

BENCHMARKING URBAN EXCHANGES

LESSONS FOR
MELBOURNE

Melbourne Sustainable
Society Institute

CONNECTED
CITIES –
– LAB

Melbourne
School of Design
The University
of Melbourne



THE UNIVERSITY OF
MELBOURNE

BENCHMARKING URBAN EXCHANGES

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This Research report has been developed jointly by the Melbourne Sustainable Society Institute and the Connected Cities Laboratory. Both of these research groups are based in the Melbourne School of Design, within the Faculty of Architecture, Building and Planning at the University of Melbourne. The authors have sought to ensure the accuracy of the material in this document, but they and the University of Melbourne will not be liable for any loss or damage incurred through the use of this report.

Published by Melbourne School of Design, University of Melbourne, 2020.

To cite this report: Dickey, A., Kosovac, A., Acuto, M., Gleeson, B. (2020) Benchmarking Urban Exchanges. Melbourne; University of Melbourne, Connected Cities Lab.

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01 ABOUT THIS REPORT

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Fragmentation of urban knowledge has been an increasing challenge in cities internationally. The diverse nature of cities, the differing perspectives that make up the urban space and also the increasing needs of residents are consistently changing ensuring that a unified approach to sharing and managing information is more important than ever. Developing healthy and sustainable cities is an interdisciplinary feat, and a goal that cannot be undertaken without first acknowledging the differing facets that make up our urban sphere.

In February 2019, The Melbourne Sustainable Society Institute (MSSI) and the Connected Cities Lab at the University of Melbourne developed a report for the Lord Mayor's Charitable Foundation outlining the potential future themes and activities to foster Melbourne's transition toward a more sustainable and healthier city. Through this screening, we identified themes and opportunities for future exploration. The report outlined the issue of fragmented and disconnected knowledge systems that are locked within disciplinary silos.

This approach stifles cross disciplinary and cross sectoral collaboration, resulting in knowledge silos. Recommendations in the report included the building of new networks of researchers, private sector actors and policy partners in an effort to provide an interdisciplinary and collaborative approach to solving Melbourne's future issues.

Global cities around the world have created these types of networks, with varying ranges of success. Within this first stage of this project, we assess world class exemplars of city-focused knowledge hubs in places such as Canada, South Africa and the United Kingdom. A benchmarking methodology is utilised to create metrics by which to measure these knowledge hubs against one another, to effectively create a type of 'ranking' according to the goals of the Melbourne exchange.

This benchmarking report has been developed to compare and assess international observatories, living labs and networks in order to learn from successful approaches to share knowledge.

02 OPPORTUNITIES FOR MELBOURNE

In 2019, the Melbourne Sustainable Society Institute (MSSI) and the Connected Cities Lab at the University of Melbourne produced a research report on potential future themes and activities to support Melbourne transitioning toward a more sustainable and healthier city.

Researchers performed an explorative analysis of 90 organisations and 130 reports published within Melbourne's "knowledge system"¹ on sustainability and health and through additional information gained via a set of expert consultations.

Overall, the study highlighted that the Melbourne context is impacted by two key factors:

- It displays an internationally recognized knowledge and innovation profile both as a city and via several knowledge institutions
- It lacks metropolitan institutions and governance capacity, impacting the effectiveness of its knowledge system too

The study underlined that this reality is ripe to capitalize on an opportunity for international leadership and benchmarking whilst providing a unique metropolitan-wide institution capable of tangible evidence-based impact for citizens.

Nine key themes emerged from this analysis as predominant in the Melbourne context when it comes to sustainability and health:

- Built environment/housing
- Climate change
- Energy
- Food
- Transport/mobility
- Urban green infrastructure
- Urban planning/governance
- Waste
- Water

This explorative analysis also revealed knowledge gaps and disconnections between many themes. As a result, four future clusters of themes in supporting Melbourne's sustainability and health transitions were identified:

- Sustainable and healthy built environments
- Urban greening for a cooler and active city
- Healthier and sustainable urban food systems
- Digitalisation as driver of sustainability/health

The report established 5 key findings about Melbourne's current knowledge system and made a series of recommendations for each of these:

1. **Melbourne's knowledge system hosts high-quality expertise and knowledge** related to sustainable and healthy cities; **however, the system is fragmented.** Melbourne needs more inter-disciplinary knowledge creation that integrates various topics around urban sustainability and health in order to avoid expertise remaining piecemeal and locked within disciplinary silos

RECOMMENDATION: The LMCF could further support interdisciplinary and transdisciplinary research in the context of urban sustainability and health that helps to break down silos between disciplines and find innovative ways of initiating new project approaches.

2. The knowledge system is also **limited by fragmentation along sectoral fault-lines**, resulting in research translation and actionable research remaining under-exploited. Melbourne would benefit from collaborative approaches that bring together stakeholders from public, private, and academic sectors

RECOMMENDATION: Provide increased support of research projects which build new networks of researchers, private sector actors, and policy partners. Furthermore, the supporting of specific collaborations between universities but also

¹ On "knowledge systems" as systems of creation, circulation and mediation of information see Cash et al 2003.

between universities and policy makers to further bundle knowledge and expertise. The City of Melbourne Chair of Resilient Cities at the University of Melbourne is an example of a closer cooperation between public sector and academia. Furthermore, the support of approaches such as ‘Urban Living Labs’ could help to break down these silos through new partner constellations which could include local government, NGOs, non-profit organisations, consultancies, artists, business and entrepreneurs.

3. Faster translation of knowledge into action would benefit from **more policy-relevant demonstration projects** that help to trial, test, and showcase mission-oriented innovations

RECOMMENDATION: Provide support of embedded research and impact activities in demonstration projects at different stages: development, assessment, knowledge translation and communication of results of learning-by-doing processes in demonstration projects. The support of intermediaries which connect all sectors and leads projects in an open way is needed. The Resilient Melbourne Delivery Office is a good example of such an intermediary cutting across

sectors across the whole of Metropolitan Melbourne.

4. Melbourne would benefit from **more evidence-based and innovative urban planning** approaches in various fields related to sustainability and health

RECOMMENDATION: Encourage new and experimental approaches in the public sector which seek to foster cooperative projects with stakeholders from academia and private sector. Moreover, it is recommended that support of research endeavours which seek to produce a collation of best practice examples of completed projects. This knowledge would help Melbourne to drive and scale up experimental approaches.

5. There is a particular place-based opportunity for Melbourne to **combine its world-class knowledge** in relation to a number of specific themes to generate a range of social and environmental outcomes and co-benefits

RECOMMENDATION: Support increasing interdisciplinary and transdisciplinary research and applied projects that seek to further explore these topics. New collaborations could be initiated through the support of Urban Living Labs.



03 RESEARCH DESIGN

The goal of this study is to draw useful lessons for Melbourne on the structure and operate of different forms of knowledge ‘exchanges’ present domestically and internationally. The benchmarking was undertaken through three main research phases: first, a literature review on the value and impact of urban exchanges; second, a review of a broad list of urban ‘living labs’, ‘observatories’ and other boundary-spanning institutions designed to mobilise knowledge. Third, this was followed by a more in-depth analysis of specific cases of exchanges using publicly available information and substantiating this with some in-person interviews. These three phases are detailed more specifically below. A final section highlighting initial comparative findings and preliminary lessons for Melbourne rounds up the report.

