

Municipal Innovation Council - Minutes

Electronic Meeting May 27, 2021 2:30 p.m.



Members

Jessica Linthorne, Director, Strategic Initiatives, Saugeen Shores, Chair	Present
Mary Rose Walden, CAO, Township of Huron-Kinloss	Present
Sonya Watson, CAO Municipality of Brockton	Present
Sharon Chambers, CAO, Municipality of Kincardine	Present
Leanne Martin, CAO/Clerk Municipality of South Bruce	Present
Sylvia Kirkwood, CAO Municipality of Arran-Elderslie (<i>left at 3:00 p.m.</i>)	Present
Peggy VanMierlo-West CAO Municipality of Northern Bruce Peninsula	Present
Matthew Meade, Strategic Initiatives Specialist at Bruce County	Present

Staff Support

Dave Shorey, MIC Innovation Officer (non-voting)	Present
Emily Dance, Clerk Huron-Kinloss, Recording Secretary (non-voting)	Present

1. Call to Order

1.1. The Chair called the meeting to order at 2:34 p.m.

2. Additions or Amendments to the Agenda

None

3. Adoption of the Minutes

Motion

Moved by: Sharon Chambers Seconded by: Mary Rose Walden

THAT the MIC hereby adopts the March 25, 2021 Municipal Innovation Council Meeting Minutes as presented.

- March 25, 2021 Municipal Innovation Council Minutes

Carried

4. Delegations

4.1. None Scheduled

5. Update/Announcements from Members

Northern Bruce Peninsula have implemented paid parking and are finalizing the Short-Term Rentals By-law. They are in discussions with a company that provides a software program that

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provides electronic information on short term rentals even if they are not registered with the common short term rental platforms.

Municipality of Kincardine has received approval for their digital transformation strategy. With the remaining funds, they plan to review their purchasing processes and records management processes. Kincardine has finalized the organization review and are implementing new positions and a change management plan. On June 7, 2021 Kincardine Council will be discussing diversity, equity and inclusion.

Brockton has completed the procurement review; and training is underway. They are also working on developing a strategic action plan. It was noted that they have had challenges with public engagement due to the pandemic.

Municipality of Arran-Elderslie stated that escribe and city wide are new electronic platforms that are being introduced.

7. Updates/Reports

7.1. Recalibration report- 18 month Check in – Jessica Linthorne

- Recalibration report- 18 month Check in

The Chair gave a quick overview of the report and noted appreciation on the relationships and candid conversations held by the members and reflecting on the past 18 months is very proud of the work to date from the group.

In relation to the action items it was recognized that there is room for improvement on communications and timeliness of document sharing and suggested revisiting the use of SharePoint as a way to get information to the group in a more efficient manner. Avenues such as a blog or Office 365 were also suggested; however, not all members have Office 365.

It was mentioned that there may be a disconnect with understanding the role of the MIC. Members are requested to try to create awareness in their organizations of the MIC role and function. The participation of the students at the participating municipalities Senior Management Team meetings was very beneficial and the students welcome an invitation to an additional meeting.

The Chair will work with Innovation Officer to include metrics relating to cost savings and efficiency as a standard item in quarterly reports to Councils and annual delegations.

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It was also requested that the MIC members ensure appropriate staff in their organization are named to relevant Community of Practice discussions, ensuring ownership and accountability regarding discovery and implementation of projects.

Motion

Moved By: Leanne Martin Seconded By: Matt Meade

THAT the Municipal Innovation Council hereby receives for information Recalibration Report – 18 month check in prepared by Jessica Linthorne, Chair.

Carried

7.2. Bi-monthly Innovation Officer Report – Dave Shorey

- Bi-monthly Innovation Officer Report

The Innovation Officer reviewed the report at a high level and provided a recap on the current projects with the members and requested moving forward with the spring/summer term work showcase on August 12, 2021.

Ideas brought forward for applied research projects include: recreation, codes of conduct in governance, agriculture community, sector, clusters, broadband gaps, natural gas, digital innovation partnership with Owen Sound Georgian College, past ideas were also brought forward along with climate change.

Motion

Moved By: Sharon Chambers Seconded By: Leanne Martin

THAT the Municipal Innovation Council hereby receives for information Bi-monthly Innovation Officer Report prepared by Dave Shorey, Innovation Officer AND approves moving forward with the spring/summer term work showcase on August 12, 2021 from 2:30 – 4:30 pm.

Carried

7.3. Advancement of National Disaster Mitigation Program (NDMP) Report No. 2021-03 – Dave Shorey

- MIC Report 2021-03 NDMP

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The Innovation Officer provided a summary of the report. Concerns were brought up on the total costs for the purchase and the funding at the current status on the current financial commitments and any other funding from other stakeholders.

The group suggest a special meeting be held in June to review the financials and funding partners.

Motion

Moved By: Mary Rose Walden Seconded By: Peggy Van Mierlo-West

THAT the Municipal Innovation Council hereby approves Report No. 2021-03 Advancement of NDMP program prepared by Dave Shorey, Innovation Officer and DEFERS approval of funding the remaining balance of the purchase of a digital product that produces a Digital Terrain Model (DTM), Digital Surface Model (DSM), and 3D rendering of the County AND THAT more information be brought forward to a special meeting in June 2021.

Carried

7.4. Smart Beach Report No 2021-04 – Dave Shorey

- MIC Report 2021-04 Smart Beach
- MIC Smart Beach Project (Appendix)

A discussion was held on the report and it was noted that Kincardine has significant concerns with beach safety and has been working with NPX for solutions. They are very interested in this project.

Comments were made indicating that this project is of value; however there are some communities that may not have similar concerns regarding rip currents in and rip currents are different for different bodies of water.

The members would like to review the budget prior to committing to the project and requested it be brought forward to the June Meeting with options for funding.

Motion

Moved By: Sharon Chambers Seconded By: Sonya Watson

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THAT the Municipal Innovation Council hereby receives Report No 2021-04 Smart Beach prepared by Dave Shorey, Innovation Officer and DEFERS the decision on the MIC being the lead municipal partner AND THAT the funding and partnerships on the 3-year beach safety program that includes remote sensing and public education regarding water hazards be discussed at the special meeting in June 2021.

Carried

7.5. Co-op Students to support priority projects Fall 2021- Dave Shorey

- MIC Report 2021-02 Co-op Students

The members are pleased with the work being done and support moving forward with the students in the noted areas of focus. The members requested the wages be discussed in closed session due to the sensitive nature. The Innovation Officer indicated that an analysis was completed around co-op student wages and that the median wage is \$23-\$25 across the institutions.

By consensus, further discussion will take place following the closed session.

7.6. Co-op Innovation Student update – Verbal Report from students

- IT Business Analyst (Ayaan Hussain)
- Organizational Development Analyst (Christie Downie)
- Municipal Service Analyst (Scarlett Wang)

By consensus due to time, the students will make a video update to be provided at a later date to the group.

8. Rules of Procedure

8.1. At the March 25, 2021 meeting the MIC approved amending the Rules of Procedure.

Attached is a copy of the revised Rules of Procedure for the members records.

- MIC Rules of Procedure – March 2021

9 Budget Review/Request

9.1 Budget Review Report

- General Ledger December 31, 2021 to May 31, 2021

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The Chair explained that a further detailed report would be presented at the June, 2021 meeting.

10 Closed Meeting

Motion:

Moved By: Mary Rose Walden Seconded By: Matt Meade

THAT the Municipal Innovation Council hereby move into Closed Session pursuant to Section [s. 239(2)(d)] Labour relations or employee negotiations – Innovation Officer AND return to open upon completion

Carried

11. Business arising from Closed Session

The Chair noted a closed session was held where Labour relations – Innovation Officer and Student Wages were discussed. The Chair and Vice-Chair received direction regarding labour relations. Student wages would be further discussed at the June 2021 meeting.

12. Meeting Schedule

A Special Meeting will be held in June, 2021, the Secretary will send out a doodle poll.

Thursday July 29, 2021- 2:30-4:30pm

Thursday September 30, 2021- 2:30-4:30pm

Thursday November 25, 2021- 2:30-4:30pm

December – delegations to all partner Councils

13 Adjournment

Motion

Moved by: Leanne Martin Seconded by: Peggy VanMierlo-West

THAT the Municipal Innovation Council hereby adjourns at 5:01 pm

Carried

Original Signed By Kara Van Myall

Chair

Original Signed by Emily Dance

Secretary

Chair's Report

Municipal Innovation Council

Report: Recalibration Report – 18 month check in

Date: May 27, 2021

Submitted by: Jessica Linthorne, Chair

As built into the timeline and accountability section of the MIC Business Plan, the MIC is committed to reviewing strategy and practice as part of the 18 month check in/recalibration.

In the past 18 months, the MIC has:

- hired an Innovation Officer
- identified secure digital signatures solution for municipalities looking to create efficiencies in document work flow between staff, elected official and other stakeholders
- developed a strategic framework based on strategic capabilities and areas of focus
- secured over \$200,000 of funding from the provincial and federal government
- completed a waste management service review
- advanced conversations on affordable housing, engaging University of Waterloo's School of Planning, to support an implementation plan
- hired three post secondary co-op students to focus on:
 - Comprehensive environmental scan of organizational development efforts across all member municipalities and advancement of a shared training and development curriculum
 - Municipal service mapping that integrates sector research and applies UX principles to improve service design and delivery
 - IT business analysis of all member municipality's digital infrastructure including software, hardware, and consultancy spends. Information used to identify shared service agreement and procurement opportunities
- promoted conversation between subject matter experts in our member municipalities, allowing for sharing of information and knowledge
- providing support in the development of a remote sensing platform with the County of Bruce IT and Transportation departments to automate problem/hazard identification throughout Bruce County
- planning for sustained engagement of youth to enhance engagement of young people in member communities
- developing Smart Coast infrastructure that enhances swimmer safety along Lake Huron shoreline through public private partnership

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- supporting the Bruce-Grey District Catholic School Board with post secondary involvement regarding a mentor-mentee STEM education program with Wilfrid Laurier University
- advancing applied research on the rehabilitating vacant buildings for community development with the University of Waterloo's MEDI program
- advancing applied research on best practices in municipal procurement with the University of Waterloo's MEDI program
- offers articles, data, conversation and connection to experts to learn more about municipal trends and industry changes

The MIC continues to advance work as it relates to the strategic framework, with ideas and opportunities coming forward from MIC representatives, municipal staff, the Innovation Officer, and from members of the community.

In April 2021 a questionnaire was circulated to MIC representatives to gather insight from MIC member municipalities. In addition to this questionnaire, the Chair has had conversations with some MIC members to discuss expectations and interests.

Results of the questionnaire confirmed the structure of the meetings are working well, and there was comment from a few members regarding the process of distributing minutes. This process will be reviewed in partnership with the MIC Secretary.

The survey results also demonstrated a sense of uncertainty regarding municipal staff awareness and understanding of the MIC. This data enforces the opportunity to leverage communities of practice/subject matter experts, including further dialogue with senior staff and champions in each member organization.

Further to these opportunities for enhancement, there is an appetite to provide a report on the value of MIC projects. It has been discussed amongst members that the quarterly reports to Council should include the cost savings/efficiency of working together.

