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WMS RFPQ 3405-13-3122

1.0   TERMINOLOGY

1.1   References to Labeled Provisions

(1)   Each reference in this Request for Pre-Qualification (RFPQ) to a numbered or lettered "section", "subsection", "paragraph", "subparagraph", "clause" or "subclause" shall, unless otherwise expressly indicated, be taken as a reference to the correspondingly labeled provision of this Request for Pre-Qualification.

1.2   Definitions

"Agreement" means the executed written contract, if any, entered into between the City and the Preferred RFP Proponent (who will become the Vendor only after that contract is fully executed) setting out the undertaking by the City and the Vendor to perform their respective duties, responsibilities and obligations as prescribed in the Agreement, and includes the RFP, any Addenda, all appendices, schedules and such other documents and information as are incorporated in the Agreement and any Change Orders and other amendments to the Agreement. The term "Agreement" is used interchangeably with "Contract". For clarity, the Agreement will be made only pursuant to the RFP that the City plans to issue subsequent to this RFPQ, and will not be made as part of this RFPQ process.

"Base Product" means that work management software product that provides the core functionality for meeting the requirements described in this RFPQ.

"Closing Deadline" means the deadline by which any RFPQ Proponent is required to submit a Response, as set out in section 3.6 below, as may be modified by the City in accordance with section 4 of Appendix A-1.

"City" means the City of Toronto.

"Confidential Information" of the City means:

a)   All information belonging to or in the possession of the City that is of a proprietary or confidential nature, regardless of whether it is identified as proprietary or confidential or not, and whether recorded or not, however fixed, stored, expressed or embodied, including all information to be transmitted, stored or processed on any network or computer system;

b)   Any information that the City is obliged not to or has the discretion not to disclose pursuant to law or statute such as the Municipal Freedom of Information and Protection of Privacy Act, the Personal Health Information Protection Act, or any other municipal, provincial and federal legislation;

c)   Any information that the City is required to keep confidential, including any information of third parties, including any suppliers of any products or services provided to the City;

d)   All information relating to intellectual property rights including copyright, trade secrets, processes, formulae, techniques, plans and designs, computer programs, computer codes whether source code or object code, and all related Documentation and financial information related hereto which is proprietary to or in the possession of the City; and

e)   Any information comprising the databases of the City or the procedures and operational protocols and information relating to the operations of the City

and in each case to which any RFPQ Proponent or any RFP Proponent may have access or obtain knowledge, possession or control at any time in the course of this RFPQ or the RFP, respectively. For clarity, all information described in clauses (a) to (e) above will continue to be Confidential Information, and may not be used or disclosed by any RFPQ Proponent or any RFP Proponent except as expressly set out in this RFPQ or the RFP, or by the Vendor except as expressly permitted in the Agreement.

"Configuration" means a set of tasks required in order to activate functionality without the need for any Customization. In submitting their Response, the RFPQ Proponents are advised that the Vendor will be required to provide, either directly or through another Person, Support Services for any Configuration.

"Council" means Toronto City Council.

"Customization" means any software changes that result in a modification or creation of any proposed application source code and that are required to be made in order for the applicable Software to meet the Functional Requirements.

"Division" means an administrative unit of the City.

"Documentation" means any communicable material that is used to describe, explain or instruct regarding attributes of an object, system or procedure, such as its parts, assembly, installation, maintenance and use.

"Functional Requirements" means the requirements described in Appendix D.3 – Product Functional Requirements Compliance Table of this RFPQ.

"ICIS" means installation, configuration and implementation services, and where the context admits, includes training services.

"Mandatory Requirements" means all of the requirements set out in this RFPQ which are identified as "mandatory", as denoted by the use of words "must", "shall" or "will".

"may" and "should" are used in this RFPQ to denote the permissive (not mandatory).

"MFIPPA" means the Municipal Freedom of Information and Protection of Privacy Act.

"Module" refers to a part of a software program or to a self-contained hardware component as the context requires.

"must", "shall" and "will" are used in this RFPQ to denote the imperative (mandatory), meaning any Responses not satisfying requirements designated in such manner will be deemed to be non-compliant and will not be considered for purposes of determining the list of Pre-qualified Proponents.

"Non-functional Requirements" means the requirements described in Appendix D.2 – Proponent Non-functional Requirements Table of this RFPQ.

"Party" means, in the case of the Agreement, either the City or Vendor as the context requires; and Parties means both the City and the Vendor.

"Permit Management" and "Permitting" refers to the business and functional scope for processing all types of requests for permissions including permits, licenses, and exceptions and related renewals, cancellations or revocations.

"Person" means, as the context admits, an individual, corporation, partnership, government ministry or agency or other legal entity, however constituted, and any successor entity of any kind to any of the foregoing.

"Preferred RFP Proponent" means the highest-ranking RFP Proponent with whom the City may enter into negotiations of the Agreement in accordance with the RFP.

"Pre-qualified Proponents" means (i) the RFPQ Proponents who are deemed successful in the RFPQ process as described in section 3.5 below; and (ii) any Solution Implementation Partners of any successful RFPQ Proponents, whether or not such Persons responded to or participated in the RFPQ process. The Persons referred to in clauses (i) and (ii) above will be qualified and are entitled to respond to the RFP.

"Project" means the project proposed to be undertaken by the City for obtaining all products and services required as part of the Solution described in this RFPQ.

"Proponent" has, for the purpose of this RFPQ, the same meaning as "RFPQ Proponent".

"Response" means a submission made in response to this RFPQ, which includes all of the documentation necessary to satisfy the submission requirements of this RFPQ.

"RFP" means the Request for Proposal that the City may issue subsequent to this RFPQ, in accordance with the provisions of sections 2.1(7) and 3.5 below, inclusive of all Appendices and Addenda that may be issued by the City.

"RFP Proponent" means any Pre-qualified Proponent who submits a proposal in response to the RFP.

"RFPQ" means this Request for Pre-Qualification package in its entirety, inclusive of all Appendices and any Addenda that may be issued by the City.

"RFPQ Proponent" means any Person that submits a Response to this RFPQ.

"SAP" means the City of Toronto's SAP Enterprise Central Component (ECC) 6.0 system including modules: Human Resources (Payroll), Plant Maintenance, Real Estate, Materials Management, Financials and Controlling.

"Services" means collectively ICIS and Support Services.

"Scripted Demonstration" refers to a component of Stage 2B - Presentation and Demonstrations of the evaluation process described in section 3.5 below, whereby the RFPQ Proponent is expected to demonstrate the functionality of the RFPQ Proponent's proposed Solution using the scripts provided in advance by the City.

"Software Vendor" means any Person that owns all intellectual property and other proprietary rights to any Base Product.

"Solution" means, in the case of this RFPQ or the RFP, respectively, the System and Services proposed to be provided by any RFPQ Proponent or any RFP Proponent, as applicable, in order to meet the requirements described in this RFPQ or in the RFP.

"Solution Implementation Partner" means, in the case of any Software Vendor, any Person that has all necessary rights and capabilities, either alone or with any other Person, (i) to resell, license or otherwise make available the Base Product and other components of the System; and (ii) to provide ICIS and Support Services for the Base Product and other components of the System.

"Solution International Partner" means any Person who has been exclusively authorized by a Software Vendor to grant, or to permit the grant of, licenses for a Base Product to customers in Ontario. For clarity, any Person may be a Solution International Partner for any Base Product, notwithstanding that it has granted non-exclusive licenses allowing other Persons to make the Base Software available to customers in Canada.

"Support Services" means maintenance and support services for any Software forming part of the System, including the issuance of new releases and updates from time to time.

"System" means the Base Product, together with all additional Software components, interfaces or modules, whether provided by way of Customization or otherwise, and all applicable Documentation, proposed to be provided by any RFPQ Proponent or any RFP Proponent, as applicable, in order to meet the requirements described in this RFPQ, or in the RFP, as applicable.

"Technical Requirements" means the requirements described in Appendix D.4 – Product Technical Requirements Compliance Table of this RFPQ.

"Vendor" means the Preferred RFP Proponent, if any, with whom the City enters into the Agreement.

2.0   PURPOSE

(1)   The objective of the City under this RFPQ is to identify a Base Product that, together with other Software and Services, represents a Solution that will meet the requirements described in this RFPQ. To achieve this objective, the City is inviting any qualified RFPQ Proponent as described in paragraph 2.0(3) below, alone or in conjunction with any other Person, to submit a Response describing in detail the manner in which the RFPQ Proponent's proposed Solution will meet the requirements set out in this RFPQ.

(2)   The City is interested in acquiring a complete Solution with little or no Customization that meets the requirements described in this RFPQ and for which any necessary components or Modules are fully integrated.

(3)   An RFPQ Proponent must be either a Software Vendor or a Solution International Partner of a Software Vendor.

(4)   The RFPQ Proponent may propose a Solution that is made up of its Base Product, either alone or in conjunction with one or more other proprietary software products offered by the RFPQ Proponent or by a third party product as described in section 2.1(2) below.

(5)   Following the completion of this RFPQ process, the City proposes to issue an RFP that will invite Pre-Qualified Proponents (as described in paragraph (6) below) to submit a proposal for providing the Solution to meet the RFP requirements. The RFP requirements will be based on and derived from the requirements described in this RFPQ, subject to any modifications, deletions or additions as may be determined by the City in its discretion. The City makes no promise, representation or warranty as to whether the RFP will be issued, or as to the contents of the RFP.

(6)   The following Persons will be the Pre-qualified Proponents who will be qualified, either alone or in conjunction with other Persons, to submit a proposal in response to the RFP:

>   i.   Any RFPQ Proponent whose Response, together with the Base Product described in its Response, have been selected by the City in accordance with the provisions of section 3.5 below;
>
>   ii.   Any Solution Implementation Partner of any RFPQ Proponent referred to in clause (i) above, whether or not such Person was named in the RFPQ or otherwise participated in any manner in the RFPQ process.

2.1 Process

(1) This RFPQ will allow the City to undertake an initial screening of capable Software Vendors or Solution International Partners in terms of the following:

- The Software components of the proposed Solution have a proven operating history and the RFPQ Proponent has a proven history of providing the complete Solution, either alone or with one or more other Persons;
- The proposed Solution capability / functionality is able to meet the City's specifications;
- The Software components of the proposed Solution have been implemented and made fully operable in at least two (2) reference customer sites similar in size (>500,000 population or users) to the City; and
- The RFPQ Proponent has the technical and financial capacity to deliver the Solution.

(2) RFPQ Proponents may submit Responses to provide functionality that will meet the RFPQ requirements, where the functionality is provided by the Base Product, another proprietary product offered by the RFPQ Proponent, or a third party product, provided that the RFPQ Proponent must demonstrate that any other proprietary product of the RFPQ Proponent or third party product have been previously used and integrated with the Base Product so that the complete Solution has been implemented by one or more customers.

