban Agenda of the EU. [https://ec.europa.eu/regional\\_policy/sources/brochure/new\\_leipzig\\_charter/new\\_leipzig\\_charter\\_imple\\_en.pdf](https://ec.europa.eu/regional_policy/sources/brochure/new_leipzig_charter/new_leipzig_charter_imple_en.pdf).
- EU2020. 2020b. The New Leipzig Charter. The transformative power of cities for the common good. [https://ec.europa.eu/regional\\_policy/sources/brochure/new\\_leipzig\\_charter/new\\_leipzig\\_charter\\_en.pdf](https://ec.europa.eu/regional_policy/sources/brochure/new_leipzig_charter/new_leipzig_charter_en.pdf).
- Frantzeskaki N, Bush J. Governance of Nature-Based Solutions through Intermediaries for Urban Transitions – A Case Study from Melbourne, Australia. *Urban Forestry & Urban Greening*. 2021;64(September): 127262. <https://doi.org/10.1016/j.ufug.2021.127262>.
- Frantzeskaki N, Dumitru A, Anguelovski I, Avelino F, Bach M, Best B, Binder C, et al. Elucidating the Changing Roles of Civil Society in Urban Sustainability Transitions. *Current Opinion in Environmental Sustainability, System Dynamics and Sustainability*. 2016;22(October):41–50. <https://doi.org/10.1016/j.cosust.2017.04.008>.
- Frantzeskaki N, Buchel S, Spork C, Ludwig K, Kok MTJ. The Multiple Roles of ICLEI: Intermediating to Innovate Urban Biodiversity Governance. *Ecol Econ*. 2019;164(October): 106350. <https://doi.org/10.1016/j.ecolecon.2019.06.005>.
- Gilbert L. Social Justice and the “Green” City. *Urbe Revista Brasileira De Gestão Urbana*. 2014;6(August):158–69. <https://doi.org/10.7213/urbe.06.002.SE01>.
- Gooch D, Kelly RM, Stiver A, van der Linden J, Petre M, Richards M, Klis-Davies A, MacKinnon J, Macpherson R, Walton C. The Benefits and Challenges of Using Crowdfunding to Facilitate Community-Led Projects in the Context of Digital Civics. *Int J Hum Comput Stud*. 2020;134(February):33–43. <https://doi.org/10.1016/j.ijhcs.2019.10.005>.
- Green, Elizabeth, Felix Ritchie, Peter Bradley, and Glenn Parry. 2021. ‘Financial Resilience, Income Dependence and Organisational Survival in UK Charities’. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations* 32 (5): 992–1008. <https://doi.org/10.1007/s11266-020-00311-9>.
- Gurr, Jens Martin, and Christian Walloth. 2014. ‘Introduction: Towards a Transdisciplinary Understanding of Complex Urban Systems’. In *Understanding Complex Urban Systems: Multidisciplinary Approaches to Modeling*, edited by

- Christian Walloth, Jens Martin Gurr, and J. Alexander Schmidt, 1–12. Cham: Springer International Publishing. [https://doi.org/10.1007/978-3-319-02996-2\\_1](https://doi.org/10.1007/978-3-319-02996-2_1).
- Gustafsson S, Mignon I. Municipalities as Intermediaries for the Design and Local Implementation of Climate Visions. *Eur Plan Stud.* 2020;28(6):1161–82. <https://doi.org/10.1080/09654313.2019.1612327>.
- Hartz-Karp, Janette, and Leen Gorissen. 'The Role of Transition Initiatives in Urban Sustainability'. *Methods for Sustainability Research*, 2017:173–88. <https://doi.org/10.4337/9781786432735.00022>.
- Hidalgo M, Daniela PD, Nunn, and Harriot Beazley. Challenges and Opportunities for Food Systems in a Changing Climate: A Systematic Review of Climate Policy Integration. *Environ Sci Policy.* 2021;124(October):485–95. <https://doi.org/10.1016/j.envsci.2021.07.017>.