Members are looking forward to learning from the co-op students brought on board in partnership with the Nuclear Innovation Institute. With a focus on organizational development, service mapping and IT services review, the representatives of the MIC have specific considerations for the students to investigate.

In addition, the group recognizes the work being done in each member municipality and feel there is further opportunity to explore each other's work, reports and recommendations. Members have noted there may be recommendations within existing work that resonates for all member municipalities. There is an opportunity to implement recommended actions as a group, and there is recognition in sharing work rather than duplicating efforts between municipalities.

Communities of practices and staff subject matter experts must continue to be a point of contact for the Innovation Officer. Staff play a tremendous role in the success of MIC projects by sharing their experience, knowledge, as well as other factors to consider such as upcoming technology, granting

opportunities, ideas for cost savings and more. Each member of the MIC employs talented, passionate and well-connected staff. The people in our organizations are an asset as we discover and implement efficiencies.

In addition to staff on the ground, area CAOs and others appointed to the MIC are critical stakeholders toward success and are recognized as sponsors of the pilot program. MIC representatives are asked to be present for bi-monthly meetings, to participate in surveys/questionnaires, to provide contact information, awareness and clarity to subject matter experts within their organization, and to offer perspective and ultimately directly to the Innovation Officer.

COVID19 has caused a shift in priorities as it relates to workload for all members and representatives of the MIC. With 18 months remaining in this pilot program, it is critical the representatives of the MIC remain engaged and active in decision making, sharing concepts and leveraging work which has been done and supporting the projects on the ground.

In this report is a list of actions to advance as they relate to recalibration of the MIC.

Actions:

- 1) Chair to work with Secretary to refine minute distribution process
- 2) MIC representatives to create awareness in their organizations of the MIC role and function
 - a. Initiatives may include minute sharing, inviting Innovation Officer to speak, ensuring engagement with co-op students
- 3) Chair to work with Innovation Officer to include metrics relating to cost savings and efficiency as a standard item in quarterly reports to Councils and annual delegations
- 4) MIC representatives to ensure appropriate staff in their organization are named to relevant Community of Practice discussions, ensuring ownership and accountability regarding discovery and implementation of projects
- 5) MIC representatives continue to be engaged in dialogue and decision making, including willingness to share reports, studies and resources as applicable



MIC REPORT

Report To: Municipal Innovation Council (MIC)
Report From: Dave Shorey, Innovation Officer, MIC
Meeting Date: January 20, 2021
Subject: Bi-monthly Innovation Officer report

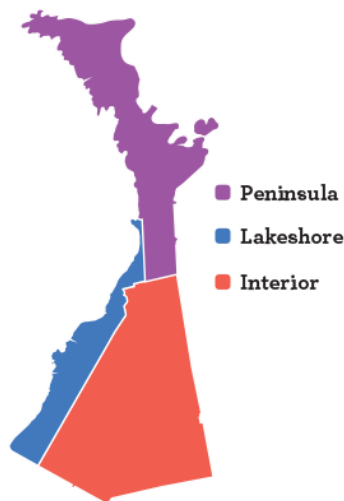
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Applied research partnership with the University of Waterloo's Master in Economic Development and Innovation (MEDI) program

In the fall of 2020, I connected with Dr. Heather Hall at the University of Waterloo. I expressed interest in working with the Masters in Economic Development and Innovation (MEDI) program and invited any opportunity to collaborate on applied research projects in Bruce County. In late 2020 I reached out to economic and community development officers across Bruce County to explore possible research topics that were of interest. After doing a thematic analysis of their responses, five research projects emerged. I worked with Dr. Hall and Dr. Jeffrey Wilson to refine each project, and in January 2021 our faculty partners shared the proposed research projects with current graduate students of the MEDI program. Each MEDI student is required to complete an applied research project over the spring/summer term, creating an opportunity for us to engage highly skilled graduate students in research that has a direct, local impact.

Fatima Hirsi selected project #3 – Best practices in municipal procurement. Her research aims to provide the MIC membership with suggested approaches to collaborative procurement that integrates proven practices locally as well as in other regions. Fatima has been introduced to staff responsible for procurement in the County of Bruce and in Brockton.



Aniqa Shams selected project #2 – Rehabilitating vacant buildings for community development. The intent of Aniqa's research is to explore strategies that other communities have used to address the problem of vacant/derelict buildings. Aniqa is also committed to understanding what unique challenges are present in the communities across Bruce County that she is looking more closely at. Aniqa has met with staff in Arran-Elderslie and has been introduced to staff in Brockton, South Bruce, Huron-Kinloss, and the County of Bruce. I have recommended that Aniqa focus her work on the interior economic region in Bruce County (see left).

I meet every other week with each graduate student for coaching, feedback, further scoping, and any follow up to facilitate connections with staff and access to information. Their project will be submitted in mid-August.

Ongoing work on attainable and affordable housing

The Town of Saugeen Shores launched an Attainable Housing Task Force in 2020 to lead research into the lack of affordable housing in the community. A final report was presented to the Saugeen Shores Council on February 16th, 2021. I established a connection to two faculty members in the University of Waterloo's School of Planning in the fall of 2020 and secured their commitment to support Saugeen Shores' work through applied research in their studio planning courses.

A total of 30 undergraduate and graduate students completed four months of research that is not only valuable to the Town of Saugeen Shores but to all MIC member communities. I coordinated two research symposiums in April so that students could share their findings with staff from across the region. In addition, I led two implementation workshops with the Town of Saugeen Shores and County of Bruce staff in late April to synthesize the research done by the task force and the UW students and to arrive at short, medium, and long term action items.

The County of Bruce planning and community services teams have been actively investigating the issue of affordable and attainable housing and have worked with the University of Guelph to develop a host of solutions that support community members in securing safe housing. In addition, Plan the Bruce is an active campaign to solicit input about what planning decisions should be considered in Bruce County in the years ahead.

I have heard many municipalities express interest in forming attainable housing task forces for their communities. There is much to learn from the work done in Saugeen Shores and in the County of Bruce, so I have confirmed a date and time where staff from both municipalities can present the following to help communities build a strategy for future action:

Attainable housing in Bruce County: Lessons learned from Saugeen Shores and the County of Bruce + a path forward together

The intent of this session is to provide space for other municipal staff in Bruce County to:

- 1) Hear about Saugeen Shores experience forming an attainable housing task force, including
 - a. Terms of reference
 - b. Who was engaged
 - c. Resources needed
 - d. Lessons learned (what you would do again, what you would not do again)
- 2) Hear about the work that the County of Bruce planning and community services teams have done on affordable and attainable housing
- 3) Discuss a "best practice" approach for any community considering an attainable housing task force, including:
 - a. How local and County of Bruce staff can work together from day 1

- b. How the research from the County of Bruce staff team and Saugeen Shores AHTF can fast-track some of the work in other communities
- c. How we might be able to share information and resources throughout the process

The date of the workshop is **June 10th from 2:30 – 4:30 pm**. All municipal staff interested in hearing about the experience of Saugeen Shores and County of Bruce staff. I will facilitate the workshop.

On a final note regarding housing, the CHMC will launch their second round of their Housing Supply Challenge on June 9th. I have early information about the focus of round 2 and believe that there is an opportunity for MIC-member municipalities to collaborate on an application. The focus of this round is on all the pre-work that can be done to create greater housing supply at affordable rates. Applications are due August 25th at 2 pm. More information about the challenge can be found here: <https://www.cmhc-schl.gc.ca/en/professionals/project-funding-and-mortgage-financing/funding-programs/all-funding-programs/housing-supply-challenge/round-2-housing-supply-challenge>

Intelligent Cities Summit (May 26 – 28)

Jess Linthorne (Chair of MIC) and I were invited to present at the 2021 Intelligent Cities Summit.

I am a member of panel that includes Raimundo Rodulfo from the City of Coral Gables, FL and Michael Thususka from the City of Summerside, PEI. We are speaking about adapting ecosystems, organizations, and people at 1 pm on Thursday, May 27th in the session titled “What does the future hold for us?”

Jess is a member of a panel that includes Andrew Buss from Philadelphia, PA and Michael Hess from Orlando, FL. They are speaking about empowering communities through partnership, allowing room for failure in municipal systems, and rewarding success at 12 pm on Friday, May 28th in the session titled “Creating a culture to foster collaboration, creativity, and critical thinking.”

We are both proud representatives of the MIC. I have registered all three co-op students in the full conference as well (at no cost) so that they have enriched professional development that can inspire new innovations in our work in the MIC.

Solid waste management services review

During our March 25th MIC meeting, I provided a detailed update on the progress of the final report's roll out and response. Additional work has been done since our last MIC meeting to mobilize one or more of the recommended "next steps" that were outlined in Dillon's report.

On April 7th from 10:30 am – 12:30 pm Matt Meade and I met with the Bruce County Waste Management Technical Sub Committee to solicit feedback on the report. The group is led by Miguel Pelletier, Director of Transportation and Environmental Services in Bruce County, and includes municipal staff responsible for waste management in their municipalities. The group also includes BASWR staff.

I presented each of the 25 recommended options to the group as a refresher, keeping in mind that all in the meeting had been involved in the waste management service review since June 2020 when information interviews were conducted by Dillon Consulting. I focussed my time with the group on identifying the most viable and attractive next steps.

Two themes from the session emerged:

- 1) There is strong interest in an organics program across the County, and the suggestion was made that County staff may be best positioned to coordinate the program, and
- 2) As waste management becomes increasingly complex, there may be an enhanced role for the county to define a county-wide strategy to waste management. This could look like subject expertise around legislative changes housed with the county, and the facilitation of a strategic plan for all municipalities to collaborate on waste management could be done by County staff.

Both themes were acknowledged, and indication was made that the 2022 work plan would include those two items for consideration.

Municipal Modernization Program (MMP)

The MIC eagerly awaits the results of the Province's evaluation of our MMP application which focussed on IT business analysis. The work that Ayaan Hussain is doing over the spring and summer will support the work of this MMP application. Given the breadth and depth of Ayaan's work, the consultant will have a great deal of high value information to use in their analysis should we be successful in our application.

Follow up to request for MIC engagement in developing transportation solution in member communities

Given the focussed work that Miguel Pelletier (Director of Transportation and Environment Services) and his team are doing to develop a master transportation plan for Bruce County, we have communicated to Saugeen Shores that we will pause work that they requested the MIC do on local transportation needs.

Progress in the County's Master Transportation Plan can be viewed here:

<https://brucecounty.on.ca/transportation-master-plan>

I strongly encourage municipal staff to review what has been developed thus far and provide feedback to Miguel to include in his planning moving forward. There are some great suggestions!