(3) RFPQ Proponents who propose Solutions which do not meet all of the Mandatory Requirements in this RFPQ will not be selected as Pre-qualified Proponents, and the Base Products proposed to be provided by any such RFPQ Proponents will not be included in the shortlist of Base Products that may be proposed by any RFP Proponent. Notwithstanding that the City does not determine, in the course of Stage 1 of the evaluation process, that a RFPQ Proponent has failed to meet any of the Mandatory Requirements, the City will disqualify that RFPQ Proponent if the City determines, at any subsequent stage of the evaluation process, that such Proponent has failed to meet any of the Mandatory Requirements.

(4) Following receipt and completion of Stages 1 and 2A of the evaluation process described in section 3.5 below, the City at its option may elect:

    i. To proceed with Stage 2B - Presentation and Demonstrations of the evaluation process described in section 3.5 below; or

    ii. To prepare the final shortlist of Pre-qualified Proponents and Base Products based on the results of Stages 1 and 2A of the evaluation process together with the reference checks referred to in paragraph (6) of this section 2.1 and paragraph (16) of Stage 2B – Presentation and Demonstrations of the evaluation process, but without otherwise proceeding with Stage 2B.

(5) During Stage 2B - Presentation and Demonstrations of the evaluation process, RFPQ Proponents will be asked to provide details of their proposed Solution and to follow a script provided by the City to demonstrate the aspects of their proposed Solution's functionality requested in the script.

(6) Also at Stage 2B - Presentation and Demonstrations of the evaluation process the City is entitled at its discretion to conduct reference checks and/or to arrange for visits to one or more reference sites for purposes of obtaining further information concerning the Solution proposed to be provided by the RFPQ Proponent, including information about the manner in which the proposed Solution has been successfully implemented by any customers.

(7)   Following the completion of the evaluation process for this RFPQ, the City may prepare and issue an RFP. The RFP will provide for a full evaluation of the technical, legal and financial capabilities of any RFP Proponent to provide the proposed Solution and to meet all of the requirements described in the RFP, which are expected to be based on and derived from the RFPQ requirements. All RFP Proponents will be required to meet all mandatory requirements and to provide all information prescribed by the RFP, whether or not such requirements were required to be met, or such information was required to be provided, as part of this RFPQ. The RFP Proponent that receives the highest score from the evaluation process set out in the RFP will become the Preferred RFP Proponent.

(8)   This RFPQ process is governed by the terms and conditions in Appendix A-1.

2.2   Background

(1)   Since amalgamation, the City of Toronto's Divisions have implemented various work management systems (WMSs). The currently implemented WMSs are generally stand-alone systems, provide very little cross-divisional connectivity and very little interface capabilities with the City's financial and human resource systems. In addition, the costs of maintaining the multiple systems, some of which are older legacy systems, and managing their upgrades can be quite onerous.

(2)   Recommendations from the Auditor General provided to Toronto Water in 2007 have pointed to the need to consider the rationalization of the City's WMSs.

(3)   Four of the City's operating Divisions, Parks, Forestry & Recreation, Solid Waste Management Services, Toronto Water and Transportation Services have been working together to define their common business requirements to select a new work management solution.

(4)   These four divisions currently use four work management systems, namely, Infor's Hansen, Invensys's Avantis.Pro, SAP's Plant Maintenance, and Toronto Maintenance Management System, a custom designed system. These systems are in addition to a number of smaller management information systems which are used by sections and units within each division to 'manage' work.

2.3   Project Objectives

(1)   The key objectives to be met through the Project include:

- The acquisition of an enterprise work management solution that can support the City's four operating divisions described in section 2.2(3) above. In future, other Divisions (and City agencies) could also adopt and implement the same Solution if it meets their needs and requirements.
- Ensure work management processes are met by implementing new business processes and work practices (or modifying existing processes and practices), supported by the Software components across multiple lines of business.
- Seamless integration with City's GIS system, namely ESRI Geodatabase and Oracle Spatial.
- Efficient and effective user interfaces provided as part of the proposed Solution will provide easy access to accommodate different level of users. User interfaces will be consistent and intuitive for navigating, data entry, querying, and printing.
- The proposed Solution will include mobile tools that address the City's mobile requirements for the WMS, and will be compatible with other mobile technologies used at the City,
- The proposed Solution will integrate with the City's existing Customer Relationship Management (CRM) system, namely Lagan.
- The proposed Solution will integrate with the City's existing Enterprise Resource Planning (ERP) system, namely Financials (SAP FI/CO), Payroll and Human Resources (SAP HR), Public Budget Formulation (PBF) and Materials Management (SAP MM).

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- Business units of the City can easily adapt the Solution to address performance measurement and reporting requirements. Reporting tools will be easy to use and allow manipulation of the data.
- The proposed Solution will reduce manual interfaces and the need for duplicate record keeping and data entry; and will increase reliability and traceability of information.
- The proposed new Solution will be compliant with the current technology standards at the City of Toronto. The proposed Solution will be sustainable in that it will be supportable, extendable, accessible, scalable, and cost effective.

(2)   The City is interested in selecting an enterprise work management solution that supports both asset maintenance management and service delivery. The Solution must have robust planning and scheduling functionality for all resources, including labour, material, tools / equipment and vehicles. The Solution must have integrated spatial, GIS and mobile capabilities and interface with the City's GIS (Esri and Oracle Spatial), CRM (Lagan), ERP (SAP) and other systems.

(3)   Other functionality the City is interested in includes: route management, permit management and contract administration.

In the event of any conflict or inconsistency between the objectives and requirements described in this section 2.3, and the requirements described in any of Appendices D.1 to D.5 of this RFPQ, the requirements described in Appendices D.1 to D.5 will prevail.

3.0   RFPQ EVALUATION AND SELECTION REQUIREMENTS

3.1   General Overview

(1)   The purpose of this RFPQ is to invite any Software Vendor or Solution International Partner, either alone or with any other Persons, to submit Responses for providing a proposed Solution that will meet the RFPQ requirements. The City will carry out an evaluation of the Responses in accordance with this section 3, to prepare a shortlist of up to three Software Vendors or Solution International Partners who are willing and able to provide a Solution that will meet the RFPQ requirements. The shortlist will also identify the applicable Base Product that is made available by the selected Software Vendors or Solution International Partners.

(2)   Subsequent to this RFPQ, the City proposes to issue an RFP setting out in detail the City's requirements for the proposed Solution, and the required capabilities of any Person who may be selected to provide the Solution. Any Software Vendor or Solution International Partner that is added to the shortlist referred to in paragraph (1) above will be qualified, either alone or with any other Person, to submit a proposal in response to the RFP. In addition, any Solution Implementation Partner of any such Software Vendor or Solution International Partner will be qualified, either alone or with any other Person, to submit a proposal in response to the RFP. See definition of "Pre-qualified Proponents".

(3)   The City anticipates that the requirements for the proposed Solution, and the required capabilities of the Vendor with whom the City enters into an Agreement pursuant to the RFP, will be substantially similar to the requirements for the proposed Solution and the required capabilities for any RFPQ Proponent set out in this RFPQ. The City intends to establish the evaluation criteria for the RFP in such a manner that all proposals submitted by any Pre-qualified Proponents will be evaluated in a fair and transparent manner without regard to whether they were a party to or otherwise participated in the RFPQ.

(4)   The proposed Solution (including all necessary ICIS) to be procured by the City will be initially implemented by between two (2) and four (4) City Divisions (Parks Forestry & Recreation, Solid Waste Management Services, Toronto Water and Transportation Services). The Agreement will allow other divisions and ABCs to use the System and related Support Services.   The City reserves the right, subject to all applicable procurement rules to which the City is bound, to issue one or more additional RFPs to procure ICIS for any division or ABC of the City that wishes to adopt or use the System subsequent to the initial implementation.

3.2   Pre-Qualification Response

(1)   Every RFPQ Proponent shall submit their Response outlining their qualifications, and the capabilities of their proposed Solution, in relation to the Project described herein.

3.3   Selection Committee

(1)   All Responses will be evaluated through a comprehensive review and analysis by a Selection Committee, which will include members from Parks Forestry & Recreation, Solid Waste Management Services, Toronto Water, Transportation Services, Information & Technology and other relevant City staff and stakeholders.

(2)   The Selection Committee may, at its sole discretion, retain additional committee members or advisors.

(3)   The aim of the Selection Committee will be to select up to three (3) Responses and provide the City with a short list of Software Vendors and Solution International Partners who will be Pre-qualified Proponents.

(4)   By responding to this RFPQ, RFPQ Proponents will be deemed to have agreed that the decision of the Selection Committee will be final and binding.

3.4   Selection Criteria

(1)   Responses to this RFPQ will be evaluated against the following criteria:

(a)   RFPQ Proponent Company Profile;
(b)   RFPQ Proponent Solution's demonstrated ability to meet RFPQ requirements; and
(c)   RFPQ Proponent Solution's implementation references for projects similar in size (>500,000 population or users) to the City.

3.5   Selection Process

Stage 1 – Initial Evaluation: Mandatory Requirements

(1)   A high-level view of the overall evaluation scheme that will be used to determine the final shortlist of Software Vendors and Solution International Partners and qualified Base Products can be found in Appendix C – Response Qualification Evaluation Table.

(2)   Responses will be reviewed to assess compliance with the Mandatory Requirements. **Responses failing to comply with all of the Mandatory Requirements will be rejected**. RFPQ Proponents **must**:

(a)   Submit their Response in accordance with Article 4.0 including the mandatory forms (Appendix B – Standard Submission Forms);

(b)   Provide acknowledgement that they have the right, either alone or with such other Persons as are identified in the RFPQ, to sell or license, and to deliver, the Software components of the proposed Solution, to provide ICIS and Support Services for all such Software components, and provide to the City with any ownership and licensing rights as detailed in Requirement 1.1 in Appendix D.1;

(c)   Provide acknowledgement that they have read, understood and comply with the requirements of the RFPQ including Appendix A-1 – RFPQ Terms and Conditions, as detailed in Requirement 1.2 in Appendix D.1; and

(d)   Agree to provide audited financial statements for the past two (2) years for public companies, or a letter from a financial institution confirming the RFPQ Proponent's financial viability and solvency as a going concern for private companies as described in Requirement 1.3 in Appendix D.1;

(e)   Respond to each of the mandatory (M) product capability requirements that clearly demonstrate compliance. Demonstration of how compliance is met must include at a minimum:

   (i)   RFPQ Proponents should respond to the Product Functional Requirements via letter codes that correspond to one (1) of ten (10) possible responses:

Letter Code	Response
BO	Functionality available through Base Product, Out-of-the-Box
BC	Functionality available through Base Product, with Configuration
BZ	Functionality available through Base Product, with Customization
OO	Functionality available through an optional/add-on component/module of the Base Product, Out-of-the-Box
OC	Functionality available through an optional/add-on component/module of the Base Product, with Configuration
OZ	Functionality available through an optional/add-on component/module of the Base Product, with Customization
TO	Functionality available through a third party software product, Out-of-the-Box
TC	Functionality available through a third party software product, with Configuration
TZ	Functionality available through a third party software product, with Customization
N	Functionality not available

   (ii)   Descriptive text, product features, function descriptions, diagrams, as required to demonstrate compliance; and
   (iii)   Two (2) North American site references where the Mandatory Requirement capabilities have been implemented in the manner described by the RFPQ Proponent, including the name of the client organization, the name and title of a client contact and a current telephone number for the named contact. The same site references may be used multiple times, or different site references may be provided if certain capabilities have been implemented at some sites but not at others, but the RFPQ Proponent must in any event provide at least two (2) reference sites for each capability.

