Non-Competitive Contract with Esri Canada Limited for Proprietary Geographic Information System Software Licenses

Date: October 5, 2021
To: General Government and Licensing Committee
From: Chief Technology Officer and Chief Procurement Officer
Wards: All

SUMMARY

The purpose of this report is to seek City Council authority for the Chief Technology Officer, Technology Services Division to negotiate and enter into a non-competitive contract with Esri Canada Limited for the provision of proprietary geographic information system (GIS) software licenses for the City. The contract will commence from the date of award for a one (1) year period, with the option to renew for two (2) additional separate one (1) year periods, at the sole discretion of the City, and subject to budget approval(s) for the total amount of $619,749 net of all taxes and applicable charges ($630,657 net of Harmonized Sales Tax Recoveries).

GIS is a critical enabler for the city, from map production to advanced business analysis. The city uses GIS in delivering its infrastructure and planning services. As an example, Toronto Water uses GIS data, maps and location analytics to track and manage 2,250,000 infrastructure assets. These include water treatment plants, pumping stations, water mains, hydrants, maintenance holes, catch basins, sewers, valves, outfalls and reservoirs.

Another critical application of GIS tools is in the use by the Infrastructure Coordination Unit (ICU) to guide the multi-year coordination process for planned construction projects to be completed by City Divisions, utilities and third party groups. The ICU mandate is to reduce the impact and disruption of construction activities experienced by the public. GIS tools assist in consolidating and analyzing the planned projects for the different groups, identifying conflicts in projects locations, assets and timelines. This helps identify and manage potential impacts to the citizens and businesses in Toronto.

GIS tools are also utilized in emergency management and response including the following:

- Tracking the location and supply levels of support and rescue teams following an emergency event.
- Creating computer-generated maps of infrastructure including pipes, sewers, power lines, neighborhoods and other aspects of an area so the map can be referenced in preparedness, emergency and recovery efforts.
- Designing databases for populations, businesses, structures, schools and more, which can be consulted in the case of an emergency.
- Assigning where emergency headquarters (i.e. police, fire, ambulance) should be located to be able to provide the quickest response time to the highest number of people.
- Identifying potentially vulnerable residents in case of a disaster, in terms of age, income and other insights.

During the COVID-19 pandemic, GIS technology emerged as an essential solution in tracking and visualizing disease movement and activity by enabling the ability to quickly develop and analyze maps portraying pandemic related data. GIS tools were used by the City of Toronto to create Quick Maps and data analytics to support Public Health and other divisions in their various initiatives and in support of public facing service delivery. Additional examples include:

- COVID-19 Response Maps and Vaccine Clinic Locations map
- Quick Maps in support of ActiveTO, CafeTO and CurbTO programs
- Emergency Operations Center Maps and ongoing geospatial support
- Police, Fire, Ambulance, 911 emergency dispatch
- Parks, Forestry and Recreation (PFR) maps for online reservations for Skating, Fitness Programs and Pools which assisted in maintaining physical distancing
- Enabled the VaxTO campaign with a postal code locator which will text client, their three nearest Vaccine Clinics

In 2003, Esri Canada Limited was the sole respondent and successful proponent for Request for Proposal 9144-03-7067 for software solutions to facilitate access to the City's enterprise geographic information platform. A contract was awarded to Esri and since then, access and use of geographic information by City Divisions, contained within the enterprise geographic information platform, has been enabled primarily via Esri software.

In 2004 the City executed a Master License Agreement to provide for the terms governing the software, licensed by ESRI and purchased from Esri Canada Limited. In 2016, the City entered into a non-competitive contract with Esri Canada Limited, through authority by the City Council under GM12.5, to purchase proprietary geographic information system software licenses. The term of this contract expired in 2021.

ESRI is a global industry leader in GIS technology development. Esri Canada Limited is the sole distributor of Esri software licenses in Canada. Esri software is used extensively across the City for business support and service delivery. Other vendors in the market do not have the same software service offerings that meet the scale and complexity of the City's use. It is critical for those services to be able to continue to use

the Esri software to avoid impacts to operations, additional costs, and to meet existing service growth needs.

