Co-governance Experiments for City Transitions: A Vison Mapping Case Study

For: Journal of Peer Production, Special Issue on Cities

Authors: Darren Sharp and Jose Ramos (19/05/17)

Contract: darren@socialsurplus.com.au

Introduction

Cities are in a state of transition and confront a range of 'wicked problems' arising from migration, climate change and rising inequality. These civilizational crises have pre-empted innovative governance responses to address these challenges through various forms of transition-oriented urban experimentation (Evans et. al., 2016). In the sustainability field, participatory design and social innovation have been used to catalyse bottom-up solutions in areas of neighbourhood renewal (the Amplify project), urban farming (Dott07), and social integration (Malmö Living Labs) (Manzini & Rizzo, 2011).

Other forms of grassroots projects include collaborative mapping which enables communities to co-produce urban space through digital visualisation methods via open source infrastructure and data to support collective action in the social production of the urban commons. Leading examples include OpenStreetMap and TransforMap which give citizens the ability to develop new economy maps for their regions, towns or local areas. Such maps have been developed in the context of Sharing Cities to document local shared resources for self-provisioning (Johnson, 2013) or for specific communities of practitioners such as the Maribyrnong Maker Map (M3, 2015).

This paper evaluates one such experiment, the Future Economies Lab 'Vision Mapping' project, in the context of social innovation for urban transformation. The methodology was developed by the authors for the Future Melbourne 2026 public consultation (City of Melbourne, 2016a). It is a novel practice to produce new urban imaginaries through the combined use of collaborative mapping, strategic foresight and human-centred design within an appreciative inquiry framework. The process aimed to support participants to imagine changes to Melbourne's economy over the coming decade.

In this paper, Vision Mapping is put forward as a process of 'design for social innovation' through sociotechnical transformation oriented towards social change (Manzini, 2015). This paper evaluates Vision Mapping against the backdrop of dramatic sociological transformations, such as the emergence of collaborative urban governance for the 'city as a commons' (Foster & Iaione, 2016), experiments for a commons-based 'partner state' (Bauwens, 2012), and other approaches. This article uses personal experiences as well as public data to inform our description and analysis of the Vision Mapping workshops. This then forms the basis for considering a more systematic approach to urban experimentation which can support co-governance for urban transitions.

Theoretical Framework

This paper develops a theoretical argument to re-define the city as transition arena for continuous experimentation to build adaptive capacity towards long-term sustainability. We argue a new social and political contract is required between cities and citizens grounded in co-production and co-governance to develop urban experiments that create path dependencies towards sustainability.

The right to the city has been discussed as a common right and a necessary precursor for directly confronting systemic crises, on so that urban life can be reshaped through a continuous process of re-making the city (Harvey, 2008). Rights need to be enshrined in policies, legislation mechanisms, governance structures and social processes that enfranchise diverse stakeholders to participate in the stewardship of shared urban resources and run experiments for urban transitions.

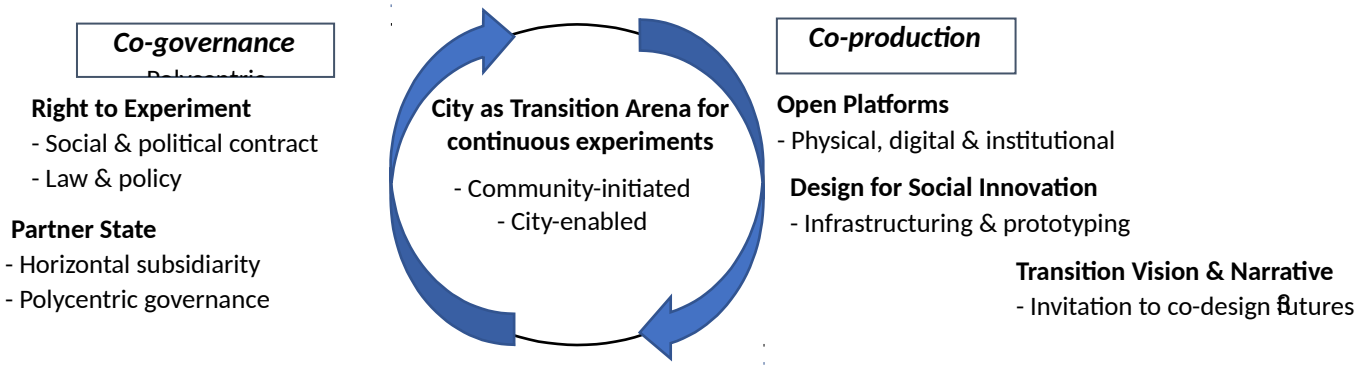
Legal mechanisms are needed to guarantee a 'right to experiment' through multi-stakeholder initiatives that enable citizen participation in the co-governance of the urban commons. New platforms for urban collaborative governance are required to bring together physical, digital and institutional modes of experimentation. Narratives provide an open-ended invitation to co-design the city and function as 'vision attractors'. Design processes like infrastructuring and prototyping can provide the means for continuous experimentation to re-invent the social and democratic foundations of the city.

Smart City proponents view the city as a 'platform for sharing' urban assets, including people, data, infrastructure and technology (Bollier, 2016). We argue, however, that a platform conception of citizen engagement cannot counter entrenched institutional structures, nor the commodification of urban environments. Power must be problematized and its exercise transformed. For example, Foster & Iaione (2016) argue for 'horizontal subsidiarity' which provides for power sharing at the local level and reframes citizens from 'city users' to 'city makers'.

The city is an urban commons comprised of shared assets like vacant land, parks and open space but is prone to 'regulatory slippage' when governments fail in their duty to protect such assets from overuse and degradation (Foster, 2012). Collective action to overcome these governance deficiencies is already underway through innovative socio-political responses such as Bologna's regulation to regenerate the urban commons (Gorenflo, 2015).

Open platform infrastructures can bring together physical and digital collaboration for urban governance in the service of the city as commons. The co-production of transition experiments through design for social innovation can re-configure urban governance and city-making to address the multi-dimensional challenges invoked by the New Urban Agenda (United Nations, 2016). The Bologna example demonstrates that co-production needs to be brought together with polycentric co-governance to create more "just and democratic cities".[1]

Alongside this is the central role of narratives and visions. If we consider the city a transition arena, we need to ask the question 'a transition to what'? In this regard, the image of the future is of fundamental importance. Guiding images of the future provides the normative context for bold experiments to be conducted in the service of transition. This 'arena' is more than just geo-graphic, it is constructed and bound by themes, issues, temporality and imagination. The image of the future plays a role as an attractor (Polak, 1961), to inspire new urban imaginaries (Hill, 2013), setting the context for bold urban experimentation and guiding cities as transition arenas. Again, however, we consider the question of power and governance to be central, and argue the very process of visioning needs to be democratised, a theme we will return to.



Urban Experiments

Cities are crucibles for humanity to discover new transition pathways for the 21st century in the face of existential threats posed by the Anthropocene and fossil capitalism (Angus, 2016). A profusion of transition-oriented urban experiments has emerged over the last two decades in cities around the world that attempt to create new political spaces for urban governance between municipal, NGO and community actors (Bulkeley & Castán Broto, 2013). With half the world's population now living in urban areas, cities have become a logical 'transition arena' to undertake 'co-creative collaboration', envision alternative economies and trial new governance experiments through open innovation systems like living labs (Nevens et. al., 2012).

There has been an outpouring of community-led 'grassroots innovation' at the niche level that focus on self-provisioning in areas of local food, renewable energy, co-housing and community currencies (Seyfang & Smith, 2007). These projects are responsive to local needs and initiated by civil society organisations like community groups and voluntary organisations with a mix of social and sustainability motives (Martiskainen, 2017).

Municipal authorities are attempting to engage active citizens in urban renewal projects through maker spaces and FabLabs. However, aligning a city's top-down vision for transformation with community expectations can be a fraught process with mixed results (Smith, 2015).