- Hogl K, Kleinschmit D, Rayner J. Achieving Policy Integration across Fragmented Policy Domains: Forests, Agriculture, Climate and Energy. *Eviron Plann C Gov Policy.* 2016;34(3):399–414. <https://doi.org/10.1177/0263774X16644815>.
- Hughes S, Hoffmann M. Just Urban Transitions: Toward a Research Agenda. *Wiley Interdisciplinary Reviews: Climate Change.* 2020;11(February): e640. <https://doi.org/10.1002/wcc.640>.
- Hysa X, Zerba E, Calabrese M, Bassano C. Social Business as a Sustainable Business Model: Making Capitalism Anti-Fragile. *Sustain Sci.* 2018;13(5):1345–56. <https://doi.org/10.1007/s11625-018-0566-1>.
- Jagt, Alexander P. N. van der, Bernadett Kiss, Shunsuke Hirose, and Wakana Takahashi. 2021. 'Nature-Based Solutions or Debacles? The Politics of Reflexive Governance for Sustainable and Just Cities'. *Frontiers in Sustainable Cities* 2. <https://www.frontiersin.org/articles/10.3389/frsc.2020.583833>.
- Kahila-Tani M, Kytta M, Geertman S. Does Mapping Improve Public Participation? Exploring the Pros and Cons of Using Public Participation GIS in Urban Planning Practices. *Landsc Urban Plan.* 2019;186(June):45–55. <https://doi.org/10.1016/j.landurbplan.2019.02.019>.
- Kazmierczak A. and Carter J. 2010: Adaptation to climate change using green and blue infrastructure. A database of case studies. Manchester
- Keiner M, Kim A. Transnational City Networks for Sustainability. *Eur Plan Stud.* 2007;15(10):1369–95. <https://doi.org/10.1080/09654310701550843>.
- Kettner C, Kletzan-Slamanig D. Is There Climate Policy Integration in European Union Energy Efficiency and Renewable Energy Policies? Yes, No, Maybe. *Environ Policy Gov.* 2020;30(3):141–50. <https://doi.org/10.1002/eet.1880>.
- Khan J, Hildingsson R, Garting L. Sustainable Welfare in Swedish Cities: Challenges of Eco-Social Integration in Urban Sustainability Governance. *Sustainability.* 2020;12(1):383. <https://doi.org/10.3390/su12010383>.
- Kotsila P, Anguelovski I, Baró F, Langemeyer J, Sekulova F, Connolly JJT. Nature-Based Solutions as Discursive Tools and Contested Practices in Urban Nature's Neoliberalisation Processes. *Environment and Planning e: Nature and Space.* 2021;4(2):252–74. <https://doi.org/10.1177/2514848620901437>.
- Kotsila, Panagiota, Austin Matheney, James Conolly, Isabelle Anguelovski, and Taliyah Dommerholt. 2020. Meta-Analysis of EU-Funded Projects. Drivers and Manifestations of Injustice. Deliverable 4.1. UrbanA Project. 25 June 2024. <https://sustainablejustcities.eu/sites/default/files/media/UrbanA-just-arenas-guide-FINAL-www.pdf>.
- Leino H, Puumala E. What Can Co-Creation Do for the Citizens? Applying Co-Creation for the Promotion of Participation in Cities. *Environment and Planning c: Politics and Space.* 2021;39(4):781–99. <https://doi.org/10.1177/2399654420957337>.
- Liotta C, Kervinio Y, Levrel H, Tardieu L. Planning for Environmental Justice - Reducing Well-Being Inequalities through Urban Greening. *Environ Sci Policy.* 2020;112(October):47–60. <https://doi.org/10.1016/j.envsci.2020.03.017>.