Stage 2A – Detailed Evaluation

(1)   The City will commence the Stage 2 evaluation process for all RFPQ Proponents that achieve a score of "PASS" for all elements of Stage 1 – Initial Evaluation: Mandatory Requirements (Pass/Fail).

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(2)   Stage 2A – Detailed Evaluation shall be based on the RFPQ Proponent's response to the Non-Functional Requirements, Product Functional Requirements and Technical Requirements.

(3)   In order to advance to Stage 2B – Presentation and Demonstrations, RFPQ Proponents must meet a minimum threshold of:

- 65% for Non-Functional Requirements (3 out of 5 points);
- 65% for Product Functional Requirements (36 out of 55 points);
- 65% for Technical Requirements (20 out of 30 points); and

(4)   The City, at its sole discretion, may create an initial shortlist at the conclusion of Stage 2A, comprised of up to four (4) high-scoring RFPQ Proponents.

Stage 2B – Presentation and Demonstrations

(1)   The City will create an initial shortlist comprised of RFPQ Proponents that met the minimum scoring thresholds from Stage 2A – Detailed Evaluation. The RFPQ Proponents on the initial shortlist will then participate in Stage 2B – Presentation and Demonstrations, which consists of a presentation and a Scripted Demonstration. A minimum of two (2) and maximum of four (4) RFPQ Proponents will be invited to participate in Stage 2B. The City will provide the short-listed RFPQ Proponents with a set of pre-defined scripts for the activities that comprise Stage 2B – Presentation and Demonstrations. The Stage 2B evaluation will then commence approximately one (1) week later.

(2)   The demonstration can be conducted on the RFPQ Proponent's own devices as long as the RFPQ Proponent can confirm that the application will work on the City's server/network if successful.

(3)   Any specific RFPQ Proponent representatives designated by the Selection Committee in its invitation to the RFPQ Proponent should where at all possible attend any presentations and demonstrations scheduled as part of this evaluation process.

(4)   The representatives of a RFPQ Proponent at any presentations or demonstrations are expected to be thoroughly versed and knowledgeable with respect to the requirements of this RFPQ and the contents of its Response, and must have the authority to make decisions and commitments with respect to matters discussed during presentation and/or demonstrations, which matters may be included in the RFP proposed to be issued by the City and any resulting Agreement.

(5)   No RFPQ Proponent will be entitled to be present during, or otherwise receive, any information regarding any presentations and/or demonstrations with any other RFPQ Proponent(s).

(6)   The City will be under no obligation to advise those RFPQ Proponents not receiving an invitation to participate in Stage 2B – Presentation and Demonstrations until completion of the evaluation and selection process.

(7)   The City of Toronto will arrange the facility for the purposes of conducting the demonstrations and presentations that comprise Stage 2B – Presentation and Demonstrations. Procurement and/or provision of all equipment, materials, infrastructure or any other type of resource required for the RFPQ Proponent to participate in Stage 2B – Presentation and Demonstrations will be the sole responsibility of the RFPQ Proponent.

(8)   RFPQ Proponents short-listed to participate in Stage 2B – Presentation and Demonstrations should prepare a short presentation that provides an overview of the company, the products making up their proposed Solution and implementation track record. Individuals will be expected to answer questions after the presentation. The RFPQ Proponent's presentation may include information about any Person named in the RFPQ Proponent's Response as a subcontractor to supply any of the products or services as part of the RFPQ Proponent's proposed Solution. At the end of the presentation, RFPQ Proponents will provide a soft copy of the presentation (Microsoft PowerPoint or Adobe Portable Document Format) to the City.

(9)   RFPQ Proponents will be expected to demonstrate "Out-of-the-Box" functionality during the Scripted Demonstration. Areas where additional components, Customization, Configuration or third-party components will be required should be covered by the RFPQ Proponent, and RFPQ Proponents will be expected to explain the level of effort and/or amount of time and/or cost that would be required to perform such necessary Customization(s) and/or Configuration(s), and/or acquire such necessary additional or third party components.

(10)   RFPQ Proponents should, at a minimum, be prepared to demonstrate the:

    (a)   Enterprise functionality of the proposed Solution;

    (b)   Asset maintenance management and service delivery work management functionality of the proposed Solution;

    (c)   Planning and scheduling of work and resources functionality of the proposed Solution;

    (d)   Integrated spatial and GIS capabilities;

    (e)   Usability and mobile capabilities;

    (f)   Permit management and contract administration capabilities;

    (g)   Reporting and query functionality of the proposed Solution; and

    (h)   Integration of the proposed Solution with GIS (Esri and Oracle Spatial), CRM (Lagan), ERP (SAP), and other systems.

(11)   The above list is not exhaustive, but rather illustrative, to give RFPQ Proponents an example of what the City expects to see during the Scripted Demonstration to be conducted during Stage 2B - Presentation and Demonstrations. The Scripted Demonstration will be akin to a "canned demo," whereby the RFPQ Proponent demonstrates for the Selection Committee how certain functions are performed.

(12)   A script of what types of activities will be included in the Scripted Demonstration will be provided to RFPQ Proponents along with all other materials distributed to RFPQ Proponents in preparation for Stage 2B – Presentation and Demonstrations. RFPQ Proponents will be expected to review the script for the Scripted Demonstration and demonstrate how the Solution will perform the required functions. Selection Committee members will be looking for ease of use, look, feel and flexibility of the proposed Solution during the Scripted Demonstration. RFPQ Proponents will be scored based on: how intuitive and easy to use user interface is (are the screens and dialog boxes clearly laid out? Are the menus and toolbars easy to understand and navigate?), the number of mouse-clicks required, ease of navigation, ease of accessing the data required to fulfil the given function, and the quality of the graphs/reports.

(13)   The information obtained during Stage 2B - Presentation and Demonstrations will also be used by the Selection Committee as a mechanism for confirming the scores achieved by RFPQ Proponents during Stage 2A – Detailed Evaluation, and the City reserves the right to adjust such scores based on this information. The Scripted Demonstration will be individually scored, as detailed in Appendix C – Response Qualification Evaluation Table.

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(14) Reference checks will be conducted at this stage for the purpose of verifying information set out in Responses or claims made in the course of Stage 2B – Presentation and Demonstrations, and the City reserves the right to adjust the scores awarded during Stage 2A – Detailed Evaluation based on the information obtained from such reference checks.

Stage 3 – Final Shortlist

(1) Aggregate scores will be calculated for all RFPQ Proponents who are included in the initial shortlist of RFPQ Proponents who are invited to participate in Stage 2B – Presentation and Demonstrations, and to whom scores will be further awarded during the course of Stage 2B – Presentation and Demonstrations. The City will use all such scores for the purpose of selecting the final shortlist of Software Vendors and Solution International Partners, who together with their Solution Implementation Partners, will be eligible to submit Proposals in response to the RFP.

(2) RFPQ Proponents must meet a minimum threshold of: an overall score of 65% for aggregate scores awarded during Stages 2A – Detailed Evaluation and Stage 2B – Presentation and Demonstrations (after all adjustments are made as contemplated above) in order to be added to the final shortlist of Software Vendors and Solution International Partners who will be eligible, along with their Solution Implementation Partners, to advance to the next stage of procurement (i.e., to respond to the RFP).

(3) A minimum of two (2) (provided that there are sufficient qualifying RFPQ Proponents) and maximum of three (3) RFPQ Proponents will be included in the final shortlist of Software Vendors and Solution International Partners, who along with any Solution Implementation Partners of any such parties, may be invited to respond to the RFP.

(4) The RFP will set out the process for evaluating RFP Proponents to enable the City to assess their capabilities to provide the proposed Solution to meet all requirements to be set out in the RFP. The City proposes to enter into negotiations of the Agreement with the Preferred RFP Proponent that is selected based on the evaluation process described in the RFP. The Agreement will contain, at a minimum, the terms and conditions set out in Appendix A-2, attached to this RFPQ. Upon the execution of the Agreement, if any, as a result of such negotiations, the Preferred RFP Proponent will become the Vendor.

(5) In the event of a tie in the aggregate score awarded to any two RFPQ Proponents after proceeding through Stages 2A and 2B of the evaluation process, the scores awarded to those two RFPQ Proponents during Stage 2A of the evaluation process shall be used for purposes of determining which RFPQ Proponents will be included in the final shortlist under Stage 3.

3.6   Schedule of Events

(1) The schedule of key events in this RFPQ process is summarized below:

Activity	Date
Phase I – RFPQ issue date	September 20, 2013
Mandatory Information Meeting	October 2, 2013
Deadline for RFPQ Proponent questions	October 14, 2013
Last day for issuing Addenda (if any)	October 18, 2013
RFPQ Closing Deadline	October 31, 2013
Completion of Evaluation of Submissions by Selection Committee (Stage 2A	November 22, 2013

NOTE: These sections (Phase 1A and/or Phase II) only applies to those who are eligible to continue on (meet or exceed technical score)

Activity	Date
Phase IA (Provisional) Invite up to 4 RFPQ Proponents to participate in Stage 2B - Presentation & Demonstrations	November 25, 2013
Stage 2B - Presentations & Demonstrations	December 9 - 12, 2013
Final Tabulation of RFPQ Proponent Scoring and Notification of at Least Two Top Ranked RFPQ Proponents	December 20, 2013

(2) Subject to all reserved rights of the City, the tentative schedule of key events for the RFP currently anticipated to be issued by the City is summarized below:

Activity	Date
Phase II Issuance of RFP	January 13, 2014
Deadline for submission of proposals in response to RFP	February 28, 2014
Evaluation of proposals in response to RFP	March, 2014
Report to Council on Preferred RFP Proponent	April, 2014
Contract and Financial Close	May, 2014

(3)   The schedule in (1) and (2) above is subject to change and appropriate written notice of any changes will be provided to any RFPQ Proponents or RFP Proponents where feasible.

