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Article

# For a Cooperative “Smart” City Yet to Come: Place-Based Knowledge, Commons, and Prospects for Inclusive Municipal Processes From Seattle, Washington

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## Abstract

This article explores possibilities for cooperative, equitable, and participatory forms of smart urbanism. We begin by outlining orientations that emphasize the heterogeneity of economic and urban life and center the capacities and priorities of constituencies that currently are often not well served by urban planning and information-gathering processes. We then further iterate these sensibilities in relation to two examples from community organizing in Seattle, Washington, sketching out a broad sense of how community’s and resident’s place-based knowledge, experiences, and forms of expertise might be understood as resources that could be integral to processes of urban planning, organization, and potential structural transformation. Finally, we connect these possibilities to ongoing debates and experiments with “commons” and “commoning”—both conceptually and in actually existing urban experiments—to show how serious engagements with place-based knowledge and capacities understood as commons might be made central within “smart” processes that are radically democratic, inclusive, open-ended, and potentially transformative in ways that are distinctive from more top-down models that often merely manage and reproduce status quo urbanisms. Ultimately, the article suggests possibilities for alternative “smart” urbanist orientations, sensibilities, and techno-political applications to emerge in and through open-ended participatory processes grounded in community and place-based resources and priorities.

## Keywords

commons and commoning; equity; participatory planning; place-based knowledge; Seattle; smart urbanism

## Issue

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## 1. Introduction: (How) Is An Equitable “Smart” Urbanism Possible?

The questions that animate this article are as follows: (a) What new ways of conceptualizing, engaging, creating, and representing cities, urban spaces, and places, and the relationships within them might be necessary to realize a “smart” orientation that is cooperative, equitable, just, democratic, and potentially transformative and emancipatory for the lives of urban residents—especially those who have historically benefited least from urban and municipal planning processes—and (b) How might taking seriously and thinking with existing place-based knowl-

edge, relations, and capacities such as those evident in countless existing contemporary urban organizing efforts offer both conceptual and practical resources toward these aims? We address these questions in a way that is at once speculative and grounded in deep intellectual and practical respect for resources and activities that already exist in urban spaces and communities. Drawing especially on examples from Seattle, Washington, USA, we highlight how, here and in other cities, there exists already—and often outside official planning or municipal processes—a tremendous amount of community-embedded knowledge and capacity. From asset-based, diverse economies, and post-development perspectives,

we can think of these as variegated place-based social and practical resources on the basis of which different, more equitable, and livable urban futures might be built. As we describe below, in Seattle such place-based resources are already being impactfully leveraged by different communities to make claims on particular spaces and institutions and to assert that these should be invested in and maintained for community benefit under different forms of equitable community control which would further build upon and multiply those same resources. And in this case, the municipality—the city of Seattle—has signaled that it is willing to consider how this might be possible. Though it would require a radical departure from the status quo, the potential exists here for the meaningful pursuit of community-identified priorities and issues—and perhaps broader forms of cooperation and transformation beyond—to emerge in and through different forms of participatory, community-engaged, and democratic planning. While we are critically aware of some of the potential shortcomings and pitfalls in such a proposition, we want to take these possibilities seriously and think in conversation with them, imagining how existing place-based knowledge and capacities could be central and generative within smart urbanist orientations both in Seattle and more broadly.

In the next section, we briefly situate our perspective and scan the smart urbanism literature, seeking points of potential resonance and connection between our framing questions and existing “smart” orientations. We then detail two cases—one involving place-based story-mapping, and the other involving participatory budgeting to rethink public safety—from Seattle wherein both the potentials and some of the challenges of existing efforts to incorporate place-based knowledge and capacities in this manner are fully in evidence. Finally, we consider how notions of “commons” and critical insights from ongoing experiments with participatory processes might point us toward alternative modes of planning, infrastructural development, and investment, and consequently toward more equitable and livable urban futures.