MIC Co-op and Internship Program

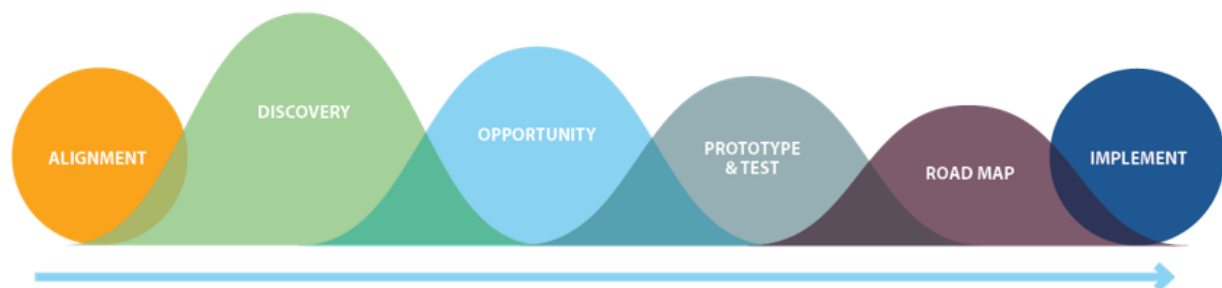
On May 3rd, the MIC team grew by three staff members with the launch of the MIC Co-op and Internship Program. We spent our first week onboarding and had the opportunity to meet with each member municipality's senior management team over the last two weeks. Our new team members are:

- **Ayaan Hussain** is a second-year undergraduate student studying Business Administration (Laurier) and Computer Science (Waterloo). Ayaan is in the role of IT Business Analyst this summer where he is assessing the current state of IT infrastructure and associated spends, identifying critical needs, and highlighting opportunities for partnership as municipalities invest in system upgrades.
- **Christie Downey** has just completed her undergraduate degree in Business Administration (Laurier) and will start her Bachelor of Education (Laurier) this fall. Christie is in the role of Organizational Development Analyst where she is identifying all training and development offerings in the membership, assessing the competencies needed in municipal work, and will do a gap analysis to identify what additional training may be needed.
- **Scarlett Wang** is in her final term of her undergraduate degree in Recreation and Leisure Studies (Waterloo) where she has focused on tourism development. Scarlett is in the role of Municipal Service Analyst where she is conducting a comprehensive scan of all member municipalities to identify all services provided, categorize services, and identify organizational structures that support the delivery of each service. Scarlett is also applying a user journey mapping methodology to her work to identify any barriers that community members may experience when trying to access a service.

Their impact has been immediate, with networks being formed across the membership with staff that share similar roles and responsibilities in our municipalities. Each project provides value to community members and to municipal teams:

- By strengthening our IT infrastructure together, we are building a more robust ecosystem for digital transformation to occur.
- By identifying each municipal service and the potential pain points that staff and community members experience, we can reduce barriers which leads to greater access.
- By assessing all training being offered to municipal teams, the resources required to coordinate training, and the competencies needed by staff to meet their roles and responsibilities, we are enhancing our shared capacity to meet the needs of our community members.

We have found that the BC service design model is a useful shared methodology for different projects.



We have moved from the first stage (alignment) into the second stage (discovery). My colleagues are engaged in deep work aided by tremendously supportive municipal staff from all member municipalities.

As we move into the third stage (opportunity identification), insights will emerge around the ways that municipalities can learn from each other and work together. Ayaan, Christie, and Scarlett can provide MIC members with a verbal update on high level opportunities that are emerging in their research as well as any barriers they need support on.

I would like to schedule a showcase event where Ayaan, Christie, and Scarlett can present their spring/summer term work to the MIC. **Could we determine a date for this event to take place at the May 27th 2021 MIC meeting?** I will forward August 12th from 2:30 – 4:30 as a suggested date and time.

Supporting NII development

In addition to the project updates listed above, I wanted to briefly share that I am engaged in the Nuclear Innovation Institute's growth and development through introductions to potential partners in FedDev, post-secondary education, and in the electric vehicle market. There are numerous points of intersection with the NII, specifically with the Clean Energy Frontier program led by Chad Richards and the Explore program led by Phillip Craig. I look forward to continuing to provide support, resources, and a willing partner on collaborative projects that position our region as a leader in clean energy and innovation and support the growth of a knowledge economy in Bruce County.

Applied research needs this fall

A great deal of success has been realized through partnerships with post-secondary institutions on applied research projects in our communities. Faculty are planning for their fall term at this time, so I would like to identify any applied research needs/interests now that I can locate partners in post-secondary education to help advance.

Do you have areas of innovation that you would like to engage PSE in investigating?

MIC REPORT 2021-03

Report To: Municipal Innovation Council (MIC)
Report From: Dave Shorey, Innovation Officer, MIC
Meeting Date: May 27, 2021
Subject: Advancement of National Disaster Mitigation Program (NDMP) program

Recommendation

THAT the MIC hereby approves Report No. 2021-03 Advancement of NDMP program prepared by Dave Shorey, Innovation Officer and approves funding the remaining balance of the purchase of a digital product that produces a Digital Terrain Model (DTM), Digital Surface Model (DSM, and 3D rendering of the County.

Communities need to plan for a changing future in the Great Lakes basin

All MIC member communities enjoy easy and reliable access to one of the world's greatest reserves of fresh water. The Great Lakes sustain life for millions. Bruce County, with more than 800 KMs of Lake Huron and Georgian Bay shoreline, has an opportunity to provide leadership around protecting our most valuable resource.

Accounting for and adapting to a rapidly changing climate was one of the first priorities set out by the MIC in 2020. The MIC has identified sustainable development as one of six areas of opportunity which requires each municipality to do what it can to ease the burden that humans place on our tributaries and lakes.

Great Lakes Now, a joint initiative between the Public Broadcasting System (PBS) and Detroit Public TV, identified that stormwater presents an immediate concern to water quality in the Great Lakes and the integrity of our infrastructure. Donald Carpenter, professor of practice of civil and architectural engineering at Lawrence Technological University in Southfield, Michigan aptly pointed out that "...our receiving waters—our lakes, our streams and our rivers—they don't know that we developed the landscape around it,"¹. Furthermore, with our many tributaries including the Saugeen Valley, Maitland Valley, and Grey-Sauble under increased pressure due to changing precipitation patterns and human activity, we have an immediate need to secure the information needed to respond. Unfortunately, we

¹ [Green Infrastructure: Cities around the Great Lakes plan for a changing future – Great Lakes Now](#)

do not have access to detailed data that identifies pervious and impervious layers across Bruce County that are required to make more informed planning and development decisions.

The MIC successfully applied for a National Disaster Mitigation Program grant to support the purchase of software that will equip our municipal staff and partners with the information needed to make sound decisions around development that mitigate risk and protect our natural assets. To plan for a changing future, we must acknowledge our role as active contributors and leaders as we work towards a more sustainable future.

Background

The Nuclear Innovation Institute approached the MIC membership in 2020 to propose the purchase of lidar imagery for the coastal regions of Bruce County. Once I started in the role, I quickly learned that lidar was prohibitively expensive.

Through a contact that I have with FedDev Ontario, I connected with a vendor whose product uses state of the art machine learning that takes all sources of geospatial imagery and data to provide a digital representation of the world. Outputs include a digital terrain model, digital surface model with thirteen layers (e.g., roads, sidewalks, greenfields, tree canopy), and a 3D rendering of all natural and human-made features in a selected region. The vendor's software is able to analyze data from Southwestern Ontario Orthophotography (SWOOP) 2020, integrates lidar imagery recently captured on the Bruce Peninsula, and proprietary satellite imagery to produce a highly detailed rendering of the entire County for a fraction of what lidar imagery costs.

I co-wrote the NDMP intake 6 grant application in late 2020 with Amanda Froese, Director, Infrastructure and Development for the Town of Saugeen Shores after consultation with a group that included staff from the Saugeen Valley Conservation Authority (SVCA), Chief Building Officer, and planning staff in the County of Bruce. A staff member with Ministry of Municipal Affairs and Housing (MMAH) continued to work with me through early January to strengthen the application.

In March of 2021, the MIC's application made it past the provincial vetting process and was advanced to Public Safety Canada. On Monday, May 3rd, 2021, we were notified that our application was selected amongst a competitive applicant pool. Our advantage lies in our desire to collaborate across municipalities and with organizations that benefit from highly detailed terrain data.

Intended methodology

The MIC will procure mapping software that includes 13 layers (e.g., roads, grassland, bareland, buildings, water, elevation) that will be integrated into existing County, lower-tier, and Conservation Authority mapping software (ArcGIS - ESRI Canada). This data will then be accessible by member municipalities, conservation authorities, Indigenous groups, and the public to inform decision making around risk mitigation, management, and development. Critical to this project is that all parties will use a common data that will create cost and operational efficiencies, and that it will allow for advanced analysis of SWOOP and lidar data. The data will be owned in perpetuity.

The procured mapping software will provide all members (e.g., municipal staff and conservation authorities) with building footprints, stormwater systems, and other municipal infrastructure for the GIS database. It will also provide elevation profiles (3D model rendering) to structures. With this software, municipal staff will be equipped to complete next phase work to define layers within the GIS system that indicate risk of flooding, erosion, and run off. Elevation contours will present future opportunities for all members to identify areas without proper overland flow routes, areas of trapped water, and known flood-line elevations. Future risk assessment work would be based on consequence of failure that is informed by the procured software. This will greatly influence municipalities asset management plans and capital project planning in the future phases of work.

As the MIC is a group of municipalities, procured software and associated outputs will be stored within the County's GIS system, which is utilized and updated by the local municipalities. It will be up to each municipality to complete future analysis to suit their needs. Conservation Authorities (CAs) will have the ability to update flood mapping at a lower cost than if they had to purchase the software on their own. The information as a minimum can be used by CAs when reviewing and determining the suitability and appropriateness of development applications near flood zones and wetland areas.

Value of 3D rendering of Bruce County, DTM and DSM using artificial intelligence

The vendor's product presents numerous benefits to users. Through global feature mining, the product extracts high-accuracy features from geospatial imagery including (but not limited to) buildings, roads, forest, grass, water, swimming pool, bareland, sidewalks, driveways, parking lots, pavement, sports ground.

Uses include:

- Flood analysis through improved flood mapping, allowing for enhanced identification of hazards to natural assets & infrastructure, developing risk mitigation plans, and better responding to disasters
- Impervious analysis on each land parcel, resulting in the identification of larger areas that contribute to surface runoff (including personal property), as they contribute to higher levels of stormwater infrastructure deterioration
- High consequence area analysis
- Wetland tracking and preservation
- Pre- and post-disaster assessment
- Impervious surface analysis for tax assessment by mapping unpermitted buildings constructed on vacant land and identifying an aggregate estimated potential value
- Advanced map of public transportation infrastructure throughout the County (all sidewalks, crosswalks, bike lanes, motor vehicle lanes, medians, etc.). that is used to gain a better understanding of existing infrastructure and improve transportation engineering processes
- Planning and deployment of telecommunication infrastructure

Benefits include:

- Proactively allows for all members to more accurately identify hazards to natural assets and infrastructure
- Illuminate vulnerabilities when planning for the development of infill situations and enables all MIC member municipalities to apply risk to asset management plans using the same data for underground infrastructure as well as municipal buildings
- Output identifies overland flow routes and drainage patterns that will allow us to better plan for corrections to the overland flow route while building the capital roads program
- Data will allow members to focus risk mitigation efforts with the greatest benefit
- Analysis for capital projects can include prioritizing flood risks

Staff Feedback

When the vendor's product was presented to the Bruce County/Local GIS Steering Committee, in February 2021 and again in May 2021, there were multiple use cases identified. Sample imagery (Appendix A) demonstrated the product output, and staff were given access to the product to gain a more-hands on experience so that they could accurately assess the utility of the tools provided.