- Maia A, Terra A, Calcagni F, Connolly JJT, Anguelovski I, Langemeyer J. Hidden Drivers of Social Injustice: Uncovering Unequal Cultural Ecosystem Services behind Green Gentrification. *Environ Sci Policy.* 2020;112(October):254–63. <https://doi.org/10.1016/j.envsci.2020.05.021>.
- Matti, Simon, Christer Petersson, and Charlotta Söderberg. 2021. 'The Swedish Climate Policy Framework as a Means for Climate Policy Integration: An Assessment'. *Climate Policy* 0 (0): 1–13. <https://doi.org/10.1080/14693062.2021.1930510>.
- May T, Perry B. Knowledge for Just Urban Sustainability. *Local Environ.* 2017;22(sup1):23–35. <https://doi.org/10.1080/13549839.2016.1233527>.
- McCann EJ. Collaborative Visioning or Urban Planning as Therapy? The Politics of Public-Private Policy Making. *Prof Geogr.* 2001;53(2):207–18. <https://doi.org/10.1111/0033-0124.00280>.
- McPhearson T, Iwaniec DM, Bai X. Positive Visions for Guiding Urban Transformations toward Sustainable Futures. *Current Opinion in Environmental Sustainability, System Dynamics and Sustainability.* 2016;22(October):33–40. <https://doi.org/10.1016/j.cosust.2017.04.004>.
- Meagher K, El Achi N, Bowsher G, Ekzayez A, Patel P. Exploring the Role of City Networks in Supporting Urban Resilience to COVID-19 in Conflict-Affected Settings. *Open Health.* 2021;2(1):1–20. <https://doi.org/10.1515/openhe-2021-0001>.
- Mejia-Dugand S, Kanda W, Hjelm O. Analyzing International City Networks for Sustainability: A Study of Five Major Swedish Cities. *Journal of Cleaner Production, Special Volume: Transitions to Sustainable Consumption and Production in Cities.* 2016;134(October):61–9. <https://doi.org/10.1016/j.jclepro.2015.09.093>.
- Mocca E. City Networks for Sustainability in Europe: An Urban-Level Analysis. *J Urban Aff.* 2017;39(5):691–710. <https://doi.org/10.1080/07352166.2017.1282769>.
- Nickels, A.E., Rivera, J.D. (2018). *Community Development and Public Administration Theory: Promoting Democratic Principles to Improve Communities* (1st ed.). Routledge. <https://doi.org/10.4324/9780203729878>.
- North Kensington Community Energy. 2022a. 'North Kensington Community Energy | Repowering London'. 20 April 2022. <https://www.repowering.org.uk/north-kensington-community-energy/>.
- North Kensington Community Energy. 2022b. 'Creating Local Energy | Repowering London'. 5 October 2022. <https://www.repowering.org.uk/creating-local-energy/>.
- North Kensington Community Energy. 2023. 'Our Story | Repowering London'. 22.12.2023. <https://www.repowering.org.uk/our-story/>.
- Ortegon-Sanchez, Adriana, and Nick Tyler. 2016. 'Constructing a Vision for an "Ideal" Future City: A Conceptual Model for Transformative Urban Planning'. *Transportation Research Procedia, Towards future innovative transport: visions, trends and methods 43rd European Transport Conference Selected Proceedings*, 13 (January): 6–17. <https://doi.org/10.1016/j.trpro.2016.05.002>.

- Pearsall H, Pierce J. Urban Sustainability and Environmental Justice: Evaluating the Linkages in Public Planning/Policy Discourse. *Local Environ.* 2010;15(6):569–80. <https://doi.org/10.1080/13549839.2010.487528>.
- Perry, Beth, and Warren Smit. 2022. 'Co-Producing City-Regional Intelligence: Strategies of Intermediation, Tactics of Unsettling'. *Regional Studies* 0 (0): 1–13. <https://doi.org/10.1080/00343404.2022.2044464>.
- Phil J. and Perry Beth. *Cultural Intermediaries Connecting Communities: Revisiting Approaches to Cultural Engagement*. Policy Press; 2019.