## 2. Parsing Smart Urbanisms

Let us begin by clarifying some orientations that are central to how we have framed our questions before, from there, unpacking smart urbanist orientations. We are approaching prospects for smart urbanism from what might be termed asset-based, diverse economies, and post-developmental perspectives (e.g., Anderson, 2020; Gibson-Graham, 2007; Gibson-Graham et al., 2013; Mathie et al., 2017). While not monolithic, we understand these perspectives as broadly asking us to consider a series of overlapping questions and propositions: Counter to modes of theorizing, planning, and policy that focus on formations of dominance and/or lack and absence, what might be gained or transformed by focusing on the heterogeneity and fullness—the forms of

knowledge, the human capacities, the diverse economic, and cultural activities—that already exists and thrives virtually anywhere there are people? What generative and potentially transformational and sustainable ways of thinking about and understanding economic opportunity, culture, sociality, political organization, and more might be opened up as the result of such a conceptual shift? What might be gained by prioritizing and seeking to cultivate economic diversity alongside and through investments and processes that support heterogeneous forms of cooperation, mutualism, equity, and democratic participation undertaken as part and parcel of ongoing policy and structural iteration and reiteration? While these provocations and the theoretical perspectives that center them emerged in part as critiques of often harmful forms of developmentalism in international and urban contexts of the 20th century, they also seem increasingly urgent for a future likely to be marked by deeply disrupted infrastructures and supply chains, borders, ecological and political systems, and more, particularly but not only in contexts of climate change and adaptation. For these and other reasons, the questions just posed are not only generative but vital for urban planning. Likewise, considering the “smart” urbanism literature in light of such heterogeneous provocations proves illuminating.

Put succinctly, “smart urbanism” might be understood as an approach to urban planning and governance that seeks to deploy specific technologies and infrastructures—perhaps especially networked digital devices and sensor-based methods—to produce, collect, and analyze a wide variety of data and make decisions, organize structures and resources, and manage urban environments and activities based on that data. While this is a rhetorical oversimplification, thinking with the provocations outlined above we might identify two predominant and contrasting orientations to smart urbanism concepts and practices. The first might be called a technocratic or cybernetics-inspired approach—one that considers a city algorithmically and tends to think in terms of managing and optimizing urban systems and functions using processes wherein many of the desired outcomes are aligned with the current status quo and determined in advance. This technocratic perspective is often closely interwoven with entrepreneurial and neo-liberal ideas of urban development (Greenfield, 2013; Hollands, 2008; Kitchin et al., 2018; Townsend, 2014; Visvizi & Lytras, 2019), and has included visions that imagine urban spaces as blank slates to be materialized and populated in ways that ingrate technologies often developed hand in glove with large corporations like IBM, Cisco, Alphabet, and Microsoft. These smart cities are synonymous with high-tech clusters and knowledge economy-driven urban development wherein corporations often determine how governments should adopt their technological vision and products (Goodspeed, 2015; Hollands, 2008). Many critics have argued that such visions of smart city planning

enact forms of computational and algorithmic governance that surveil and discipline urban inhabitants and that often implement and reinforce inequitable logics of urban development (Kitchin et al., 2015; Shelton & Lodato, 2019). Moreover, many have argued that such corporate-led, technology-centric visions of the smart city feed into neoliberal urbanism—in short, they underwrite forms of privatization, the hollowing out of public goods, and the enrollment of state and municipal institutions in processes of profit-driven growth that create deep inequalities—as they utilize technologies and infrastructures to datafy and commodify all manner of urban metabolisms and circulations in the name of improving efficiencies using new platforms and urban infrastructures (Cardullo & Kitchin, 2019; Kitchin, 2014; Rodgers & Moore, 2018; Wilson, 2018). These critiques of technocratic smart cities orientations are widespread, and we will not linger on them except to echo and underscore that “smart” is often hand in glove with forces that run deeply counter to the spirit of the heterogeneous provocations posed above and run the danger of reducing the rights of urban inhabitants, abetting the commodification of urban life, and foreclosing numerous diverse possibilities for different forms of urban living and organization to sprout, let alone flourish.

Often emerging directly from critiques of more normative technocratic visions, a second “smart” orientation aspires to processes and applications of technology that might tap into, if not necessarily be led by, communities and residents’ collective intelligence. We might call this a collaborative and participatory approach, based on a broader vision that embraces more than the efficient management of facilities and services and explicitly promotes the democratic production and exchange of knowledge and human capacities (Barlow & Lévy-Bencheton, 2019; Lampugnani, 2017; Picon, 2015). Such an approach epitomizes a participatory digital turn, emphasizing practices that blur distinctions among production, distribution, and consumption and seeking to facilitate forms of (often digitally enabled) creativity, collaboration, and information sharing, including knowledge-intensive and information-rich user-created content and activities (Battistoni et al., 2022; van der Graff & Ballon, 2019). To be sure, these more participatory, resident-engaged orientations can also serve privatizing and commodifying interests and can deepen structural barriers by treating urban inhabitants as consumers, sources of un- or undercompensated labor, and sources of data to be mined or commodified for profit (Cardullo & Kitchin, 2019). Here too equitable and heterogeneous outcomes are hardly a given, and there is great potential for the opposite. And yet there is something in the potential open-endedness of these more collaborative and participatory orientations that might be productively re-directed in relation to the heterogeneous provocations posed above, especially where sensitized to some of the more heterogeneous qualities of life in urban spaces themselves.