Networks of alternative economy actors are creating mutualized systems of provisioning through cooperatives and community land trusts to protect common goods in the urban environment as a bulwark against the privatization of city assets and public space by developers and new players in the platform economy (Semuels, 2015). This burgeoning movement of solidarity economy, commons transition and community resilience movements use lateral modes of civic participation, community ownership and decision-making to build capacity and strengthen the urban commons. (Mommaerts & White, 2014)

Yet it remains challenging for activists, scholars, municipal governments and community groups to come together and cooperate on urban commons projects in the city. While there are thousands of bottom-up initiatives in urban agriculture, the maker movement and community energy projects, they often lack visibility and a coherent approach for citizens and city authorities to come together, co-produce and co-govern. As Smith has suggested (2014), policy calls to 'democratise innovation' are inadequate if they focus on the products of grassroots innovation over the processes of community development and fail to confront the political challenges in opening-up innovation systems to citizens.

Overall, we argue that social processes of co-production must be reinforced by analogous shifts in collaborative co-governance and political reform to enable shared power relations. Participatory Budgeting, for example, helped to democratize decision-making in some cities in Brazil and has spread to over 1,500 cities worldwide, but this ambitious movement has been neutralised through 'procedural diffusion' via translation in other contexts and become less concerned with questions of social justice and broader institutional reforms (Ganuza & Baiocchi, 2012). The City of Bologna's

‘Regulation on Collaboration Between Citizens and the City for the Care and Regeneration of Urban Commons’ supports active citizens to co-lead city interventions through ‘collaboration agreements’, an instrument that aligns deliberative processes and intent with a legal contract between citizens and the municipality (City of Bologna, 2014).

Design for Social Innovation and Urban Experimentation

The popularity of design thinking and the shift towards co-production in the public and social sectors has been used to foster participatory innovation that is more “experimental, iterative, concrete and citizen-centred” (Bason, 2010). Participatory design for sustainability engages active citizens in the development of sociotechnical experiments to “put on stage” visions of future lifestyles (Manzini & Jegou, 2003). It is a form of co-design aimed at the “construction of socio-material assemblies for and with the participants in the projects” (Manzini & Rizzo 2011: 201). This approach produces artefacts known as ‘design devices’ that include prototypes, models and mock-ups as catalysts for new actions and events. (ibid.).

The ‘Eco-Acupuncture’ (EcoA) and ‘Visions and Pathways 2040’ (VP2040) projects by the Victorian Eco-Innovation Lab in Melbourne, Australia uses participatory design to develop future scenarios, visual sketches and policy conversations with local stakeholders about the transition of Australian cities to low-carbon futures (Ryan et. al, 2016). These projects have developed a process of ‘virtual city experimentation’ through ‘visualised futures’ to engage local citizens in dialogue for action in areas of policy, investment and research on the built environment (ibid.).

Italian sustainable design professor Ezio Manzini has been the driving force behind a form of participatory design known as ‘design for social innovation’ through his books, papers and global network of design labs (DESIS). Design for social innovation is a social learning process to catalyse sociotechnical transformation through actions along a spectrum from diffuse design by everyday people to expert design carried out by professionals, or a hybrid of these approaches (Manzini, 2015: 40). DESIS has auspiced multiple design for social innovation projects like Malmö Living Labs in Sweden, a multi-year endeavour across varied sites that worked with local community actors to address inequality, unemployment and alienation in the city (Ehn et. al., 2014).

Malmö Living Labs was an ‘enabling platform’ to co-design “small-scale experiments in real world contexts” with marginalized groups of people that were recognized as valuable “unused assets” (Hillgren, 2013). Experiments included a neighbourhood-based mobile game to explore the city (Urblove); a Bluetooth distributed hip-hop music channel by immigrant youth on local bus routes (Blue Bus); and a design jam to develop game ideas for Arabic culture (Arabic Game Jam). These participatory design-led ‘local projects’ are conceived of as short-term, small-scale experiments that need to be amplified and nested within ‘framework projects’ like Malmö Living Labs to achieve larger-scale transformation at a city-level (Manzini & Rizzo, 2011: 209). Within the context of design for social innovation, these experiments must always allow for new actors to enter through an open process of ideation and prototyping that creates space for generative problems, opportunities and solutions to arise with no “final expected result” (ibid: 211).

Geoff Mulgan from the Young Foundation points to visualisation, a user-centred approach and prototyping as strengths of design for social innovation, but weaknesses include a lack of

implementation ability, the high-cost of design consultants and superficiality of some proposals (In Hillgren et. al., 2011). In addressing these concerns, action researchers from Malmö Living Labs highlight that design for social innovation practitioners can overcome the limitations of project-based work through 'infrastructuring', a continuous process to build peer-to-peer collaboration and trust with diverse stakeholders through an "open-ended design structure without predefined goals or fixed timelines" (Hillgren et. al., 2011:180). Framework projects like living labs provide this type of infrastructure, along with city labs and Public Innovation Places.

Collaborative Mapping

City governments, citizens and community groups all have a role to play in enabling new infrastructures to support urban experiments through 'structured platforms', both online and in physical space, that bring together different local actors to practice co-design in the service of social transformation (Manzini, 2015). Collaborative mapping combines digital technologies with community development processes to create an 'enabling environment' for collective action as a design intervention to amplify weak signals and make unseen dimensions of city life visible and tangible (ibid: 121). It is a form of infrastructuring that invites ongoing community participation in the co-production of city space.

Various collaborative mapping projects have developed to visualise and amplify local social innovations and alternative economies including OpenStreetMap and Green Maps. These mapping initiatives are typically spearheaded by civil society actors and action researchers working toward sustainability transitions, and / or to co-produce new forms of urban spatial relations for post-capitalist systems of production, consumption and exchange (community gardens, tool libraries, food swaps, distributed manufacturing etc.).

The TransforMap collective emerged in Germany following the call by commons activist Silke Helfrich in 2013 to bring together the various alternative economy mapping initiatives that were until that point disconnected and developed in isolation as closed data silos (Lebaeye & Richter, 2015). TransforMap has since developed an atlas of 226 maps from around the world and is working to make these resources more visible, accessible and interoperable on a single mapping system.

Shareable, the action hub for the sharing economy, launched the Sharing Cities Network in 2013 with the use of MapJams as a core strategy for community building (Johnson, 2013). MapJams use collaborative mapping to legitimate commons and solidarity economy initiatives in local communities and convene city stakeholders for collaboration and community building. Shareable provides toolkits and 'how to guides' for facilitators that includes information on using open source platforms (uMap and Open Street Map), community organising, fundraising and event coordination. MapJams have been run by grassroots groups independently or in partnership with local government as the case with the City of Yarra MapJam in Melbourne (Llewellyn, 2014).

Anticipatory Governance

As argued earlier, compelling images of the future are a fundamental component to constructing the city as a transition arena for urban experimentation. One of the key thinkers in the field, Fred

Polak, argued a half century ago that images of the future are not simply epiphenomenal by-products of society, but rather they are co-constituting and act as generative elements of what creates society. He argued, societies with powerful images of the future are ascendant, a compelling image of the future acts as an 'attractor', while those that societies that lose vision are in societal decline (Polak, 1961). Whether or not we accept Polak's full argument, it is still very clear that if we want experimentation that will lead to fundamental transitions, images, visions and narratives act as guides – they provide a way to align strategic action in the present with the long term future. They can insure that experiments are qualitatively aligned with transition aims and goals.

And yet there are fundamental problematic dimensions to future images in this context. First, images of the future are often mobilized to ensure political legitimacy, rather than authentically reflecting the desires of citizens (Slaughter, 1999). Secondly, images of the future may be 'used futures', images or ideas taken unconsciously or uncritically without regard to local context (Inayatullah, 2008). For example, the 'smart city' vision is fashionable and paints a picture of a high tech, automated, internet-of-everything city, however it has strong technocratic tendencies that may hamper real inclusion in city governance and participation. Finally, one has to ask whether an image or vision is contextually relevant, given the emerging challenges that a particular city faces (Hayward, 2003).

