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| TO: | CHAIR AND MEMBERS STRATEGIC PRIORITIES AND POLICY COMMITTEE MEETING OF DECEMBER 7, 2015 |
| FROM: | JOHN M. FLEMING MANAGING DIRECTOR, PLANNING AND CITY PLANNER |
| SUBJECT: | SMART CITY STRATEGY TERMS OF REFERENCE |

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| RECOMMENDATION |
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That, on the recommendation of the Managing Director, Planning & City Planner, the attached Terms of Reference for the *Smart City Strategy* **BE APPROVED**.

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| PREVIOUS REPORTS PERTINENT TO THIS MATTER |
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March 9, 2015 - Strategic Priorities and Policy Committee, update on the draft of *The London Plan* and next steps.

February 26, 2015 - Strategic Priorities and Policy Committee, Council's 2015-2019 Strategic Plan.

June 23, 2014 - Strategic Priorities and Policy Committee, Public Participation Meeting on the draft of *The London Plan*.

May 22, 2014 - Strategic Priorities and Policy Committee, launch of the new draft Official Plan for the City of London.

April 14, 2014 - Strategic Priorities and Policy Committee, update on *ReThink London* and an overview of the next steps for public review and engagement on the draft of the new Official Plan in advance of its final adoption by Municipal Council.

August 26, 2013 - Planning Report to Strategic Priorities and Policy Committee (SPPC) regarding the information report on the public feedback to the *ReThink London* discussion papers.

June 10, 2013 - Planning Report to Strategic Priorities and Policy Committee (SPPC) regarding the *ReThink London* process and the discussion papers related to the eight key directions.

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| PURPOSE |
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This report is intended to advise Council of the proposed Terms of Reference for the *Smart City Strategy*. The *Smart City Strategy* is identified in the City's Strategic Plan (2015-2019) and the new draft Official Plan for the City of London (The London Plan) as a strategic initiative. This report identifies the partners who are funding the preparation of the strategy, the proposed focus areas, the scope of work, the process to be undertaken and the timelines proposed for the project. Staff are seeking confirmation of the proposed Terms of Reference for the *Smart City Strategy* from Council.

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| BACKGROUND |
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Through the Rethink London process eight key directions were identified to move London towards its vision for the city for the next 20 years. One of the prevailing themes on how London will be defined in 2035 is the notion of prosperity. To create a prosperous City a number of factors were suggested during the public engagement process to achieve this goal, one of which was to build a city that is more connected and accessible. Specifically, Londoners identified that they wanted to become a "smart city", a City that would have a greater virtual connection, enabling Londoners access to knowledge and learning, to foster the growth of innovative knowledge-based firms and through our partner universities, colleges, research centres and hospitals. Londoners also envisioned that the city of the future would develop

technological and communication capabilities to support connections between local businesses and global knowledge.

Based on this community vision, and the input from LARG*NET (London and Region Global Network) and its member partners and the City of London's Information Technology Services research was undertaken by staff into the best practices from other municipalities. From this direction a smart city policy framework was developed and incorporated in the City Building policies for the new draft City of London Official Plan (The London Plan). Through development of the Smart City policies it was recommended that a *Smart City Strategy* may be prepared to establish a clear direction for collaboration, facilitation, investment, infrastructure advancement, skill development and additional actions supportive of the development of a smart city.

From the outset of the project it was recognized that partnerships with various community entities and City of London Service Areas were needed to ensure the scope of work would produce a strategy that is comprehensive in nature. Currently, the funding for the preparation of the strategy is being contributed through multiple partners, which include Planning Services, Information Technology Services, LARG*NET, LEDC, and London Hydro. The overall project team includes a collaboration between Planning Services, Information Technology Services, Community and Economic Innovation, Environmental and Engineering Services, LARG*NET, LEDC and London Hydro.

PROPOSED TERMS OF REFERENCE

Overview

The City's Strategic Plan (2015-2019) and the new Official Plan for the City of London (The London Plan) has identified the *Smart City Strategy* and its associated initiatives as an investment that will help London to promote economic development, civic innovation, data sharing, while gaining efficiencies and effectiveness in municipal processes, all in effort to improve our residents' overall quality of life. Through these advancements cities across North America and the world have been able to realise notable cost savings, increased development activity, improved business intelligence and analytics, heightened business attraction and incubation and have experience in some cases increases in population growth. Given the suggested advancements the strategy will assist London in attracting and retaining talent as it competes with other cities on a provincial, national and global scale in making it a place people want to live and invest.

What is a Smart City?

A smart city is a city that leverages new forms of information and communications technology (ICT) to promote economic development, civic innovation, improved service management and a high quality of life. This results in a more livable, functional, efficient and competitive city.