An additional foundational tension that persists in many conceptualizations of smart urbanism concerns innovation (Hajer & Dassen, 2014; Halegoua, 2020; Marvin et al., 2016). In many smart city models, innovation is central. Economic development and growth are imagined to occur in and through the cultivation of creative economies which attract entrepreneurial talent, which will beget further technological innovation, the flourishing of start-up cultures, and further rounds of the same. However, in reality—and in light of the heterogeneous provocations above—this is a very narrow approach to innovation and economic cultivation, and one that often does not incorporate many of the most creative and resourceful residents of any city, namely those who have figured out how to persist and thrive even despite historical discrimination, segregation, and other structural-historical barriers (see, e.g., Jung & Anderson, 2017). Indeed, creative, innovation-focused smart implementations can exacerbate already rampant political-economic processes—particularly forms of speculative development connected to increased housing costs and costs of living—that make it harder for many historically disadvantaged and marginalized urban residents to live in, let alone fully participate in and benefit from, the urban forms that emerge.

Following from the above observations, we might also question exactly how—and which—figures of “cities” and “urbanism” conjoin within “smart” formulations. As the above discussion implies, quite different conceptualizations of the urban can underlie different formulations, and these can be very revealing of other tacit orientations or disinclinations within. As in the most high-profile examples like Songdo in Seoul, Korea or Alphabet’s Sidewalk Labs in Toronto, Canada, utopian visions of future smart cities often take the form of from-scratch developments where advanced technologies are overlaid on blank city spaces that are then marketed to potential residents as beacons of modern convenience, luxury, and innovative living (McFarlane & Söderström, 2017). In these smart city visions, cities seem to be treated almost as if they are computers—as manageable systems that can be made to act in rational, mechanical, linear, relatively frictionless, and systematic ways and that exist to serve the needs of worker-producer-consumers, all integrated seamlessly with real-time data streams serving the same function. New ways of knowing, seeing, and governing the city are imagined to emerge in and through the integration of thousands of urban sensors, real-time GIS-enabled mapping, and infrastructures for crowdsourced information about urban environments through distributed networks of millions of smartphones. Although such a vision seems rational and promising, it also seems closely aligned with the prerogatives of techno-capitalism and—absent explicit commitments to and prioritization of such principles—unlikely to yield anything resembling equity and solidarity, let alone true innovation or resilience in the spirit of the heterogeneous provocations above.

But different visions are available, offering different sensibilities around what urban spaces and relations are, why they are generative and valuable, and what they could become. A huge aspect of what makes cities exciting, vibrant, and spaces of true innovation is, after all, that they are full of often heterogeneous and contradictory formations of sociality, culture, politics, value, competing interests, and even wicked problems/tensions (Anderson, 2020; Leszczynski, 2018; Tally, 2013). Cities are complex and ever-evolving, full of interdependent actors, processes, relationships, and contingent encounters with and across differences.

In ways resonant with influential strands of urban planning (e.g., Watson, 2013), the best of what we are calling collaborative and participatory orientations to smart urbanism seems to work with, if not amplify and multiply, the heterogeneous aspects of urban life rather than managing them toward outcomes and according to metrics suited merely to narrow notions of efficiency or capitalist value. And from there, it is possible to engage a series of additional questions and experiments in relation to the ways of life, social and political-economic structures, attitudes, values, and more around which urban processes and priorities might be organized. By and for whom and for what purposes should smart cities be shaped? What kinds of inequities and trade-offs are produced through current modes and models? What about significant urban problems that are left out of traditional smart city models, such as rampant socio-spatial inequality, historically marginalized communities' right to the city, struggling institutions such as school and health systems, questions of public safety and criminal justice, or access to affordable housing and living wage jobs, etc.? What kinds of processes, social, material, and information technologies, and—perhaps most crucially—already existing place-based and community-embedded knowledge and capacities could be leveraged as resources to address these questions? Truly addressing these questions might mean demoting the end goals of efficiency and optimization in favor of “meaningful inefficiencies” that facilitate civic connection, study, experimentation, and reflection—the opposite of many dominant smart city orientations (Gordon & Walter, 2016).