Esri provides geospatial products and services to most municipal governments across the Greater Toronto Area (GTA) such as Peel (including Brampton and Mississauga), York, Halton, Durham, and other municipalities like Ottawa, Waterloo and Niagara

Locally, in addition to the City of Toronto, Esri is the primary provider of Geospatial Services to the Provincial and Federal Government. Examples include the frequently-accessed Ontario Map Portal hosted by the Federal Land Information Ontario Map Program, called Land Information Ontario (LIO)[1]. Additionally, with Esri's current roster of government clients, it also is the primary geospatial solution that operates the Community Map of Canada[2]. This is a base map of Canada built from authoritative data, collected and updated daily.

Lastly, two of the local school boards in Toronto, in conjunction with the universities providing geospatial support, are all using ESRI products as their main tool to support their mapping programs operations.

Esri is used by our government partners, agencies, boards and commissions and it is beneficial for the City to continue using Esri for compatibility and business continuity purposes.

City Council approval is required in accordance with Municipal Code Chapter 195-Purchasing, where the current request exceeds the Chief Purchasing Officer's authority of the cumulative five year commitment for each supplier, under Article 7, Section 195-7.3 (D) of the Purchasing By-Law or exceeds the threshold of $500,000 net of HST allowed under staff authority as per the Toronto Municipal Code, Chapter 71- Financial Control, Section 71-11A.

RECOMMENDATIONS

The Chief Technology Officer, Technology Services and the Chief Procurement Officer, Purchasing & Materials Management recommend that:

1. City Council grant authority to negotiate and enter into a non-competitive contract with Esri Canada Limited to purchase proprietary geographic information system software licenses, for a one (1) year period commencing from the date of award, with the option to renew for two (2) additional separate one (1) year periods, at the sole discretion of the Chief Technology Officer and subject to budget approval(s), for the total amount of up to $619,749 net of Harmonized Sales Tax ($630,657 net of Harmonized Sales Tax Recoveries) on terms and conditions satisfactory to the Chief Technology Officer, Technology Services and in a form satisfactory to the City Solicitor.

[1] Land Information of Ontario: https://www.ontario.ca/page/land-information-ontario
[2] The Community Map of Canada: https://www.esri.ca/en-ca/products/data/the-community-map-of-canada

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FINANCIAL IMPACT

The total potential value for which approval is sought is up to $619,749 net of Harmonized Sales Tax ($630,657 net of Harmonized Sales Tax Recoveries) for the one (1) period and the two (2) option years.

Funding in the amount of $220,232 net of Harmonized Sales Tax recoveries was included in the Council approved 2021 Divisional Operating and Capital Budget submission for Esri licenses. Should the City choose to exercise the option to renew for additional two (2) years, then additional operating and capital funding will be requested in the 2022 and 2023 Divisional Operating and Capital Budget submissions. The annual estimated expenditures by Division are summarized as below.

Table 1: Financial Impact Summary of Initial Term:

	Divisions	Cost Centre	Cost Element	Date of Award to Dec 31, 2021
Initial Term 2021	City Planning	UR005	3420	$26,201
	Transportation Services	TS4010	3420	$37,960
	Children's Services	E0131A	3420	$629
	Toronto Water	TW6045	3420	$64,948
	Toronto Paramedic Services	B31100	3420	$13,142
	Technology Services	IT2107	3420, 4828	$46,598
	Various Divisions	Various Operating Budgets *	3420	$30,754
Total Net of HST Recoveries				$220,232

* City Divisions will be able to utilize the contract, as required, by issuing Contract Release Orders (CROs) against the contract subject to validation of funding at the time of issuance and approval by the Division Head of the requesting division. Individual cost centres will be identified by the Divisions on each CRO as it is issued against the contract.

Table 2: Financial Impact Summary of Option Periods:

	Divisions	Cost Centre	Cost Element	Total
Option 1 Jan 1, 2022 to Dec 31, 2022	Various Divisions	Various Operating Budgets *	3420	$249,626
	Technology Services	IT2107	3420	$47,282
Option 2 from Jan 1, 2023 to Dec 31, 2023	Various Divisions	Various Operating Budgets *	3420	$64,681
	Technology Services	IT2107	3420	$48,836
Total of Option Years Net of HST Recoveries				$410,425
* City Divisions will be able to utilize the contract, as required, by issuing Contract Release Orders (CROs) against the contract subject to validation of funding at the time of issuance and approval by the Division Head of the requesting division. Individual cost centres will be identified by the Divisions on each CRO as it is issued against the contract.				