What is needed is an approach that democratizes the future, allowing for the polycentric co-production of a city's image of the future, informed by citizen needs and critical stakeholders, reflecting a grounded awareness of long-term challenges (Ramos, 2016). Citizen based visioning processes were pioneered decades ago by Robert Jungk, Alvin Toffler and Clem Bezold. Jungk and Müllert (1987) saw futures workshop as ways to challenge technocracy and open up agency to citizens to envision the futures they really cared for. Toffler and Bezold (1978) similarly saw Anticipatory Democracy as providing grassroots agency, but they also believed that existing governance systems were not equipped to deal with accelerating and disruptive change, and believed that societies could only deal with this through democratizing the future-response processes of societal navigation. Toffler argued: "representative government was the key political technology of the industrial era and that
new forms must be invented in the face of the crushing decisional overload, or political future shock" (Bezold, 2006: 39).

Redefining the city as a transition arena requires a robust framework by which a city is guided by foresight and the needs of citizens. Unfortunately, foresight work can often be piece-meal and ad hoc. To guide cities as transition arenas, foresight needs to be more systematically embedded as part of the navigation system for cities, what can be called 'anticipatory governance' (Ramos, 2014). Anticipatory governance can allow a city to harness the intelligence and wisdom of its citizens in charting intelligent directions for their cities. Tapping into citizen knowledge can create the requisite awareness of change that provides agility and new pathways for city policy-making and change efforts. Anticipation allows a city's policies to be adaptive while driving toward preferred futures.

The vision for a city or municipal region should reflect the common good, and should itself be subject to collaborative urban governance. Democratizing the future means that the future is not just framed based on narrow commercial interests, a policy clique, lobby groups or other special interests, but rather that a city's vision and purpose is driven through the multifaceted and dynamic knowledges and wisdom of its many citizens, which then guides its citizens as experimenters and social innovators to enact transition pathways.

Vision Mapping: Case Study[2]

The Future Economies Lab was a series of two public engagement workshops for Future Melbourne 2026 that used 'Vision Mapping', a process developed by the authors that combined collaborative mapping, strategic foresight, appreciative inquiry and human-centred design to imagine changes to Melbourne's economy over the coming decade. Participants included a mix of the public and invited stakeholders from industry, government and the community sectors in Melbourne.

Future Melbourne 2026 was a collaborative planning process initiated by the City of Melbourne to refresh the city's 10-year community plan through a series of face-to-face events, online conversations and surveys conducted between February to June 2016. (City of Melbourne, 2016a). The Future Economies Lab workshops took place during the ideation phase of Future Melbourne 2026 and was proceeded by the synthesis phase and final deliberation where a citizens' jury used the outputs from the prior phases to draft the community's refreshed plan for the city over the next decade.[3]

Appreciative inquiry was used to structure workshop activities and curate learning conversations. Appreciative inquiry is a strength-based method which focuses on "peak experiences and successes of the past" as motivators for individual and collective action (Mathie & Cunningham, 2003). It is a social constructivist approach to the co-production of knowledge grounded in language that guides action through stories and uses positive questions to carry the best of participants past experiences into the future (Cooperrider et, al., 2008).

The Future Economies Lab utilised the appreciative inquiry '4-D Cycle' comprised of the following phases: Discovery – searching for the best of what is and appreciating that which gives life. Dream – envision the ideal of what might be and envision impact. Design – co-construct the future and reach consensus on what should be. Destiny – implementation actions that build on strengths and lead towards visions of the future (ibid.).

The first of event was a 'Vision Mapping' workshop held 8th March 2016 at Melbourne Town Hall which asked participants to discover strengths and dream about Melbourne's future economy. The authors of this paper in the role of facilitators invited participants to imagine changes to Melbourne's future economy towards 2026 and framed the engagement in the context of major economic, social and ecological transitions. Recent trends in the sharing economy, maker movement and co-operative forms of ownership, production and value exchange were presented to frame the engagement activities.

Vision Mapping was used as a process for the community to generate visions of the economy in a location-specific way using digital maps as a wayfinding tool to the future. A digital mapping

platform was used as a canvas from which to dream in a geo-spatially rich way to feed social conversations about the future. OpenStreetMap was chosen as the mapping platform due its open source knowledge base of free, portable data that is peer produced by the global community. uMap was also utilised as the interface to create an editable and customised map for workshop participants.

Process

The 'discovery' phase began via learning conversations to identify Melbourne's strengths, assets and resources. The first of these conversations involved participants identifying – *the essence of Melbourne's economy that makes it unique and strong*. This surfaced a diversity of strengths including parks, gardens, laneways, technology precincts, universities, radio stations, Queen Victoria Market, transport hubs, galleries, libraries, theatres, museums and sporting assets like the Tennis Centre and Melbourne Cricket Ground.

The next learning conversation looked at – *the positive seeds of innovation and change in Melbourne that can and should be grown*. This led to a discussion on spaces for creative production in the city to support a prosperous and sustainable future. Seeds identified included arts hubs, coworking spaces, maker spaces, craft communities, social enterprise hubs, the State Library of Victoria, artist studios, markets, festivals and research facilities.

The final learning conversation asked – *what are the trends and emerging issues that disrupt the status quo for Melbourne?* The main trends identified were population growth, an ageing population, climate change, the rise of artificial intelligence, robotics and automation, loss of traditional jobs, heatwaves, traffic congestion, homelessness, inequality, housing affordability, pedestrian crowding, increased congestion and the sharing economy.

Workshop participants then moved into the 'dream' phase and were asked to imagine it's 2026 and Melbourne has leveraged its strengths and seeds of innovation. People formed into pairs and were asked to d*escribe the aspects of this future economy they most want to be part of based on things they're committed to personally*. Teams then brought their dreams forward and added them to a 'dream canvas' where table conversations ensued and participants were encouraged to connect their dreams; look for common ground and broader patterns; discover the critical relationships between elements in these dreams; and finally pinpoint these dreams (where possible) to a specific location in Melbourne.

Visions were synthesised by the authors into five clusters.

Vision 1: Nurturing diverse times and generative spaces

The need to honour, nurture and create a diversity of spaces and times for the breadth of activities and people that comprise Melbourne. People need a diversity of autonomous and generative spaces that can enhance the city economically and socially. As one participant put it: Melbourne needs places for "Rest time, Downtime and Dreamtime".

Vision 2: Wellbeing and happiness as key criteria for economic success

Social wellbeing and happiness are critical aspects of Melbourne's future economy. The city's economy should foster happy and healthy people that can navigate change successfully. New

evaluation frameworks are needed that recognise the diversity of care-based activities we engage in as members of communities we belong to and that sustain us.

Vision 3: Navigating the past and future through civic engagement
Melbourne is a city that values its history and heritage and is able to tell its stories, and at the same time can navigate change and the future to reinvent itself and its identity. Navigating the city's past and future requires new approaches to civic engagement, participatory sense-making, decision-making and collective intelligence.

Vision 4: New economic systems to help us live and work with purpose
The nature of work is changing with the potential for radical disruption including trends and issues like coworking, working from home, flexibility and automation. Future Melbourne should be a place where people can live and work with purpose, and are engaged in activities that are meaningful and rewarding. Alternative economic systems (sharing, making, circular economy, cryptocurrencies) provide new pathways for purposeful work.

Vision 5: Using the arts to promote equity and inclusion
The arts can connect and 'ground' many aspects of city life: learning, sustainability, innovation, digital production, small business, multi-culturalism, celebrating diversity and equity. Future Melbourne supports arts incubators, arts markets, mobile art, and art that twines the physical and online worlds to foster economic inclusion.

The second event was a prototyping workshop held 15th March 2016 where participants used the visions generated in the first workshop as a launchpad for the 'design' phase to create prototypes of emerging future economy initiatives. New workshop participants were given time to engage with the visions developed in the previous session and discuss what they would add. An ideation process was then facilitated where participants were asked to – *create ideas that can move the economy in the direction of your future visions and dreams*. This was achieved by identifying opportunity areas based on the visions from the first week which were translated into several opportunity statements.