What we are gesturing toward here are open-ended “smart” processes that engage and amplify heterogeneous and already existing place-based knowledge, community capabilities, and institutional capacities. These are precisely the considerations we ultimately want to get at in relation to “commons.” But first, in the next section, we draw on examples from contemporary Seattle to illustrate more vividly community-embedded capacities and resources of the kind we might bear in mind.

### **3. Examples: Halting Attempts at Place-Based Knowledge Activation**

As the above review highlights, there are strands within the literature on smart urbanisms which hold out hope

if not explicitly advocate for less technocratic and more participatory, less expert-driven, and more democratic conceptualizations and realizations. Our own ambitions for a more radically heterogeneous, inclusive, equitable, and participatory smart urbanism clearly resonate with these strands of the literature. But upon what foundations might cities and practitioners work to implement such ambitions in practice? And what further steps—both conceptual and practical—might be necessary to move already-existing activities in cities closer to these visions? In this section, we deepen and address those questions drawing on two community organizing-based examples from Seattle: a place and story-mapping initiative and a process of planning for large-scale participatory budgeting.

Our knowledge of the examples described below draws from our participation in an initiative called the People's Geography of Seattle (PGS)—a loose network of community-based artists, storytellers, organizers, and university-based faculty from geography and aligned fields. The PGS originated in 2017 through a set of convenings that aimed to connect practitioners working on anti-displacement and related efforts in response to the rapid development that has dramatically transformed Seattle and the surrounding region over recent years. As Amazon and other major tech corporations have anchored and expanded operations here, the fortunes of the city and region have boomed (US Bureau of Economic Analysis, 2021). Between 2010 and 2020 the population of King County (which includes the cities of Seattle, Bellevue, and numerous smaller municipalities) grew by 338,000 people—an increase of 17% (Gutman & Shapiro, 2021). Many of these transplants are highly educated and highly paid tech-sector workers and contemporary Seattle currently boasts among the highest average rates of education and per-capita income in the United States (King County Office of Economic and Financial Analysis, 2022a, 2022b). At the same time and in direct relation to these changes, Seattle and the region are acutely experiencing crises at intersections among affordability, housing, widening socio-economic inequality, and displacement from what have historically been—because of restrictive covenants, redlining, and other forms of segregation—Black, Pan-Asian, and Indigenous communities adjacent to the urban core (Fynn Bruey, 2019; Seattle Office of Planning and Community Development, 2020). Unprecedented numbers of unhoused people live on the streets while low-income families, the elderly, racial minorities, and other vulnerable populations have been forced to leave the city in high numbers because of skyrocketing housing and living costs. Seattle is routinely at the top of rankings of the “smartest smart cities” in North America (e.g., Locke, 2020)—rankings that evaluate the density of sustainability initiatives, tech start-ups, open data initiatives, and the ability to attract creative and entrepreneurial talent along the lines of the creative development strategy outlined above. Yet—and even despite and in parallel with efforts toward

equity described in more detail below—Seattle has also become one of the least affordable, most inequitable cities in the US.

Attempting to engage a diverse array of participants around the issues above, since its founding in 2017, PGS participants have collaborated on a prototype augmented reality place-based storytelling app (Anderson et al., 2019), supported oral and spatial history by and for historically Black central city communities, and skill-shared with community-based organizations working for place-based equity. It is from these later efforts that we are familiar with the two examples we offer below. In keeping with the broader ethos that animates this article, we must stress that the activities described below were undertaken by community-embedded organizations and not by scholars (including ourselves) or other outside experts. As such, we are engaging these not as research outcomes, but as examples that help us think through how already existing community activities, knowledge, and capacities might intersect—or not—with different orientations to “smart” engagement. There is a great deal to learn from consideration of these examples in these terms.

The first example concerns a regional coalition called King County Equity Now (KCEN). KCEN emerged in 2020 in direct connection with uprisings that rocked cities across the US following the murder of George Floyd. KCEN is a coalition composed of a larger number of (in 2020, the coalition included more than 50) Black-led community-based organizations organizing to achieve equity—in the sense of both justice and ownership stakes—for communities in Seattle and the region. From the start, KCEN aimed to aggregate and amplify already existing community-embedded initiatives to take on decades of inequity and displacement disproportionately affecting Seattle’s historically Black communities.

