

EXECUTIVE COMMITTEE OF COUNCIL

*HIS WORSHIP, THE MAYOR
AND COUNCILLORS*

SUBJECT: CIVIC INNOVATION LAB – UPDATE ON ACTIVITIES

RECOMMENDATIONS:

1. THAT Council receive this report for information.
2. THAT Council approve participation of the City of Burnaby in the Reach Cities Project, as outlined in Section 4.1. of this report.

REPORT

The Executive Committee of Council, at its Open meeting held on 2022 December 08, received and adopted the attached report providing Council with an update on the Civic Innovation Lab.

Respectfully submitted,

Councillor S. Dhaliwal
Chair

Councillor R. Lee
Vice Chair

Copied to: Chief Administrative Officer Deputy CAO/CFO GM Corporate Services Acting GM Engineering GM Lands & Facilities GM Planning and Building GM Parks, Recreation and Cultural Services
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TO: CHAIR AND MEMBERS
EXECUTIVE COMMITTEE OF COUNCIL

DATE: 2022 November 23

FROM: DEPUTY CHIEF ADMINISTRATIVE
OFFICER AND CHIEF FINANCIAL
OFFICER

FILE: 2410 01

SUBJECT: CIVIC INNOVATION LAB – UPDATE ON ACTIVITIES

PURPOSE: To provide Council with an update on the activities of the Civic Innovation Lab.

RECOMMENDATIONS:

1. **THAT** the Committee recommend Council receive this report for information.
2. **THAT** the Committee recommend Council approve participation of the City of Burnaby in the Reach Cities Project, as outlined in *Section 4.1* of this report.

REPORT

1.0 INTRODUCTION

At its meeting of 2022 March 07, Burnaby City Council approved the establishment of a formal research partnership with Simon Fraser University (SFU) through the formation of a jointly controlled, non-profit Society – the Civic Innovation Lab (CIL). CIL's mandate is to research and develop innovative solutions to civic issues and challenges, in addition to providing educational advancement through collaborative learning and research opportunities. This report provides an update to Council of the CIL's activities to date.

The CIL was officially incorporated under the B.C. Societies Act on 2022 May 16. This process included the registration of a Constitution for the Society, along with certified Bylaws. The founding Board includes two representatives from SFU and two from the City of Burnaby (COB), as outlined below. Charitable status is also being pursued.

Name	Organization	Position
Mr. Leon Gous	City of Burnaby	Chief Administrative Officer
Mrs. Noreen Kassam	City of Burnaby	Deputy Chief Administrative Officer - CFO
Mrs. Joanne Curry	SFU	Vice-President, External Relations
Mr. Dugan O'Neil	SFU	Vice-President, Research and International

As part of formation of the Society, both SFU and COB agreed to contribute matching administrative ‘start up’ costs of \$175,000 to the CIL. This has included the identification of a staff person from each organization dedicated to support operations:

- City of Burnaby: Rebekah Mahaffey, CIL Executive Director
- SFU: Abdul Zahir, CIL Research Project Manager

A similar contribution to the CIL has been included as a request in the 2023 City budget, and is also being requested through the equivalent SFU processes.

As well, it is a founding intention of the CIL that the Society will seek, either alone or in partnership with other organizations and institutions, external funding opportunities as they emerge, and as connected with identified projects.

2.0 POLICY CONTEXT

The founding of the Civic Innovation Lab is aligned with the following Council-adopted policies and plans/strategies: the *Climate Action Framework* (2020), the *Corporate Strategic Plan* (2022), the *Environmental Sustainability Strategy* (2016) the *Social Sustainability Strategy* (2011), and the *Economic Development Strategy* (2007).

3.0 CURRENT PROJECTS

At the time of the Civic Innovation Lab’s (CIL) formation, a wide range of potential project areas were identified including, but not limited to:

- Climate Emergency adaptation and mitigation, e.g. alternative energy sources
- Transportation, e.g. North-South corridor, driverless cars and City design
- Innovative Technology, e.g. adaptive street lights
- Eco-system Health, e.g. Deer Lake remediation

Since CIL was incorporated in 2022 May, a number of projects have been identified. An overview of these projects is provided below. The Civic Innovation Lab Board will identify and pursue future projects based on an annually confirmed framework of priority areas of action, which align with both City and SFU objective. Council will continue to be kept updated via biannual reports and/or on a project specific basis.

3.1 Mobility Access and Participation Project (MAP)

The MAP¹ project is a seven-year Social Sciences and Humanities Research Council (SSHRC) funded partnership that began in 2019. Simon Fraser University (SFU) is one of the participant research institutions, which also includes the University of British Columbia and Université Laval. The lead SFU researcher is Dr. Atiya Mahmood from the Department of Gerontology. Burnaby has been a participant community since the beginning of the project, pre-dating incorporation of the CIL. To-date, Burnaby has been most heavily involved in pedestrian infrastructure-related research efforts, coordinated through Transportation Planning.