Focus Areas

In defining the focus areas of the *Smart City Strategy*, the City has proposed four pillars to form the basis of the strategy (and will be further refined through this project). These are the following:

- Smart Living
 - Sharing data to allow the public to use and republish data
 - Improve access to and education required to use digital technologies
 - Use of web-based citizen engagement tools/applications to enhance collaboration
 - Create digital service delivery methods to improve customer service
- Smart Infrastructure
 - Optimize the construction/operation/management of infrastructure (water, sewer, transportation, energy, and information and communications technology)
 - Coordination and monitoring of physical assets through use of digital infrastructure
 - Data collection to assist with municipal decision-making
 - Smart buildings/green infrastructure

- Smart Economy
 - Creation/enhancement of technology incubators/accelerators/business hubs
 - Attraction/retention of talent to grow digital economy
 - Provision of resources and organizations to support economic development
 - Workforce education/skill development opportunities to support digital economy
- Smart Governance and Decisions
 - Use of data analytics/metrics to improve corporate decision-making
 - Governance model to support collection/maintenance/dissemination of municipal data
 - Improving and building the corporate digital culture
 - Governance structure for public/private partnerships to operate potential municipal assets

Scope and Timeline

The City is proposing a three-phased approach to prepare a comprehensive *Smart City Strategy*. This will encompass such elements as: a public engagement strategy for the project, a readiness assessment, strategy development, branding, infrastructure and program investments, development of governance models, project phasing, and an implementation plan. It is anticipated that the *Smart City Strategy* will be delivered in late 2016 or early 2017. For further detail on the project scope and timeline, the proposed Terms of Reference for the *Smart City Strategy* are included in Appendix A.

Financial/Strategic Implications

The *Smart City Strategy* will provide a framework to guide investment decisions regarding some or all the City's digital services, corporate processes, partnerships and infrastructure. The development of the implementation plan will identify priority initiatives, corporate processes and associated projects to carry out the strategy. Currently, the project has been allocated \$125,000, with contributions from Planning Services and Information Technology Services, and with the support of our project partners, LARG*NET, LEDC and London Hydro to create the *Smart City Strategy*. Regarding the implementation of the strategy, the City has not allocated new funding for the strategy in the multi-year budget. The rationale for not allocating a budget to the implementation phase of the project is to allow for the development of identified projects and initiatives along with appropriate costing. Upon completion funding mechanisms identified in the strategy will be explored to begin undertaking the implementation plan. It is expected that the strategy will include a variety of potential initiatives that range from no cost, to low cost, to substantive cost. The strategy will also include municipal initiatives that are already underway or planned and budgeted for within existing budgets, the framework of the *Smart City Strategy* will coordinate those efforts within the context of the implementation plan of the strategy. The timing by which the strategy is ultimately implemented, particularly any significant cost items, will be at the discretion of Council. In the early stages of implementing the strategy consideration should be given to low cost/no cost solutions in an effort to kick-start the implementation of the plan.

Collaboration with Partners

During the past year meetings have occurred with our project partners to guide the development of the Terms of Reference for the *Smart City Strategy*. To date, we have incorporated comments regarding the proposed Terms of Reference from LARG*NET, Information Technology Services and Environmental and Engineering Services, Community and Economic Innovation, LEDC, and London Hydro. City staff has also made a presentation to members of the Senior Leadership Team to gain their input and feedback on the development of the Terms of Reference. Contributions from all parties involved in the consultation process have been invaluable in preparing the proposed scope of work.

Existing Smart City Initiatives/Infrastructure

Presently, the City of London has existing initiatives and/or projects that represent an element of smart cities. However, a more comprehensive strategy will assist the corporation with managing and implementing a larger range of smart cities initiatives and projects. The following are examples of projects that would fall within the spectrum of smart cities:

Smart Living

- Open Data London: An initiative to provide information and data that is easily reusable and can be used by the user as they wish (catalogue currently includes 42 datasets and 70 sub-datasets).
- Renew London: Londoners are made aware of construction zones and traffic detours resulting from roadwork, sewer rehabilitation and watermain relining projects through a web based system. Daily updates of construction zones and traffic detours resulting from roadwork, sewer rehabilitation and watermain relining projects are provided to media, and information is available online 24/7 for anyone to find out about road closures, ongoing and upcoming projects on city streets.

Smart Infrastructure

- Primary Network Modernization: The Information Technology network has been upgraded to improve the network backbone for the corporation. The completion of the project will enhance the speed and reliability of voice and data communications for Service Areas within the City of London.
- Wastewater/Water Supervisory Control and Data Acquisition (SCADA) system: The system consists of a broad wide area network (WAN) connecting all sites, which provides remote monitoring, control, data historization, reporting and alarming of equipment. Also included in the system monitoring is real time energy consumption of major plants and equipment. System Operators have the ability through numerous tablets to operate equipment remotely. Video is incorporated into the SCADA system to monitor process and security.

Smart Economy

- Last Mile Program: Qualifying business owners and/or property owners may be eligible for a one-time grant to complete last-mile fibre optic cable installation to deliver higher capacity broadband services to the building.