In summer 2020, KCEN put forth a set of demands, subsequently re-framed as equity solutions, which were largely based on initiatives that had already been underway among its membership (KCEN, 2020). These solutions were partly policy and legally oriented (proposing policies against predatory property acquisition and development in historically segregated neighborhoods, terminating contracts between police and schools, and dropping charges against protestors) but predominantly focused on the need for different forms of investment and financial redistribution (turning four parcels of underutilized public land over to community control; establishing a \$1 billion anti-gentrification land acquisition fund, roughly 25% of which was to be redistributed from policing budgets) to create opportunities for Black economic development, ownership, and community self-determination. During the summer of 2020, a team of four University of Washington students and two faculty affiliated with the PGS volunteered to help KCEN create story maps that would situate the sites named in the equity solutions. The idea was to use the Environmental Systems Research Institute, Inc. (ESRI)

ArcGIS StoryMaps platform to show the location of the parcels and—drawing upon archival and interview-based qualitative information—explicate connections between these specific spaces and deeper social relations and histories within which they were imbricated. This included, on the one hand, histories of forms of segregation experienced by Black communities—specific policies and practices which limited spatial mobility and institutional access. On the other hand, histories of resiliency and resourcefulness in the face of such segregation were also included, especially in relation to specific institutions—a vocational school connected to national Black labor organizing and a senior care facility that had long been under Black community control, for instance—which became particularly important to the community precisely given the constraints of segregation, and whose stories highlighted processes and capacities for Black community-led decision making, institutional organizing, resource provision, and more. This mapping process was also meant to spark additional community-driven and resident-generated data and visualization moving forward, perhaps especially highlighting the deep roots and already existing presence of processes and capacities for cooperative institutional decision-making and management that would be required to successfully realize community control over the parcels named in the demands.

Ultimately, this mapping process did not go farther than an initial prototype, largely because access and proliferation were limited by the privatized and proprietary ESRI platform, and neither community nor university-based collaborators had sufficient bandwidth or resources to identify and mobilize alternatives. Some of the parcels of land in question have since come under community control as hoped, but ambitions for qualitative mapping to inform what might happen from there have remained stunted. Nevertheless, this undertaking is one small example (and there were many others in relation to KCEN and its membership) of existing desires, potentials, and latent capacities for technologies—in this instance qualitative mapping, but one can imagine other technologies for qualitative engagement, participatory archiving, institutional consolidation and administration, and other forms of information gathering and sharing—to be useful as part and parcel of broader strategies for researching and pursuing place-based equity as community controlled institutional and resource management in direct connection with community-identified priorities and drawing directly upon community-embedded capacities.

Our second example emerged in parallel with the contexts of the first. Following directly from the concerted efforts of KCEN and other community-advocacy groups, in the fall of 2020 the Seattle City Council passed a budget that re-allocated funds that had been designated for policing, redirecting them toward an ambitious participatory budgeting process (Russillo, 2020). The city committed \$30 million (one of the largest such investments by a US city to date), with \$3 million to be

spent over the course of 2020–2021 on a community-led research initiative to generate recommendations for a multi-year participatory budgeting process beyond, all meant to create a participatory pathway for re-imagining public safety and health in collaboration with front line communities. The contract to facilitate this initial work in 2020–2021 was awarded to a research organization called The Black Brilliance Research Project (BBRP), which was at that time directly affiliated with KCEN. The results were complex and controversial, but also highly instructive for anyone considering how best to incorporate community held-knowledge in larger processes of planning, organizing, and potential structural-institutional renovation.

Partly because of the way the city council allocated and administered the funds, partly because of conflicts and tensions that soon emerged within KCEN as a coalition, and partly because this initiative asked the community to create a sweeping vision (some participatory budgeting existed in Seattle, but only at the level of small-scale capital improvements) on a perhaps unrealistically short timeline, the initial round did not go smoothly and did not produce the results it seems many expected. The BBRP undertook a participatory action research (see, e.g., Kindon et al., 2010) process wherein more than 100 paid and 100 volunteer researchers fielded from community organizations were trained, then collaborated to design and undertake interviews, focus groups, questionnaires, case studies, photovoice creation, and story mapping involving more than 1,400 participants from historically segregated and over-poled communities across Seattle. That initial round produced a detailed report (BBRP, 2021) with recommendations and a proposed budget for the next steps. BBRP especially stressed the need for substantial investments in things like publicly supported communication infrastructures, care resources, affordable housing, worker and owner cooperatives, and other public and institutional goods that would not only improve public safety, health, and equity but that researchers concluded would also be necessary before more and broader participatory planning and community-based economic development could take place in a truly equitable way moving forward.

These recommendations were not what many seem to have expected to emerge from the process. Many in the local media painted it as a boondoggle. As the fervor of 2020 subsided, the city ended up largely disregarding the recommendations and cutting ties with the organizations that were involved in the initial round. At the time of writing, the next phases of the larger participatory budgeting process are moving forward and will be facilitated by a Brooklyn, New York-based organization called The Participatory Budgeting Project which was a third-party administrator preferred by BBRP. But there is little information about how the process will unfold or how closely it will attend to BBRP's recommendations.