The Chief Financial Officer and Treasurer has reviewed this report and agrees with information included in the Financial Impact section.

DECISION HISTORY

In 2003, Esri Canada Limited was the successful proponent for Request for Proposal 9144-03-7067. Technology Services, at that time known as Information & Technology Division, awarded a $357,627 contract to Esri for software solutions to facilitate access to the City's enterprise geographic information platform.

In 2004 the City executed a Master License Agreement to provide for the terms governing the software licensed by ESRI and purchased from Esri Canada Limited. Following the execution of that agreement, the City and its Divisions purchased software from Esri under the terms of that agreement using standard and divisional purchase orders (POs and DPOs) in conjunction with PMMD's non-competitive procurement procedures.

On June 7, 2016 City Council granted the authority under GM12.5 to negotiate and enter into a non-competitive contract with Esri Canada Limited to purchase proprietary geographic information system software licenses, for a one (1) year period commencing from the date that the contract is issued, with the option to renew for additional four (4) separate one (1) year periods, at the sole discretion of the City and subject to budget

approval(s), for the total amount of $800,000 net of HST ($814,080 net of HST recoveries).

The following is the link to City Council Decision Document:
http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2016.GM12.5

COMMENTS

GIS is an enterprise technology platform made for capturing and displaying positions on the earth's surface and portraying data in many different ways on maps. Its main job is to help in analyzing groups of data and in finding correlations or patterns. GIS helps users understand patterns, relationships, and geographic context. The benefits include improved communication and efficiency as well as better management and decision making.

In 2009, as a part of its open data initiative, the City launched Toronto.ca/open, a website offering Toronto's municipal information to the public. Some of the available datasets include public transportation routes, priority investment neighbourhoods, commercial sites, municipal boundaries and utility permits. The bulk of the data is in geospatial context and formats that allow the development of GIS applications. The City's GIS implementation has improved how the community accesses and uses data and allows the City to be better connected with citizens.

Access and use of geographic information by City Divisions contained within the enterprise geographic information platform has been enabled primarily via Esri software. The City has continued to leverage this investment through license purchases, and maintenance and support over the past years to ensure the solution continues to meet City requirements.

In 2020, independent market research firm Forrester, recognized ESRI as the global leader in GIS, location intelligence, and mapping technology. The report[3] acknowledges ESRI'S leadership in location intelligence technology and highlights the company's long-term commitment to the development of a shared global geospatial infrastructure. Subsequent articles referencing ESRI accomplishment on the world stage can be seen in the 2015 Forbes article written by, Miguel Helft[4], a technology editor at Forbes.

Within the City of Toronto, the primary divisions using Esri software include Technology Services, City Planning, Toronto Water, Transportation, Parks, Forestry & Recreation, Public Health, and Engineering & Construction Services. In the Geospatial Competency Centre within Technology Services, the software is used for the provision of geospatial

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[3] The Forrester Wave™: Location Intelligence Platforms, Q2 2020:
https://reprints.forrester.com/#/assets/2/595/RES157271/reports
[4] You Can't Kill Jack Dangermond's Company. Try, And It Will Only Get Stronger, by Miguel Helft:
https://www.forbes.com/sites/miguelhelft/2015/03/31/you-cant-kill-jack-dangermonds-company-try-and-it-will-only-get-stronger/?sh=312b3a3b5cd7

business solutions and data services to City's internal organizations, other levels of government, and private industry. Other divisions use the software for internal operations and service delivery to the public and to access geospatial data from an enterprise geospatial data repository managed by Technology Services. Divisions use the data generated to build map-based applications which are accessed by the general public.

Conclusion

City Divisions' use of geographic data and technology has continued to increase over the last five (5) years and it is expected to continue to do so.

Adopting the recommendations contained in this report will further leverage the existing investments and expertise in Esri technology. This will position the City to utilize the Enterprise Geographic Information platform in understanding complex issues, improving decision making, optimizing service delivery and creating impactful citizen engagement to efficiently deliver services to the public.

The Fair Wage Office has reported that Esri Canada Limited has reviewed and understood the Fair Wage Policy and Labour Trades requirements and has agreed to comply fully.

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ATTACHMENTS