The following are **reflections from staff** that support the purchasing of a digital product that produces a DTM, DSM, and 3D rendering of the County:

1. Informs land development decisions with greater detail and precision (from current CBO)
 - Pre-development: it would enable staff to look at existing site conditions and identify any features that need consideration; natural hazards (watercourses, steep slopes), natural heritage (wooded areas), neighbouring buildings and uses, etc.
 - During construction: it would help with the proper siting of buildings (in relation to the identified features) and determining lot grading and drainage
 - For existing development: staff can verify that site plan requirements have been met in terms of required parking, driveways and landscaped area. It would also help identify any buildings or structures that didn't receive permission
2. Equips staff to do fulsome watershed analysis with pervious and impervious surface data, and can get far more granular with flood simulation
 - Surface permeability is becoming a big issue especially when it comes to dealing with the stormwater from heavy weather events. Having this as a tool to predict when public works or emergency services would be needed will help greatly in response planning
 - Conservation Authorities and municipalities can conduct pervious and impervious surface analysis. The elevation data will be most useful for high water mark and flood analysis, and even some construction work.
 - Good data for staff doing sub-service analysis
3. Can monitor for ecosystem continuity by purchasing this product at the same time as SWOOP data is taken (estimated to next occur in 2025)
 - Change in growth, change in canopy cover, changes in slope, terrain modification, shoreline and water level difference

4. Replaces the manual effort for heads up digitization with automated processes (AI) that frees GIS staff up to do more advanced and dynamic analysis.
 - Significant time saving by automating the identification of all building footprints in the County
 - This product presents a more efficient way of mapping both the built and the natural environment
 - “People hours would be dramatically diminished. We’re talking hundreds of hours, easily. The precise number would depend on how much of the effort we perform in house.”
 - “Digitizing this type of layer manually to the level of detail that [the vendor] can produce would take a very long time and could quite possibly be someone’s entire career if doing it for multiple years.”

Current customer reflections

In addition to reflections from staff in the Steering Committee, I reached out to an Ontario customer that has purchased the product on two occasions. The following are their reflections:

- “The services we used through [vendor] used our aerial images to extract land cover types...these products have been instrumental in creating urban hydrology models and was one of the core pieces of data used in developing our Natural Asset inventory. We have also used the data in a more general sense as part of our watershed plan and identifying area of high imperviousness.”
- “There really was no work on the back end for us to get this data. We just provided our images and they sent back the data! I know our GIS team still likes to use our manually digitized building layer as they feel it is more accurate, but from what I have seen the automated product is comparable.”
- “...for the other feature identifications, this is info that I didn’t even have before and would have required a lot of manual work. In the case of hydrologic modeling, we would have been making assumptions on surface types, but now we can use actual data.”
- “The technology does seem to improve with each acquisition (we’ve done two) as the AI improves.”

Seeking partnerships

The desired product fully integrates into ArcGIS that is already being used by participating members of the GIS Steering Committee. There are no limitations to the use of the license once purchased, which allows for multiple partners to leverage the product including staff from Conservation Authorities, other levels of government, private industry, and in non-profits.

At this time, outreach has been made to the Saugeen Valley, Grey Sauble, and Maitland Valley Conservation Authorities to explore the co-funding of this product. With the NDMP paying for over half of the total cost of the product, we can de-risk the remaining purchase through co-funding. The opportunity that partnered organizations have is significant in terms of return value for dollars invested.

The remaining balance for purchase is \$106,220.00.

Timelines and requirements

The NDMP intake 6 process includes acceptance of applications (which we were successful in), and a series of deadlines to complete administrative items such as signing the partnership agreement, completing the fund transfer agreement, project scoping, purchasing of products, and implementation of the product that require progress reporting.

The contract and fund transfer agreements will be released this summer. I intend to continue to solicit partnerships in the region so that when prompted to sign the contract, we are confident in the sources of funding that make the purchase of this product possible.

MIC REPORT 2021-04

Report To: Municipal Innovation Council (MIC)
Report From: Dave Shorey, Innovation Officer, MIC
Meeting Date: May 27, 2021
Subject: Smart Beach

Recommendation

THAT the MIC hereby approves Report No. 2021-04 Smart Beach prepared by Dave Shorey, Innovation Officer and approves the MIC being the lead municipal partner that will provide funding support for a 3-year beach safety program that includes remote sensing and public education regarding water hazards.

Background

Mike Kirkpatrick, Director of Information Technology Services for the County of Bruce, initiated a conversation with a local business in 2018 about the need for advanced solutions to mitigate drownings along the Lake Huron shoreline. In late 2020, Mike discussed similar concerns with me, and together we began to ideate on possible solutions that integrate remote sensing, machine learning, advanced analysis of data, and communication strategies to generate real-time awareness of conditions.

With increased traffic on Bruce County beaches and continued risks to beach goers such as rip currents, municipal staff have a duty to develop solutions with partners that can enhance safety while allowing visitors and residents alike to continue to enjoy our waterfront. After consultative meetings with private industry partners, inventors from New Zealand, and faculty at the University of Windsor, a project has taken shape that presents an incredible opportunity for the MIC to co-lead.

Outreach was made in winter 2021 to numerous potential partners including Dr. Chris Houser (University of Windsor), Microsoft, the inventors of the Nah Yeah Buoy, Mitacs, and Insight. Each has expressed a keen interest in being involved in a project that includes rip current detection and reporting along select beaches and on-site evaluation of beach goer behaviour.

Smart Beach system

Dr. Chris Houser, Dean of the Faculty of Science and Professor in the School of the Environment at the University of Windsor, is an eager and highly qualified partner to work with the MIC to pilot a “Smart Beach” system in Bruce County. Dr. Houser leads the Coastal Research Group ([Coastal Research Group \(windsorcoastalgroup.ca\)](http://windsorcoastalgroup.ca)) with field sites along the Great Lakes, in the Maritime provinces, and in Costa Rica. He has also conducted extensive research on rip currents in Florida and Texas. Dr. Houser’s expertise and interest in this project is a tremendous asset to MIC communities, and he is well positioned to define the methodology for the three-year project. Additional information can be found in the attached slides that Dr. Houser has drafted for the MIC for reference.

Methodology

Given that the Smart Beach program is a research project led by Dr. Houser, research ethics approval will be required and is being pursued at the University of Windsor. This provides the project with the appropriate review process to ensure that the necessary precautions are put in place to protect data and reduces liability for partners given the focus on research.

A “Smart Beach” system includes the use of cameras to capture real-time data regarding the volume of beach goers and where they chose to locate on a beach, the identification of rip currents, and analysis of the risks to beach goers given the location of rip currents. Cameras capture imagery (with anonymity of beach goers assured), and artificial intelligence is used to report valuable data to Dr. Houser’s research team that will be further analysed. In addition, an array of in-water sensors will be developed to actively monitor water conditions including rip currents. There is the opportunity to integrate additional sensors that measure water quality given local runoff near beaches.

Access to municipal infrastructure will be needed to power some of the equipment. For example, to have monitoring equipment active at Station Beach in Kincardine, we would need access to the light mounted at the end of the break wall (see below). This would allow for cameras to be properly mounted and powered. Hardware to manage the transmission of data will also need to be placed in a secure location with consistent power provided.



Estimated budget

The following is a draft estimate for a three-year project that would expand from a single test beach this summer (2021) to several beaches by year 3. This is based on the project starting later this summer, which means each year includes parts of two different summers.

	Year 1 (August 2021 - July 2022)	Year 2 (August 2022 - July 2023)	Year 3 (August 2023 - July 2024)	Total
Total Cash Contribution:	\$22,500.00	\$45,000.00	\$45,000.00	\$112,500.00 + HST
Total Mitacs Award:	\$45,000.00	\$90,000.00	\$90,000.00	\$225,000.00
Stipends/Salaries:	\$35,000.00	\$75,000.00	\$75,000.00	\$185,000.00
Project-related Expenses:	\$10,000.00	\$10,000.00	\$10,000.00	\$30,000.00

The project includes the following budget items:

- **Project-related expenses:** Weather, wave, and camera equipment to be deployed at each site in addition to travel and accommodations.
- **Project Manager:** Salary for a recent graduate student to manage the project from instrument deployment and data analysis to the behavioural surveys. (Years 1-3)
- **Post-Doc:** Salary for a postdoctoral fellow to manage the research and communication of results to stakeholders (Years 2-3). While this position is preferable, it could also be a future graduate student at lower cost, but more difficult to potentially secure.

Partnerships

At present, there are numerous partners involved in the development of this project including:

- The University of Windsor: faculty lead and research team
- Microsoft: partner in data management and processing
- Insight: future partner to develop sensor array for in-water devices
- Mitacs: primary funding partner
- Municipal Innovation Council: municipal lead that includes membership staff

In addition, the following parties have expressed interest in being involved

- Nah Yeah Buoy: Hannah Tilsley and Chamonix Stuart were runners up for the James Dyson award with the development of an in-water buoy with an array of sensors that measure rip currents and signal water safety in real time
- Ontario Tech: additional sensors focussed on algae blooms
- Bruce Power: has expressed interest in supporting this project
- Nuclear Innovation Institute: has expressed interest in the development of an IoT solution for civil application

As the Smart Beach project continues to be scoped out, prototyped, and implemented, the role of interested and committed partners will be further defined. Given the positive momentum that already exists around the Smart Beach concept, I anticipate that interested parties will become more involved in the coming months.

Extended opportunities for partnership

NPX approached the Kincardine council in early 2021 proposing a public safety plan for Station Beach in Kincardine that focussed on communicating beach safety, providing safety equipment in the event of an emergency, and dividing Station Beach into zones. The Smart Beach work provides advanced monitoring and evaluation solutions that inform the beach safety program that NPX has proposed. There could be an integration of findings from the Smart Beach project with the work NPX is doing for a full mobilization of knowledge to positively impact beach safety.

Blue Flag Global is an international accreditation body that evaluated beaches and awards Blue Flag status to those that have safety standards in place that promote safety. The Smart Beach project could support shoreline communities interested in pursuing Blue Flag designation.

Recommendation

The MIC has an opportunity to coordinate activity in Bruce County alongside Dr. Houser and multiple parties to develop a solution that improves beach safety for residents and supports a growing tourism industry that depends on safe shoreline. Given the impact that this project has on all communities in Bruce County (you either live close to the lake or drive to the lake), I firmly believe that the Smart Beach project is worth entering a long-term agreement with the University of Windsor on. The findings and technical solutions developed from our work could be replicated across the Great Lakes, which can improve beach safety for countless beach goers.

The total financial commitment that I recommend the MIC make is as follows:

2021: \$25,500

2022: \$51,000

2023: \$51,000

Total contribution over three years: \$127,500

I anticipate that funding partners will support the MIC in offsetting this cost, but without firm commitment given the stage that this project is in, the MIC should plan to pay in full to provide certainty for the project moving forward.

Acknowledgement

I want to acknowledge Mike Kirkpatrick, Director of Information Technology Services for the County of Bruce, for his leadership on making our beaches safer. Mike's persistence in developing a viable, sustainable solution to beach safety and his ability to identify multiple parties that can collaborate on the solution is the primary reason the MIC is able to consider this report.