Now that the CIL is in place, discussions are underway about how Burnaby's participation in MAP initiatives can grow with initial efforts focused on improving the accessibility of bike path/urban trail design, and incorporating an accessibility lens into the City's existing pedestrian infrastructure programs (e.g. new sidewalk program). The MAP project also has the potential scope to support the City's ongoing process of implementing accessibility standards as per the *Accessible BC Act* (2021).

3.2 Urban Resilient Futures Initiative

As Council is aware, the Urban Resilient Futures² (URF) is a three-year initiative working with the City of Burnaby, residents and stakeholders to accelerate climate action and to co-create a new, locally developed narrative for a resilient, low-carbon future. This work is also intended as a proof-of-concept for how municipal governments across Canada, that face barriers in reducing the consumption of greenhouse gases, can engage their urban populations. The founding partners of URF are the City of Burnaby, Simon Fraser University's Morris J. Wosk Centre for Dialogue and Vancity.

More specifically the initiative is focussed on the following areas:

- Accelerating action on retrofits for commercial and residential buildings;
- Enabling and supporting neighbourhood-level climate action projects;
- Convening a Citizens' Assembly on Livable and Resilient Neighbourhoods, to develop recommendations for a renewed Burnaby Official Community Plan (recently begun); and,
- Demonstrating how cities can advance the concept of an equitable transition, by integrating the voices of equity-seeking communities.

The City's participation in URF pre-dates incorporation of the CIL, but is now also being supported by CIL staff in ongoing collaboration with other relevant COB and Centre for Dialogue staff. The Urban Resilient Futures Building Retrofit Taskforce presented its findings to Council at its 2022 November 21 meeting.

1 For more information, please visit: [inclusivemap.ca](https://www.inclusivemap.ca)

2 For more information, please visit: <https://www.sfu.ca/dialogue/programs/urban-sustainability/urban-resilient-futures.html>

3.3 *Deer Lake Ecosystem Remediation Project*

Deer Lake is a lake and wetland area in the central valley watershed of Burnaby in proximity to the City of Burnaby's cultural precinct (i.e. the Shadbolt Centre for the Arts, Burnaby Art Gallery, and Burnaby Village Museum), and to Burnaby City Hall. The area is a vital ecosystem location for a wide variety of flora and fauna, and also connects to salmon bearing streams (e.g. Buckingham creek). As well, it is an important year-round gathering location for Burnaby community members.

Deer Lake, while still a 'jewel' of Burnaby, is often turbid and nutrient rich as a result of urban run-off and natural aging. The lake is also often overrun with Canada geese and other water fowl whose droppings contribute to poor water quality. It has long been a goal of the City of Burnaby to embark on ecosystem remediation for Deer Lake, to improve its habitat quality and with a long-term goal to make the lake swimmable again.

Work in this area has been initiated by the CIL, with appropriate Parks, Recreation and Culture staff engaged, with potential SFU researchers identified to undertake a 'state of the lake' study to determine a baseline and initial avenues for ecosystem remediation. Additional SFU academics will be identified through the CIL as needed.

Funding to support this initial work to occur in a timely manner is being included as a request in the 2023 City budget. As well, CIL staff have begun efforts to identify additional funding sources which could offset these study costs and/or contribute to implementation of the findings. Council will be further updated as the project advances.

3.4 *Community Centred Climate Innovation – Exploration of Hydrogen Power*

The City of Burnaby, via the CIL, is a partner along with Fortis BC in SFU's multifaceted 'Community Centered Climate Innovation' (C3I) application to the Federal Government's Canada First Research Excellence Fund (CFREF). The particular focus of the partnership broadly involves developing technologies to integrate distributed resources in energy networks; decarbonize sectors and systems; promote adoption of zero-emissions energy technologies; and accelerate decision-making and planning for the de-carbonization of energy systems. More specifically, the project focusses on trialing hydrogen blends as alternative power sources, with potential application in civic facilities.

The SFU research lead is Dr. Sami Khan, an expert in interfacial material phenomena, with the SFU School of Sustainable Energy Engineering. Partnership development meetings are occurring on a regular basis, and implementation will begin pending notice of the CFREF application (anticipated Q2 2023). Council will be kept updated.

3.5 *Sustainable Energy Systems*

Sustainable energy systems and associated initiatives have been identified as a City of Burnaby priority for investigation and piloting (at a variety of scales), as outlined in the Burnaby Climate Action Framework and City Energy Strategy. CIL staff, with the support of the SFU Partnerships Hub, have developed a connection with Dr. Majid Bahrami who

is a Professor with the SFU School of Mechatronic Systems Engineering, with expertise in district energy networks, decarbonizing thermal systems in buildings and hybrid micro grids, sustainable heat pumps and air conditioning systems, etc.

Conversations are occurring to establish a partnership for the City, coordinated through the CIL, to work with Dr. Bahrami to provide input and expertise into:

- District Energy System (DES) Project, which aims to provide Burnaby residents with safe, reliable, cost-competitive thermal energy recovered from the Metro Vancouver Waste-to-Energy facility. As Council is aware, budget to initiate this project was included in the 2022-2026 Financial Plan.
- Green Building Policy – to further inform development of the City’s green building policies, for example in the areas of modelling and forecasting heat storage and transfer needs/usage, and electrical grid load and distribution capacity predictions.