Several points emerge from these examples in

Seattle and speak directly to the discussion of smart urbanism laid out above. First, there is a tremendous amount of community-embedded capacity, place-based knowledge, and community-driven ambition on display in these examples. There are also historical and/or already existing institutional memories and frameworks as well as orientations to collective decision-making and resource provision. Drawing directly on these assets, community-based actors—in this case, especially from Seattle's relatively small but robust Black community—entirely drove the efforts described above, providing the human infrastructure, networks, expertise, and labor. That outcomes diverged from the expectations should not come as a surprise given the degree to which the organizations and actors involved have historically and still do have limited access to power and resources relative to historically powerful and/or status-quo actors and organizations. The learning and insights that emerged from both examples above clearly reflect this.

Moreover, questioning what exactly should or might be expected from such participatory processes is also generative. Reading across much of the reporting on the BBRP process, for instance, it seems what many observers expected was a recommendation that more diverse people should simply be brought into the conversation about how money should best be spent within relatively status quo budget categories, and that a more inclusive undertaking of this process would itself create more equity, accountability, community buy-in, and perhaps some administrative innovation and social capital building (e.g., Gutman, 2021; Oron, 2021; Schofield, 2021). To us, however, that feels like an inhibiting imagination of what a truly path-breaking participatory process could be like. And indeed, what emerged in both cases above was a strong sense that more and different kinds of investments and prioritization would be needed to create the conditions for a more radically democratic and transformational process to unfold in the future. In these respects, these examples underscore much of what we are trying to argue in relation to smart urbanism goals and perspectives: That they might ideally emphasize and seek to facilitate open-ended processes for shaping questions, aims, protocols, and outcomes—rather than presuming these in advance—in collaboration with the knowledge and resources already embedded among residents and communities; that they should prioritize investing in such processes and the community-embedded resources and infrastructures needed (if not already existing) to make them truly equitable and transformational in the long term, even if that presents difficult challenges within shorter time horizons.

One final context worth considering here is the degree to which these community-led initiatives did and did not connect to a number of planning and management initiatives—some explicitly engaging “smart” discourses, others less so—in Seattle during the same period. The city of Seattle and other regional players

have shown serious interest in developing “smart” initiatives that explicitly prioritize collective decision-making through processes that are crowdsourced, tailored to the qualities and needs of already existing people and places, and that integrate the insights of everyday citizens. For instance, Smart Seattle is a collaboration between the City of Seattle, King County, Microsoft, and the University of Washington (Seattle Department of Transportation, 2020) focused on transportation. This initiative has piloted free and publicly available crowdsourcing apps through which residents can provide and benefit from real-time information on changing conditions. It explicitly targets what it calls “equity areas”—spaces with particularly important transit links for commuters trying to navigate the increasing spatial mismatch between the locations of affordable housing and other resources (increasingly on the periphery of the city and region) and good jobs (largely concentrated in or near areas with high housing costs)—for particular attention, investment, and infrastructural development. The Digital Equity Initiative is seeking to ensure that all residents and neighborhoods have access to and know how to utilize information technologies that are increasingly important for accessing information and economic opportunity. That initiative explicitly names potential forms of technologically mediated civic engagement among its priorities. There is also an Innovation Advisory Council intended to facilitate information and technology sharing between the local tech industry and the City to better address ongoing crises of homelessness, affordability, and mobility, alongside services provision, prioritizing racial, social, and spatial justice.

While the effectiveness and impact of the above initiatives are open questions, the city of Seattle is clearly signaling an alignment with many of the values and practices we are trying to advocate for here: Developing processes and technologies that facilitate, crowdsource, freely share, and cede narrative and decision-making power to residents and communities; thinking about equity in relation to technology; making strategic investments in existing places and communities rather than treating “smart” development as an elitist *tabula rasa*; and so forth. So perhaps the gap between what community advocacy and equity groups are calling for and what the City is already pursuing is not insurmountable. At the same time, the impulse seems to be toward facilitating access and inclusion within management frameworks where goals are already known in advance, as opposed to using technologies to facilitate open-ended participatory processes which grow and activate place-based knowledge and capacities to then identify and pursue democratically determined aims, resources, outcomes, and transformations that cannot be known in advance because they have yet to emerge from any truly equitable and well-supported process. Clearly, we would like to push the agendas of planners and “smart” practitioners—especially in avowedly progressive cities like Seattle—toward the latter.