Smart Beach Project

Kincardine



University
of Windsor
Faculty of Science



NSERC
CRSNG

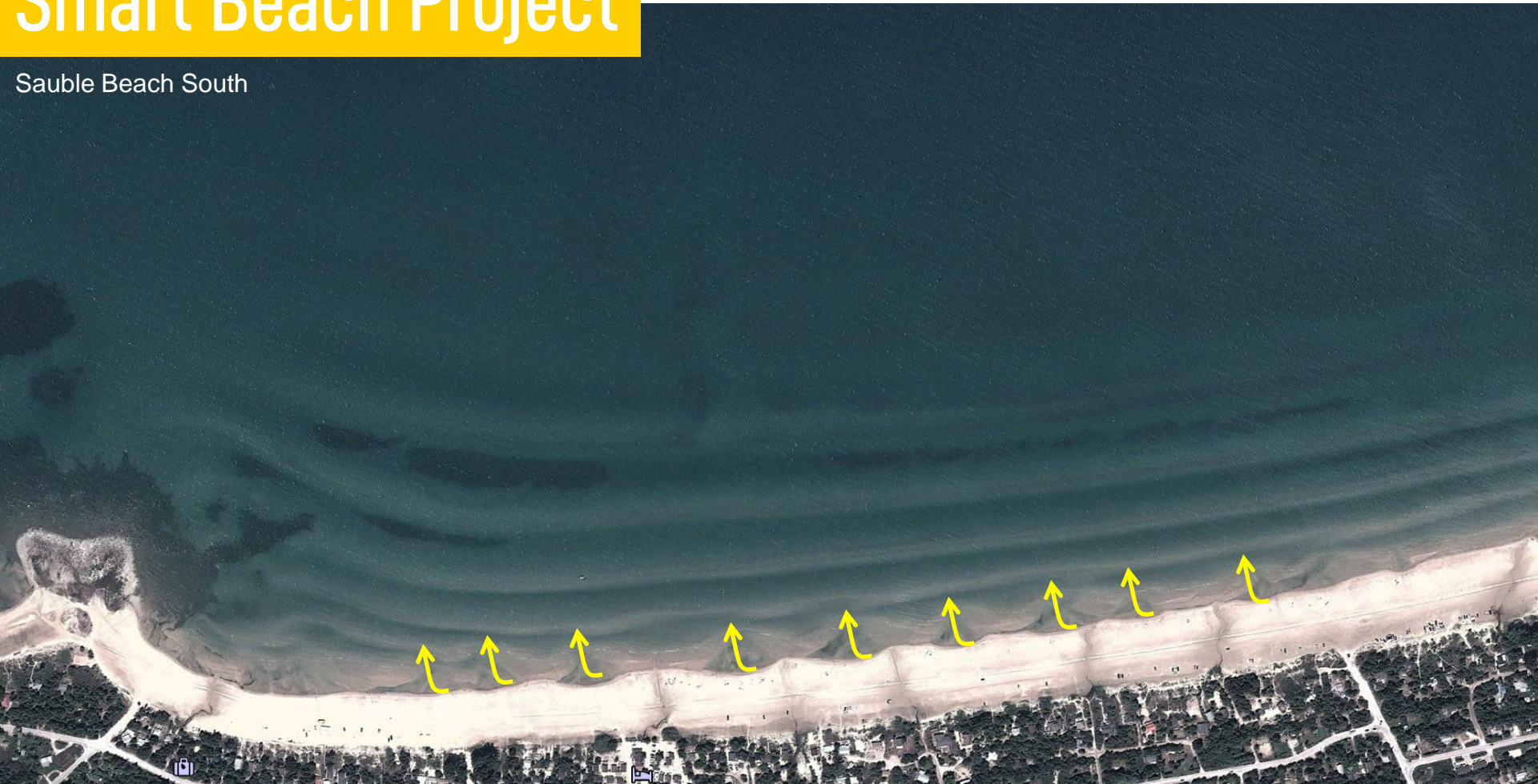
Mitacs



MIC
municipal
innovation
council

Smart Beach Project

Sauble Beach South



University
of Windsor
Faculty of Science

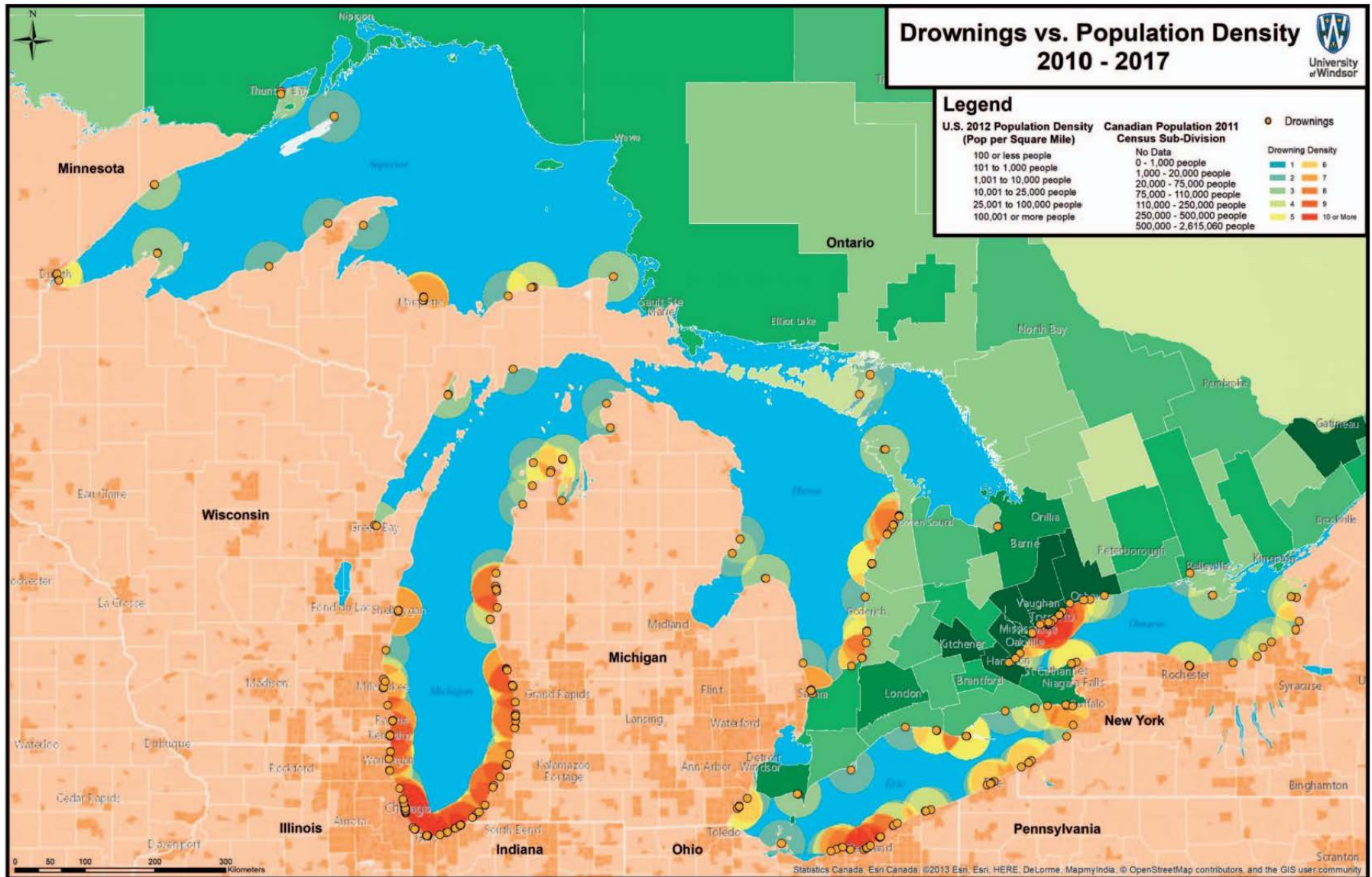


NSERC
CRSNG

Mitacs



MIC
municipal
innovation
council



Smart Beach Project

High Resolution WebCAT Camera

- Beach user counts (anonymized)
- Surf conditions
- Automatic rip current detection

Local Weather Station

Real-time Wave Sensor

Water Quality Sensors

Model-Predicted Wave Forecast

Beach erosion monitoring

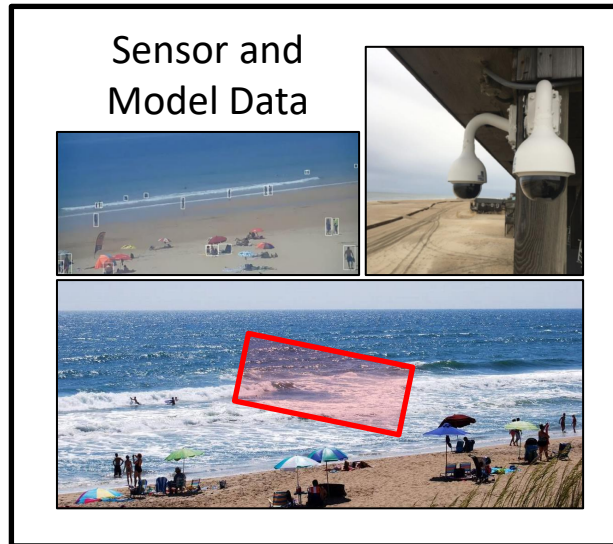
Integration to other sensor networks

Real-time sensor network and local surf modelling to improve beach safety



Smart Beach Project

Real-time sensor network and local surf modelling to improve beach safety



Beach User App

Surf Warning @ Sauble
Strong Waves and Currents

Dynamic Road Signs



Beach Signs and Flags



University
of Windsor
Faculty of Science



**NSERC
CRSNG**

Mitacs



MIC
municipal
innovation
council

Smart Beach Project

Real-time sensor network and local surf modelling to improve beach safety

Year 1: August 2021-July 2022

- Sensor deployment at Beach #1
- Beach user surveys

Year 2: August 2022-July 2023

- Sensor deployment at Beach #2
- Initial data communication strategy

Year 3: August 2023-July 2024

- Sensor deployment at Beach #3
- App development and distribution



MIC REPORT 2021-02

Report To: Municipal Innovation Council (MIC)
Report From: Dave Shorey, Innovation Officer, MIC
Meeting Date: May 27, 2021
Subject: Co-op students to support priority projects in fall 2021

Recommendation

THAT the MIC hereby approves Report No. 2021-02 Co-op Students prepared by Dave Shorey, Innovation Officer and approves the hiring of three co-op students from partner post-secondary institutions if grant funding is secured OR two co-op students from partner post-secondary institutions if grant funding is not secured for the Fall 2021 term (September to mid-December) to support the advancement of priority projects for member municipalities as detailed in the report.

Background – MIC growth in 2021

The Municipal Innovation Council approved the funding and hiring of three co-op students for the Spring/Summer 2021 term. The Innovation Officer developed position descriptions for each position, liaised with co- staff at partner post-secondary institutions, interviewed and selected candidates, and completed all HR functions including payroll, contracts, and grant applications for SWPP funding.

All three co-op students began their 16-week term of employment with the MIC. The Innovation Officer supervises all co-op students and provides daily coaching and supervision to ensure project objectives are being met. The three projects associated with our expanded team include IT business analysis, municipal service analysis, and organizational development analysis. Over the first three and a half weeks of work, each co-op student has provided tremendous value to member communities while developing competencies that prepare them for work after graduation.