3.7   Clarifications

(1)   As part of the evaluation process under this RFPQ, the Selection Committee may make requests for further information with respect to the content of any Response in order to clarify understanding. The clarification process will not be used to obtain, or to allow any RFPQ Proponent to provide, required information that was not submitted at time of closing or to promote the RFPQ Proponent's company.

(2)   The Selection Committee may request this further information from one or more RFPQ Proponents and not from others.

3.8   Evaluation Results

(1)   Upon conclusion of the selection process, a final recommendation will be made by the Selection Committee to the appropriate City staff members. Those Software Vendors and Solution International Partners qualified through this RFPQ process, and their Solution Implementation Partners, will be added to the prequalification list, and subject to the reserved rights of the City, all such Persons will be eligible to submit proposals in response to the RFP proposed to be issued by the City as part of the procurement process for the Project.

(2)   Responses shall be the property of the City and may be subject to public release pursuant to MFIPPA.

(3)   RFPQ Proponents should be aware that Council and individual Councilors have the right to view the Responses provided that their requests have been made in accordance with the City's procedure.

3.9   Pre-qualification Re-issuance

(1)   The City reserves the right to revise and re-issue this RFPQ if there are less than two (2) or fewer RFPQ Proponents who have been pre-qualified based on the criteria described in this RFPQ. The purpose of the re-issuance is to ensure proper competition at later stages. Any RFPQ Proponents who submitted Responses to the original RFPQ will be allowed to submit proposals in response to the revised and reissued RFPQ. For greater clarity, the right of the City to re-issue the RFPQ as described in this section 3.9 may be exercised at any time subsequent to the Closing Deadline, and is in addition to the right of the City to revise the RFPQ by way of Addenda prior to the Closing Deadline, as set out in section 4 of Appendix A-1.

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3.10   Proponent Debrief

(1)   All RFPQ Proponents are entitled to a formal or informal debriefing, upon written request made to
        the Chief Purchasing Official, to obtain feedback on why their response was not successful.

3.11   Dispute Resolution Procedure

(1)   Should a RFPQ Proponent have a complaint regarding the level of service provided, they should
        submit the complaint to the Purchasing and Materials Management Division as per the
        Complaints Handling Procedure documented at the City's website
        http://www.toronto.ca/calldocuments/complaints.htm.

4.0   RESPONSE SUBMISSION REQUIREMENTS

4.1   General Overview

(1)   The City has formulated the procedures set out in this RFPQ to ensure that it receives Responses
        through an open, competitive process, and that RFPQ Proponents receive fair and equitable
        treatment in the solicitation, receipt and review of their Responses. The City may reject the
        Response of any RFPQ Proponent that fails to comply with any such procedures.

(2)   Responses must address the RFPQ content requirements as outlined herein, must be well
        ordered, detailed and complete. Clarity of language, adherence to suggested structuring, and
        adequate accessible documentation is essential to the City's ability to conduct a thorough
        evaluation. General marketing and promotional material will not be reviewed or considered.

4.2   Response Documentation and Delivery

(1)   The documentation:

        a)   Must be submitted in a sealed envelope or container (submissions made by fax, telephone,
             electronic message or telegram will not be accepted) displaying a full and correct return
             address.
        b)   Must consist of one (1) hard copy original (clearly marked as such on its first page) and one
             (1) electronic copy (CD, DVD or memory stick) of:

             •   **Main Response Document** as described in Section 4.3 below titled Response
                 Content, including all attachments and appendices as required. (Mandatory);
             •   **Form 1** (Response Submission Form) completed and signed by an authorized official
                 of the RFPQ Proponent. (Mandatory);
             •   **Form 2** (Policy to Exclude Bids from External Parties involved in the Preparation or
                 Development of a Specific Call/Request) completed as indicated (Mandatory);
             •   **Form 3** (Restrictions on the Hiring and use of Former City of Toronto Management
                 Employees for City Contracts) completed as indicated, if applicable; and
             •   **Form 4** (Environmentally Responsible Procurement Statement) completed as
                 indicated, if applicable.

        Note: Forms 1 to 4 are provided in Appendix B.

        c)   Must be delivered no later than the Closing Deadline to:

             Chief Purchasing Official
             Purchasing and Materials Management Division
             18th Floor, West Tower, City Hall
             Toronto, ON, M5H 2N2

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Delays caused by any delivery service (including Canada Post and courier) shall not be grounds for any extension of the Closing Deadline, and Responses that arrive after the Closing Deadline will not be accepted.

4.3   Response Content

Note: Unless otherwise noted, the following items apply to Responses.

(1)   The responses must be completed in English.

(2)   The Response must contain the following items:

- **Letter of Introduction** –   Introducing the RFPQ Proponent and signed by the person(s) authorized to sign on behalf of and to bind the RFPQ Proponent to statements made in response to this RFPQ. This should contain the same signature as the person signing the submission forms.

- **Table of Contents** - Include page numbers and identify all included materials in the Response submission.

- **RFPQ** – The Response should be divided into the following five sections:

     D.1 - Mandatory Proponent Requirements
     D.2 - Non-Functional Proponent Requirements
     D.3 - Product Functional Requirements
     D.4 - Product Technical Requirements
     D.5 - Product Implementation Requirements References

APPENDICES

APPENDIX A1 - RFPQ PROCESS TERMS AND CONDITIONS

1. Proponent's Responsibility

It shall be the responsibility of each Proponent to:

(a)   Examine all the components of this RFPQ, including all appendices, forms and addenda.

(b)   Acquire a clear and comprehensive knowledge of the requirements set out in this RFPQ, including all requirements for the Solution proposed to be procured by the City before submitting a Response.

(c)   Become familiar, and (if selected as a Pre-qualified Proponent) comply to the extent applicable, with all of the City's Policies and Legislation set out on the City of Toronto website at www.toronto.ca/tenders/index.htm.

The failure of any Proponent to receive or examine any document, form, addendum, agreement, policy shall not relieve the Proponent of any obligation with respect to its Response.

2. Prime Proponent

A joint Response provided by or on behalf of two or more Persons having no formal corporate links may be submitted, but one Person (being a Software Vendor or a Solution International Partner) must be shown as the prime Proponent and be prepared to represent any other Persons named in the Response and have the capability of providing, either alone or in conjunction with other Person(s), the complete Solution described in the Response. In the event that such prime Proponent is added to the shortlist of Pre-qualified Proponents for purposes of the RFP proposed to be issued by the City, either that Person, or any Solution Implementation Partner of that Person, may be named as the prime Proponent to the RFP, provided that such Person has the required capabilities, either alone or with any other Persons, to provide the proposed Solution described in the RFP, and is willing and able to assume all of the obligations and responsibilities of the Vendor under the Agreement to be made pursuant to the RFP.

Where a Response is made by a prime Proponent that proposes to use one or more other Persons, such other Persons shall be designated as subcontractors and shall be named in the Proponent's Response.

3. Questions

All questions concerning this RFPQ should be directed in writing to the City employee(s) designated as "City Contacts" in the Notice to Potential Respondents as set out on the first page of this RFPQ.

No City representative, whether an official, agent or employee, other than those identified "City Contacts" are authorized to speak for the City with respect to this RFPQ, and any Proponent who uses any information, clarification or interpretation from any other representative does so entirely at the Proponent's own risk.

Not only shall the City not be bound by any representation made by an unauthorized person, but any attempt by a Proponent to bypass the RFPQ process such as by contacting any representative of the City other than the City employee designated as the "City Contact" may be grounds for rejection of its Response.

4. Addenda

If it becomes necessary to revise any part of this RFPQ, the revisions will be by Addendum posted electronically in Adobe PDF format on the City's website at www.toronto.ca/calldocuments.

Proponents and prospective Proponents SHOULD MONITOR THAT SITE as frequently as they deem appropriate until the Closing Deadline.   Only answers to issues of substance will be posted. The City reserves the right to revise this RFPQ up to the Closing Deadline. When an Addendum is issued the date for submitting Responses may be revised by the City (which revised date will become the new Closing Deadline) if, in its opinion, the City determines more time is necessary to enable Proponents to revise their Responses.

All Proponents must acknowledge receipt of all Addenda in the space provided on the Response Submission Form.

The City's Purchasing and Materials Management Division will make reasonable efforts to issue the final Addendum (if any) no later than five (5) days prior to the Closing Deadline.

5. Exceptions

If a Proponent wishes to suggest a change to any mandatory term or condition set forth in any part of this RFPQ (including any of the requirements listed in any of the Appendices D.1 to D.5 that are described therein as mandatory, and including any of the terms and conditions set out in Appendix A-2 that are to form part of the Agreement to be made by the City with the Preferred RFP Proponent) it should notify the City in writing not later than fifteen (15) business days before the Closing Deadline. The Proponent must clearly identify any such term or condition, the proposed change and the reason for it. If the City wishes to accept the proposed change, the City will issue an Addendum as described in the article above titled "Addenda". The decision of the City shall be final and binding, from which there is no appeal. Changes to mandatory terms and conditions that have not been accepted by the City by the issuance of an Addendum are not permitted and any Response that takes exception to or does not comply with the mandatory terms and conditions of this RFPQ will be rejected.

6. Omissions, Discrepancies and Interpretations

A Proponent who finds omissions, discrepancies, ambiguities or conflicts in any of the RFPQ documentation or who is in doubt as to the meaning of any part of the RFPQ should notify the City in writing not later than fifteen (15) business days before the Closing Deadline. If the City considers that a correction, explanation or interpretation is necessary or desirable, the City will issue an Addendum as described in the article above titled Addenda. The decision and interpretation of the City shall be final and binding, from which there is no appeal. No oral explanation or interpretation shall modify any of the requirements or provisions of the RFPQ documents.

7. Incurred Costs

The City will not be liable for, nor reimburse, any potential Proponent or Proponent, as the case may be, for costs incurred in the preparation, submission or presentation of any Response, for interviews or any other activity that may be requested as part of the evaluation process for this RFPQ, or the process for the issuance of the proposed RFP or for submitting a proposal in response to the RFP, or in connection with the negotiation or execution of an Agreement that the City proposes to make with the Preferred RFP Proponent.

The rejection or non-acceptance of any or all Responses shall not render the City liable for any costs or damages to any Person that submits a Response.

8. Post-Submission Adjustments and Withdrawal of Responses

No unilateral adjustments by Proponents to submitted Responses will be permitted.

A Proponent may withdraw its Response prior to the Closing Deadline any time by notifying the City Contact designated in this RFPQ in writing.

A Proponent who has withdrawn a Response may submit a new Response, but only in accordance with the terms of this RFPQ.

If the City makes a request to a Proponent for clarification of its Response, the Proponent will provide a written response accordingly, which shall then form part of the Response.