#### 4. Further Discussion: Smart Commoning?

What we have laid out thus far is intended to be suggestive and illustrative. We have offered a broad orientation to smart urbanism, then offered examples to begin suggesting contexts in which such an orientation might be mobilized. To revisit our guiding ambition: We want to consider how mobilizations of “smart” urbanism might engage place-based knowledges and community capacities (such as those evident in instances like those described above) and marshal them toward equitable and participatory planning. We view this as a conceptual and processual question as much as a practical or technocratic one. As such, we now engage an additional set of concepts, specifically around commons and commoning, to add additional nuance to what we have presented above.

At this point, we feel we can make a compelling argument that forms of place-embedded experience, knowledge, and capacity such as we have outlined above constitute and might generatively be treated as forms of “commons.” We are not the first to suggest strong potential overlaps between notions of the commons and the more democratic and participatory strands of smart urbanism (see the conclusion of Cardullo & Kitchin, 2019). We wish to elaborate and further consider such overlaps.

“Commons” and “commoning” are old concepts that have gained increasing purchase in different contemporary contexts. In keeping with definitions generally accepted in the commons literature (e.g., Anderson & Huron, 2021; Gidwani, 2013; Linebaugh, 2008; Ostrom, 1990), we understand these concepts as referring, on the one hand, to resources—often but not always material—that are maintained, stewarded, and used collectively (commons), and, on the other hand, the practices—the actual activities, protocols, and ways of acting and relating in mutuality and relation (commoning practices)—that people undertake in relation and in order to maintain particular commons as resources. It is worth noting here that contemporary work on the commons takes place along a spectrum ranging from what might be termed a descriptive-institutionalist approaches—often focused on understanding how shared resources are governed, by which communities of users, according to what rules and protocols, under what conditions and constraints, and so forth—to approaches more closely aligned with critical social theory and critique. We think it useful to consider approaches from across this spectrum in relation to the contexts and questions we have presented thus far.

By virtue of their cooperative character and the collective practices necessary to sustain them, commons are often—but not always—oriented toward at least grappling with, if not necessarily resolving, questions of equity, access, and inclusion. Crucially, where these conditions are not met—in other words, where processes for dealing with these issues are not in place and constantly



re-visited and negotiated—commons can ossify, become privatized, and cease to be commons. Some have suggested that this ethos of constant renegotiation and reiteration means that commons and commoning might be considered among the most potentially transformative and radically egalitarian socio-political ideas available at present (Dardot & Laval, 2019). At a minimum, a descriptive sense of existing commons and the origins, protocols, structures, adaptive capacities, relationships, and so forth that appear in robust examples can be central to understanding institutional, political-economic, resource-related, and even cultural landscapes in particular locations and settings. This is also where we believe notions of commons and commoning could connect decisively with smart urbanism in the ways we have identified.

With the above aspects in mind, what thinking about smart urbanism in relation to commons and commoning affords us is not just another way to critique the often troubling agendas behind smart rhetorics or the gaps between smart ambitions and their implementation, but a conceptualization for thinking deeply and generatively about the technologies, processes, modes and rules of shared engagement, forms of investment and resource cultivation, orientations to data, and so forth that could identify and describe, augment and grow existing urban place-based knowledge, community-embedded capacities, institutional frameworks and relationships, and social infrastructures in relation to and as commons. Moreover, given the crucial importance of open-ended process and constant negotiation within commons, the pairing allows us to speculate about how “smart” approaches could be re-tooled to enliven, support, and sustain organizing and participatory processes, diverse economic and planning activities, collective structures of data ownership and processes of cooperative analysis, and more, among already existing and/or nascent communities of users. Particularly where explicitly connected to goals like equity, racial justice, and/or just climate adaptation, the result could be “smart” uptakes that are participatory, research-oriented, self-reflexive, iterative, adaptive, and deeply transformative, rather than simply perpetuating existing status quo formations, exclusions, and advantages accrued by narrow groups (see Anderson & Huron, 2021; Foster & Iaione, 2022, for further theoretical elaboration of principles upon which such a process might work).