- Rall, Emily, Rieke Hansen, and Stephan Pauleit. 2019. 'The Added Value of Public Participation GIS (PPGIS) for Urban Green Infrastructure Planning'. *Urban Forestry & Urban Greening*, Urban green infrastructure – connecting people and nature for sustainable cities, 40 (April): 264–74. <https://doi.org/10.1016/j.ufug.2018.06.016>.
- Rigolon A. A Complex Landscape of Inequity in Access to Urban Parks: A Literature Review. *Landsc Urban Plan.* 2016;153(September):160–9. <https://doi.org/10.1016/j.landurbplan.2016.05.017>.
- Rode P. Urban Planning and Transport Policy Integration: The Role of Governance Hierarchies and Networks in London and Berlin. *J Urban Aff.* 2019;41(1):39–63. <https://doi.org/10.1080/07352166.2016.1271663>.
- Rosenstock TS, Lubberink R, Gondwe S, Manyise T, Dentoni D. Inclusive and Adaptive Business Models for Climate-Smart Value Creation. *Current Opinion in Environmental Sustainability, Advancing the Science of Actionable Knowledge for Sustainability.* 2020;42(February):76–81. <https://doi.org/10.1016/j.cosust.2019.12.005>.
- Schlozman KL, Verba S, Brady HE. *The Unheavenly Chorus: Unequal Political Voice and the Broken Promise of American Democracy*. The Unheavenly Chorus: Princeton University Press; 2012. <https://doi.org/10.1515/9781400841912>.
- Sedlitzky R, Franz Y. "What If We All Chip In?" Civic Crowdfunding As Alternative Financing For Urban Development Projects. *Built Environment.* 2019;45(1):26–44. <https://doi.org/10.2148/benv.45.1.26>.
- Sekulova F, Anguelovski I, Kiss B, Kotsila P, Baró F, Palgan YV, Connolly J. The Governance of Nature-Based Solutions in the City at the Intersection of Justice and Equity. *Cities.* 2021;112(May): 103136. <https://doi.org/10.1016/j.cities.2021.103136>.
- Shelton T, Lodato T. Actually Existing Smart Citizens. *City.* 2019;23(1):35–52. <https://doi.org/10.1080/13604813.2019.1575115>.
- Sheng R. Multilevel Governance in Environmental Policy Integration: A Content Analysis of Regional and Urban Nested Hierarchies in China. *Environ Policy Gov.* 2021;31(4):283–301. <https://doi.org/10.1002/eet.1916>.
- Sibbling L, Candel J, Termeer K. A Comparative Assessment of Local Municipal Food Policy Integration in the Netherlands. *Int Plan Stud.* 2021;26(1):56–69. <https://doi.org/10.1080/13563475.2019.1674642>.
- Silverton, Sophia, and Philipp Späth. 2021. 'Deliverable\_D5.2-Comprehensive-Report-on-All-Results-of-WP5'. [https://urban-arena.eu/wp-content/uploads/2021/08/822357\\_Deliverable\\_D5.2-Comprehensive-report-on-all-results-of-WP5.pdf](https://urban-arena.eu/wp-content/uploads/2021/08/822357_Deliverable_D5.2-Comprehensive-report-on-all-results-of-WP5.pdf).
- Silverton, Sophia. 2021. 'Enabling-Governance-Arrangements-Booklet.Pdf'. Freiburg. <https://sustainablejustcities.eu/sites/default/files/media/Enabling-Governance-Arrangements-Booklet.pdf>.
- Slovenian Presidency of the Council of the European Union. 2021. *Ljubljana Agreement*. Brdo pri Kranju. [https://ec.europa.eu/regional\\_policy/sources/brochure/ljubljana\\_agreement\\_2021\\_en.pdf](https://ec.europa.eu/regional_policy/sources/brochure/ljubljana_agreement_2021_en.pdf).