9. No Collusion

No Proponent may discuss or communicate about, directly or indirectly, the preparation or content of its Response with any other Proponent or the agent or representative of any other Proponent or prospective Proponent. If the City discovers there has been a breach at any time, the City reserves the right to disqualify the Response, disqualify the Proponent from responding to the proposed RFP, or terminate any Agreement made pursuant to the RFP, in each case without incurring any cost or liability to the Proponent.

10. Prohibition Against Gratuities

No Proponent and no employee, agent or representative of the Proponent, may offer or give any gratuity in the form of entertainment, participation in social events, gifts or otherwise to any officer, director, agent, appointee or employee of the City in connection with or arising from this RFPQ or the RFP, whether for the purpose of securing the selection of the Proponent as one of the Pre-qualified Proponents under this RFPQ, as the Preferred RFP Proponent pursuant to the RFP, or as the Vendor under the Agreement proposed to be made by the City, or otherwise seeking favourable treatment with respect to the RFPQ or the RFP, or in respect to the award or amendment of the Agreement or influencing the performance of the Agreement, including without restriction enforcement of performance standards, or expressing appreciation, or providing compensation, for the award of an Agreement or for performance of the City's obligations thereunder or for conferring favours or being lenient, or in any other manner whatsoever.

If the City determines that this article has been breached by or with respect to a Proponent, the City may exclude its Response from consideration, may exclude any proposal submitted in response to the RFP from consideration, or if an Agreement has already been entered into, may terminate it, in each case without incurring any cost or liability to the Proponent.

11. Acceptance of Responses

The City shall not be obliged to accept any Response in response to this RFPQ.

The City may, without incurring any liability or cost to any Proponent:

a)   accept or reject any or all Response(s) at any time;
b)   waive immaterial defects and minor irregularities in any Responses;
c)   modify and/or cancel this RFPQ prior to accepting any Response for preparing the shortlist of Pre-qualified Proponents;

The City is relying on the experience and expertise of the Proponent. The City reserves the right to disqualify any Proponent who has given inaccurate, incomplete, false or misleading information in the sole opinion of the City.

The City also reserves the right not to proceed with the issuance of an RFP as contemplated hereunder, and reserves the right to determine in its discretion the terms and conditions of the RFP, including the requirements set out in the RFP. The City also reserves the right, without incurring any liability or cost to any Proponent or any RFP Proponent, to accept or reject any or all responses to the RFP, if any, issued by the City, to waive immaterial defects or irregularities in any response to the RFP, to modify or cancel the RFP prior to the selection of the Preferred RFP Proponent, and to terminate negotiations with the Preferred RFP Proponent prior to the execution of an Agreement.

12. Verification

The City reserves the right to verify with any Proponent or with any other person any information provided in its Response but shall be under no obligation to receive further information.

If, in the opinion of the City, any Proponent has clearly misinterpreted the products or services that the City requires to be provided as part of the Solution, as reflected in the contents of the Proponent's Response, then the City may reject the Proponent's Response as unbalanced (i.e., as not being representative of the scope of the products and services required by the City as part of the proposed Solution).

13. Conflicts of Interest

In its Response, the Proponent must disclose to the City any potential conflict of interest that might compromise the performance of any obligations to be performed by the Proponent if the City were to procure the Proponent's proposed Solution under the Agreement to be made pursuant to the RFP. If such a conflict of interest does exist, the City may, at its discretion, refuse to consider the Response.

The Proponent must also disclose whether it is aware of any City employee, Council member or member of a City agency, board or commission or employee thereof having a financial interest in the Proponent and the nature of that interest. If such an interest exists or arises during the evaluation process of this RFPQ or the proposed RFP, or during the negotiation of the Agreement pursuant to the proposed RFP, the City may, at its discretion, refuse to consider the Response, may withhold the qualification of the Proponent or the Proponent's Base Product for purposes of the RFP to be issued by the City, or may suspend or terminate any negotiations, until the matter is resolved to the City's sole satisfaction.

If during the Response evaluation process, the evaluation process for the RFP, or the negotiation of the Agreement, the Proponent is retained by another client giving rise to a potential conflict of interest, then the Proponent will so inform the City. If the City requests, then the Proponent will refuse the new assignment or will take such steps as are necessary to remove the conflict of interest concerned.

Proponents are cautioned that the acceptance of their Response may preclude them from participating as a proponent in subsequent projects where a conflict of interest may arise.

14. Ownership and Confidentiality of City-Provided Data

All correspondence, documentation and information provided by City staff to any Proponent or prospective Proponent in connection with, or arising out of this RFPQ or the acceptance of any Response:

a)   is and shall remain the property of the City;

b)   must be treated by Proponents and prospective Proponents as confidential;

c)   must not be used for any purpose other than for replying to this RFPQ, and provided that the same information is also provided to all prospective RFP Proponents under the RFP proposed to be issued by the City, for replying to such RFP, and if the Proponent becomes the Preferred RFP Proponent and enters into the Agreement with the City, for purposes related to the fulfillment of the Agreement.

15. Ownership and Disclosure of Response Documentation

The documentation comprising any Response submitted as a result of this RFPQ, along with all correspondence, documentation and information provided to the City by any Proponent in connection with or arising out of this RFPQ, once received by the City:

a)   shall become the property of the City;

b)   shall become subject to the *Municipal Freedom of Information and Protection of Privacy Act* ("*MFIPPA*"), and may be released, pursuant to that Act.

Because of *MFIPPA*, prospective Proponents are advised to identify in their Response material any scientific, technical, commercial, proprietary or similar confidential information, the disclosure of which could cause them injury.

Each Proponent's name at a minimum shall be made public. Responses will be made available to members of City Council provided that their requests have been made in accordance with the City's procedure and may be released to members of the public pursuant to MFIPPA.

16. Intellectual Property Rights

Each Proponent warrants that the information contained in or submitted with its Response does not infringe any intellectual property right of any third party and agrees to indemnify and save harmless the City, its staff and its consultants, if any, against all claims, actions, suits and proceedings, including all costs incurred by the City brought by any person in respect of the infringement or alleged infringement of any patent, copyright, trademark, or other intellectual property right in connection with their Response.

17. Publicity

The Proponent and its affiliates, associates, third-party service providers, and subcontractors shall not release for publication any information in connection with this RFPQ, or the RFP or the Agreement without prior written permission of the City.

18. Governing Law

This RFPQ and any Response submitted in response to it and the process contemplated by this RFPQ including if applicable, any ensuing RFP and Agreement shall be governed by the laws of the Province of Ontario and any laws of Canada applicable therein. Any dispute arising out of this RFPQ or this RFPQ process or the RFP or the RFP process will be determined by a court of competent jurisdiction located in the Province of Ontario.

APPENDIX A-2 - AGREEMENT TERMS AND CONDITIONS

Notes to this Appendix:

(1) The terms of this Appendix are proposed to be incorporated in the Agreement to be made by the City pursuant to the RFP proposed to be issued by the City subsequent to this RFPQ. Any Pre-qualified Proponents who will be eligible to submit proposals in response to the RFP will not be required to enter into any agreement prior to submitting a response to the RFP. However, all RFPQ Proponents should assume that these terms and conditions will be a mandatory requirement of the RFP, and that these terms will not be negotiable in the negotiations of the Agreement to be conducted with the Preferred RFP Proponent. Any RFPQ Proponent wishing to request that the City consider any changes to the terms and conditions before they are included as a mandatory requirement of the RFP must follow the process outlined in section 5 of Appendix "A-1"

(2) The Agreement will include additional terms and conditions, which will be based on and be consistent with the terms and conditions of the proposed RFP, as may be applicable to the provision of the Solution. Subject to all of the City's reserved rights, the RFPQ Proponents should assume that the mandatory requirements of the RFP will be based on and derived from the Mandatory Requirements of this RFPQ.

(3) The Agreement may also include one or more Statements of Work, which may be made concurrently with or subsequent to the execution of the Agreement, and which may include terms and conditions applicable to the supply of certain components of the Solution to be provided by the Vendor, such as a description of the following:

   (i)   the items of Software, Documentation or Services to be provided by the Vendor;
   (ii)   the requirements or specifications for the applicable components of the Solution;
   (iii)   the representatives of the Vendor who shall be responsible for providing any Services;
   (iv)   prices and payment terms for the applicable components of the Solution;
   (v)   any timelines or milestones to be met with respect to the applicable components of the Solution; and
   (vi)   such other terms and conditions as may be required by the City.

(4) All RFPQ Proponents should assume that all capitalized terms used herein will be defined in the RFP and the Agreement in a manner consistent with the definitions for such terms set out in the RFPQ.

A.1 Compliance with Laws

The Vendor will be required to comply with all federal, provincial and municipal laws and regulations in performing any Services including, without limitation, the *Occupational Health and Safety Act* and the *Workplace Safety and Insurance Act, 1997*, or any successor legislation, as applicable, and to provide to the City, upon request, periodic reports confirming such compliance.

A.2 Non-Exclusivity

The execution of the Agreement between the City and the Vendor does not constitute a guarantee that the City will acquire any volume or value of goods or any services from the Vendor, and the City reserves the right to procure any goods or services from any other Person.

A.3 Confidentiality

The Vendor shall treat as confidential all Confidential Information of the City of any kind that comes to the attention of the Vendor in the course of providing any part of the Solution. The Vendor shall not use any Confidential Information of the City except for purposes of performing its obligations under the Agreement, and shall not disseminate or disclose such information for any reason without the express written permission of the City. The Vendor may be required to enter into a detailed confidentiality agreement (either as a separate contract or as part of the Agreement) in a form satisfactory to the City Solicitor.

A.4 Indemnities

(1) The Vendor shall from time to time, and at all times hereafter, well and truly save, keep harmless and fully indemnify City of Toronto and any of its Members of Council, Mayor, officers, employees, agents, representatives, invitees, members, volunteers, successors and assigns from and against any and all manner of claims, demands, losses, costs, charges, actions and other proceedings whatsoever which may be brought against or made upon any of them and against any loss or damages suffered or incurred by the City arising from or relating to any physical injury, including death, or any loss of or damage to tangible property, caused by the Vendor, its employees, agents or subcontractors or any entity for whom it is in law responsible, or arising from or relating to any obligations of the Vendor under the Agreement; and

(2) The Vendor shall also fully defend, save harmless and indemnify the City from and against any loss or damages suffered or incurred by the City from or arising out of the performance or rendering of, or the failure to perform or render, or the failure to exercise reasonable care, skill or diligence in the performance or rendering of the Services or the provision of any other part of the Solution. The Vendor's liability to the City shall not exceed an amount equal to the total amount payable hereunder by the City to the Vendor and in no event shall the Vendor be liable to the City for any indirect or consequential damages. The limitation of liability in this section 4(2) does not apply to the indemnities required by Articles 4(1) and 5, to a breach of obligations relating to confidentiality as set out in Article 3, or a breach of obligations of the Vendor set out in Article 12 of this Appendix A-2.