Moreover, as we previously suggested and as the commons literature also confirms, urban spaces themselves are quite distinctive in that they are made up of all kinds of instances of both commons and commons practices (Huron, 2018). In the case of Seattle and some of the examples given above, it is possible to conceptualize a complex interplay between particular commons as resources (in relation to particular parcels of land, public institutions, built structures, and material infrastructures, perhaps particular technologies, public funds, and more) and commons practices that sustain and steward them (social infrastructures, forms of community-

embedded and sometimes very place-specific knowledge, forms of labor, care, solidarity, and more). These are clearly domains of urban space and urban life with which smart urbanism is already deeply engaged, only in a “smart commoning” framing such engagements would be driven by notions of equity, inclusiveness, participatory process, and open-ended negotiation and iteration in relation to particular resources and toward community-identified priorities along the lines of what we have outlined above.

To bring these arguments full circle, we could point to numerous examples where communities and municipalities have already started to experiment explicitly with exactly the kinds of engagements we have in mind. Some of the most striking and ambitious examples come from cities where smart approaches have been integrated into progressive “municipalist” political movements which cultivate structures of direct democracy, structured public participation and stewardship, and cooperative ownership in order to confront neoliberalism and create durable, equitable institutional and economic formations that can then be strategically expanded from the municipal scale. For instance, the Calafou Postcapitalist Eco-Industrial District near Barcelona, Spain, aims to surface marginalized, hidden, and alternative economic activities as catalysts for place-based advocacy and policy reform. It promotes a wide range of urban projects from community-managed broadband internet infrastructure—including an open source “Internet of Things” network—to free software cooperatives and spaces for public education and collective reflection (Lynch, 2020). Municipalist experiments ongoing in Barcelona alone—similar experiments are ongoing in many other cities (see, e.g., Morozov & Bria, 2018)—have included the development of an overarching “digital transformation roadmap” based on the idea that citizens should maintain ownership and control of their own data (the initiative includes a “data commons” and co-creation workshops for scaffolding and implementing this vision at the community level) and designed to lay the foundations for broad and equitable participatory bottom-up democratic decision making moving forward, and smaller overlapping undertakings like Guifinet, a decentralized network of community associations that builds and maintains their own extensive public broadband internet infrastructures as part of a broader community-based economic and democratic capacity building strategy (Lynch, 2020). An open-source platform called Decidim ([www.decidim.barcelona](http://www.decidim.barcelona)) allows any citizen of Barcelona to submit their proposals and priorities for budgetary allocations. These examples create new processes for citizens and municipalities to share information, interact, and make collective decisions, forging collective identities and generating, shaping, and sharing resources along the way.

Other examples abound even where political and municipal institutions have not invested in participatory processes. The Hyderabad Urban Lab in Hyderabad,

India, for instance, is supported by donations and foundations to facilitate research by and for urban residents whose livelihoods have historically and continue to be undercut by processes of colonialism, imperialism, and capitalist development (Maringanti, 2020). In this initiative it is residents, working with activists and experts, who produce and interpret data, and not external consultants or professional planners. The knowledge that matters here is that learned by residents and activists living and working in informal settlements, struggling to access basic amenities like housing, water, and sanitation, and organizing for extended municipal services and more equal relationships with municipalities that often hold them at arm's length and disregard their ways of knowing, navigating, and stewarding the urban world. Technology is used to supplement already existing ways of knowing and commitments to urban social transformation. But it is people, relationships, processes, and place-based forms of knowledge and organizing—not technocapitalist development imperatives—that matter most. This is place-knowledge-intensive smart urbanism that strives to shape technology in the service of collective and cooperative aims around resource access.

There are countless other examples we could highlight. Each would differently underscore the open-ended, process-oriented, and often radically egalitarian sensibilities that attend to commoning practices and the stewardship of resources in common. The point is that attention to, cultivation of, and investment in commons and commoning can lead to both the identification and enhancement of processes and human infrastructures for economic development, solidarity, resiliency, innovation, democracy, and more. This is about much more than integration and access—it is about transforming current structures, deliberately cultivating and stewarding shared resources, and developing robust modes of cooperative and equitable urban living.

## 5. Conclusions

Smart urban theorists and practitioners already clearly know that urban residents and communities steward and are in possession of all kinds of potentially valuable and generative place-based knowledge, capacities, and resources and that technologies can be used strategically to tap into these. The question is by and for whom (or what), how, in relation to what technologies, innovations, and processes, and toward what outcomes and futures. We have offered what we simply hope is a provocative perspective, ultimately suggesting that those questions should be addressed via open-ended, just, and participatory processes wherein residents, communities, commons, and commoning practices are invested in and supported in the cooperative pursuit of such answers. The smart urbanisms that emerge from there could well be innovative and transformative in ways all manner of urban inhabitants and actors are only just beginning to imagine.

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## Conflict of Interests

The authors declare no conflict of interests.

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