PHASE ONE

The initial phase of this work involved conducting a literature review of work discussing the potential and role of what could be considered as ‘urban exchanges’. The purpose of conducting the review was to complement existing database work already conducted by the Connected Cities Lab (with the United Nations) on ‘urban observatories’, and expand current knowledge with any recent publications or studies on observatories and exchanges. A systematic review was undertaken with specific search terms “observatories”, “urban”, “living labs” and targeting databases such as Web of Science, Google Scholar and Scopus. The aim was to capture any literature relating to observatories and exchanges, particularly regarding their success factors.

PHASE TWO

The second phase of the work was based on developing a broad list of cases of ‘urban exchanges’ that exist internationally, seeking to balance Northern and Southern examples from developed and developing contexts, as well as offering a broad sense of the variety of foci and institutional set ups available out there. This desktop search was undertaken through expanding the Lab’s current database, which builds on an existing dataset collated by the United Nations Human Settlements Agency (UN-Habitat), and adding to this list any additional cases mentioned in the

literature (Phase One), whilst noting any initial information on the exchanges (e.g. location, purpose).

PHASE THREE

Phase Three subsequently used the list developed in Phase Two to narrow down a more in-depth collection of information of a select group of exchanges in order to conduct a more systematic benchmarking exercise. Comparative metrics were developed from the Phase One literature review. Information was captured from each exchange to identify drivers of impact of each institution as theorised by the existing academic literature. This includes information on the types of output or the variety of stakeholder engagement. More practical and logistical information on the set up of the network was also captured.

Comparative metrics aimed to measure:

- Diversity of Stakeholders
- Networking of the Observatory
- Translation of Research into Action
- Monitoring/evaluation processes in place
- Contextual arrangements of the observatory (locally focused, or international)

Other data that was collected included:

- Philanthropic involvement/investment
- Output typology
- Observatory Purpose
- Lab/testing component of the observatory
- Type of data collected

A list of exemplar exchanges was shortlisted and analysed in further detail, as shown in section 04. These exchanges were selected on the basis of the key features outlined in the literature review (see section 03). A profile is created for each observatory/exchange to highlight some of its key features. Radar graphs were also developed to allow for easy comparability between exchanges, and were based on the following metrics:

1. Diversity of Types of Engaged Organisations
2. Local-specific nature of projects
3. International Networks
4. Local networks
5. Diversity of Disciplines Involved.

UNDERSTANDING THE REPORT'S METRICS

Detailing the variety of institutional set-ups, impact approaches and overall orientation of the many examples of 'urban exchanges' internationally is a task that does not lend itself to simplification. In order to highlight the diversity of approaches in cities the world over, and to provide a review that offers a 'menu' of options as to how exchanges can be set up, this study relied on a set of seventeen factors (or 'metrics') for our comparison. These are detailed below.

Diversity of Stakeholder Types refers to the types of institutions from which stakeholders are drawn. Examples include NGOs, non-profits, academia, government, citizen bodies, and the private sector.

Number of Local Networks/Partners captures the number of local institutions and/or organisations with which the urban knowledge exchanges partner or interact with for the purpose of sharing knowledge and information. For the purpose of this report, "local" refers to institutions and organisations operating within the same country as the urban knowledge exchange.

Number of International Networks/Partners captures the number of international institutions and/or organisations with which the urban knowledge exchanges partner or interact with for the purpose of sharing knowledge and information.

Translation of Research into Action indicates whether or not the knowledge exchange clearly demonstrates specific instances when knowledge generated is then applied, for example, if new policy is informed by research results.

Process tracks the level to which monitoring, evaluation, and learning processes are formalised.

Context Specificity traces the degree to which knowledge exchanges addressed local issues, with lower scores indicating a focus on general urban themes and higher scores indicating a focus on issues specifically afflicting the study area of the exchange.

Qualitative Data indicates whether or not qualitative data is gathered.

Quantitative Data indicates whether or not quantitative data is gathered.

Local Actor Empowerment tracks if knowledge exchange outputs are intended to inform and be acted on by local actors, such as citizens or local organisations.

Philanthropic Involvement indicates if the knowledge exchange participates in any philanthropic activities.

Experimentation tracks if there is a "lab" component to the knowledge exchange, specifically focusing on if the exchange conducts experiments.

Local Decision-Making traces whether or not the knowledge exchange outputs are intended to inform decision-making at the local level, for example for policy development or infrastructure investment.

Knowledge Transfer indicates whether or not the outputs produced by the knowledge exchange are intended to be used for transferring knowledge to contexts outside that of the producing exchange, for example if research results are intended to be transferred from one city to another.

Benchmarking for International Comparison indicates whether or not the outputs produced by the knowledge exchange are intended to be used for tracking the governed area against internationally standard goals, such as the United Nations Sustainable Development Goals or Millennium Development Goals.

Policy Reports tracks if the knowledge exchange produces policy reports.

Research Reports indicates whether or not the knowledge exchange produces research reports.

Academic indicates whether or not the knowledge exchange produces peer-reviewed academic publications.

04 KEY IMPACT FACTORS

ACCORDING TO THE LITERATURE, AN IMPACTFUL ‘URBAN EXCHANGE’ IS ONE THAT IS NOT ONLY LINKED TO STAKEHOLDERS AND OTHER KNOWLEDGE INSTITUTIONS, BUT ALSO ONE THAT IS DIVERSE, AND THAT REPRESENTS A SUSTAINED LONG-TERM INVESTMENT.

The aim of undertaking a review of the academic literature was to determine a set of characteristics that were deemed key traits of a knowledge sharing institution, and thus core markers of its impact on one or more cities. Incorporating these previous studies will provide insight into how urban exchanges are differently structured, what common traits are present internationally, and what possible features could apply to the Melbourne context sketched in section 02 of this report. At a broad summary, the following characteristics are perhaps most commonly discussed within the literature as to what makes for an effective and impactful knowledge sharing institution.

1. **Long-term, sustained investment** of time, researchers, funds, and energy into relationship- and trust-building enables observatories to address complex urban problems, navigate conflict between partners, and inspire a willingness to participate in stakeholders. Within this long-term mentality, license for projects to fail is also important to encourage learning-based change and experimentation².

Examples from the literature: Gauteng City-Region Observatory (GCRO) the Seoul Institute

2. **Diversity of stakeholders** (multi-level and cross-sectoral) necessary to appropriately capture multiple views of urban knowledge and more effectively co-produce information. Incorporating local and non-local knowledge enables identification of local issues and needs while also enriching knowledge through contrast with other localities³.

Examples: GCRO, IIHS, Connected Places Catapult

3. **Balance of monitoring/evaluation and learning** is needed in order to present “objective” information based on indicators and data for comparability while also

constantly improving processes, incorporating new/alternative perspectives, and scaling-up of successful actions and measures. Qualitative data should be collected to complement quantitative data in order to better capture context and feedback that quantitative data cannot for evaluation and learning⁴.

Examples: Urban Resources Centre (URC), Mistra Urban Futures

4. **Openness to conflict/controversy/tension** between partners and stakeholders should be used as opportunity for learning, development of mutual understanding of varying perspectives and needs, and trust-building. Common aims and procedures should be designated, and regular meetings held to ensure continued engagement of all partners across agendas⁵.

Examples: Newcastle City Futures, GCRO

5. **Proactive networking** with organisations with similar focus useful for sharing experiences and learning from other organisations, while networking outside of leaving open space to broadcast information and negotiate policy change⁶.

Examples: UN Habitat Global Urban Observatories (GUO); URC

6. **Context specificity** – observatory can look to international best practice for the sake of benchmarking, comparison to, and knowledge transfer from other cities, but should ultimately address the needs of the locality and respond to the information needs of local organisations who might use the information collected (universities, government, NGOs, citizens’ councils, etc.)⁷.

Examples: LabCDMX, URC.

