B.C. Smart Communities Pilot: Smart Kootenays

Project Overview

The proposed BC Smart Cities pilot project represents the road safety and efficiency components of our Smart Kootenays collaborative work plan developed by the Cities of Nelson, Castlegar, Trail and Rossland during the Government of Canada's Smart Communities Challenge.

Challenge Statement: Our rural region will work together to measurably improve travel decision-making, road safety, and digital access by decreasing accidents, reducing transportation-related greenhouse gas emissions, and building the capacity of all of our residents to adopt digital technologies.

More specifically, this project will involve the development and beta testing of the Smart Kootenays Digital Mobility (SKDM) platform and will include digital inclusion and open data capacity building efforts focused on technology adoption and the identification, standardization and integration of transportation data, including but not limited to road safety (e.g. data generated from sensors on snow plows), and efficiency (e.g. road closures and wait times associated with construction and natural disasters – avalanches, floods, wildfire), both within and between our West Kootenay communities.

While Smart Kootenays partners are actively pursuing other funding sources to advance our shared priorities, this proposed project will specifically focus on phase 1 development and beta testing of the SKDM platform. Technology partners will construct the mobility platform to allow for future integration of ride-load-delivery share components as well as elements related to low carbon transportation. The overarching goal is to use data and connected technologies to enable our residents to make smart transportation decisions resulting in safe and efficient travel within the context of digital inclusion. Desired outcomes include: safer roads and reduced accidents, improved ability to make informed travel choices resulting in completed trips, improved satisfaction levels related to travel safety and efficiency, and reliability. The development of the platform will bring multiple data sources into a single application, including the opening up of new data sources.

The project includes scoping and development of the SKDM app from January to August 2019 and beta testing of the app from September to December 2019. It is anticipated that students from Selkirk College's Geographic Information Systems and Nursing programs will participate with support from Selkirk College's Applied Research and Innovation Centre. Key aspects include open data and beta testing, included targeted testing with isolated seniors. A steering committee comprised of local government representatives, economic development practitioners, technology advisors, and Selkirk College researchers will guide the project from January to December 2019.

Rationale for Smart Cities Approach and Alignment with Pilot Themes

As noted above, the rationale for submitting this proposal builds on the momentum and excitement generated from the Government of Canada's Smart Cities Challenge. The joint-submission from the Cities of Nelson, Castlegar, Trail and Rossland also demonstrates a commitment to cross-community collaboration, especially as it relates to challenges that extend beyond the ability of a single municipality to address. The theme of transportation was prioritized through extensive consultation processes and has captured the interest of other partners including CBT's Climate Adaptation Program. Partners including Kootenay Ride Share have also stepped forward to explore ways to partner in ways that build rural resilience through data and connected technologies. In addition, Smart Kootenay efforts are well grounded in existing research and strategic plans. The project relates primarily to the theme of efficient transportation and mobility but also touches on aspects of community resiliency and safety as well as energy efficiency and climate change mitigation.

Partner Contributions

Contributions of municipal, economic development and technology partners total $2,000 of cash and $48,600 in-kind totalling $50,600 that will be matched with the provincial contribution of $40,000 to advance our collaborative Smart Kootenay priorities. Partners include the City of Nelson, the City of Castlegar, the City of Trail, the City of Rossland, Community Futures Central Kootenay, Community Futures of Greater Trail, Castlegar Economic Development Office, Nelson and Area Economic Development Partnership, Lower Columbia Initiatives Corporation, Lower Columbia Development Team Society, Thoughtexchange, Kootenay Association for Science and Technology, and Selkirk College's Applied Research and Innovation Centre.

Community Engagement

As part of the Smart Community Challenge broad and targeted engagement activities took place in March and April 2018 in the form of some initial stakeholder meetings, 2 Thoughtexchanges, 2 stakeholder sessions facilitated by Selkirk College, and countless proposal development meetings by the Smart Kootenays working group. The first Thoughtexchange question asked residents "What are some ways data and connected technology could be used in the West Kootenay to address local challenges facing residents." This exchange was pushed out extensively through social media resulting in 135 participants, 116 Thoughts and 2048 rankings. The qualitative data was then coded by Selkirk College's Rural Development Institute using grounded theory resulting in the following themes: transportation (n=17), environmental (n=17), enabling a remote / technology workforce (n=15), open data / data sharing (n=14), citizen engagement (n=12), social considerations (n=13), health and education (n=7), and economic development (n=5). These findings were then used to frame the first facilitated session at Selkirk College. Themes were then further scoped into possible project ideas. A follow up session was then held at Selkirk College to further scope the technology solutions that could align with top project ideas. A second Thought Exchange was used to gather input on residents' desired outcomes by posing the following question, "Specific to moving around safely and reliably and staying connected with each other, what would successful implementation of the Smart Cities Challenge look like in your life and our communities?" The exchange that was pushed out through traditional news media channels and social media channels resulted in 110 participants, 71 Thoughts, and 718 ratings. Again, desired outcomes related to transportation challenges dominated the data.

Community Readiness

In order to ensure the successful implementation of this project, the current Smart Kootenays working group will become the project Steering Committee and will be responsible for guiding this one-year project and will include representation from the Cities of Nelson, Castlegar, Trail and Rossland as well as Selkirk College. A Terms of Reference will identify the roles and responsibilities of the Steering Committee.

Selkirk College will administer the project on behalf of Smart Kootenay partners. Selkirk College has an annual operating budget of approximately $48 million and has an extensive track record of contributing to local and regional innovation dating back to 2003 when the Selkirk Geospatial Research Group (SGRC) was founded, followed by the establishment of the Regional Innovation Chair in Rural Economic Development in 2005 and the Columbia Basin Rural Development Institute in 2011. Collectively housed at the Applied Research and Innovation Centre, the college's research and innovation programs account for $1.5 million annually, including a Social Sciences and Humanities of Canada *Rural Open Data for Local Government* social innovation grant. Technology partners and Selkirk College applied researchers will work together to develop the Smart Kootenays Digital Mobility platform. It is also important to note that partner, City of Nelson, has expertise related Intelligent Communities. Nelson was named one of the top 21 Smart Cities out of 400 communities globally and holds the proud distinction of having the smallest population base of all 21 winners.