Table groups were then asked to select four opportunity areas based on the statements provided or to develop their own. Using a human-centred design process, participants then brainstormed ideas related to their four opportunity areas using divergent thinking to surface as many ideas as possible that were related to bringing future economy visions to life in the context of Future Melbourne 2026. Table groups then formed into small design teams and voted on their favourite ideas from the brainstorming session. Teams then came together to collaboratively develop 'rapid prototypes' related to the opportunity areas identified.

Four paper-based prototypes were created and teams presented their solutions back to the group before the second workshop concluded.

Prototype 1: Melbourne airwalk system

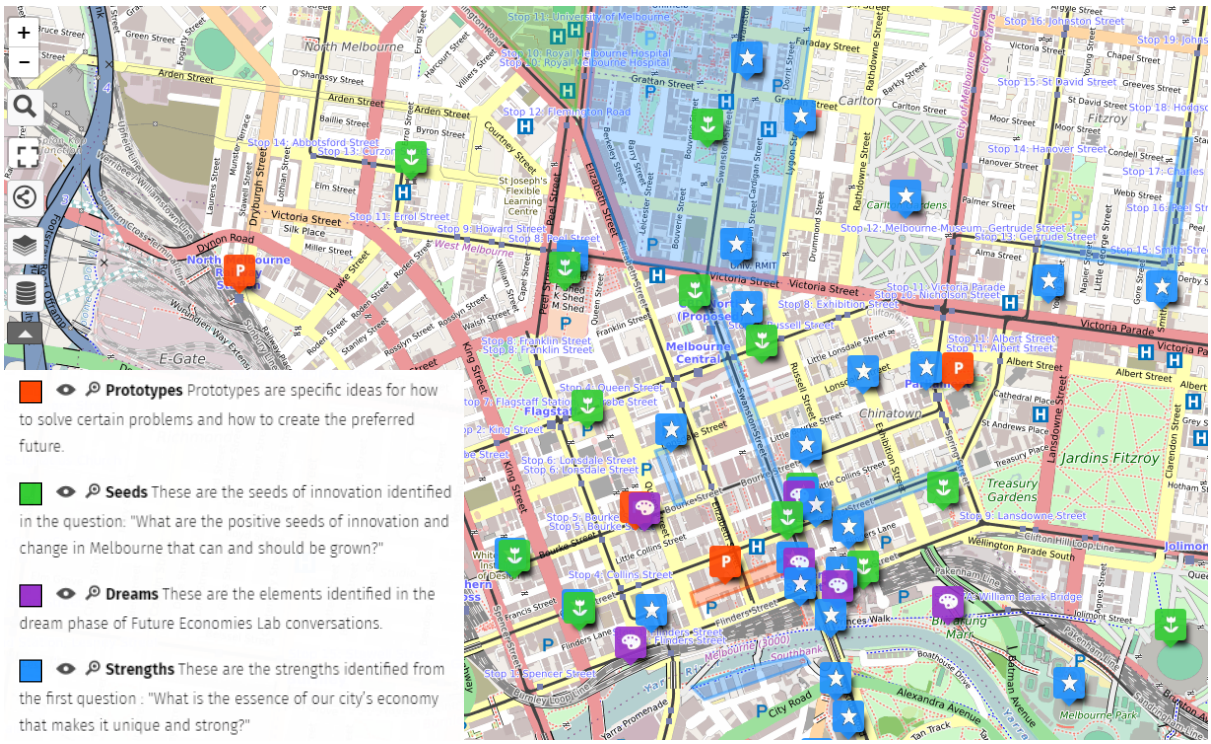
People can navigate through the CBD in different ways through meeting and clustering opportunities between buildings. The purpose of this is to green the city and utilize more airspace. This prototype adds trees, gardens and benches to spaces between buildings and helps cool the city.

Prototype 2: Public access to underutilised space
Create more cohesive communities by opening up train stations and other public spaces to community groups for them to use however they want. It could be setting up a small business or a small showcase and basing it out of train stations or other underutilised public spaces.

Prototype 3: Melbourne Goodwill Exchange
An exchange in the City of Melbourne where people can loan each other time and money to support worthy projects. People can build up credit for the time and skills provided and use that in other ways. The exchange is a way to network goodwill and relationships between people to assist new enterprises that are community focused.

Prototype 4: Basic income trial
Give everybody a guaranteed basic income to partially support oneself and have a degree of security in a future economy where work may be transient and the very nature of work is changing. People would also be rewarded for supporting family members and creatively participating in the community.

The resulting Vision Map provides a data rich view of Melbourne's current strengths, seeds of innovation, synthesised dreams and prototypes for the future economy as seen through the eyes of workshop participants.



Analysis and Discussion

The City of Melbourne is a regional leader in participatory governance experiments and deliberative approaches to decision-making. The first version of Future Melbourne in 2008 used a wiki platform to enable the public to submit ideas for its first community plan and the Council has trialled participatory budgeting with a citizens' jury to make recommendations on the city's $5 billion budget (Reece, 2015).

Future Melbourne 2026 is described as the 'Community Plan' that will provide context to inform the development of the 'Council Plan 2017-21' (City of Melbourne, 2015). The four-year Council Plan is tied to an Annual Plan and Budget that describes activities and funding details for that financial year (City of Melbourne, 2017). In relation to any social contract of shared responsibility between citizens and the city, the Visions Mapping exercise was undertaken by the authors as one citizen engagement opportunity, among many, for participants to shape the city's 10-year community plan.

The visions and prototypes developed from the two Vision Mapping workshops had modest scope for impact due to the nature of the Future Melbourne 2026 Project Plan which stipulated the parameters of engagement between the city, institutions, organisations and individuals (City of Melbourne, 2015). The Future Melbourne 2026 Project Plan's detailed three phases of public engagement: ideas, synthesis and deliberation. These phases were informed by a framework developed by the International Association for Public Participation (IAP2) which defines the public's role in community engagement and increasing ability to impact on decisions along a spectrum from inform, consult, involve, collaborate and empower (IAP2, 2014).

The ideas and synthesis phases of Future Melbourne 2026 are noted in the Project Plan (City of Melbourne, 2015: 19) as 'consult' which seeks to "obtain public feedback on analysis, alternatives and/or decisions" (IAP2, 2014), and 'involve' that works "directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered" (ibid.). The final deliberation phase references the 'collaborate' mode to "partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution." (ibid.). The Project Plan does not go so far as to 'empower' participants to "place final decision making in the hands of the public." (ibid.). A Citizens' Jury went through a deliberative process to develop the Future Melbourne 2026 Plan (City of Melbourne, 2016a) but final decisions were ultimately made by the city-appointed Future Melbourne Ambassadors (City of Melbourne, 2016b).

In general terms, participatory citizen engagement projects encounter a pattern of challenges including a lack of leadership within government and civil society to champion ideas through to implementation; no consensus on the role of nonelectoral direct public engagement in democratic governance processes; terms of reference that trivialize participation; and limited political motivation to advance social justice (Fung, 2015).

The Vision Mapping experience points to the limitations of co-production when it merely encourages greater citizen engagement in deliberative policymaking and service design to legitimise government decisions (Holmes, 2011). Linking co-production to co-governance grounded in subsidiarity and the "sharing of duties and decision-making over the use, protection and replenishment of a particular resource", such as the urban commons, is vital for genuine transition experiments to take place (Quilligan, 2009).

Following the two Vision Mapping workshops, the visions and prototypes developed were added to the Future Melbourne 2026 engagement platform 'Participate'.[4] These ideas then had to compete for attention with over 900 other ideas generated through almost 30 additional public events that were convened during the ideation phase of the project. Following this phase external consultants Global Research (2016) were appointed by the City to create a report that analysed and synthesised all project outputs including ideas, comments on ideas and survey responses which were then delivered to the citizens' jury.