² See: Bergvall-Kåreborn et al., 2009; Farah, 2011; Höflehner & Zimmerman, 2018; Juujärvi & Pessa, 2013; Perry & May 2010; Washbourne et al., 2019
³ Acuto, 2018; Acuto et al., 2018; Farah, 2011; Ferreira & Ramos, 2012; Holden, 2006; Hordijk & Baud, 2006; Perry & May 2010; Televizian, 2009

⁴ Farah, 2011; Höflehner & Zimmerman, 2018; Perry & May 2010; Robin et al., 2019

⁵ Höflehner & Zimmerman, 2018; Washbourne et al., 2019

⁶ Hasan, 2007; Holden, 2006; Juujärvi & Pessa, 2013

⁷ Martinez & Guera, 2010; Perry & May, 2010; Televizian, 2009

05 BENCHMARKING EXCHANGES

A TOTAL OF 28 INTERNATIONAL CASES OF WHAT COULD BE CONSIDERED ‘URBAN EXCHANGES’ WERE ANALYSED AS PART OF THIS STUDY, PROVIDING A MIX OF LABS, OBSERVATORIES AND HUBS.

Preliminary scoping for the report identified a total of 44 institutions that could be considered ‘urban exchanges’ internationally, providing a varied mix of Labs, observatories, hubs and other forms of urban knowledge exchange platform and a balance of North and South institutions.

We selected a subset of 28 cases from these to provide more in-depth learnings from the practice of facilitating urban exchanges in cities the world over. In particular, our sample included, in alphabetical order:

AURIN is a university-hosted and federal government-funded collaborative platform focused on the spatial aspects of Australian settlements. It is principally centred upon an online repository and workbench that enables the visualisation and mapping of thousands of multidisciplinary datasets. It was selected as a case study because of its approach to collating, integrating and disseminating information from diverse sources.

Australian Urban Observatory is a university-hosted digital platform that maps key liveability indicators associated with health and wellbeing across Australia’s 21 largest cities. It was selected as a case study in the context of Melbourne.

Beijing City Lab is a virtual research network of academics dedicated to the study of China’s major cities with a primary focus on Beijing, and a predominance of quantitative analysis. It was selected based on its method of sharing information within its research network.

Centre for Cities is an independent think tank (and funder) dedicated to helping the UK’s cities and towns to realise their economic potential. It was selected as a case study for its targeted research focus and multi-city emphasis.

Centre for Liveable Cities is a Singapore-based, government-funded research centre that examines Singapore’s founding and development as a means to address current and future urban challenges locally and internationally. It was selected because it is a governmental research institution that produces reports intended to improve urban futures.

Centre for London is an independent think tank, and a charity, dedicated to making London a fair and prosperous global city. It was selected as a case study because it offers a potential model for an exchange that has an explicit bi-partisan role, and has a focus on a large metropolitan area.

Citilab is a digital centre of citizen innovation for the diffusion and promotion of the ‘knowledge society’ in Barcelona. It was selected as a case study based on its model as a citizen-driven innovation organisation and its structural mix between a training centre, a research centre and an incubator for business and social initiative.

Cityworks is a GIS-based asset management system operating internationally. It was selected because its spatially based information can be used to guide decision-making.

Connected Places Catapult (previously the ‘Future Cities Catapult’) is a government-supported organisation guided by the mission to increase connectivity and reduce constraints on businesses seeking to exploit opportunities to introduce new products and services. It was selected based on its remit to increase the exchange of expertise and skills for better business innovation and commercialisation.

Dublin Dashboard is a platform accessible to citizens, government, and industry with a number of tools that use real-time information to track various aspects of the city, including housing, social welfare, and crime monitoring. It was selected as a case study of a monitoring platform.

Esco Lab is a Barcelona-based institution that enables access for secondary and vocational students to laboratories and research centres and the opportunity to collaborate with the professional researchers working at them across Catalonia. It was selected because its purpose is the exchange of knowledge between students and professional researchers.

Future Cities Laboratory is a laboratory of the Swiss federal Institute of Technology (ETH Zurich) based jointly between Singapore and Switzerland to research the urban challenges of sustainability. It was selected based on the twin country location, single academic institutional basis, collaborative nature of knowledge production and exchange.

Gauteng City-Region Observatory is a university-hosted research institution aimed at improving planning, management, and government cooperation in the Gauteng City-Region, South Africa. It was selected based on its charge to extend links to all the higher education institutions, as well as knowledge councils, private sector think-tanks, research NGOs and information-exchange and learning-networks operating in the city-region.

I2CAT is a Barcelona-based non-profit research and innovation centre that promotes research and design in information and communications technologies. It was selected based on its role in deploying digital strategies and policies of the Government of Catalonia and in fostering collaboration to leverage the outcomes of their R&D projects.

Indian Institute of Human Settlements is a Bangalore-based research and education institute committed to the equitable, sustainable and efficient transformation of Indian settlements. It was selected based on its interdisciplinary research and practice aimed at building new global knowledge and its long-standing role in linking research with education from an explicit 'Southern' perspective.

Lab CDMX was an experimental regional government initiative active from 2013-2018 that focused on exploring new models of citizen participation to find creative solutions to urban challenges in Mexico City. It was selected based on its experimental nature and specific positioning within a metropolitan local authority like that of Mexico City.

LSE Cities is a London-based, Deutsche Bank-funded, university-hosted research and education centre with an international focus that investigates the social, spatial and environmental complexities of contemporary cities. It was selected as a potential model for a university-hosted exchange with strong backing from philanthropic funding.

Mistra Urban Futures is an international research and knowledge centre working towards sustainable urban futures. It was selected based on its emphasis of co-production as a key means of knowledge production.

MIT Senseable Cities Lab is a university-hosted research centre that seeks to critically examine how networks and digital information transform cities. It was selected based on the consortium of companies, cities and regions, and research partners that support its research efforts.

Newcastle City Futures is a joint city and university-hosted collaborative platform in Newcastle, England aimed at bringing together research, policy, and business. It was selected based on its stipulation that all

projects must have multi-sector, multi-partner involvement.

Seoul Institute is a metropolitan government-hosted think tank dedicated to the development Metropolitan Seoul. It was selected as an international case study of a metropolitan-scale research centre.

Sierra Leone Urban Research Centre (SLURC) is a Freetown-based independent research centre focused on capacity building and research to improve the well-being of informal settlement residents in Sierra Leone. It was selected based on its diverse activities and project outputs, such as hosting international exchanges to expose urban stakeholders to other urban contexts and research centres.

SKOLKOVO Centre for Urban Studies is a Moscow-based national research and education centre that aims to support urban development in Russia by establishing interactions between businesses, governments, and the Russian professional community. It was selected as a case study because of its unusual placement within a business school.

UK Collaboratorium for Research on Infrastructure and Cities (UKCRIC) is a research network comprised of 13 cross-disciplinary lab and urban observatory test spaces housed in universities across the UK that gather and analyse data about existing and future infrastructure projects to better guide policy, regulation, and investment. It was selected based on its explicitly experimental and multi-sectoral approach and large national government funding base.

Urban Knowledge Exchange Southern Africa is an online knowledge repository designed to facilitate urban information exchange in South Africa. It was selected as case study of an online-only exchange platform.

Urban Resource Centre is a non-profit organisation that researches and monitors Karachi's development. It was selected as a case study based on its advocacy work with the urban poor.

Vivelab is a university-hosted laboratory aimed at connecting governments, academia, companies, and citizens to improve social and economic outcomes in Bogota through digital solutions. It was selected a case study from South America.