- Späth P, Knieling J. How EU-Funded Smart City Experiments Influence Modes of Planning for Mobility: Observations from Hamburg. *Urban Transformations.* 2020;2(1):2. <https://doi.org/10.1186/s42854-020-0006-2>.
- Stapper EW, Van der Veen M, Janssen-Jansen LB. Consultants as Intermediaries: Their Perceptions on Citizen Involvement in Urban Development. *Environment and Planning c: Politics and Space.* 2020;38(1):60–78. <https://doi.org/10.1177/2399654419853583>.
- Tasan-Kok T. Changing Interpretations of "Flexibility" in the Planning Literature: From Opportunism to Creativity? *Int Plan Stud.* 2008;13(3):183–95. <https://doi.org/10.1080/13563470802521382>.
- Taşan-Kok, Tuna, Gideon Bolt, Larissa Plüss, and Walter Schenkel. 2017. *A handbook for governing Hyper-Diverse Cities*. Utrecht University Repository. <https://dspace.library.uu.nl/handle/1874/361915>.
- Toxopeus H, Kotsila P, Conde M, Katona A, van der Jagt APN, Polzin F. How "Just" Is Hybrid Governance of Urban Nature-Based Solutions? *Cities.* 2020;105(October): 102839. <https://doi.org/10.1016/j.cities.2020.102839>.
- UrbanA. 2022b. 'Urban Arena Wiki'. 2022. [https://wiki.sustainablejustcities.eu/Main\\_Page](https://wiki.sustainablejustcities.eu/Main_Page).
- Venghaus S, Märker C, Dieken S, Siekmann F. Linking Environmental Policy Integration and the Water-Energy-Land-(Food)-Nexus: A Review of the European Union's Energy, Water, and Agricultural Policies. *Energies.* 2019;12(23):4446. <https://doi.org/10.3390/en12234446>.
- von Lüpke H, Well M. Analyzing Climate and Energy Policy Integration: The Case of the Mexican Energy Transition. *Climate Policy.* 2020;20(7):832–45. <https://doi.org/10.1080/14693062.2019.1648236>.
- Wiek A, Iwaniec D. Quality Criteria for Visions and Visioning in Sustainability Science. *Sustain Sci.* 2014;9(October):497–512. <https://doi.org/10.1007/s11625-013-0208-6>.
- Wilson A, Tewdwr-Jones M, Comber R. Urban Planning, Public Participation and Digital Technology: App Development as a Method of Generating Citizen Involvement in Local Planning Processes. *Environment and Planning b: Urban Analytics and City Science.* 2019;46(2):286–302. <https://doi.org/10.1177/2399808317712515>.
- World Habitat Awards. 2010. 'Ekostaden Augustenborg'. World Habitat. 2010. <https://world-habitat.org/world-habitat-awards/winners-and-finalists/ekostaden-augustenborg/>.
- Wüstemann H, Kalisch D, Kolbe J. Access to Urban Green Space and Environmental Inequalities in Germany. *Landsc Urban Plan.* 2017;164(August):124–31. <https://doi.org/10.1016/j.landurbplan.2017.04.002>.
- Yeh, Wan-chy. 2020. 'Towards Social Meaningful Participation: An Explorative Study into Meaningful Participation Processes Becoming Socially Sustainable in Mixed-Use Urban Area Developments'. <https://repository.tudelft.nl/islandora/object/uuid%3A002d307d-59a6-49a7-a5f9-55c6b5d93f27>.
- Yin Y, Olsson AR, Håkansson M. The Role of Local Governance and Environmental Policy Integration in Swedish and Chinese Eco-City Development. *J Clean Prod.* 2016;134(October):78–86. <https://doi.org/10.1016/j.jclepro.2015.10.087>.
- Young, Iris Marion. 2000. *Inclusion and Democracy*. Oxford; New York: Oxford University Press. <https://doi.org/10.1093/0198297556.001.0001>.

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