The broader ideation phase of engagement surfaced hundreds of ideas which were then curated by external consultants, deliberated by a citizens' jury, with final decisions made by city-appointed ambassadors. While the Vision Mapping process welcomed diverse citizen engagement it could have gone much further. The exercise was contained to two workshops within a much larger and very complex public engagement exercise. There was no clear pathway for Vision Mapping participants to follow-up on the visions and prototypes generated and create opportunities with the city for additional testing, refinement or pilots.
City governments and civil society must embrace a new era of collaborative governance that empowers citizens and other stakeholders to have a more active and self-directed role in city-making. The following discussion reflects on what's needed to develop the Vision Mapping process further in the context of the theoretical framework developed for this paper and the prospects for collaborative governance for urban experimentation.

The Right to Experiment
The New Urban Agenda calls for stronger citizen participation in decision-making for urban development but with "empowered citizens asking to be protagonists" must go further to ensure more inclusive cities (Colau, 2016). The Sustainability Transitions field frames the city as a transition arena and site for a diversity of experiments defined as: "any inclusive, practice-based and challenge-led initiative designed to promote system innovation through social learning under conditions of uncertainty and ambiguity" (Sengers et. al., 2016).

In relation to the Vision Mapping process undertaken, there was no clear community-led process in place to steward ideas, visions and prototypes generated by workshop participants into the Future Melbourne 2026 synthesis and deliberation phase of the consultation process. By contrast, collaborative urban governance efforts like the Bologna Regulation support collective action through decision-making and 'resource-sharing' to give citizens access to local assets for inclusive development (Foster & Iaione, 2016).

At a legislative level, the Bologna Regulation enables active citizens to approach local government and establish civic agreements to co-govern public space, parks and vacant buildings or land (City of Bologna, 2014). These 'collaboration pacts' signed by both citizens and the city, outline

‘standards for collaboration’ between a variety of stakeholders, require local government to provide ‘technical support’ to meet agreed tasks, and are a “critical tool of legal experimentation in shared governance” (Iaione, 2016).

The UK Localism Act 2011 introduced Community Rights through the right to bid for assets, the right to build and the right to challenge in support of community-led economic development. The Localism Act is designed to support self-determination at the local level and has been taken up across England and Wales where residents have secured community assets and built capacity around local service delivery (Gordon-Farleigh, 2017).

Enacting the right to the city through legislation from state or city authorities can enable community participation in decision-making but does not guarantee implementation. Brazil introduced the 2001 City Statute placing the right to the city as a ‘collective right’ for community governance of urban development and to improve ‘socio-spatial inclusion’ (Fernandes, 2007). While the Statute is written to prioritise the ‘social function’ of property and support low-income housing, in cities like São Paulo a conservative administration and institutional bias has instead favoured speculative development (The Polis Blog, 2011).

Returning to Vision Mapping for Future Melbourne 2026, some engagement practitioners have noted that the IAP2 Public Participation Spectrum takes a sponsor or government-led approach to decision-making that can alienate communities, create disengagement and reinforce power imbalances (McCallum, 2015). Becky Hirst has gone further in challenging the underlying assumptions inherent in this model and inverted the IAP2 Spectrum by asking “what if the community became the decision-makers?” and put government on the receiving end of engagement: “The community would then determine the level to which it wants and needs to engage with the Government.” (Hirst, 2013).

The right to the city must extend its understanding of citizen empowerment to include the right to experiment in order for new governance approaches to be initiated by citizens and other civil society actors working in collaboration with municipal governments. Aside from the examples given in Bologna and the UK, most governments do not have the legal or institutional structures in place to enable this shift to take place.

Polycentric Governance and the Partner State

The New Urban Agenda calls for governments to develop legal and policy measures that uphold equality and non-discrimination in determining urban policies through decentralization based on principles of subsidiarity (United Nations, 2016). In the context of citizen engagement for participatory urban planning, there is a tension between top-down interests that seek ‘nominal participation’ as their ideal to achieve legitimacy, in contrast with bottom-up actors that seek ‘transformative participation’ to achieve self-organised empowerment and changes to community life (Anttiroiko, 2016).

Foster and Iaione (2016) point to horizontal subsidiarity, collaboration and polycentrism as democratic design principles that could shift cities monopoly position over shared urban resources towards a new role as facilitator in the co-governance of the city as a commons. This goes much further than just getting the balance right between top-down control and inclusive bottom-up

participation and emphasizes a much deeper turn towards community-led co-governance of the urban commons: "The principle of horizontal subsidiarity conceptualizes the citizen as an active citizen and encourages local officials to put in place appropriate public policies that foster the activation and empowerment of citizens in managing and caring for shared resources." (ibid: 327).

The idea for polycentric governance emerged from Vincent Ostrom's work on metropolitan governance and institutional diversity across different scales where "multiple independent actors mutually order their relationships" (Araral & Hartley, 2013). With a shift from city as initiator to city as facilitator, a multitude of new urban experiments become possible as "governments look for allies at different hierarchical levels to facilitate the initiatives of proactive citizens" (Foster & Iaione 2016: 328). Such experiments in polycentric governance through "public-private partnership of people and communities" are already underway across various cities in Italy with five types of actors including social innovators, public authorities, businesses, civil society organizations, and knowledge institutions (Iaione, 2016: 438).

The Partner State Approach (PSA) is a complementary set of policy proposals to support an alternative political economy of peer production and participatory politics that was refined in Ecuador through the FLOK society project (Kostakis & Bauwens, 2014). In this model the Partner State embraces an enabling role which transcends the binary "state/privatization dilemma" and instead optimises regulation, market freedom and autonomous civil society projects to: "maximize openness and transparency while it would systematize participation, deliberation and real-time consultation with the citizens" (ibid: 66). The Partner State is a key part of a broader transitional proposal towards a social knowledge economy supported by an ethical market economy and civic infrastructures including various public-commons partnerships (Bauwens & Kostakis, 2015)

The Partner State, horizontal subsidiarity and polycentricity can be seen in action in cities across Italy and presents a credible transition pathway for collaborative urban governance. The Partner State can enable an "infrastructure of cooperation" to protect the common good and the peer production of social value in the interests of all citizens but this requires deep institutional transformation (Bauwens, 2012). In Australia, local government is directly answerable to state government which constrains its power, resources and autonomy (Longo, 2011). While a turn towards participatory engagement with a wider range of institutions and actors is evident in Australian local government, Aulich (2009) suggests that: "in few instances has the practice yet been accepted as a fundamental right of communities to enable them to assume a formal place in governance". Policy innovation and civil society mobilisation is needed to ensure a legal right to community-initiated experimentation based on the principles of subsidiarity and polycentricity, for collaborative urban governance to be formally tested in Australian cities.

Open Platforms

Urban experiments in co-production require structured platforms to support face-to-face interaction, collaborative mapping and to convene diverse stakeholder networks. Manzini describes these as "places for experiments" capable of holding collaborative relationships in an enabling ecosystem that is *tolerant* of the new, *open* across disciplinary boundaries and able to foster *learning capacity* where people feel able to "try out new things" (2015: 161). The Bologna

Co-City Protocol describes these as physical, digital and institutional platforms to support "public-private-citizen partnerships".[5]

Propositionally, open, online, editable maps are ideal platforms for facilitating cities as transition arenas for urban experimentation. They allow us to visualise an ecosystem of ideas and initiatives. They are open to continuous editing and updating. They can facilitate new connections across urban landscapes and themes and provide a space for new urban imaginaries to emerge. But as discussed in the previous section, such platforms need to be able to hold participation across many stakeholder categories (e.g. social innovators, public authorities, businesses, civil society organizations, and knowledge institutions). This requires the positioning of such platforms as intermediaries and facilitators of change across systems. It also requires that people become familiar with and learn to use such systems.