OVERVIEW

91%

OF EXCHANGES ANALYSED COLLECT
QUANTITATIVE DATA (COMPARED TO
68% FOR QUALITATIVE)

72%

OF EXCHANGES ANALYSED CLAIMED TO
EMPOWER LOCAL ACTORS

56%

OF EXCHANGES ANALYSED CONDUCT
KNOWLEDGE TRANSFER BETWEEN
INSTITUTIONS



6 OUT OF 28
CREATE POLICY
REPORTS



53% TRANSLATED
RESEARCH INTO
POLICY/PRACTICE



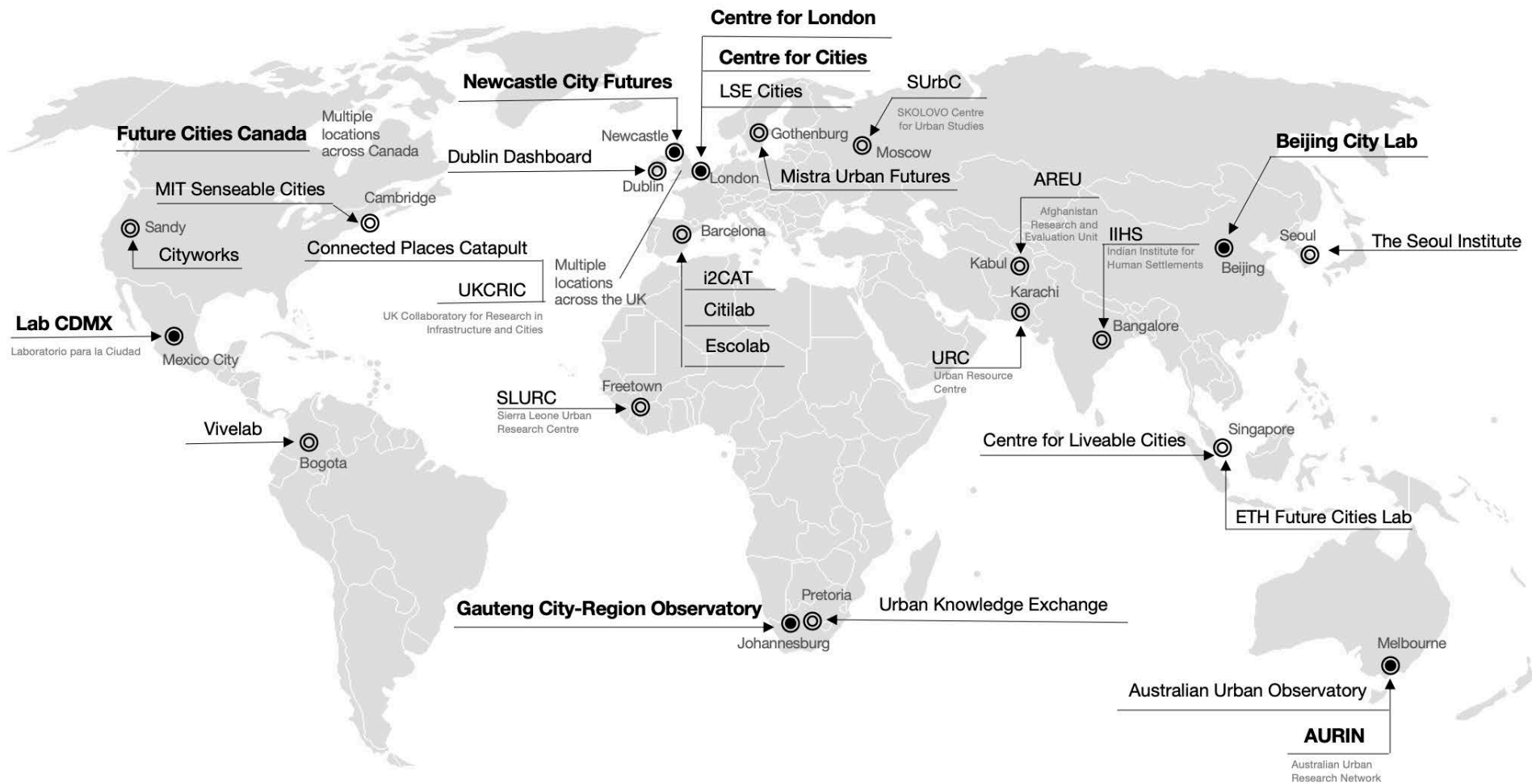
THE MAJORITY OF EXCHANGES HAVE
LOCALLY-SPECIFIC PROJECTS (71%)



ONLY **TWO** OUT OF
TWENTY-EIGHT
EXCHANGES
ANALYSED ACTIVELY
BENCHMARK FOR
INTERNATIONAL
COMPARISON

Map of exchanges

Note: filled circles indicate in depth case studies included in this report



06 IN-DEPTH ANALYSIS

A TOTAL OF 8 EXCHANGES WERE SELECTED FOR A FURTHER IN-DEPTH CASE STUDY ANALYSIS BASED ON DRIVERS OF IMPACT AS DESCRIBED IN SECTION 03 AND EMERGING FROM THE LITERATURE. THEY WERE SELECTED BASED ON THE FOLLOWING ATTRIBUTES.

In order to provide more specific operational insight into the functioning and complexity of exchanges, the study selected a set of case studies to be investigated more in-depth.⁸ The final list of exchanges analysed more in detail in detail includes:

- Australian Urban Research Infrastructure Network (AURIN)
- Gauteng City-Region Observatory
- Newcastle City Futures
- Beijing City Lab
- Centre for Cities
- Centre for London
- Future Cities Canada
- Lab CDMX

This list presents an ideal cross-section of observatories, many of which with an extensive history of exchange, with from which to be able to glean further insight as to the possibilities for a complex context like that of Melbourne. In particular, these are analysed as to:

- a. Evidence of long-term sustained investment of time;
- b. Large diversity of stakeholders engaged with;
- c. Collection of both qualitative and quantitative data;
- d. Effective proactive networking – internationally or locally;
- e. Looks to other exchanges for best practice and benchmarking.



⁸ Some elements of the successful attributes as described in Section 03 can be difficult to measure, for example, the openness to conflict, tension and controversy. This is an element that is difficult to glean from purely publicly available information.

THE AUSTRALIAN URBAN RESEARCH INFRASTRUCTURE NETWORK (AURIN)

Australia

The Australian Urban Research Infrastructure Network (AURIN) is a university-hosted project initiated by the federal government under the National Collaborative Research Infrastructure Strategy (NCRIS) that was established in 2010. It is a collaborative network of researchers across a variety of Australian universities (e.g. Melbourne, UNSW, UQ, Griffith) and data providers and an online workbench. The workbench has access to thousands of multi-disciplinary datasets provided by universities, government departments (at state and federal level) and private sector. These cover spatial and statistical modelling, planning, and visualisation designed to ease access to data that can be used to improve the sustainability of Australian settlements and inform evidence-based research, policy, and decision-making. Although AURIN doesn't produce any academic outputs, research or policy reports, it does provide a platform for organisations to access its trove of data it has collated.

Data accessible in AURIN includes:

- Demographic and Social Indicators
- Economic Activity and Productivity
- Urban Design and Form
- Housing
- Health and Liveability
- Infrastructure and Transport

With its main office housed at the University of Melbourne, AURIN is currently, and has historically been, headed by a professor from the university. It is funded by the federal government and is managed by a board whose members are drawn from the University of Melbourne as well as other Australian universities and staff from local councils. AURIN networks with over 100 institutions, including research groups and organisations in academia, government, and industry from across Australia.