Human resource needs to continue growth in 2021

The work that Ayaan, Christie, and Scarlett are doing in the Spring/Summer 2021 term demonstrates the efficacy of hiring co-op students to advance the MIC's mission of building stronger, smarter, and more resilient communities. I recommend that the MIC continue to prioritize funding for co-op positions this fall academic term (September to mid-December 2021) given that they provide significant value to our membership through advanced research, project development, and the prototyping of solutions. I also recommend that we continue to focus our position titles and descriptions on the current needs of the MIC to ensure that we are receiving applications from students whose skills and interests align.

Why hire co-op students?

Co-op students are immersed in fields of study that integrate leading research into the curriculum. Students enrolled in co-op are eager to transfer their learning to applied spaces, in turn enhancing our shared capacity to research and develop solutions to common problems. Co-op students support our need to meet short-term hiring needs in a cost-effective manner, are interested in advancing special projects, and create a possible feedback loop for future staffing needs in our municipalities.

Proposed positions (3)

Each of the proposed positions below supports the advancement of the strategic capabilities we need to affect change in our municipalities. For reference, below are the strategic capabilities featured in the strategic framework that was received by the MIC on March 25th, 2021.



I recommend hiring for the following two roles:

- 1) Organizational Development Specialist: Supports the advancement of MIC strategic capability #5 – Inclusive Organizational Development

The work that Christie Downey has done in the Organizational Development Analyst position has highlighted the opportunity that the membership has to learn from and collaborate with each other on training and development. The Organizational Development Specialist will advance the good work being done by Christie this term, and I firmly believe the sustained focus on organizational development will have a transformational impact on staff across our membership.

There are common training needs for municipal staff that can be more integrated with neighbouring municipalities, but ongoing leadership will be needed to identify and support the coordination of such training. New content and content providers will be needed as municipal staff explore issues of equity, diversity, and inclusion in our workplaces and our communities. This position will also be charged with looking at strategies for succession planning and employee retention and will continue to monitor developments around the hybrid work environment in the public sector. I also see the opportunity for a pan-MIC institute/conference early in 2022 (pending health conditions) that will require administrative support.

Organizational development is sustained work that can dramatically improve employee retention, satisfaction, and performance.

- 2) Municipal Procurement Analyst: Supports the advancement of MIC strategic capability #2 – Progressive procurement practices.

The University of Waterloo's MEDI program is currently engaged in applied research on best practices in municipal procurement that will conclude in mid-August 2021. I expect the report to give concrete suggestions on where opportunities for shared procurement exist for member municipalities. I do anticipate the need for ongoing, focussed work in municipal procurement and strongly feel that a co-op student with business training will support the advancement of recommendations made in the MEDI report.

The Municipal Procurement Analyst will work with all member municipalities to 1) identify shared purchasing opportunities for goods and services amongst members, 2) develop systems that facilitate collaborative purchasing amongst MIC members, 3) identify areas of cost savings if goods and services were procured through alternative vendors and Vendors of Record, and 4) highlight proven practices in municipal procurement that lead to cost savings.

If grant funding is secured, I recommend hiring a third co-op position as outlined below:

- 3) Youth Engagement Strategist: Supports the advancement of MIC strategic capability #4 - Community-centered engagement and capacity building.

Younger community members that want to be engaged in local issues can depend on municipal leaders to create and preserve space for meaningful engagement. The MIC believes and validates each person's capacity to know, wants to situate engagement in the experiences of our younger community members, and wants to support the co-construction of outcomes that lead to improvements in the lives of youth. The MIC is focussed on developing the necessary skills and knowledge so that young people of all ages can thrive as community leaders. Member municipalities support projects that lead to action and are committed to creating the conditions that foster next-generation leaders.

The MIC would be well-served to create a co-op position that can focus on collaborating with community groups such as Trinity Theatre as well as municipal staff who have been engaged in the development of youth programs. The co-op student would also conduct research into proven practices around youth engagement and develop a model for member municipalities to deploy in their communities.

Working in partnership with the Innovation Officer, this staff position would research additional youth engagement strategies in Ontario as a means of having a fulsome understanding of the programs and services that municipalities are using to engage youth. Co-curricular programming for young adults enrolled in post-secondary education would also provide the MIC with well-developed and resourced models to learn from as part of a youth engagement strategy.

Position cost

I completed additional market research and confirmed that \$24/hour is the median hourly wage for co-op students that have the skills we seek to advance MIC objectives. Using an assumed \$24/hour wage, the following is a cost breakdown for each co-op position:

\$24/hour x 35 hours per week x 16 weeks	\$13440
Vacation pay (2%)	\$269
Holiday premiums	?
Accounting	?
Insurance	?
Office 365 (\$66 monthly)	\$264
Training	
Total	

The County of Bruce IT department is supporting the technical needs of the MIC by providing co-op students with a laptop at no cost and on-going technical support should there be software or hardware issues.

Funding sources

Over the Spring/Summer term, the MIC has been able to secure Student Work Placement Program (SWPP) funding for all three co-op positions. The Federal government sets terms for the SWPP and has modified requirements during the pandemic. It is expected that terms of reference will return to a pre-pandemic state which reduces funding available and requires that co-op positions be net-new hires.

I am awaiting a response from one of the funding partners about the opportunity to secure SWPP funding for sequential terms. I am also pursuing additional funding sources that can offset the cost of student employees with the MIC.

Given that we will know if we are successful in securing grant money to support student employment on a term-by-term basis, I recommended a total upset cost to MIC of \$32000 per term. This amount pays for two co-op students in full. If I can secure \$15000 in funding support in a given term, then I recommend hiring three co-op students for that term. If I am unable to secure funding in a given term, then I would hire two co-op students in that term.

Supervision and workspace

Each co-op position reports to the MIC Innovation officer for the duration of employment. I have extensive experience in designing and supporting experiential learning initiatives which positions me well to support the developmental goals of student employees in co-op positions.

Given that each co-op position reflects a strategic project that the MIC wants to advance, staff from all member municipalities will be needed to provide support to each co-op student through meetings, on-site visits (when permitted) and access to information that will inform their work.

Given ongoing health conditions in the province, co-op students may need to work all or a portion of the fall term in a remote setting. Clear objectives and regular meetings for coaching, collaboration, problem solving, and solution development will be needed to make progress in our work, regardless of work context. If in-person is possible, the Nuclear Innovation Institute has agreed to provide space to support the MIC's efforts.

Consideration for Winter 2022 term

MIC Report 2021-01 and 2021-02 recommend that the MIC hire co-op students for the Spring/Summer 2021 and Fall 2021 academic terms. Each report has been delivered to the MIC after the start date for the first round of co-op hiring on college and university campuses. To alleviate the problem of being late to the recruitment cycle on campuses, I recommend that the MIC consider approving the hiring of co-op students for the Winter 2022 term as well. This would allow the Innovation Officer to initiate the recruitment and selection phase of co-op student hiring at the start of the first round.

Below are the recruitment and hiring dates for co-op students on college and university campuses:

- Spring/Summer work term 2021: job postings were to be submitted by January 13, 2021 to participate in the first hiring cycle
- Fall 2021 work term: job postings were to be submitted by May 12, 2021 to participate in the first hiring cycle
- Winter 2022 work term: job postings need to be submitted by **September 15, 2021** to participate in the first hiring cycle

MUNICIPAL INNOVATION COUNCIL RULES OF PROCEDURE

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1.0 General

The Town of Saugeen Shores will be acting as the lead for the Municipal Innovation Council.

All Partners of the Municipal Innovation Council (MIC) agree to enter into a Memorandum of Understanding with MIC and agree to:

- Contribute financially to the Municipal Innovation Council to support the agreed upon budget and funding model.
- Appoint a municipal staff person to represent each municipal partner.
- Participate in priority setting exercises, strategic planning and evaluation review for the Municipal Innovation Council.
- Participate in conversation with invited resources including MIC representatives, CAOs, other key staff or appointed individuals connected to the areas of focus.

All communications by letter, fax or electronic mail should be addressed to the Chair. The Chair will set up a group e-mail to include all correspondence to members.

During a declared emergency the Chair with the consensus of the membership may make the necessary adjustments to the Rules of Procedure but not to the extent that it alters the intent.

Innovation Officer

The Town of Saugeen Shores, acting as the lead for the Municipal Innovation Council will:

- Be responsible for employment of the position of Innovation Officer, collectively funded by MIC partners
- Recruitment and operational oversight MIC partners to be engaged in work plan development and evaluation
- Ensure sufficient space and resources for Innovation Officer, as outlined in MOU between Saugeen Shores and NII

2.0 Members of the Municipal Innovation Council

The MIC shall be composed of members appointed in accordance with the Memorandum of Understanding. (MOU)

Members Municipalities shall appoint a municipal staff person (and alternate) to represent each municipal partner.

Chair

The Town of Saugeen Shores will act as the Chair for the Municipal Innovation Council. In the absence or unavailability of the Chair an Acting Chair shall be appointed by consensus of the MIC for the duration of the meeting.

The Chair shall:

- Call meetings of the MIC
- Develop the agenda in consultation with the secretary and circulate to members.
- Ensure the MIC formulates and maintains the general areas of focus as outlined in the MOU (attached as Appendix 'A')
- Acts a general spokesperson

Members

Members of the MIC shall:

- Participate and share in priority setting exercises, strategic planning and evaluation review for the MIC
- Bring forward suggestions of innovative strategies
- Vote on priority areas
- Approve the annual budget with expenses reported to the MIC members quarterly
- Collectively define the work plan for the Innovation Officer
- Participate in a courteous manner and not engage in any action which disturbs the meeting.

Secretary

The Secretary will be provided by a participating municipality and shall:

- Be appointed by resolution of the MIC
- Work with the Chair to publish the agenda.
- Record the minutes of the meeting.

Signing Authority

The Chair and one member (plus alternate) of the MIC shall have signing authority for the MIC to enter into contacts

- The members shall appoint the member with signing authority and alternate.
- The combination of two signatures will be required

3.0 Meetings

Meetings may take place using an electronic platform.

Meetings shall be open to the public; however, there is no automatic right for the public to speak or participate in a meeting.

If a member of the public would like to participate, they must make a request through the Chair. The Chair's decision is final.

Members of the public will be courteous and not engage in any action that disturbs the meeting.

The Chair may exclude any person from the meeting for improper conduct.

During a declared emergency the extent of public participation may vary and may be limited to distribution of the agenda and minutes upon request.

4.0 Meeting Procedures

The majority of the members shall constitute a quorum.

If there is no quorum present within fifteen (15) minutes after the time fixed for holding the meeting, or if quorum is lost during the meeting, the secretary shall record the names of the members present and note in the minutes that there was no quorum established.

The meeting may continue with those present; however, decisions and voting will be deferred to the next meeting when quorum is present.

Members may participate electronically by video conference or telephone and count towards quorum.

E-mail participation is not permitted.

All decisions will be made on the basis of motions.

Advancing priority area project that require a vote of membership

- Chair to call questions as presented by member or through MIC collective discussion
- Chair to record vote

All matters will be decided by a majority vote of the members present, including electronically or by telephone.

Each member municipality shall be given one vote.

Majority required to advance a project which has a final implication.

Majority required to advance a project assigned to the Innovation Officer.

Any member who refuses to vote is deemed to have voted against the motion. In the event of a tie the motion is deemed defeated.

