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COUNCIL DATE: September 27, 2021

REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **September 23, 2021**

FROM: **General Manager, Engineering
General Manager, Investment &
Intergovernmental Relations
General Manager, Parks Recreation & Culture**

FILE: **4520-01**

SUBJECT: **Urban Technology Test Lab Pilot Project**

RECOMMENDATION

The Engineering, Parks Recreation & Culture, and Investment & Intergovernmental Relations Departments recommend that Council:

1. Receive this report for information; and
2. Endorse staff to develop a program to engage with technology developers in support of the Urban Technology Test Lab Pilot and facilitate technology testing within the City.

INTENT

The purpose of this report is to provide Council with information on the City's Urban Technology Test Lab Pilot (the "Pilot") and to seek Council's endorsement for staff to develop a program to engage with technology developers to support field testing in City roads or land.

BACKGROUND

In 2019, the City participated in Infrastructure Canada's Smart Cities Challenge. One of the key take-aways from the Smart City Challenge was that technology companies in the process of developing software and hardware frequently lack a venue for field testing. The lack of field-testing venues was confirmed in subsequent discussions with the BC Technology Association and Western Technology Supercluster, who together represent hundreds of technology firms.

The Smart City Challenge's Call for Innovation received over 300 responses from technology firms interested in deploying their technologies to solve transportation-related problem scenarios. Products included:

- enhanced mobility wheelchairs,
- crosswalk sensors for the visually impaired,
- pedestrian/cyclist detection cameras that could change traffic lights
- smart parking sensors

Many of these technologies were developed by local or Canadian firms that saw the Smart City Challenge and Surrey's physical asset base as an opportunity to:

- Pilot their devices/software.
- Learn from deployment in the field.
- Obtain feedback from City subject-matter-experts and the public.
- Refine the product prior to taking it to market.

Without the opportunity to field test in a real-world setting, many of the products could not proceed to final development and commercialization.

Surrey is unique amongst Metro Vancouver communities in possessing a large and diverse geography, including agricultural and bare land, waterways, and the regions' largest road network. Surrey is outside of the restricted airspace adjacent to the Boundary Bay Airport and the Vancouver International Airport, therefore offering large airspace parcels with the potential for unmanned aerial vehicles ("UAV") testing. UAV manufacturers and operators have indicated the ability to field test locally is a critical gap in their product development, leaving them to travel to the BC Interior or out of province to access suitable flight test areas.

DISCUSSION

Responding to this need for technology testing areas, the Pilot proposes developing an expedited program and intake process, utilizing the City's existing processes being used for film production which would provide technology firms with access to safe, local, "real world" test zones.

The initiative has potential for multiple benefits such as generating clean technology jobs, increased commercial tenancy, expanded applied research partnerships with academic research programs, and exploring solutions to City problem-scenarios. There is also potential for new revenue streams derived from licensing agreements.

Applications for technology test permits would be assessed based on four focus areas:

1. Transportation;
2. Agritech;
3. Sustainability; and
4. Robotics.

Consistent with the approach used for film production, applications would be reviewed and processed by staff in the Parks Recreation & Culture Department, with input from the Investment and Intergovernmental Relations Department, and Engineering Department. The Investment & Intergovernmental Relations Department will be responsible for promoting the program and identifying companies that could be candidates for this pilot program.

Opportunity/Benefits

A technology testing program has potential for multiple benefits to the City:

- increased probability of technology firms choosing to locate/headquarter in Surrey, employing staff with above-average education and incomes;

- an increase in local clean-technology jobs;
- opportunity to challenge technology firms to provide solutions to Surrey problem-scenarios especially in the realm of transportation safety and enhanced mobility, as defined within the City's Intelligent Transportation Strategy;
- opportunity to coordinate with applied research from SFU, KPU, and other academic/research institutions;
- potential for new revenue streams from licensing agreements; and
- staff exposure to new and emerging technologies.

Expedited Permitting Process

To begin, staff are proposing investigating up to four potential pilot testing zones across the City that will be identified for potential technology testing. As technology testing requirements are assessed, the objective will be to identify and make available sites for innovators to consider.

The program would replicate the film production process, with any firm required to carry commercial liability insurance and cover all costs related to a technology deployment such as traffic management plans or space rentals. A limit on number of permits accepted per month will be established to ensure staff resources are sufficient to ensure due diligence in terms of risk management and compliance with City policies.

Next Steps

Staff will report back to Council on the results of the first few projects and with recommendations regarding continuation.

As pilot projects proceed, staff will develop metrics to gauge success, including the number of technologies tested in Surrey and potential economic spin-offs for Surrey and any impacts it may cause to residents, both positive and negative.

SUSTAINABILITY AND POLICY CONSIDERATIONS

The proposed initiative supports the objectives of the City's Sustainability Charter 2.0. In particular, they correspond to the Sustainability Charter 2.0 themes of Economic Prosperity and Livelihood, and Infrastructure. Specifically, these installations support the following Desired Outcomes ("DO") and Strategic Direction ("SD"):

- Innovation (DO14) – Surrey is the region's innovation hub, focusing on health and clean technologies, and creating significant local and regional economic impacts.
- (DO15) --An innovation network attracts and retains talent, and enables new company formation.
- Jobs and Skills Training (DO3)– Job creation and entrepreneurship development are widely fostered.
- Economy (DO4)– – Surrey's economy is diversified with a mix of service, industrial, agricultural and innovation-based business.
- Learning (SD2)– Advance innovation and technology learning opportunities in Surrey, to achieve ongoing relevance and broad community access to information and learning opportunities.

CONCLUSION

The proposed Urban Technology Test Lab Pilot has potential to yield multiple benefits including expanded technology employment, technology-based solutions to City operational issues (particularly road safety and enhanced mobility), and partnerships with academic research institutions.

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