AURIN demonstrates its diverse applications in research and policy in the Research Impacts⁹ and Publications¹⁰ pages on its website. It also hosts events around Australia and maintains a blog as well as a proactive presence on social media (e.g. Twitter).

AT A GLANCE

AURIN

FOUNDED

2010

- HIGH INCOME
- LOCAL DECISION-MAKING
- LOCAL ACTOR EMPOWERMENT
- TRANSLATION OF RESEARCH INTO PRACTICE

OUTPUTS



ACADEMIC PAPERS



RESEARCH REPORTS



POLICY REPORTS



HOSTING INSTITUTION
UNIVERSITY



QUALITATIVE DATA
COLLECTION



QUANTITATIVE DATA
COLLECTION

18

NUMBER OF STAFF

SCALE



⁹ <https://aurin.org.au/resources/research-impacts/>

¹⁰ <https://aurin.org.au/resources/aurin-citation-guide-and-publications/>

GAUTENG CITY-REGION OBSERVATORY (GCRO)

South Africa

GCRO was set up in 2008 as a university-government collaboration centred on observatory functions for the greater Gauteng region, and housed within two universities: The University of Johannesburg and the University of the Witwatersrand. The Gauteng Provincial Government is represented on the GCRO board, and they are also the primary funders of the observatory.

The basis for the creation of the observatory is to create more effective planning and management approaches that incorporate both academic and practice-based knowledge for the city of Gauteng.

The GCRO provides policy recommendations to government in the areas of city planning to drive development. Part of their remit is to:

- Generate data sets by which to undertake comparative analyses to other cities internationally.
- Highlight key opportunities and challenges as a result of the comparative analysis.
- Outline urban, relevant trends to government departments.
- Provide policy recommendations for future urban development.

The GCRO has a high diversity of disciplines engaged, and also a strong track record with engaging local networks. Their projects are predominantly local in scope, and they effectively engage with many different organisations and sectors.

The observatory is set up in such a way that government can commission policy support work in a streamlined way. This allows for short turnarounds on pressing policy concerns. However, in tandem with these short policy projects, the GCRO also runs longer research projects that are underscored by progressing academic thought and scholarship. The observatory has been in place since 2008, and therefore the longevity of the organisations allows for these in-depth projects, while also maintain relevance in addressing key areas of interest for the government. Outputs are easily accessible directly through the GCRO website,¹¹ which includes a mixture of academic publications, policy reports, data sets and data briefs. All data collection, both qualitative and quantitative, is undertaken by the GCRO.

AT A GLANCE

GAUTENG CITY-REGION OBSERVATORY

FOUNDED

2008

- UPPER MIDDLE INCOME
- INFORMS LOCAL DECISION-MAKING

- LAB COMPONENT
- KNOWLEDGE TRANSFER
- TRANSLATION OF RESEARCH INTO PRACTICE

OUTPUTS



ACADEMIC PAPERS



RESEARCH REPORTS



POLICY REPORTS



HOSTING INSTITUTION
UNIVERSITY



QUALITATIVE DATA
COLLECTION



QUANTITATIVE DATA
COLLECTION

24

NUMBER OF STAFF

SCALE



¹¹ www.gcro.ac.za

NEWCASTLE CITY FUTURES (NCF)

United Kingdom

Consortium of private, public, and third sector partners. Focused on co-designing urban solutions with academics, civil society, industry, and government. While participants are drawn from across private, public, and third sector, each project is led by an academic. Also has an “urban living lab” component. The NCF is led by Newcastle University, and is also partnered with Northumbria University. A suite of projects sits under the Urban Living Partnership (ULP) to determine collaborative ways of addressing future needs of the city of Newcastle and Gateshead. There are 22 partners ranging from private industry, academia, government and civil society that works together under the ULP banner.

The key research areas of the organisation are very broad, but mainly consider the broad sweeping urban challenges that cities face. The focus is nevertheless on the local context, within Newcastle and Gateshead, in terms of implementation into practice. The organisation does not claim to create policy reports, or to provide policy recommendations for government, but instead focuses more on promoting urban innovations for the city. Priority themes of the network are:

- Ageing
- Sustainability
- Social Renewal (including Young People)

A notable element of NCF is Tyneside crowd – a crowdfunding platform where local projects can be pitched and funded. It allows local people to provide solutions to the challenges they face within their community providing funding rounds to realise these ideas. This is a great initiative to promote grassroots ideas and give creative local entrepreneurs a chance to allow their ideas to come to fruition to improve the local community. However, there has not been a funding round call since 2018, so is unclear whether this process is still ongoing. Reports are easily accessible through their website, however academic papers are not readily available through this platform, nor are they listed.

AT A GLANCE

NEWCASTLE CITY FUTURES

FOUNDED

2014

- HIGH INCOME
- INFORMS LOCAL
DECISION-MAKING

- LAB COMPONENT
- TRANSLATION OF
RESEARCH INTO
PRACTICE

OUTPUTS



ACADEMIC PAPERS



RESEARCH REPORTS



POLICY REPORTS



HOSTING INSTITUTION
UNIVERSITY



QUALITATIVE DATA
COLLECTION



QUANTITATIVE DATA
COLLECTION



NUMBER OF STAFF

SCALE



BEIJING CITY LAB (BCL)

China

The Beijing City Lab, hosted by Tsinghua University, is an academic network focusing on urban studies, predominantly for the city of Beijing, but does undertake projects outside of the city (within China). BCL effectively acts as a platform for sharing of information between academics to further understand Chinese urban studies. Although titled 'lab', it does not in fact have a lab component in which it undertakes testing. The network primarily acts to share information and knowledge among other urban researchers. There has been little evidence of research translation into practice, nor does BCL produce any policy recommendations or reports directly framed toward government.

The notable aspect of the Beijing City Lab rests in its open sharing of research and information. Its website¹² provides the open access research directly. There are no governmental or philanthropic partners involved in the network, but they do state that they partner with local organizations such as International Association for China Planning, CityIf and the Beihang Interest Group on Smart City.

A component of this lab also provides course content that have been previously run by the founder of the lab, Dr Ying Long.

The focus of the network is on 'the urban', within the Chinese context. This captures quantitative data on cities which is openly shared on the website.

AT A GLANCE

BEIJING CITY LAB

FOUNDED

2013

- UPPER MIDDLE INCOME
- KNOWLEDGE TRANSFER

- NO LAB COMPONENT

OUTPUTS



ACADEMIC PAPERS



RESEARCH REPORTS



POLICY REPORTS



HOSTING INSTITUTION
NONE



QUALITATIVE DATA
COLLECTION



QUANTITATIVE DATA
COLLECTION

103

NUMBER OF STAFF

SCALE



¹² <https://www.beijingscitylab.com>

CENTRE FOR CITIES

United Kingdom

The Centre for Cities is a self-hosted think tank and charity. It was established in 2005 as an independent, non-partisan research organisation, and its mission is to help the UK's cities and towns realise their economic potential by producing data-driven research and policy recommendations.

As a charity, the Centre relies on support from funding partners which include charitable foundations, cities, and businesses. It also partners with organisations for project-based research and events as well as maintains long-term partnerships, for example with Arup and the London School of Economics for the "What Works Centre for Local Economic Growth" program, which analyses policies for effectiveness in supporting and increasing local economic growth. A board of trustees manages the Centre for Cities, with members drawn from the public and private sector. The Centre produces policy briefs and research reports accessible on its website with different research themes each year.