(3) The City will not provide any indemnity under any circumstances.

A.5 Intellectual Property Indemnity

The Vendor shall indemnify and save harmless the City of Toronto, its Mayor, Members of Council, officers, employees, and agents from and against any losses, liens, charges, claims, demands, suits, proceedings, recoveries and judgements (including legal fees and costs) arising from infringement, actual or alleged, by the Solution, its use or misuse, or by any of the deliverables developed or provided or supplied under or used in connection with the Services (including the provision of the Services themselves), of any Canadian, American or other copyright, moral right, trade-mark, patent, trade secret or other thing with respect to which a right in the nature of intellectual/industrial property exists.

A.6 No Assignment

The Vendor shall not assign any of its rights or obligations under the Agreement without the prior written consent of the City, which consent shall not be unreasonably withheld. However, such written consent shall not under any circumstances relieve the Vendor of its liabilities and obligations under the Agreement.

A.7 Sub-Contractors

The Vendor shall be solely responsible for the payment of every sub-contractor, service provider or supplier employed, engaged, or retained by the Vendor for the purpose of assisting it in the performance of its obligations under the Agreement. The Vendor shall coordinate the services of its sub-contractors, service providers and suppliers in a manner acceptable to the City, and ensure that they comply with all the relevant requirements of the Agreement.

The Vendor shall be liable to the City for all costs or damages arising from acts, omissions, negligence or wilful misconduct of its sub-contractors, service providers and suppliers.

A.8 Personnel and Performance

The Vendor must make available appropriately skilled workers, consultants or subcontractors, as appropriate (including any personnel named in the proposal submitted by the Vendor in response to the RFP), and must provide the necessary materials, tools, machinery and supplies to carry out the Project. No substitution of personnel may be made by the Vendor except as otherwise expressly permitted under the Agreement or as approved by the City.

The Vendor shall be responsible for its own staff resources and for the staff resources of any subcontractors and third-party service providers or suppliers.

The Vendor will ensure that its personnel (including those of approved sub-contractors), when using any City buildings, premises, equipment, hardware or software, shall comply with all security policies, regulations or directives relating to those buildings, premises, equipment, hardware or software.

Personnel assigned by the Vendor to perform or produce the Services or any part (including those of approved subcontractors) may, in the sole discretion of the City, be required to sign non-disclosure Agreement(s) satisfactory to the City before being permitted to perform such Services.

A.9 Independent Contractor

The relationship of the City and the Vendor is one of owner and independent contractor and not one of employer-employee. Neither is there any intention to create a partnership, joint venture or joint enterprise between the Vendor and the City.

A.10 Insurance

The Vendor shall purchase and maintain in force, at its own expense and for the duration of this Agreement, the following policies of insurance, which policies shall be in a form and with an insurer acceptable to the City. A certificate evidencing these policies signed by the insurer or an authorized agent of the insurer must be delivered to the City prior to the commencement of any work relating to the Project:

>   (1)   Professional Liability (errors and omissions coverage) provided that the policy is:
>   (i)   in the amount of not less than One Million Dollars ($1,000,000);
>   (ii)   will extend to infringement of copyright and other intellectual property, including misuse of trade secrets, if appropriate;
>   (iii)   notwithstanding anything to the contrary contained in this Agreement, kept in full force and effect for a period of time ending no sooner than TWO YEARS after the termination or expiry of this Agreement, as the case may be.

      (2)   Comprehensive General Liability, provided that the policy:

            (i)   is in the amount of not less than TWO Million Dollars ($2,000,000.00), per occurrence;
            (ii)   adds the City of Toronto as additional insured;
            (iii)   includes Non Owned Automobile Liability, Employer's Liability and/or Contingent Employer's Liability, and any other provision relevant to the Services;
            (iv)   includes a clause which will provide the City with thirty (30) days' prior written notice of cancellation or material change.

It is understood and agreed that the coverage and limits of liability noted above are not to be construed as the limit of liability of the Vendor in the provision of any part of the Solution. It is also agreed that the above insurance policies may be subject to reasonable deductible amounts, which deductible amounts shall be borne by the Vendor. At the expiry of the policies of insurance, original signed certificates evidencing renewal will be provided to the City without notice or demand.

The Vendor is responsible for any loss or damage whatsoever to any of its materials, goods, equipment or supplies and will maintain appropriate all-risk coverage as any prudent owner of such materials, goods, supplies and equipment. The Vendor shall have no claim against the City or the City's insurers for any damage or loss to its property and shall require its property insurers to waive any right of subrogation against the City.

The provisions of this section 10 do not limit any liability to which the Vendor is otherwise subject under the Agreement, including as set forth in sections 4 and 5 above.

A.11 Warranties and Covenants

The Vendor represents, warrants and covenants to the City (and acknowledges that the City is relying thereon) that any components of the Solution to be provided by the Vendor to the City under the Agreement will be in accordance with the requirements as set out in the RFP, subject only to such additions or modifications thereto as are set out in the Agreement.

A.12 Third Party Software

Where the City is in possession of software containing or constituting confidential proprietary information belonging to third parties, the Vendor shall not, except in the usual incidental manner genuinely necessary for the intended use of such software on the equipment of the City and as is permitted by the terms of the applicable license agreements:

         a)   Analyze, copy, decompile, disassemble, translate, convert, reverse engineer or duplicate any physical embodiment or part thereof, or permit any person to do so; or
         b)   Divulge to any unauthorized person the ideas, concepts or techniques, or make any other improper use, of such software.

The Vendor shall fully defend, save harmless and indemnify the City from and against any loss or damages suffered by the City as a result of any failure by the Vendor, its Personnel or any of them to comply with the provisions hereof.

Should the Vendor include third party components within the System, the Vendor **must** secure the rights to allow use of the applicable third party components by the City and users of the System, including as envisaged by the terms of the RFP, and pass on those rights to the City without additional charges.

Except for any items of pre-existing software or other pre-existing works which the City has agreed may form part of the System and for which the license terms have been agreed to in writing in advance by the City, the City will own all intellectual property rights, including (without limitation) copyright, in and to all deliverables provided by the Vendor and its subcontractors, service providers or suppliers.

A.13 Ownership of Project Documentation

Except for any items of pre-existing software or other pre-existing works which the City has agreed may form part of the System and for which the license terms have been agreed to in writing in advance by the City, all information, data, plans, specifications, reports, estimates, summaries, photographs and all other Documentation prepared by the Vendor in the provision of any part of the Solution under the Agreement, whether they be in draft or final format, and all intellectual property rights therein, shall be the property of the City.

A.14 Payment Schedule

A payment schedule satisfactory to the City shall form part of the Agreement (including any SOW).

No fees or reimbursable expenses shall become payable to the Vendor pursuant to the Agreement other than as set out in the Agreement, including as set out in any SOW made as part of the Agreement.

The Vendor shall submit invoices in such detail as may be required by the City, and the City reserves the right to require further proof or Documentation from the Vendor in respect of any part of the Solution provided by the Vendor or expenses incurred by the Vendor and the Vendor shall provide, without delay, such further proof or Documentation.

If the City does not approve of the Services or other components of the Solution which are the subject of the invoice, the City shall advise the Vendor in writing of the reasons for non-approval and the Vendor shall remedy the problem at no additional cost to the City before the City shall be obliged to pay the invoice or any part of it, as the case may be.

The Vendor shall be solely responsible for the payment of all personnel costs including statutory and otherwise (including without limitation subcontractors and suppliers and their respective personnel) made available by it and used for the provision of any part of the Solution.

A.15 Termination Provisions

Upon giving the Vendor not less than thirty (30) days' prior written notice, the City may, at any time and without cause, cancel the Agreement, in whole or in part. In the event of such cancellation, the City shall not incur any liability to the Vendor apart from the payment for the goods, material, articles, equipment, work or services that have been satisfactorily delivered or performed by the Vendor at the time of cancellation.

Failure of the Vendor to perform its obligations under the Agreement shall entitle the City to terminate the Agreement upon ten (10) calendar days' written notice to the Vendor if a breach which is remediable is not rectified in that time. In the event of such termination, the City shall not incur any liability to the Vendor apart from the payment for the goods, material, articles, equipment, work or services that have been satisfactorily delivered or performed by the Vendor at the time of termination.

All rights and remedies of the City for any breach of the Vendor's obligations under the Agreement shall be cumulative and not exclusive or mutually exclusive alternatives and may be exercised singularly, jointly or in combination and shall not be deemed to be in exclusion of any other rights or remedies available to the City under the Agreement or otherwise at law.

No delay or omission by the City in exercising any right or remedy shall operate as a waiver of them or of any other right or remedy, and no single or partial exercise of a right or remedy shall preclude any other or further exercise of them or the exercise of any other right or remedy.

Upon termination, all originals and copies of data, plans, specifications, reports, estimates, summaries, photographs, and other documents, including all applicable components of the Solution, that have been accumulated and/or prepared by the Vendor in performance of the Agreement shall be delivered to the City in a clean and readable format. All rights and licenses granted to the City with respect to any Software or Documentation and other materials provided to the City during the term of the Agreement shall survive and continue in full force and effect following any termination of the Agreement.

A.16 Right to Audit

The City may audit all financial and related records associated with the terms of the Agreement including timesheets, reimbursable out of pocket expenses, materials, goods, and equipment claimed by the Vendor. The Vendor shall at all times during the term of the Agreement, and for a period of X years following completion of the Agreement, keep and maintain records of all deliverables relating to the Project to be provided pursuant to the Agreement. This shall include proper records of invoices, vouchers, timesheets, and other documents that support actions taken by the Vendor. The Vendor shall at his own expense make such records available for inspection and audit by the City at all reasonable times.

A.17 Occupational Health and Safety

(1) The Vendor shall comply with all federal, provincial or municipal occupational health and safety legislative requirements, including, and without limitation, the Occupational Health and Safety Act, R.S.O., 1990 c.0.1 and all regulations thereunder, as amended from time to time (collectively the "OHSA").

(2) Nothing in this section shall be construed as making the City the "employer" (as defined in the OHSA) of any workers employed or engaged by the Vendor for the Project, either instead of or jointly with the Vendor.

(3) The Vendor agrees that it will ensure that all subcontractors engaged by it are qualified to provide any part of the Solution and that the employees of subcontractors are trained in the health and safety hazards expected to be encountered in the Project.

(4) The Vendor acknowledges and represents that:

a. The workers employed to carry out the Project have been provided with training in the hazards of the Project to be performed and possess the knowledge and skills to allow them to work safely;

b. The Vendor has provided, and will provide during the course of the Agreement, all necessary personal protective equipment for the protection of workers;

c. The Vendor's supervisory employees are competent, as defined in the OHSA, and will carry out their duties in a diligent and responsible manner with due consideration for the health and safety of workers;

d. The Vendor has in place an occupational health and safety policy in accordance with the OHSA; and

e. The Vendor has a process in place to ensure that health and safety issues are identified and addressed and a process in place for reporting work-related injuries and illnesses.