If these rules do not provide for a matter of procedure that arises during a meeting, the practice shall be determined by the membership to use standard meeting practices to enable it to effectively continue the meeting.

Agenda

- The Chair will establish the MIC agenda in consultation with the secretary.
- The order of business set out in the agenda may be changed by the consensus of the MIC.
- A member may introduce a new item of business by providing written notice to the Chair prior to publication of the agenda.
- Additional business items may be added to the agenda by consensus of the MIC.

Closed Meetings

A meeting or part of the meeting may be closed to the public if the subject matter being considered is:

- Personal matters about an identifiable individual
- Litigation
- Advice subject to solicitor-client privilege
- Education or training
- Information explicitly supplied in confidence to the MIC
- A trade secret or certain specific information supplied in confidence to the MIC, or that belongs to the MIC and has monetary value
- A plan or instruction to be applied to negotiations

Minutes of Meetings

The Secretary will keep the minutes of all MIC meetings.

The minutes will include:

- The names of all members attending and absent
- All decisions and other proceedings
- Brief discussion points
- The general nature of any items discussed in closed.
- Closed Minutes will be kept separate and protected.
- Will be provided to the MIC in draft form prior to the next meeting.
- Be passed by motion at the next meeting.
- Upon passage will be forwarded to the Clerks of member municipalities to be distributed as per local procedures.

5.0 Agenda

General order of the meeting, may be modified by the Chair.

- a) Call to Order
- b) Additions or Amendments to the Agenda
- c) Adoption of Minutes

- d) Delegations
- e) Update / Announcements from Members
- f) Project Updates
 - a. Update/Reports from the Chair
 - b. Update /Reports from Innovation Officer
- g) Other reports
- h) Budget Review
- i) Correspondence/Information
- j) Closed meeting (if required)
- k) Meeting Schedule
- l) Adjournment

6.0 Schedules

The MIC will meet every other month.

The MIC shall establish an annual schedule of its regular meetings, and shall adhere to that schedule unless otherwise decided by the Chair in consultation with the membership.

If under the direction of the Chair a special meeting is required, members shall be given when possible five (5) business days' notice.

The Chair of the MIC shall send a copy of the agenda for each meeting to the members at least five (5) business days before the time of commencement of the meeting.

Member shall notify the Chair, as far in advance as possible if they will not be attending the meeting. When possible members shall send an alternate.

Appendices

- A. Memorandum of Understanding
- B. Communitel January 16, 2020 – Innovation Initiatives
- C. Strategic Framework – Municipal Innovation Council Opportunities & Strategic Capabilities

MUNICIPAL INNOVATION COUNCIL MEMORANDUM OF UNDERSTANDING

PARTNERS OF THE MUNICIPAL INNOVATION COUNCIL (MIC) AGREE TO:

- Contribute financially to the Municipal Innovation Council to support the agreed upon budget and funding model.
 - Funding will support collaborative staffing, research, and implementation during the three-year project (2020-2023).
- Appoint a municipal staff person to represent each municipal partner.
 - MIC member will be responsible to attend MIC meetings (quarterly) and will actively participate and engage with partners of MIC.
 - The appointed representative will act as the point of contact for the partner municipality, participate and share in priority setting and act as a supporter for change in their organization.
 - This representative should possess a collaborative attitude and demonstrate innovative thinking.
 - The position of MIC representative is not a paid position by the MIC or by NII.
- Participate in priority setting exercises, strategic planning and evaluation review for the Municipal Innovation Council.
- Participate in conversation with invited resources including MIC representatives, CAOs, other key staff or appointed individuals connected to draft areas of focus:
 - ▶ Construction and Infrastructure
 - ▶ IT and Digital Solutions
 - ▶ Municipal Sustainability
 - ▶ Liveable Communities
- **Decision making:**
 - Members who contribute financially and have identified municipal staff representation are deemed voting members
 - A majority of voting members will represent quorum
 - MIC members will vote on priority areas
 - MIC will approve its annual budget, with expenses reported to MIC members quarterly (Saugeen Shores purchasing protocol will be used)
 - MIC members will collectively define the work plan for the Lab Director, with regular work oversight performed by Saugeen Shores' MIC representative
- The Lab Director will prepare quarterly reports for MIC representatives to submit to municipal Councils as required
- The Lab Director will provide an annual in-person report to member municipal Councils

MUNICIPAL INNOVATION COUNCIL

MEMORANDUM OF UNDERSTANDING

THE TOWN OF SAUGEEN SHORES, acting as the lead for the Municipal Innovation Council, will:



- Coordinate and secure partnerships for the Municipal Innovation Council, ensuring local communities are informed and invited to join
- Chair the Municipal Innovation Council
- Sit on the Board of Directors of NII, participating in conversations and decisions which offer opportunity to the Municipal Innovation Council
- Be responsible for budget including reporting to MIC partners, and payroll to Lab Director position
- Be responsible for employment of the position of Lab Director, collectively funded by MIC partners
 - Recruitment and operational oversight
 - MIC partners to be engaged in work plan development and evaluation
- Ensure sufficient space and resources for Lab Director, as outlined in MOU between Saugeen Shores and NII

Signed:

Mayor, Arran Elderslie

Date

Mayor, Brockton

Date

Warden, Bruce County

Date

Mayor, Huron Kinloss

Date

Mayor, Kincardine

Date

Mayor, North Bruce Peninsula

Date

Mayor, Saugeen Shores

Date

Mayor, South Bruce

Date

Mayor, South Bruce Peninsula

Date



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tel. +1 (519) 888-9944 fax +1 (519) 804-2224 front.desk@communitech.ca
communitech.ca

January 16, 2020

Members of the Innovation Council,

Thank you for the opportunity to work with you to advance your organization's innovation initiatives. I've summarized the key insights, first steps, and additional areas of opportunities in the following notes.

Thank you for your partnership - Communitech is proud to support your success!

Best regards,

Lindsay Farlow
Head of Corporate Innovation Programs
Communitech

General thoughts

- We need to figure out how to share/learn (Eg. fleet best practices)
 - A lab director could lead this - perhaps one focus area per quarter?
 - Some digital tools could help too
- We could start by looking at budgets and identifying high cost areas that would have a big impact

First Areas of Focus for the Innovation Council

E-Services

- Implementing a digital service could be a quick win
- Easy to collaborate
- Different communities have different seasonal residents, and e-services could help
- Digital tools could impact other areas too (eg. environmental data, open data)
- Municipalities could start by doing an inventory of what they have/need and what's working/what isn't
 - Lab director could coordinate a meeting to start
- There's a municipal modernization fund that could be leveraged

Waste Management

- There's an application in for a review of best practices (if successful, a consultant would lead)
- Waste expense is huge, and recycling is at risk
- Right now we all do garbage differently
- LEED standards for new buildings could reduce cost, waste

Sustainability/Climate Change/Environmental

- We need to understand where we're at risk (some municipalities have gotten reports on this, some haven't)
- Not sure if this is a requirement?
- There are grants for green energy things
- Next step would be to look at risk reports and identify specific areas of opportunity

Transportation

- Could explore best practices from other areas
- Transportation options would also help with labour problems, people/hiring as well
- So many inefficiencies right now!
- Geographically, it's difficult to provide a regional solution.
 - Maybe some kind of Municipal Uber Pool?
 - Examples we could model: Bruce Power bus, Warton airport shuttle.

- Fleets potentially as well (green vehicles)
- A pilot project would be a good start, like what Mississauga did recently
- SMART needs to be fixed
- There is an Integrated Transportation Committee that just started - it will explore regional transportation options (some municipalities weren't aware of it)
- Provincial funding is available

Original Notes About Areas of Opportunity

E-Services (10 dots)

- Communication practice → residents
- IT solutions (software, apps, etc.)
- IT services
- Open data
- Development process (enterprise solutions)
- Communications strategy and solutions (technology)
- Digital solutions (payroll, building, parking...)
- 311 potential
- Accessibility across communities (facilities, locations)
- Sharing data (open data) - GIS-->asset management

Climate Change/Environmental (8 dots)

- Climate change adaptation initiatives → how to protect our infrastructure
- Climate change (flooding, expense, road effects)
- Sustainable practices (environmental)
- Infrastructure/asset management planning
- Coastal care/initiatives
- Fleet efficiencies
- Apply new construction techniques

Waste Management (9 dots)

- Waste management (recycling risk, different approaches)
- Enhanced recycling
- Recycling program improvements
- Waste management (landfill, new ways, reducing cost)
- LEED building standards (to reduce waste)

Regional Transportation (5 dots)

- Rural transportation options - specialized
- Public & active transportation

Shared Services (4 dots)

- Cost sharing
- Centralized purchasing
- Health and safety
- Culture/heritage
- Tourism
- Access to healthcare (recruitment, NP...other solutions)
- Big issues with little solutions planning

People & Growth (4 dots)

- Employment gaps - recruitment for winter maintenance, manufacturing industries
- Labour/skilled trade shortage
- Staffing growth & development
- Training opportunities for our staff
- Resource sharing when we are vulnerable

Housing (1 dot)

- Develop strategies together
- Affordable housing plan initiatives



Municipal Innovation Council
Opportunities & Strategic Capabilities



Session Outline

Municipal Innovation Council

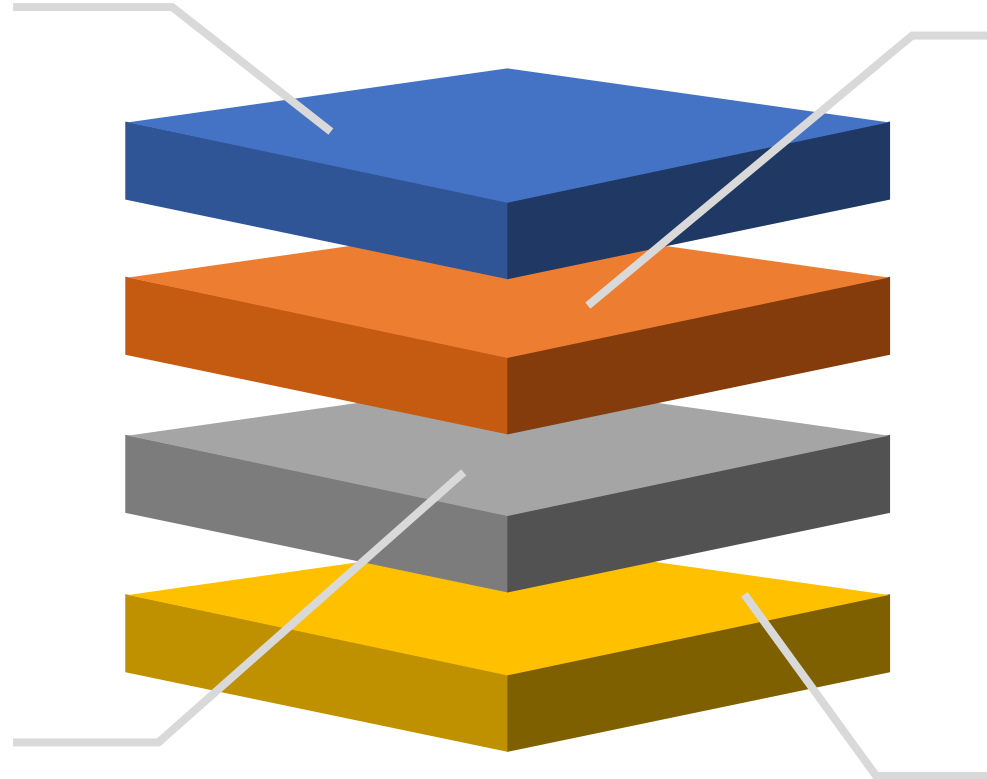
MIC INNOVATION PARADIGM

The processes, frameworks, methodologies, resources, and proven practices that have informed the MIC's discovery work and will guide future action and decision making.