Research themes are regularly updated and change throughout the years. In 2020 these are for instance:

- Economic Geography
- Devolution
- Skills and Education
- City Centres and High Streets
- Enterprise and Innovation
- Transport
- Air Quality and Climate Change
- Housing

In addition to the aforementioned outputs, the Centre for Cities maintains a blog, a podcast, and a data tool to create visualisations. It hosts events designed to bring together city leaders, policy makers, and leading thinkers to tackle issues facing the UK and also collates case studies for towns and cities to make use of as they consider policy for their locality.

AT A GLANCE

CENTER FOR CITIES

FOUNDED

2005

- HIGH INCOME
- LOCAL DECISION-MAKING

OUTPUTS



ACADEMIC PAPERS



RESEARCH REPORTS



POLICY REPORTS



HOSTING INSTITUTION
SELF-HOSTED



QUALITATIVE DATA
COLLECTION



QUANTITATIVE DATA
COLLECTION

18

NUMBER OF STAFF

SCALE



CENTRE FOR LONDON

United Kingdom

The Centre for London is a self-hosted, independent think tank and charity dedicated to making London a fair and prosperous global city. It is highly locally specific and highlights its belief in collaboration as a key feature of its diverse knowledge base. Partners include local government, research organisations, and other London-based think-tanks.

A board of trustees manages the Centre, with members drawn from the private sector, public sector, and academia. It is funded on a project-by-project basis by coalitions of sponsors across sectors in addition to its core funding, which is derived from trusts, charitable foundations, and grant-givers as well as the recently-launched Centre for London's Partner Forum, a network of organisations dedicated to London and in support of the centres mission.

The Centre produces research reports utilising qualitative and quantitative data and maintains a blog, which is presented as an opinion complement to its research component. Both outputs are accessible on its website. The current research programme explores the following themes:

- Housing and Neighbourhoods
- Skills and Opportunity
- London, UK, and the world
- Transport and Environment

It also hosts private roundtables, public events, hustings, and conferences generally focused on the state of London and on driving a more public and bi-partisan debate on the city.

The Centre emphasises its translation of research into action, underscoring not only its research reports but also its influence in government policy. For example, London's 2018 Autumn Budget incorporated three proposals recommended by the Centre to civil servants advising the Chancellor on the budget.

AT A GLANCE

CENTRE FOR LONDON

FOUNDED

2017

- HIGH INCOME
- LOCAL DECISION-MAKING

- PHILANTHROPIC INVOLVEMENT

OUTPUTS



ACADEMIC PAPERS



RESEARCH REPORTS



POLICY REPORTS



HOSTING INSTITUTION
NONE



QUALITATIVE DATA
COLLECTION



QUANTITATIVE DATA
COLLECTION

27

NUMBER OF STAFF

SCALE



FUTURE CITIES CANADA

Canada

Future Cities Canada is a self-hosted collaborative platform founded by a consortium of five philanthropy and private sector organisations with the mission to ensure that Canada's cities are equitable, regenerative, and prosperous for all. Leaders of four of the founding partner organisations play leadership and strategic roles at Future Cities Canada.

In addition to research reports and podcasts, Future Cities Canada also holds public and private events and webinars designed to connect people from different sectors in order to re-imagine cities and accelerate innovation. Future Cities Canada's outputs focus on four areas of urban innovation:

- Capital
- Infrastructure
- Governance
- Participation

It also hosts a number of programs to advance its remit as a collaborative platform: learning networks, labs, and hubs. "Learning networks" are platforms for knowledge sharing, capacity building and a means for fostering partnerships. In the "labs," collaborators conduct experimental research around specified urban themes, including data governance and civic capital. "Hubs," which are a network of physical collaborative meeting spaces.

Future Cities Canada is funded by its five founding partners as well as a growing network of partners from the public, private, and third sector on an initiative-wide basis as well as through specific programs and projects.

AT A GLANCE

FUTURE CITIES CANADA

FOUNDED

2018

- HIGH INCOME
- KNOWLEDGE TRANSFER
- LOCAL DECISION-MAKING
- LOCAL ACTOR EMPOWERMENT
- LAB COMPONENT
- TRANSLATION OF RESEARCH INTO PRACTICE

OUTPUTS



ACADEMIC PAPERS



RESEARCH REPORTS



POLICY REPORTS



HOSTING INSTITUTION
NONE



QUALITATIVE DATA
COLLECTION



QUANTITATIVE DATA
COLLECTION

SCALE



116

NUMBER OF STAFF

LAB CDMX

Mexico City, Mexico

Lab CDMX (Laboratorio Para La Ciudad) was established in 2013 and ended in 2018. It was hosted within the Mexico City metropolitan government, the first of its kind in Latin America. The exchange bridged a wide range of stakeholders including academia, community groups, government and private industry.

The lab specifically focused on six key areas:

- Democracy and Urban Governance
- Pedestrian Mobility and Road Safety
- Participatory Planning
- Gamification of Urban Development Plans
- Creative Capital in the Design of the City
- Internationalization of the Lab

Each of these key areas had specific teams allocated to them made up of 2-3 people. The aim of the lab was to test and adopt new creative solutions within Mexico City to generate new forms of participation, collaboration, and co-creation with its citizens. Because it was hosted by the metropolitan government, it had direct access to policy and planning instruments for fast adoption into practice. It is primarily funded by the government but also receives funding from philanthropy, such as the Hewlett & Flora Foundation.

Lab CDMX has a strong focus on public participation in decision-making processes, and how a city can be created with the citizen in mind. They run public-facing events while also hosting meetings of Latin American urban observatories.

The list of collaborators is long and includes international local governments (eg. Buenos Aires local government), community groups (eg. Community Design Laboratory), international organisations (eg. UN Habitat) and universities (both local and international).

AT A GLANCE

LAB CDMX

FOUNDED

2013

- NO LONGER ACTIVE (ENDED IN 2018)
- HAS LAB COMPONENT
- CONDUCTS KNOWLEDGE TRANSFER ACTIVITIES

- UPPER MIDDLE INCOME
- LOCAL DECISION-MAKING
- LOCAL ACTOR EMPOWERMENT

OUTPUTS



ACADEMIC PAPERS



RESEARCH REPORTS



POLICY REPORTS



HOSTING INSTITUTION
LOCAL GOVERNMENT



QUALITATIVE DATA
COLLECTION



QUANTITATIVE DATA
COLLECTION

27

NUMBER OF STAFF

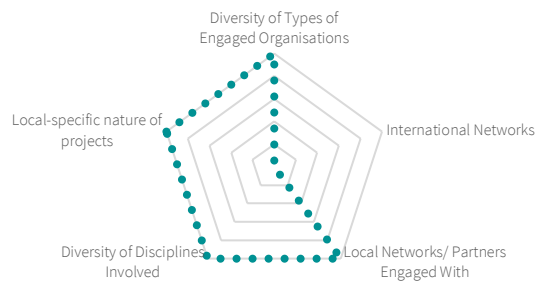
SCALE



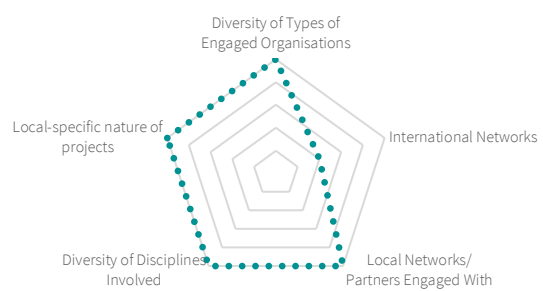
COMPARING FUNCTIONS

The following radar graphs have been developed using information gathered based on ‘success factors’ of observatories. They have all been collated on this page for ease of comparison.