(5) The Vendor shall provide, at the request of the General Manager or his designate, the following as proof of the representations made in paragraph d(i) and d(iv):

a. documentation regarding the training programs provided or to be provided during the Project (i.e. types of training, frequency of training and re-training); and

b. the occupational health and safety policy.

(6) The Vendor shall immediately advise the General Manager or his designate in the event of any of the following:

    a. A critical injury that arises out of Project that is the subject of this Agreement;

    b. An order(s) is issued to the Vendor by the Ministry of Labour arising out of the Project that is the subject of this Agreement;

    c. A charge is laid or a conviction is entered arising out of the Project that is the subject of this Agreement, including but not limited to a charge or conviction under the OHSA, the *Criminal Code*, R.S.C 1985, c. C-46, as amended and the *Workplace Safety and Insurance Act*, 1997, S.O. 1997, c. 16, Sched. A, as amended.

(7) The Vendor shall be responsible for any delay in the progress of the Project as a result of any violation or alleged violation of any federal, provincial or municipal health and safety requirement by the Vendor, it being understood that no such delay shall be a force majeure or uncontrollable circumstance for the purposes of extending the time for performance of the Services or entitling the Vendor to additional compensation, and the Vendor shall take all necessary steps to avoid delay in the final completion of the Project without additional cost to the City.

(8) The parties acknowledge and agree that employees of the City, including senior officers, have no authority to direct, and will not direct, how employees, workers or other persons employed or engaged by the Vendor do work or perform a task that is the subject of this Agreement.

A.18 Workplace Safety and Insurance Act

The Vendor shall be in good standing with the Workplace Safety and Insurance Board ("WSIB") throughout the term of this Agreement. If requested by the General Manager or his designate, the Vendor shall produce certificates issued by the WSIB to the effect that they have paid in full their assessment based on a true statement of the amount of payrolls. If the Vendor is considered by WSIB to be an independent operator without coverage, the Vendor shall provide a letter to that effect from the WSIB.

A.19 Accessibility Standards for Customer Service Training Requirements

The Vendor shall require all applicable personnel (including those of its subcontractors) to fulfill the training requirements set out in the City's policy on Accessible Customer Service Training Requirements for Contractors, Consultants and other Services Providers.

APPENDIX B - SUBMISSION FORMS

FORM 1: Response Submission Form – Mandatory

FORM 2: Policy to Exclude Bids From External Parties Involved in the Preparation or Development of a Specific Call/Request - Mandatory

FORM 3: Restrictions on the Hiring and Use of Former City of Toronto Management Employees for City Contracts – If Applicable

FORM 4: Environmentally Responsible Procurement Statement – If Applicable

FORM 5: Notice of No Submission – If Applicable

MII TORONTO

RESPONSE SUBMISSION FORM

REQUEST FOR PRE-QUALIFICATION NO. 3405-13-3122

RE: Work Management Solution
CLOSING: 12:00 NOON (local time) October 31, 2013

I/WE HEREBY SUBMIT MY/OUR RESPONSE FOR THE PROVISION OF THE GOODS AND/OR SERVICES AS DESCRIBED WITHIN THE REQUEST FOR PRE-QUALIFICATION DOCUMENT FOR THE ABOVE NAMED PROJECT.

I/WE HAVE CAREFULLY EXAMINED THE DOCUMENTS AND HAVE A CLEAR AND COMPREHENSIVE KNOWLEDGE OF THE REQUIREMENTS AND HAVE SUBMITTED ALL RELEVANT DATA. I/WE AGREE, IF SELECTED TO PROVIDE THOSE GOODS AND/OR SERVICES TO THE CITY IN ACCORDANCE WITH THE TERMS, CONDITIONS AND SPECIFICATIONS CONTAINED IN THE REQUEST FOR PRE-QUALIFICATION DOCUMENT AND OUR SUBMISSION. I/WE AGREE THAT THIS SUBMISSION IS BEING MADE WITHOUT ANY COLLUSION OR FRAUD.

ACKNOWLEDGE RECEIPT OF ADDENDA BY NUMBER AND ISSUE DATE:

ADDENDUM NO. _____ DATED _____

ADDENDUM NO. _____ DATED _____

SUBMITTED BY:

_____

(RESPONDENT'S FULL LEGAL NAME)

ADDRESS: _____**TELEPHONE NO.** _____

_____**FAX NO.**_____

_____**EMAIL:** _____

_____ **DATE:**

_____

SIGNATURE OF AUTHORIZED SIGNING OFFICER

_____

PRINTED NAME OF SIGNING OFFICER

THIS FORM MUST BE SIGNED AND SUBMITTED WITH YOUR RESPONSE OR YOUR RESPONSE WILL BE DECLARED INFORMAL.

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FORM 2

POLICY TO EXCLUDE BIDS FROM EXTERNAL PARTIES INVOLVED IN THE PREPARATION OR DEVELOPMENT OF A SPECIFIC CALL/REQUEST

To ensure Fair and Equal Treatment in its competitive procurements, the City of Toronto will undertake to:

- disallow bidders/Proponent from submitting a bid to any Tender, Quotation, or Proposal call in which the bidders/Proponent has participated in the preparation of the call document; and

- a bidder/Proponent who fails to comply will result in disqualification of their response to the call/request.

Did you, the Proponent, assist the City of Toronto in the preparation of this Request for Pre-Qualification call?

Specify: Yes _____   No _____

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RESTRICTIONS ON THE HIRING AND USE OF FORMER CITY OF TORONTO MANAGEMENT

EMPLOYEES FOR CITY CONTRACTS

The purpose of this Policy to ensure that former City of Toronto management employees who took part in a separation program or received a retirement package, are prohibited from participating in contracts directly or indirectly related to the City of Toronto or its special purpose bodies for a period of two years starting from an employee's separation date.

Former employees covered by this policy are prohibited from participating in contracts directly or indirectly related to the City of Toronto or its special purpose bodies for a period of two years starting from the employee's separation date. This would include, but not be limited to, for example, the following roles:

- As an independent contractor/consultant;
- As a contractor/consultant on City project Work for a company/firm (but, the firm may compete); or
- As a contractor/consultant on City project Work for a company/firm that has been sub-contracted by another company/firm.

Former City of Toronto management employees who took part in a separation program or received a retirement incentive are prohibited from participating in contracts directly or indirectly related to the City of Toronto and its special purpose bodies for a period of two years starting from an employee's termination date.

Notes: (1)   Adopted by Council at its meeting of February 4, 5, & 6, 1998, Report No. 2, Clause No. 2 of the Strategic Policies and Priorities Committee, and

          (2)   Revised by City Council at its meeting of November 26, 27, 28, 2002, Report No. 14, Clause No. 6, Administration Committee.

Proponents are to state the name(s) of any former City of Toronto management employee(s) hired/used by your firm, if any, who have left the employ of the City or its special purpose bodies within the last two years.

Specify: _____ .

This policy will be considered in the evaluation of all submissions received by the City of Toronto.

For further information contact:

      Manager, Corporate Purchasing, Policy & Quality Assurance
      18th Floor, West Tower, City Hall, (416) 392-0387

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ENVIRONMENTALLY RESPONSIBLE PROCUREMENT STATEMENT

The City of Toronto Environmentally Responsible Procurement Policy encourages bidders to also offer products/services that are environmentally preferred.

Environmentally preferred products/services offered must be competitive in cost, conform to specifications, performance requirements and, be suitable for the intended application as determined by the using department(s)

Environmentally preferred products/services are those such as durable products, reusable products, energy efficient products, low pollution products/services, products (including those used in services) containing maximum levels of post-consumer waste and/or recyclable content, and products which provide minimal impact to the environment.

An environmentally preferred product is one that is less harmful to the environment than the next best alternative having characteristics including, but not limited to the following:

1. Reduce waste and make efficient use of resources: An Environmentally Preferred Product would be a product that is more energy, fuel, or water efficient, or that uses less paper, ink, or other resources. For example, energy-efficient lighting, and photocopiers capable of double-sided photocopying.

2. Are reusable or contain reusable parts: These products such as rechargeable batteries, reusable building partitions, and laser printers with refillable toner cartridges.

3. Are recyclable: A product will be considered to be an Environmentally Preferred Product if local facilities exist capable of recycling the product at the end of its useful life.

4. Contain recycled materials: An Environmentally Preferred Product contains post-consumer recycled content. An example is paper products made from recycled post-consumer fibre.

5. Produce fewer polluting by-products and/or safety hazards during manufacture, use or disposal: An EPP product would be a non-hazardous product that replaces a hazardous product.

6. Have a long service-life and/or can be economically and effectively repaired to upgraded.

Bidders shall if requested, provide written verification of any environmental claims made in their bid/Proposal satisfactory to the City of Toronto within five (5) working days of request at no cost to the City. Verification may include, but not be limited to, certification to recognized environmental program (e.g., Environmental Choice Program [ECP]), independent laboratory tests or manufacturer's certified tests, Only proven environmentally preferred products/services shall be offered. Experimental or prototype products/services will not be considered.

For a copy of *the* City of Toronto Environmentally Responsible Procurement Policy, visit the website at
http://www.toronto.ca/calldocuments/pdf/environment_procurement.pdf

State if environmentally preferred products/service is being offered: YES_____
                                                                          NO_____

State briefly the environmental benefit of the product/service offered:

_____

_____

NOTICE OF "NO SUBMISSION"

🏙 TORONTO

RFPQ # :	3405-13-3122
CLOSING DATE:	October 31, 2013

IMPORTANT - PLEASE READ THIS

It is important to the City of Toronto to receive a reply from all invited Proponents. There is no obligation to submit a Response; however, should you choose not to submit, completion of this form will assist the City in determining the type of services you are interested in submitting a Response to in the future.

INSTRUCTIONS:

If you are unable, or do not wish to submit a Response on this Request for Pre-Qualification, please complete the following portions of this form. State your reason for not submitting a Response by checking applicable box(es) or by explaining briefly in the space provided. It is not necessary to return any other Request for Pre-Qualification documents.

1. We do not offer this service.		Other reasons or additional comments.
2. We do not offer services to these requirements.		
3. Unable to offer services competitively.		
4. Cannot handle due to present commitments.		
5. Quantity/project too large.		
6. Cannot meet delivery/completion requirements.		
7. Licensing restrictions.		