Smart Governance and Decisions

- Business Intelligence Tools: A project was undertaken by the City of London to consolidate and augment existing internal reporting analytics that are currently in place within the corporation. The implementation of Business Intelligence Tools will support better analytics and corporate decision making.
- Transportation and Roadside Operations: Tablets are used to collect inventory and condition data for trees, sidewalk and walkways. GPS/AVL is used to track winter equipment progress and winter material applications. Road Weather Information System (RWIS) stations are installed in each quadrant of the City to collect air, pavement and ground temperature data for weather forecasting.

CONCLUSION

The *Smart City Strategy* is an important initiative that will assist in building a prosperous London. From a strategic perspective, it will promote economic development, civic innovation, data sharing, while gaining efficiencies and effectiveness in municipal processes for the City of London, all in effort to improve our residents' overall quality of life. The strategy will coordinate existing and future smart city initiatives within the context of the City's Strategic Plan (2015-2019) and City of London's new draft Official Plan (The London Plan). It is hoped that a plan of this nature will build a city that is exciting, exceptional and connected.

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November 5, 2015
MJ/
Attach.

Appendix "A"

Smart City Strategy – Terms of Reference

Overview

Presently, the City is seeking a response to an RFP from qualified individuals or organizations to assist with the preparation of a comprehensive *Smart City Strategy*. This will encompass such elements as a readiness assessment, strategy development, branding, business process integration, infrastructure and program investments, development of governance models, project phasing, and an implementation plan.

Background and Objectives

The City's Strategic Plan (2015-2019) and The London Plan (the City's Official Plan) has identified the *Smart City Strategy* and its associated initiatives as an investment that will help London to promote economic development, civic innovation, data sharing, while gaining efficiencies and effectiveness in municipal processes, all in effort to improve our residents' overall quality of life. Through these advancements cities across North America and the world have been able to realise notable cost savings, increased development activity, improved business intelligence and analytics, heightened business attraction and incubation and have experience in some cases increases in population growth.

In defining the focus areas of the *Smart City Strategy*, the City has proposed four pillars to form the basis of the strategy. These are the following:

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Scope of Work

The scope of work for this project includes:

Phase #1

1. Create a public engagement strategy for this project that includes all technological requirements for implementation, such as, but not limited to, mobile applications, browser

applications, technologies that engage the public through the use of sensors or mobile data collection.

2. Prepare a readiness assessment of current infrastructure, programs and services related to smart cities that is available to the Corporation of the City of London and its citizens.
3. Gain an understanding of best practices for smart cities initiatives (which can include partnerships, funding models, infrastructure, processes and governance) and compare against the readiness assessment to understand the potential gap.

Phase #2

1. Prepare a cohesive *Smart City Strategy* that establishes a vision, goals, objectives and proposed initiatives that will create the desired Smart City for London. This should include, but is not limited to the following:
 - a. Improve and support the management of the City's existing infrastructure (both traditional municipal infrastructure and IT infrastructure) through smart cities technology.
 - b. Identify required infrastructure (and networks), municipal programs and other incentives that are needed to improve the City of London's Smart City service delivery.
 - c. Improve the use of green technologies, monitoring and design in city development practices.
 - d. Identify a governance strategy and processes related to data sharing, data collection, data maintenance and the operation and maintenance of municipally owned smart cities infrastructure (and networks).
 - e. Develop strategies that will improve participation and access to public engagement.
 - f. Identification of and strategies for partnerships and collaboration with local partners to implement the *Smart City Strategy*, this includes infrastructure, and programs and services.
 - g. Create/identify corporate processes and software that allows data to be used to support evidence based decision making on municipal applications and city projects/initiatives.

Phase #3

1. Create an implementation plan for the *Smart City Strategy* that includes, costing (no cost, substantive cost), estimates (qualitatively and quantitatively), resources (both human and financial), phasing and future corporate requirements, partnerships, governance model and other tools that may be required.
2. Identify pilot projects to showcase the ability of smart cities related infrastructure. This is to include preparation of a plan and required financial and human resources to implement the identified project.
3. Identify human capital required to advance a smart cities program and investments to support business incubation and local economic development.
4. Build a brand strategy for both the *Smart City Strategy* project and future infrastructure networks.

Timeline

The proposed timelines for this project are:

Phase #1

January/February 2016

1. Project kick-off
2. Public Engagement Strategy
3. Brand Strategy for the initiative

March 2016

1. Readiness Assessment
2. Best Practice Review
3. Gap Analysis

Phase #2

June 2016

1. First Draft of Strategy

August/September 2016

1. Final Draft *Smart City Strategy*

Phase#3

December 2016

1. First draft of Smart City Implementation Plan (will form part of the overall Strategy)

February 2017

1. Final draft of the *Smart City Strategy* and Implementation Plan for adoption –
Committee/Council Presentation