In the Vision Mapping process, there was no capacity building or upskilling involved in the process, as the need to capture all relevant data in a short time frame (3-hour workshops) overrode the potential for knowledge transfer from facilitator to participant. In addition, the Vision Mapping process was only used for one small aspect of Future Melbourne 2026, rather than a meeting point of all the various ideas and initiatives across the landscape of work being done.
There are a variety of examples that can help us come to a fuller understanding of open platforms within the context of facilitating urban experimentation for transition:

Physical platforms take a variety of forms in Seoul, such as Digital Media City, a business precinct, IT cluster and residential centre described as "a lab of for 21st-century city innovation" that is built on a reclaimed former waste landfill site (Seoul Digital Media City, 2017). Sharing City Seoul under the leadership of Mayor Park Won-soon developed City Hall where citizens can send a video message to the city, and private sector initiative D.Camp is a coworking incubator funded by local banks that provides 3-months free rent to local sharing economy start-ups that solve urban challenges (McLaren & Agyeman, 2015: 76-77).

Underutilised land is an important physical platform that communities can leverage to activate empty space and undertake grassroots innovation for urban renewal. Brooklyn-based 596 Acres use digital maps to unlock vacant land for urban agriculture as part of a bolder strategy to assert the community's right to the city and re-claim the urban commons through "data activism" and community land trusts (Bollier, 2017a). Manzini refers to blended physical and digital places as hybrid environments where "positive loops between bottom-up initiatives and public agency innovations will take place" (2015: 163).

Bauwens and Kostakis (2015) have demonstrated how mutual civic infrastructure together with partner state support and entrepreneurial coalitions can generate common pool resources like knowledge, code and design and protect peer production by civil society from being appropriated. It is therefore vital for urban experiments using digital platforms to support peer production through open source software and Peer Production Licenses.

The Vision Mapping workshops used Open Street Map with a uMap interface as the platform for citizen engagement because these tools are open source, robust, easy to use and freely available. Data was captured on paper in real-time during the workshops and transferred to the digital map by the authors both during and after the events. All the data generated including the visions and

prototypes is available for the community to develop and build on if the opportunity arises in the future.[6]

Using Open Street Map gives other civil society actors the opportunity to connect the vision map with related projects and activities. The Charter for Building a Data Commons is an important development that could enable future Vision Mapping activities to support other co-production efforts around the world through an evolving set of principles on data ownership, licencing, interoperability and transparent documentation (Bollier, 2017b).

Institutional platforms are also required to create more structured opportunities for lateral engagement between diverse stakeholders. Various public innovation labs (i-labs) have appeared over the last decade, like MindLab in Denmark and NESTA Innovation Lab in the UK, which are part think tank and R&D lab, with an interest in exploring new forms of "citizen-centric governance" (Tõnurist et. al., 2017). These platforms are modelled after living labs and often located within government which leads to a focus on public sector innovation. However, a wider frame of reference and openness to more stakeholders could re-direct i-lab activities towards more collaborative forms of experimentation.

Foster & Iaione (2016: 333) observe that: "a polycentric approach to local governance locates commons institutions in between the market and the state." Laboratory for the Governance of the Commons (LabGov) provides the best example of an institutional platform for collaborative urban governance. Coordinated by Christian Iaione who co-wrote the Bologna regulation, LabGov is an independent organisation co-located at LUISS Guido Carli University Rome and Fordham Urban Law Center New York City.[7] LabGov works with students, local governments and industry to develop new legal frameworks and experiments in public collaboration to support the urban commons and was instrumental in creating the Bologna co-city protocol.

Other examples can be found in new commons-based institutional platforms that have begun to emerge only recently in Europe and elsewhere. Chambers of the Commons, Assemblies of the Commons and the European Commons Assembly have developed to create a political, civic and enterprise platform for commoners to develop commons-based policy proposals (Bauwens et. al., 2017). This demonstrates that future Vision Mapping activities needed to be supported by physical and institutional platforms to test prototypes in public settings and bring diverse stakeholders together for transition experiments.

Infrastructuring and Prototyping

Urban experiments are complex and generative interventions, the outcome of which is unknown in advance. Design for social innovation can provide active citizens with new tools, practices and skills to leverage the city as a transition arena. Manzini & Rizzo (2011) argue that short-term local experiments must be nested within larger and longer-term framework projects like Living Labs or Public Innovation Places to enable generative and ongoing solution finding. Hillgren et. al. (2011) demonstrate how Malmö Living Labs overcame the fleeting nature of short-term design experiments through infrastructuring, a continuous open-ended process with a flexible structure capable of attracting new participants.

In relation to infrastructuring, Manzini (2015: 152) reflects on its complex material and immaterial components in the context of Malmö Living Labs which had easy-to-access physical space, a

support team to facilitate prototyping, and a clearly defined sequence of design activities connected to a broader network of projects. Infrastructuring clearly requires a commitment of time and resources from public, private and citizen partners to maintain a continuous experimental footing that is strategically connected to solving urban transition challenges.

The co-city protocol provides a robust example of how infrastructuring can work in action to support collaborative urban governance. As Iaione explains, it consists of mapping the urban commons, the creation of LabGov which acts as an "innovation unit" inside LUISS Guido Carli University with structured supervision and knowledge transfer, developing collaborative partnerships and the co-design of new governance experiments through prototypes to support the city as a commons (2016: 438).

Prototyping was a key aspect of the Vision Mapping process and took place during the design phase of the second and final workshop. The authors used human-centred design methods informed by IDEO's Design Kit[8] to create opportunity statements from the visions developed in the previous workshop, and to frame the brainstorming activity where small teams self-selected ideas to develop into prototypes. Teams undertook a form of 'rapid prototyping' using paper, markers and other creative supplies and had roughly 45 minutes to develop a drawing, model or storyboard of their idea to support their visions of Melbourne's future economy.

Four prototypes were created during the Vision Mapping process but the short time frame made it difficult for participants to expand on the purpose, function and users of each solution proposed. The Young Foundation refer to 'slow prototyping' as a gradual means to facilitate a "scaling-up process" and create solutions that are better able to meet the needs of specific communities in their location-specific contexts (In Hillgren et. al., 2011). In terms of knowledge transfer to facilitate diffuse design by everyday people, generative toolkits are commonly used in co-design to help people "make artefacts about or for the future" (Sanders & Stappers, 2014). The authors used IDEO's Design Kit but there was limited opportunity to develop Vision Mapping participants' capability as non-expert designers.

In reviewing the Vision Mapping co-design process in light of the above observations, we argue that ongoing slow prototyping supported by generative toolkits and place-based platforms could create the ideal conditions for infrastructuring urban experiments. This approach could enable Vision Mapping participants to undertake ongoing prototyping with other city stakeholders through pop-up trials at Town Hall or local libraries in the future, and lead to further evaluation, refinement and testing with potential for community pilots, new services and even policy innovation to support the community's right to experiment.

Transition Vision and Narrative

The Vision Mapping process we undertook with participants for Future Melbourne 2026 produced some inspiring results. Processes like this are essential aspects of social navigation for city futures. And yet, as discussed previously, these outputs were seemingly 'blended' into an ideation process that was then whittled down through top down curation. The Future Melbourne 2026 process itself was subject to a pre-existing social and political contract whereby the city must consult with citizens to produce a community plan, which is then operationalized through the municipal bureaucracy.

While this may have worked in the 20th century when municipalities were by necessity establishing foundational infrastructure which coupled social democratic ideals and initiatives with bureaucratization this is not adequate for a 21st century context in which we need to transform and transition our cities through continuous urban experimentation. A new political contract is needed where a city's image of the future is democratized – open to ongoing public debate and decision-making – an aspect of co-governance. In this way, a vision for a city can emerge which is not just a 'used future' or a legitimation exercise, but which is deeply inspiring for citizens and which guides ongoing urban experimentation.

The vision and narrative which guides a city's purpose and identity may be one of the hardest aspects of a system to change. Even when good foresight work clearly indicates that an existing vision is out of step with oncoming social changes, and a renewed image of the future is needed, this may simply be ignored if the requisite awareness and maturity is not present (Hayward, 2003). Vision, purpose and identity is most often implicit, deeply engrained, embodied and often unconscious dimensions of a city's character.