STRATEGIC CAPABILITIES

Existing and emerging capabilities that are required in order to successfully pursue each Opportunity Area. The Municipal Innovation Council can install, grow, and leverage these capabilities from:

- Existing Capabilities
- New Capability Building
- Partnerships & Alliances



OPPORTUNITY AREAS

Represent significant and enduring problems that – if solved – unlock considerable new value for our region, government, and residents in the form of sustainable new services, programs, and offerings.

MIC MATRIX

The demonstrated intersections between our Opportunity Areas and Strategic Capabilities.

Mission

Municipal Innovation Council

The Municipal Innovation Council (MIC) serves lower and upper-tier municipalities that are committed to building smarter, stronger, and more resilient communities. The MIC seeks to understand how issues impact people and is a catalyst for developing solutions to shared problems. The MIC invests in the ability to sense and respond to challenges quickly so that member communities thrive in the 21st century.



MIC Innovation Scale

Municipal Innovation Council



Incremental

The focus is on our core services and operations. We are committed to optimizing existing services for community members.



Sustained

There is investment in “next generation” services as well as expansion from existing services into “new to the organization” services.



Transformational

There are breakthroughs that disrupt current services and operations. New models, systems, and services emerge.

Where do we play? How do we win?



What are the areas of opportunity that we are going to focus on?
Where are we going to focus our efforts, and for whom?

WHERE DO WE PLAY?



HOW DO WE WIN?

Which capabilities and connections do we need to strategically invest in to drive progress? What do we already have that can be leveraged?



WHERE DO WE PLAY?

↳ **“Opportunity Areas”**

Represent significant and enduring problems that – if solved – unlock considerable new value for our region, government, and residents in the form of sustainable new services, programs, and offerings.

Opportunity Areas

Municipal Innovation Council



HOLISTIC HOUSING

MIC municipalities will address the critical need for attainable housing through collaborations with private, public, and non-profit organizations so that all community members have access to safe and secure shelter.

TRANSFORMED TRANSPORTATION

MIC municipalities will coordinate multi-modal solutions that address the need for enhanced intra-municipal, inter-municipal, and out-of-county transportation.



WORLD-CLASS WASTE

MIC municipalities will provide a broad range of solid waste management programs and infrastructure that maximize waste diversion and increase efficiencies.

RESILIENT INFRASTRUCTURE

MIC municipalities will plan, design, repair, and build infrastructure that will sustain and adapt to shocks and will create new opportunities for communities to grow. (1)



SUSTAINABLE DEVELOPMENT

MIC municipalities will thrive in the 21st century through sustainable social, economic, and environmental development by leveraging regional growth driven by agriculture, energy, tourism, and migration to rural spaces.

AGILE SERVICE DELIVERY

MIC municipalities will value people and interactions, collaborate to develop more fulsome services, and ensure that barriers to accessing services and supports are removed.



HOW DO WE WIN?



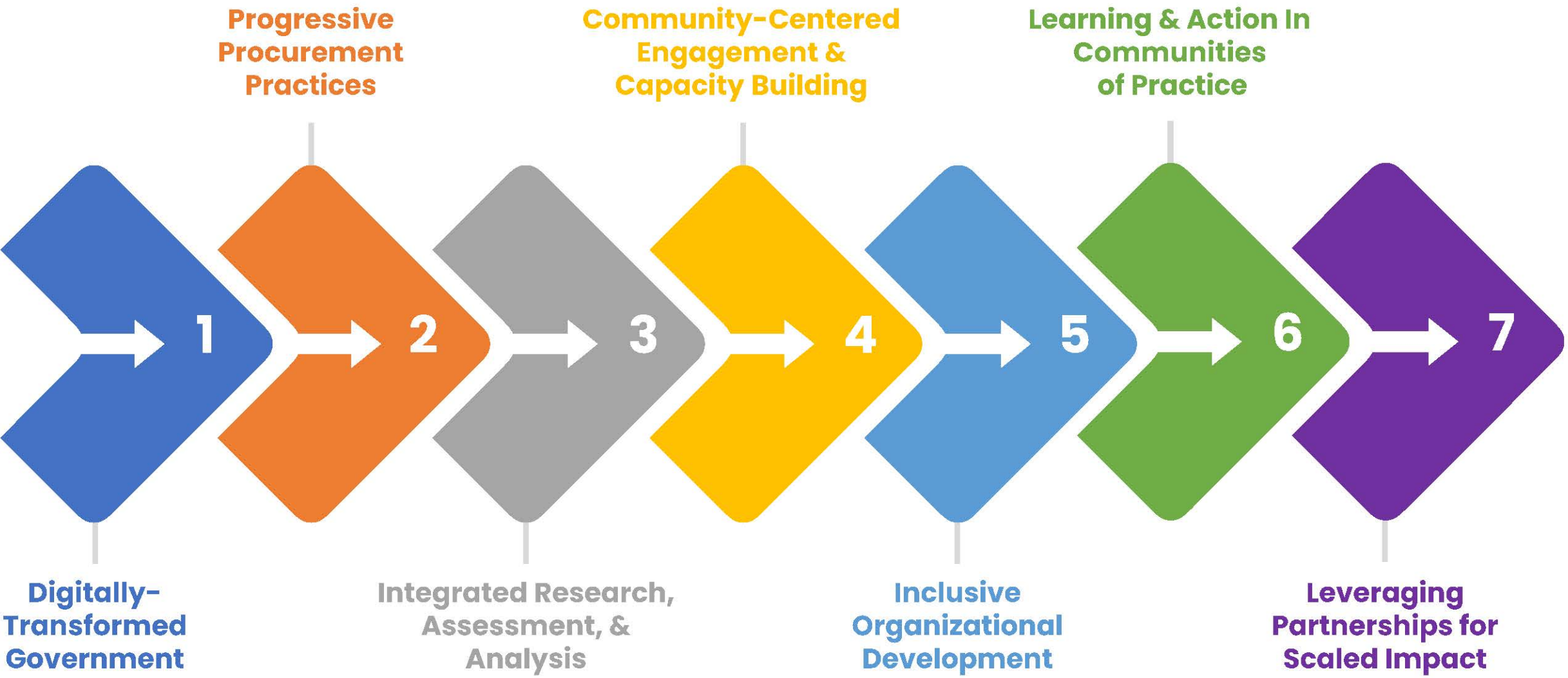
↳ **“Strategic Capabilities”**

Existing and emerging capabilities that are required in order to successfully pursue each Opportunity Area. The Municipal Innovation Council can install, grow, and leverage these capabilities from:

- *Existing Capabilities*
- *New Capability Building*
- *Partnerships & Alliances*

Strategic Capabilities

Municipal Innovation Council



Strategic Capabilities

Municipal Innovation Council

1

Digitally-Transformed Government

By integrating digital technology into our operation, we will fundamentally change how we operate and deliver value. Digitizing services, processes, and the tools for engagement will result in cultural change that requires us to continually challenge the status quo, experiment, and get comfortable with failure. (2)

2

Progressive Procurement Practices

By leveraging our buying power and streamlining how we work, we will be more efficient, deliver innovative services and goods, and most importantly, work together to reduce costs for member communities. (3)

3

Integrated Research, Assessment, & Analysis

By advancing research and assessment in member communities, we will make evidence-based decisions. Our collective understanding of complex issues will shape how we approach our work and how we deploy resources.

4

Community-Centered Engagement & Capacity Building

By prioritizing a deep understanding of issues and how they impact people, we will be able to address inequities and building strong communities. We will seek out opportunities to build capacity in our communities so that we can collectively sense and respond to challenges more quickly.

5

Inclusive Organizational Development

By incorporating a complex set of strategies including problem identification, fact finding, planning, change management, recruitment, engagement, analysis, competency development, and transformation, we will develop more inclusive and informed organizations that reflect the diversity of our communities.

6

Learning & Action In Communities of Practice

By establishing and being active members in local, regional, provincial, national, and international networks, members will radically galvanize knowledge sharing, learning, problem solving, and change. We will support collaboration, cultivate sustained learning, provide encouragement, and help members integrate new knowledge and skills into their work. (4)

7

Leveraging Partnerships for Scaled Impact

By seeking out and building strong relationships with leaders in the public, private, and non-profit sectors, the MIC will leverage expertise and access to resources that support existing and emergent areas of opportunity.

References

Municipal Innovation Council

1. <https://www.hatch.com/en/About-Us/Publications/Blogs/2017/07/Five-principles-for-delivering-resilient-infrastructure>
2. <https://enterpriseproject.com/what-is-digital-transformation#:~:text=Digital%20transformation%20is%20the%20integration,and%20get%20comfortable%20with%20failure>.
3. <https://www.doingbusiness.mgs.gov.on.ca/>
4. <http://www.communityofpractice.ca/background/why-communities-of-practice-are-important/>

General Ledger

Annual Department Budget vs. Actual Comparison Report

Fiscal Year Ending: DEC 31,2021 - From Period 1 To Period 5 Ending MAY 31,2021

Account	Description	Previous Year Total	Current Year To Date Actual
Fund: 17 MUNICIPAL INNOVATION CENTRE			
Category: 5???			
5881 MUNICIPAL INNOVATION COUNCIL			
Revenue			
17-5881-5000	MIC-MUNICIPAL CONTRIBUTIONS		214,543.00
17-5881-5100	MIC - PROVINCIAL GRANTS		0.00
Total Revenue			214,543.00
Dept Excess Revenue Over (Under) Expenditures			214,543.00
Category Excess Revenue Over (Under) Expenditures			214,543.00
Category: 6???			
6881 MUNICIPAL INNOVATION COUNCIL			
Expense			
17-6881-4120	MIC - SOFTWARE / ANNUAL LICEN		0.00
17-6881-5430	MIC-CONSULTANTS		38,712.65
17-6881-9300	MIC-TRANSFER TO RESERVE		0.00
Total Expense			38,712.65
Dept Excess Revenue Over (Under) Expenditures			(38,712.65)
Category Excess Revenue Over (Under) Expenditures			(38,712.65)

General Ledger
Annual Department Budget vs. Actual Comparison Report
Fiscal Year Ending: DEC 31,2021 - From Period 1 To Period 5 Ending MAY 31,2021

Account	Description	Previous Year Total	Current Year To Date Actual
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REPORT SUMMARY

17-5881	MUNICIPAL INNOVATION COUNCIL		214,543.00
Fund 17 Total Revenue			214,543.00
17-6881	MUNICIPAL INNOVATION COUNCIL		38,712.65
Fund 17 Total Expenditure			38,712.65
Fund 17 Excess Revenue Over (Under) Expenditures			175,830.35
Report Total Revenue			214,543.00
Report Total Expenditure			38,712.65
Report Excess Revenue Over (Under) Expenditures			175,830.35