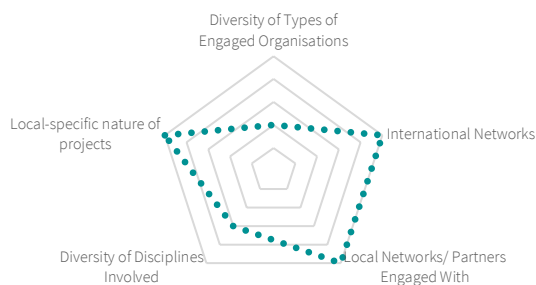
Future Cities Canada



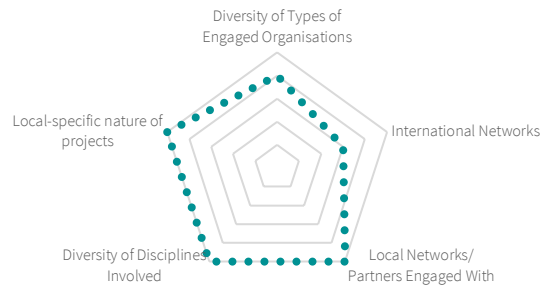
Gauteng City-Region Observatory



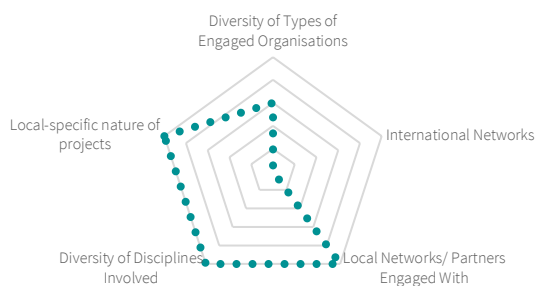
Beijing City Lab



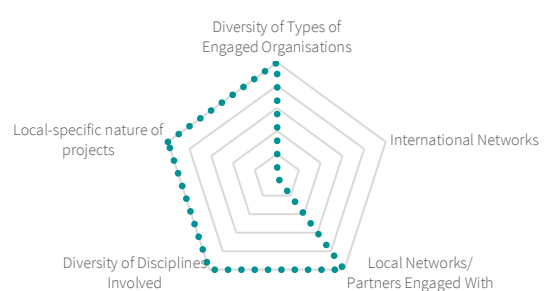
Centre for Cities



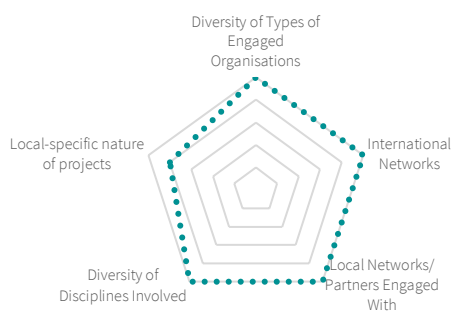
AURIN



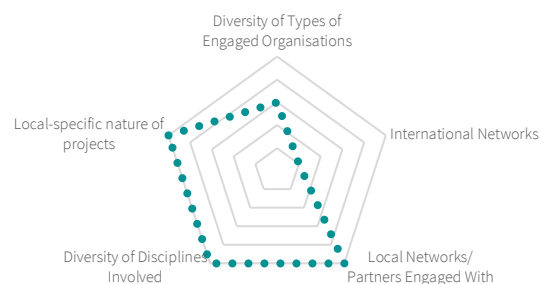
Newcastle City Futures



Lab CDMX



Centre for London



07 PRELIMINARY FINDINGS

—

For the purpose of this report, 26 urban exchanges were analysed according to metrics based on a review of academic literature, with 7 of them then scrutinised more in-depth as specific case studies. The following discussion summarises some initial findings, commonalities and lessons learnt from this analysis thus far.

Overall Findings

In line with the literature review, all analysed urban exchanges engaged a **diverse range of stakeholders**, particularly with regards to multiple disciplines and sectors. Of the specific case studies analysed, no urban exchange scored less than 3 and a majority scored 5 in terms of this diversity, indicating that stakeholders involved are generally drawn from diverse backgrounds and thus contribute a broad range of perspectives to both identifying and addressing the issues researched at the urban exchanges. The diversity of types of institutions engaged, however, more greatly varied, with no majority emerging.

Local specificity prominently emerged as a feature of the analysed urban exchanges. A majority of urban exchanges undertook highly contextually specific research projects, thus demonstrating their aim to prioritise and address local issues.

The analysed urban exchanges were also highly **locally networked**, with 18 of the 28 exchanges networked with five or more local networks and/or partners. Relatedly, “local actor empowerment” and “local decision-making” emerged as common purposes of the urban exchanges. This implies that, in line with international findings, the Greater Melbourne Urban Exchange should design its research projects to address local issues and do so by networking with local partners and producing outputs that can be actioned by local actors and decision-makers.

Research reports were the most frequently produced outputs by the analysed exchanges. About half produced academic papers, and only 6 produced policy reports. Producing research reports could be a critical element for the Melbourne context in order to make the knowledge generated publicly available to local actors and decision-makers who can guide the city towards a better future.

The urban exchanges analysed did not consistently **engage in experimentation** or “lab”-like activity, with less than half doing so. However, those that did, such as Newcastle City Futures, Citilab, and Mistra Urban Futures, encouraged co-creation, co-design, and multi-disciplinary collaboration as guiding objectives of their “lab”-like activity.

Lessons for Melbourne

University-hosted urban exchanges seem to provide viable model Melbourne might want to consider considering the international profile of some of its higher education institutions. Three of the seven profiled exchanges falling within this category. Key strengths of this model are reliable access to researchers and the legitimacy afforded to the exchange via its affiliation with a university.

An independent and self-hosted urban exchange is another feasible option for Melbourne. This organisational arrangement could be modelled after the Centre for London, as a specific metropolitan-focused convener of discussions and knowledge. Another model, that of Future Cities Canada and its consortium of five partners, including two charitable foundations, a not-for-profit organisation, and two private entities, presents an independent approach to engaging with multiple cities. On a similar model, the Centre for Cities illustrates a think tank model funded on a project basis and through support from a variety of partners.

Access to staffing and budgeting information was limited, however from the available annual reports, the following could be deduced. Staff at urban exchanges typically ranged from about 18-35. Cases with significantly larger staff numbers are typically attributed to the inclusion of unpaid staff, interns, or external consultants in total staff numbers, for example the Beijing City Lab which hosts 66 unpaid junior researchers of 103 total staff.

Publicly available funding information was limited from the 28 exchanges analysed. However, according to 2018 annual report data, the Centre for London received £ 1,123, 844 in income, with its main source being the private sector at 55%. The Centre for Cities, by comparison, received £1,413,552 in income, with a core grant from a charitable foundation accounting for 56% of that income. At both aforementioned urban exchanges, research grants comprise about 17% of funding

ANNEX 1. INSTITUTIONS NOT ANALYSED

A total of 26 exchanges were analysed as part of this work. The data gathering was based on publicly available information. For this reason, there was difficulty in obtaining data such as financial information, number of staff employed, the level of sustained investment (funding) and sustained investment (time). Despite this, there was still ample information available for conducting a comparison between differing exchanges, in order to inform what would be ideal for the Melbourne context.

Afghanistan Research and Evaluation Unit (AREU) is a Kabul-based think tank.

Al-Madinah Local Urban Observatory – insufficient publicly available information

Cape Urban Observatory – insufficient publicly available information

CUSP Urban Observatory – insufficient publicly available information

Greater Toronto Urban Observatory - hasn't produced work recently and examples of work were limited in scope.