As project work in this area continues to evolve, Council will be kept updated.

3.6 Transportation Decarbonization

Meeting zero emission targets within its transportation networks, both corporately and within the community, is a City priority, again as outlined in the Burnaby Climate Action Framework and City Energy Strategy. To further explore how this transition can occur equitably, from a full systems approach, CIL staff, with the support of the SFU Partnerships Hub, have made a connection with Dr. Vahid Hosseini, a Professor with the SFU School of Sustainable Energy Engineering.

Through this connection, the City of Burnaby, via the CIL, has participated in two funding applications to support the integrative modeling initiative within Burnaby as a case study community. These applications were submitted to Environment and Climate Change Canada and the Natural Sciences and Engineering Research Council of Canada ‘Anthropogenic greenhouse gas research’ funding stream. Further project discussions and planning will occur pending notice of the funding applications. Council will be kept informed.

4.0 EMERGENT CIVIC INNOVATION LAB OPPORTUNITIES

In addition to the projects discussed above, the following opportunities are emergent areas for future work of the CIL. A brief summary is provided below for Council’s information.

4.1 REACH-Cities Project

The City of Burnaby, via the CIL, has been invited to join as a participant local government in the Research and Action for Healthy Cities (REACH-Cities) Project³. This project is a

³ For more information, please visit <https://chatrlab.ca/projects/reach-cities>

7-year funded initiative by the Canadian Institutes of Health Research (CIHR), and led by Dr. Meghan Winters with the SFU Faculty of Health Sciences. The REACH-Cities program focuses on how cities can welcome and support people of all genders—especially those historically overlooked within city planning on the basis of age, race, income, or ability.

The research of REACH-Cities explores the implementation and impacts of population health interventions, such as policies related to municipal transportation or community planning policies, changes to the built environment such as new rapid transit and bicycle facilities, and programs that support social connections and physical activity. The overarching focus, is to better understand how health-related outcomes are patterned by gender and other intersectional identities.

No specific funding contributions on the part of the City have been requested, as the project is fully funded and in-kind staff resources are available via the CIL. In order to formalize the City of Burnaby's participation in the REACH-Cities Project, staff are seeking Council's approval to join the work as a project partner.

Should Council endorsement be granted, implementation will then occur supported by CIL staff, engaging other City staff on an as-needed basis. Project milestones and achievements will be shared with Council as they occur.

4.2 *City Space Living Lab – Project Concept*

As an overarching opportunity to support many of the projects identified above, and to enable the overall dynamic growth of the CIL, Simon Fraser University is partnering with the City of Burnaby, via the CIL, to explore funding opportunities for a Living Lab approach involving the City and SFU with industry partners. Discussions with a prospective higher level of government funder is at early stages.

Based upon SFU's Living Lab operational model, this concept proposal would foster industry-municipal-academic collaboration for regional scaling and real-time feedback for product development marketization. The project will prioritize industry innovation that would support the City of Burnaby to achieve its climate goals and test high-impact, ready-to-scale, climate solutions with potential further application outside Burnaby.

If successful, this concept would strengthen linkages between SFU, industry, and the City in order to further test and apply successful applications and technologies on a larger civic scale. The 'hydrogen power' project referenced above is one such example, which could be expanded or replicated in a range of areas and industries. Should this opportunity come to fruition, Council will be updated accordingly.

4.3 *Gun & Gang Violence Reduction Strategies*

At its 2022 April 20 meeting, Burnaby City Council received information outlining that the Community Safety Department had been invited by Public Safety Canada (PSC) to apply for funding to the federal Building Safer Communities Fund, specifically to support

To: Chairs and Members, Executive Committee of Council
From: Deputy Chief Administrative Officer and Chief Financial Officer
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community-based prevention and intervention strategies to reduce gun and gang related violence. The funding application has moved forward and, pending official confirmation from PSC, work is anticipated to begin in 2023.

In anticipation of this work beginning, the CIL has been engaged in order to initiate collaboration between relevant City staff with SFU researchers in the areas of criminology, crime reduction, and criminal justice. This partnership development has just begun and is intended to ensure that efforts undertaken under the grant are informed and supported by innovative, evidence-based crime reduction initiatives and research.

As work takes shape, further progress updates will be shared with Council either via the CIL, or directly from Community Safety staff.

7.0 CONCLUSION

This report provides an overview of activities undertaken by the Civic Innovation Lab since its incorporation in 2022 May. A further update on Civic Innovation Lab activities will be shared with Council after the inaugural AGM in 2023 June, or on an as-needed, project-specific basis.

To further the work of the CIL, it is recommended that Council receive this report for information and approve participation in the REACH-Cities Project, as outlined in *Section 4.1* of this report.



Noreen Kassam, CPA, CGA
Deputy Chief Administrative Officer and Chief Financial Officer

NK/RM:eb

Copied to: General Manager, Lands and Facilities
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