We assert that the way through this is by constructing democratic platforms for the co-production of future imaging, that are anchored in new social and political contracts that cannot be easily dismissed. The co-production of a city's vision and narrative need to be on-going, as our understanding of future conditions, challenges and opportunities evolves. It requires city governments to partner with citizens to co-develop the platforms, systems and structures (from in-person meetings to online participation systems) that can generate futures-relevant knowledge. These platforms and structures need to be well resourced and designed for use with critical stakeholders. In this way, whole cities can become platforms for collective intelligence, helping cities to navigate new levels of complexity.

Tied to urban experimentation, foresight becomes part of a virtuous cycle informing and inspiring social innovation, policy ideation and other transition projects and initiatives. Dedicated public resources are required to establish and support such platforms for citizen collaboration, but citizens are critical to the energy needed, data requirements, creative responses and the governance of the process. As such it should not be solely controlled by a municipality, but rather exist within a polycentric governance framework (Ramos 2016).

Conclusion

Urban experiments have proliferated in recent years with an emerging emphasis on the city as a transition arena to address the myriad civilizational challenges confronting humanity. The right to the city in the New Urban Agenda signals an important shift in urban governance but we have argued that a new social and political contract is needed between cities and citizens with an extended right to experiment. Participatory governance through conventional citizen engagement does not address power asymmetries and cannot counter legacy institutional structures that privilege city governments as key decision-makers and drivers of urban transformation.

We have developed a theoretical framework that brings together co-production and co-governance to support community-initiated experiments that builds on Foster & Iaione's (2016) collaborative urban governance, Kostakis & Bauwens' (2014) Partner State Approach, and Manzini's (2015) design for social innovation. The Vision Mapping case study has been presented

as a process of design for social innovation to co-produce visions and prototypes and we signal several future research pathways informed by our analysis and discussion in the context of collaborative urban governance based on the principles of horizontal subsidiarity and polycentricity.

Urban transitions require visions and prototypes to be co-designed by communities and embedded in co-governance agreements that give citizens the structural power to propose and act on experiments. To further develop design for social innovation processes like Vision Mapping requires it to be nested within broader framework projects, physical places and institutional structures like public innovation labs to support continuous efforts with generative outcomes. Vision Mapping is a useful method for enabling communities to co-produce bold new urban imaginaries and prototype experiments. Further testing with other cities and communities of interest will assist in its ongoing development and refinement.

References

Angus, I. (2016). Facing the Anthropocene: Fossil Capitalism and the Crisis of the Earth System. NYU Press.

Anttiroiko, A. V. (2016). City-as-a-Platform: The Rise of Participatory Innovation Platforms in Finnish Cities. *Sustainability*, *8*(9).

Araral, E., & Hartley, K. (2013). Polycentric governance for a new environmental regime: Theoretical frontiers in policy reform and public administration. In 1st International Conference on Public Policy. Grenoble, France.

Aulich, C. (2009). From Citizen Participation to Participatory Governance. Commonwealth Journal of Local Governance.

Bauwens, M., Dereva, M., Kostakis, V., Niaros, V., Ramos, J., Sharp, D., Troncoso, S., & Utratel, A. (2017). What the P2P Foundation did in 2016. Commons Transition. http://commonstransition.org/what-the-p2p-foundation-did-in-2016/ (accessed on 17 May 2017).

Bauwens, M., & Kostakis, V. (2015). Towards a new reconfiguration among the state, civil society and the market. *Journal of Peer Production*, *7*, 1-6.

Bauwens, M. (2012). Blueprint for P2P Society: The Partner State & Ethical Economy. Shareable. http://www.shareable.net/blog/blueprint-for-p2p-society-the-partner-state-ethical-economy (accessed on 12 May 2017).

Bason, C. (2010). Leading public sector innovation: Co-creating for a better society. Policy Press.

Bezold, C. (1978). Anticipatory Democracy: People in the Politics of the Future. NY: Random House.

Bezold, C. (2006). Anticipatory Democracy Revisited. In Mannermaa M. D., Dator, J., and Tiihonen, P. (Eds.), Democracy and Futures (pp.38-51). Finland: Parliament of Finland, Committee for the Future.

Bollier, D. (2016). The city as platform: How digital networks are changing urban life and governance. *The Aspen Institute: Washington, DC, USA*.

Bollier, D. (2017a). Using data mapping to help reclaim urban commons. P2P Foundation. https://blog.p2pfoundation.net/using-data-mapping-to-help-reclaim-urban-commons/2017/05/02 (accessed on 3 May 2017).

Bollier, D. (2017b). A Charter for How to Build Effective Data (and Mapping) Commons. P2P Foundation. https://blog.p2pfoundation.net/a-charter-for-how-to-build-effective-data-and-mapping-commons/2017/04/20
(accessed on 14 May 2017).

Bulkeley, H. and Castán Broto, V., (2013). Government by experiment? Global cities and the governing of climate change. *Transactions of the Institute of British Geographers*, *38*(3), pp.361-375.

City of Bologna (2014). Regulation on Collaboration Between Citizens and the City for the Care and Regeneration of Urban Commons. Comune di Bologna.
http://www.comune.bologna.it/media/files/bolognaregulation.pdf
(accessed on 4 May 2017).

City of Melbourne (2015). *Future Melbourne 2026 Project Plan*. City of Melbourne.
https://www.melbourne.vic.gov.au/SiteCollectionDocuments/future-melbourne-2026-project-plan.pdf
(accessed on 4 May 2017).

City of Melbourne (2016a). *Future Melbourne 2026 Plan*. City of Melbourne.
https://participate.melbourne.vic.gov.au/download_file/3246/943
(accessed on 12 January 2017).

City of Melbourne (2016b). *Refreshing the Future Melbourne plan. Citizens' Jury Report*. City of Melbourne. https://participate.melbourne.vic.gov.au/download_file/3277/943
(accessed on 5 May 2017).

City of Melbourne (2017). *New Council Plan*. City of Melbourne.
http://magazine.melbourne.vic.gov.au/council-updates/new-council-plan/
(accessed on 4 May 2017).

Colau, A. (2016). After Habitat III: a stronger urban future must be based on the right to the city. The Guardian. 20 October.
https://www.theguardian.com/cities/2016/oct/20/habitat-3-right-city-concrete-policies-ada-colau
(accessed on 10 May 2017).

Cooperrider, D. L., Whitney, D. K., & Stavros, J. M. (Eds.). (2008). Appreciative inquiry handbook: For leaders of change. Berrett-Koehler Publishers.

Ehn, P., Nilsson, E. M., & Topgaard, R. (2014). *Making futures: Marginal notes on innovation, design, and democracy*. MIT Press.

Evans, J., Karvonen, A., & Raven, R. (Eds.). (2016). The Experimental City. Routledge.

Fernandes, E. (2007). Constructing the 'Right to the City' in Brazil. Social & Legal Studies, 16(2), 201-219.

Foster, S. (2012). Collective Action and the Urban Commons. Notre Dame Law Review, Vol. 87, p. 57, 2011; Fordham Law Legal Studies Research Paper No. 1791767.

Foster, S. & Iaione, C. (2016). The City as a Commons. Yale Law & Policy Review. 281.

Fung, A. (2015). Putting the public back into governance: The challenges of citizen participation and its future. Public Administration Review, 75(4), 513-522.

Global Research (2016). Future Melbourne 2026: Bringing your ideas together. https://participate.melbourne.vic.gov.au/download_file/3100/943 (accessed on 5 May 2017).

Gordon-Farleigh, J. (2017). Q&A: Frances Northrop. STIR: The Magazine for the New Economy. April.

Gorenflo, N. (2015). 'Bologna Celebrates One Year of a Bold Experiment in Urban Commoning'. Shareable. http://www.shareable.net/blog/bologna-celebrates-one-year-of-a-bold-experiment-in-urban-commoning (accessed on 3 May 2017).