Korea Research Institute of Human Settlements – purpose and structure is similar to Korean case study at the metropolitan level that has already been analysed, so this national-level exchange was not deemed necessary for analysis

Manila Observatory – focused primarily on natural sciences

Metropolis Urban Observatory – is essentially a research arm of the city-network *Metropolis* and does not focus on locally-specific issues.

MIT China Future City Lab – some overlaps with MIT Senseable Cities

MxD – focused on digital manufacturing and is not relevant to LMCF objectives

Observatory on Decentralised Co-operation – focused on training rather than producing and exchanging knowledge

One Belt One Road Observatory – insufficient publicly available information

The City Observatory - functions similarly to AURIN. Since AURIN already exists, no need for an additional observatory in Australia performing mapping functions based on census data

Urban Expansion Observatory - This was not analysed because its objective is to trace urban growth and development using mapping tools. It does not have a social impact element to it.

Urban Flows Observatory - This is an observatory based on contextual surveillance. It gathers data related to physical processes (so air quality, fixed data sensors, etc.). It was not analysed because it would likely be too resource-intensive to replicate this model (for example, installing sensors around metropolitan Melbourne).

World Council on City Data - not analysed because it is a platform of indicators and data for cities to use to compare themselves to one another. It's not locally specific and doesn't have a research component to it.

World Resources Institute - This is focused on international trends and is geared towards development.

Table 1. Assessment of each exchange using a 5-point Metric system.

NAME OF OBSERVATORY	DIVERSITY OF TYPES OF ENGAGED (NGO, NON-PROFIT, ACADEMIA, GOVERNMENT, CITIZEN-BODIES, INDUSTRY)	DIVERSITY OF DISCIPLINES INVOLVED	NUMBER OF LOCAL NETWORKS/PARTNERS ENGAGED WITH	NUMBER OF INTERNATIONAL NETWORKS/PARTNERS ENGAGED WITH	HOW LOCALLY SPECIFIC ARE RESEARCH PROJECTS?	AT WHAT SCALE DOES THE OBSERVATORY OPERATE?
AURIN (Australian Urban Research Infrastructure Network)						
Australian Urban Observatory						
Beijing City Lab						
Centre for Cities						
Centre for Liveable Cities						
Centre for London						
Citilab						
Cityworks						
Dublin Dashboard						
Escolab						
Future Cities Canada						
Future Cities Catapult (now Connected Places Catapult)						
Gauteng City-Region Observatory						
i2CAT						
Indian Institute of Human Settlements (IIHS)						
LAB CDMX						
London School of Economics -Cities						
Mistra Urban Futures						
MIT Senseable Cities						
Newcastle City Futures						
The Seoul Institute						
SKOLKOVO Centre for Urban Studies (SURbC)						
UKCRIC (UK Collaboratorium for Research in Infrastructure and Cities)						
Urban Knowledge Exchange						
Urban Resource Centre						
ViveLab						

Key

DIVERSITY OF TYPES OF ENGAGED (NGO, NON-PROFIT, ACADEMIA, GOVERNMENT, CITIZEN-BODIES, INDUSTRY)	DIVERSITY OF DISCIPLINES INVOLVED	NUMBER OF LOCAL NETWORKS/PARTNERS ENGAGED WITH	NUMBER OF INTERNATIONAL NETWORKS/PARTNERS ENGAGED WITH	HOW LOCALLY SPECIFIC ARE RESEARCH PROJECTS?	AT WHAT SCALE DOES THE OBSERVATORY OPERATE?
Stakeholders are from at least 6 institutions	Stakeholders cross 6+ disciplines	Involved in at least 5 local networks	Involved in at least 5 international networks	Highly context-specific research projects specifically tailored to address local issues	Global/ International
Stakeholders are from at least 5 institutions	Stakeholders cross 5 disciplines	Involved in at least 4 local networks	Involved in at least 4 international networks	Urban issues are framed through local context	Regional (world)
Stakeholders are from at least 4 institutions	Stakeholders cross 4 disciplines	Involved in at least 3 local networks	Involved in at least 3 international networks	Balance between local specificity and general urban issues	National
Stakeholders are from at least 3 institutions	Stakeholders cross 3 disciplines	Involved in at least 2 local networks	Involved in at least 2 international networks	Some local specificity but still mostly focused on general urban themes	Regional (intrastate)
Stakeholders are from at least 2 institutions	Stakeholders cross 2 disciplines	Involved in at least 1 local network	Involved in at least 1 international network	Brief mention of local issues but primarily geared towards general urban ‘issues’	Metropolitan
No diversity; all stakeholders are from one institution	No diversity, stakeholders are all from one discipline	No involvement in local networks	No involvement in international networks	Not locally specific; research focus on general urban themes without locally specific considerations	Local

Table 2. Assessment of Exchange based on observable features of each institution. Diamond indicates they have this feature, blank indicates they do not. Shaded indicates information not available.

NAME OF EXCHANGE	IS RESEARCH TRANSLATED INTO ACTION?	COLLECTION OF QUALITATIVE DATA?	COLLECTION OF QUANTITATIVE DATA?	PHILANTHROPIC INVOLVEMENT?	PRODUCE: POLICY REPORTS?	PRODUCE: RESEARCH REPORTS?	PRODUCE: ACADEMIC OUTPUTS?	DOES RESEARCH AIM TO AID LOCAL DECISION-MAKING?	IS KNOWLEDGE TRANSFER PART OF THE PROCESS?	DO THEY AIM TO EMPOWER LOCAL ACTORS?	IS THERE A LAB COMPONENT TO THE EXCHANGE? (DO THEY CONDUCT EXPERIMENTS?)	DO THEY BENCHMARK FOR INTERNATIONAL COMPARISON (EG. AGAINST SDGS, ETC)?
AURIN (Australian Urban Research Infrastructure Network)	◆	◆	◆					◆		◆		
Australian Urban Observatory	◆	◆	◆					◆		◆		
Beijing City Lab			◆				◆		◆			
Centre for Cities			◆	◆	◆	◆		◆				
Centre for Liveable Cities		◆	◆			◆		◆	◆			
Centre for London		◆	◆	◆		◆		◆				
Citilab	◆	◆				◆			◆	◆	◆	
Cityworks	◆		◆					◆		◆		
Dublin Dashboard			◆					◆	◆	◆		
Escolab									◆	◆	◆	
Future Cities Canada	◆	◆	◆	◆	◆	◆		◆	◆	◆	◆	
Future Cities Catapult (now Connected Places Catapult)	◆	◆	◆			◆		◆		◆		
Gauteng City-Region Observatory	◆	◆	◆		◆	◆	◆	◆	◆	◆		
i2CAT									◆	◆	◆	
Indian Institute of Human Settlements (IIHS)		◆	◆		◆	◆	◆	◆	◆	◆		◆
LAB CDMX		◆	◆	◆	◆	◆		◆	◆	◆	◆	
London School of Economics -Cities	◆	◆	◆	◆		◆	◆		◆			
Mistra Urban Futures	◆	◆	◆		◆	◆	◆	◆	◆	◆	◆	◆
MIT Senseable Cities	◆	◆	◆				◆				◆	
Newcastle City Futures	◆	◆	◆			◆	◆	◆		◆	◆	
The Seoul Institute			◆				◆	◆	◆			
SKOLKOVO Centre for Urban Studies (SUrbC)		◆	◆			◆				◆		
UKCRIC (UK Collaboratorium for Research in Infrastructure and Cities)	◆							◆				
Urban Knowledge Exchange		◆	◆		◆	◆	◆		◆	◆		
Urban Resource Centre	◆	◆	◆			◆	◆	◆		◆		
ViveLab	◆									◆	◆	

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