Harvey, D. (2008). The Right to the City. *New Left Review*. https://newleftreview.org/II/53/david-harvey-the-right-to-the-city (accessed on 2 May 2017).

Hayward, P. (2003). Facilitating Foresight: where the foresight function is placed in organisations. Foresight, 6(1), 19-30.

Hill, D. (2013). On the smart city: Or, a 'manifesto' for smart citizens instead. *City of Sound*. http://www.cityofsound.com/blog/2013/02/on-the-smart-city-a-call-for-smart-citizens-instead.html (accessed on 4 May 2017).

Hillgren, P. A., Seravalli, A., & Emilson, A. (2011). Prototyping and infrastructuring in design for social innovation. *CoDesign*, *7*(3-4), 169-183.

Hillgren, Per-Anders. 2013. "Participatory design for social and public innovation: Living Labs as spaces for agonistic experiments and friendly hacking." In Public and collaborative: Exploring the intersection of design, social innovation and public policy, edited by Ezio Manzini and Eduardo Staszowski, 75-88. DESIS Network.

Hirst, B. (2013). What if the community became the decision-makers? Becky Hirst Consulting. https://www.beckyhirstconsulting.com.au/offline/what-if-the-community-became-the-decision-makers/
(accessed on 12 May 2017).

Holmes, B. (2011). Citizens' engagement in policymaking and the design of public services. Parliament of Australia.

IAP2 Federation (2014). IAP2's Public Participation Spectrum. https://www.iap2.org.au/Tenant/C0000004/00000001/files/IAP2_Public_Participation_Spectrum.pdf
(accessed on 4 May 2017).

Iaione, C. (2016). The CO-City: Sharing, Collaborating, Cooperating, and Commoning in the City. American Journal of Economics and Sociology, 75(2), 415-455.

Inayatullah, S. (2008). Six pillars: futures thinking for transforming. Foresight, 10(1).

Johnson, C. (2013). 'We Gathered, We Mapped, We Shared: a #MapJam Follow-Up'. Shareable. http://www.shareable.net/blog/we-gathered-we-mapped-we-shared-a-mapjam-follow-up
(accessed on 24 January 2017)

Jungk, R., and Müllert, N. (1987). Future Workshops: How to Create Desirable Futures. London: Institute for Social Inventions.

Kostakis, V., & Bauwens, M. (2014). Network society and future scenarios for a collaborative economy. Springer.

Lebaeye, A, and Richter, J. (2015). Crowd-mapping alternative economies: The TransforMap proposal. Refereed conference proceedings. The City As A Commons: Reconceiving Urban Space, Common Goods and City Governance, Bologna.

Llewellyn, T. Dispatches from the 2nd Global #MapJam. Shareable. http://www.shareable.net/blog/dispatches-from-the-2nd-global-mapjam
(accessed 20 April 2017).

Longo, M. (2011). (E)merging Discourses: Local and Regional Governance in Australia and the European Union. University of Tasmania Law Review. 11; 30(2).

Mathie, A., & Cunningham, G. (2003). From clients to citizens: Asset-based community development as a strategy for community-driven development. Development in Practice, 13(5), 474-486.

Martiskainen, M. (2017). The role of community leadership in the development of grassroots innovations. *Environmental Innovation and Societal Transitions*, *22*, 78-89.

Manzini, E., & Jegou, F. (2003). Sustainable everyday. Design Philosophy Papers, (4).

Manzini, E., & Rizzo, F. (2011). Small projects/large changes: Participatory design as an open participated process, CoDesign: International Journal of CoCreation in Design and the Arts, 7:3-4, 199-215.

Manzini, E. (2015). *Design, when everybody designs: An introduction to design for social innovation*, MIT Press.

McCallum, S. (2015). Re-imagining the IAP2 Spectrum. Medium Blog. https://medium.com/@RedheadSteph/re-imagining-the-iap2-spectrum-9d24afdc1b2e (accessed 15 May 2017).

McLaren, D., & Agyeman, J. (2015). Sharing cities: a case for truly smart and sustainable cities. MIT Press.

Mommaerts, M., & White, K. (2014). Weaving the community resilience and new economy movement: Voices and reflections from the field. Post Carbon Institute.

Nevens, F., Frantzeskaki, N., Gorissen, L., & Loorbach, D. (2013). Urban Transition Labs: co-creating transformative action for sustainable cities. *Journal of Cleaner Production*, *50*, 111-122.

Polak, F. (1961). The Image of the Future: Enlightening the Past, Orientating the Present, Forecasting the Future. Leyden: Sythoff.

Quilligan, J. (2009). People Sharing Resources Toward a New Multilateralism of the Global Commons. Kosmos Journal.

Ramos, J. (2014). Anticipatory Governance: Traditions and Trajectories for Strategic Design. Journal of Futures Studies, 19(1), 35-52.

Ramos, J. (2016). Anticipatory Governance and the City as a Commons, in Ramos, J. (ed) The City as Commons: a Policy Reader, Commons Transition Coalition, Melbourne.

Reece, N. (2015). Melbourne People's Panel makes bold decisions where politicians fear to tread. The Age. 1 April.
http://www.theage.com.au/comment/melbourne-peoples-panel-makes-bold-decisions-where-politicians-fear-to-tread-20150331-1mchjp.html?stb=twt
(accessed 10 May 2017).

Ryan, C., Gaziulusoy, I., McCormick, K., & Trudgeon, M. (2016). Virtual city experimentation: A critical role for design visioning. In Evans, J., Karvonen, A. and Raven, R. eds., *The Experimental City*. Routledge.

Sanders, E. & Stappers, P. (2014). Probes, toolkits and prototypes: three approaches to making in codesigning. *CoDesign*, *10*(1), 5-14.
Semuels, A. (2015). Affordable housing, always. *The Atlantic*.
https://www.theatlantic.com/business/archive/2015/07/affordable-housing-always/397637/
(accessed 4 May 2017).

Sengers, F., Berkhout, F. and Raven, A.W., (2016). Experimenting in the city. In Evans, J., Karvonen, A. and Raven, R. eds., *The Experimental City*. Routledge.

Seoul Digital Media City (2017). What is the DMC?
http://seouldmc.kr/cntntsService.do?siteId=SITE_000000000000017&menuId=MNU_0000000000000261
(accessed on 17 May 2017).

Seyfang, G. and Smith, A., (2007). Grassroots innovations for sustainable development: Towards a new research and policy agenda. *Environmental politics*, *16*(4), pp.584-603.

Slaughter, R. (1999). *Futures for the Third Miillenium*. St Leonards, N.S.W.: Prospect Media.

Smith, A. (2015). Tooling up: civic visions, FabLabs, and grassroots activism. *The Guardian*.

Smith, A. (2014). Scaling-up inclusive innovation: asking the right questions? STEPS Centre.
https://steps-centre.org/blog/scaling-up-inclusive-innovation/
(accessed on 19 April 2017).

The Polis Blog. (2011). Implementing the Right to the City in Brazil? Smart Cities Dive.
http://www.smartcitiesdive.com/ex/sustainablecitiescollective/implementing-right-city-brazil/30417/
(accessed on 5 May 2017).

Tõnurist, P., Kattel, R., & Lember, V. (2017): Innovation labs in the public sector: what they are and what they do? Public Management Review.

United Nations (2016). New Urban Agenda. Resolution adopted by the General Assembly on 23 December 2016. United Nations.

Notes

1 https://www.collaborative.city/
2 The Vision Mapping case study is drawn from material developed for Future Melbourne 2026: https://participate.melbourne.vic.gov.au/future/vision-map-melbournes-future-economy
3 http://www.melbourne.vic.gov.au/about-melbourne/future-melbourne/creating-the-plan/Pages/creating-the-plan.aspx
4 https://participate.melbourne.vic.gov.au/future
5 https://www.collaborative.city/
6 http://umap.openstreetmap.fr/en/map/future-melbourne-2026-vision-map_74247
7 https://www.labgov.it/about-labgov/
8 http://www.designkit.org/