Do you wish to participate in Request for Pre-Qualification for services in the future?   YES   ____

NO

For City's use only - Do not write in this space.	Company Name:
	Address:
	Signature of Company Representative:
	Position:
	Date:

Date:	Tel. No.:
	Fax No.:

Fax: 416-392-8411

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APPENDIX C - RESPONSE QUALIFICATION EVALUATION TABLE

Criteria	Indicator	Scoring	Minimum Threshold
Stage 1 - Mandatory Requirements	Proposal must satisfy all mandatory requirements	Pass/Fail	
Technical Proposal **Technical Score – maximum 100 points**			
Stage 2A			
Non-Functional Requirements	Time in business and number of public sector clients, and installations of work management solution listed in Appendix D.2	Maximum 5 points	3 points
Product Functional Requirements	Proposal will be scored on how the Solution (product capabilities) meet the requirements listed in Appendix D.3	Maximum 55 points	36 points
Technical Requirements	Proposal will be scored on how the Solution (product capabilities) meet the requirements listed in Appendix D.4	Maximum 30 points	20 points
Proponents must score minimum Technical Score of 65% for each of the individual requirements in stage 2A (written technical proposal evaluation) in order to be considered for evaluation in step 2B.			
Stage 2B – Presentation and Demonstration			
Software Demonstration	Solution usability and demonstration of product capabilities	Maximum 10 points	

APPENDIX D - PROPONENT & PRODUCT REQUIREMENTS

D.1 - Mandatory Proponent Requirements

D.2 - Non-Functional Proponent Requirements

D.3 - Product Functional Requirements

D.4 - Product Technical Requirements

D.5 - Product Implementation Requirements References

D.6 - City of Toronto I&T Infrastructure

Appendix D.1 - Proponent Mandatory Requirements Compliance Table

(1) This Appendix contains the Proponent Mandatory Requirements. Proponents **must** respond to the Mandatory Requirements using one (1) of two (2) possible responses:

Letter Code	Response
Y	Proponent complies with Mandatory Requirement
N	Proponent does not comply with Mandatory Requirement

(2) Mandatory Requirements with responses other than "Y" will be treated the same as "N," which corresponds to "Proponent does not comply with Mandatory Requirement."

(3) Proponents who do not respond "Y" to **each and every** Mandatory Requirement in this appendix **will have their Proposals declared Informal and will NOT be considered for further evaluation.**

Mandatory Requirements (Section 1) Proponent Qualifications		
Mandatory Requirements (Section 1) **Proponent Qualifications**		
Req't #	**Requirement Text**	**Response**
1.1	Proponents **must (M)** have the right, either alone or with other Persons, to represent, sell (or license or otherwise provide), deliver, install, train in the use of, service, maintain and support the products proposed, (including any Documentation to be provided in relation thereto), and the right to transfer to the City any required ownership, license rights, pass-through warranties and other ancillary rights for all proposed goods and services. In providing such products and services to the City the rights of any third-party **must** not be infringed or otherwise violated.	
1.2	Proponents **must (M)** acknowledge that they have read, understood and comply with the terms and conditions of this RFPQ, specifically as identified in Appendix A-1 – RFPQ Process Terms and Conditions	
1.3	Proponents **must (M)** agree to provide the following information: Audited financial statements for the past two (2) years for public companies, or a letter from a financial institution confirming the Proponent's financial viability and solvency as a going concern for private companies. Proponents **must (M)** provide this information upon request from the City within 10 business days.	

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Appendix D.2 - Proponent Non-Functional Requirements Compliance Table

(1)   This Appendix contains the Proponent Non-Functional Requirements for the WMS Project.

(2)   **All Proponent Non-Functional Requirements for the WMS project are mandatory.**

(3)   Proponents must respond to the Proponent Non-Functional Requirements using one (1) of two (2) possible responses:

Letter Code Response	
Y	Proponent complies with Requirement
N	Proponent does not comply with Requirement

(4)   For the purposes of this Appendix, a Proponent who is the Solution International Partner of a Software Vendor must submit information on both itself as well as the Software Vendor.

(5)   Proponent Non-Functional Requirements with responses other than "Y" will be treated the same as "N," which corresponds to "Proponent does not comply with Non-Functional Requirement."

(6)   **Proponents who do not respond "Y" to each and every Mandatory Proponent Non-Functional Requirement in this appendix will have their Proposals declared Informal and will NOT be considered for further evaluation.**

(7)   In the Details or Additional Comments, Proponents should respond to the Proponent Non-Functional Requirements using text, charts, tables, graphs, diagrams or any other method required to comprehensively describe how Proponents will satisfy the stated Proponent Non-Functional Requirements.

(8)   Proponents may respond directly on the form, or, they may simply place a reference to the location in their Proposal where the response is located.

(9)   Responses that fully address all elements referred to in the text of the Proponent Non-Functional Requirements will be scored higher. Proponents should ensure that their responses contain the necessary level of detail for the City's Selection Committee to properly evaluate the quality of the response.

Req't #		Requirement Text	Response	Details and Additional Comments
2.1	M	Proponents **must (M)** provide the following information about all of the firms/companies/sub-Proponents (collectively "companies") included in the Proponent's Response so that the City can evaluate the Proponent's ability and stability to support the commitments set forth in response to the RFPQ: • How long the company has been in business? • A brief description of the company size and organization. • How long the company has been selling the proposed Solution to public and private sector clients? • The number of public and private sector installs of the Solution, as well as the size of each (number of users). Additionally for these installations, please specify the number and size of each (number of users) for the following organizations: • Water Treatment and Supply and Wastewater Treatment organizations • Solid waste and recycling organizations • Transportation and road organizations • Parks and urban forestry organization The City, at its option, may require a Proponent to provide additional information and/or clarify the information provided, as part of this evaluation stage.		
2.2	M	If the Proponent's Response includes other entities for the purposes of providing the software products forming part of the proposed Solution, the Proponent **must (M)** provide the following information for each entity: • The full legal name; • Full address; • The software product(s) and version number(s) proposed.		

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Appendix D.3 – Product Functional Requirements Compliance Table

(1)   **There are both mandatory and non-mandatory Product Functional Requirements for the WMS project.**

(2)   The designations "M" or "D" on the requirements tables are detailed below:

	Legend Description
D	Requirement listed is "Desirable"
M	Requirement listed is "Mandatory"

(3)   Proponents should respond to the Product Functional Requirements via letter codes that correspond to one (1) of ten (10) possible responses:

Letter Code	Response
BO	Functionality available through base product, Out-of-the-Box
BC	Functionality available through base product, with Configuration
BZ	Functionality available through base product, with Customization
OO	Functionality available through an optional/add-on component/module of the base product, Out-of-the-Box
OC	Functionality available through an optional/add-on component/module of the base product, with Configuration
OZ	Functionality available through an optional/add-on component/module of the base product, with Customization
TO	Functionality available through a third party software product, Out-of-the-Box
TC	Functionality available through a third party software product, with Configuration
TZ	Functionality available through a third party software product, with Customization
N	Functionality not available

(4)   Responses other than "BO," "BC," "BZ," "OO," "OC," "OZ," "TO," "TC," or "TZ" will be treated the same as "N," which corresponds to "Functionality not available."

(5)   Responses with blank or "N" responses will be scored as 'Failure' For Mandatory items resulting in disqualification.

(6)   In some cases, there may be a need to elaborate a response, such as "most of what's being asked for is Out-of-the-Box, but one small aspect would have to be customized."   In such situations, Proponents are encouraged to take advantage of the "Details and Additional Comments" column on the compliance tables, so that the City of Toronto can properly understand the extent to which their Solution actually matches their chosen response code.

(7)   Please note that the "Details and Additional Comments" section to the far right of each requirement is provided to allow Proponents space to provide detailed information on how their Solution satisfies the City's requirements. Proponents may use this space to provide a reference to the body of their Proposal where the details and additional comments may be found, or it may be filled in directly.

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Req't #		Requirement Text	Response	Details and Additional Comments
3.1				
3.1.1	M	The Solution **must (M)** be an enterprise Solution than can support multiple organization units (Divisions and ABCs across the City) and is scalable.		
3.1.2	D	The Proponent **should (D)** describe the various enterprise features of the Solution including performance, scalability, extensibility, robustness, and administration.		
3.2		**Asset Maintenance Management and Service Delivery Operations** The City performs two types of work management: Asset Maintenance Management and Service Delivery Operations: (1) Asset Maintenance Management work is defined as ongoing maintenance and support of an asset, in accordance with established operational services levels and asset maintenance management plan. Some examples of asset maintenance work include repairing pot holes in a road segment (where the asset is the road segment), re-sodding part of a soccer field in a park (where the asset is the turf), preventative maintenance of a water pump (where the asset is the water pump), pruning of a street tree (where the asset is the tree) and repairing the recycling sorting equipment at a transfer station (asset is the recycling sorting equipment). (2) Service Delivery Operations is defined as the ongoing recurring work activities involved in the running of a business for the purpose of delivery of services. Some examples of proactive or planned service delivery are grass cutting, roadway sweeping, planting a tree, collecting garbage on an established schedule, and seasonal shut-off/turn-on of public water service. Examples of reactive service delivery include a request for a new blue bin, and a request for tree maintenance due to structural concern. Examples of an Incident (service interruption) include missed garbage pick-up, loss of water service, traffic signal outage and park vandalized.		
3.2.1	M	The Proponent **must (M)** describe how the Solution supports both planned (preventative) and unplanned (reactive and corrective) ongoing maintenance and support of an asset to meet required performance and service levels.		

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WMS RFPQ

Req't #		Requirement Text	Response	Details and Additional Comments
3.2.2	M	The Proponent **must (M)** describe how the Solution supports ongoing work activities required to run an organization for the purpose of delivery of services producing value to "customers". This includes both proactive (or service plan) and reactive (service request) work.		
3.3		**General Work Management Capabilities**		
		Productivity and Workflow Requirements		
3.3.1	M	The Solution **must (M)** provide the ability to search, identify, and review common work management entities through a consistent and easy to navigate user interface.		
3.3.2	M	The Solution **must (M)** provide the ability to identify or review work requests, work orders/activities, assets and locations in the context of a map view such that navigation between the native record or tabular view of the record(s) and the map view for the same record(s) is possible.		
3.3.3	M	The Solution **must (M)** provide for a notification capability for the delivery and receipt of notifications required to support required approvals, work identification and creation, work order planning and scheduling and recording.		
3.3.4	M	The Solution **must (M)** provide for an approval management capability for the requesting and recording of different types of approvals required to support work identification and creation, work order planning, work order scheduling and recording.		
3.3.5	M	The Proponent **must (M)** demonstrate how work management entities can be extended to accommodate additional data field requirements and related search/lookup criteria.		
3.3.6	D	The Solution **should (D)** provide a configurable approval management capability to actively manage approval requirements and re-route approvals with outstanding responses according configurable workflows and business rules for the routing, requesting and recording of different types of approvals.		
3.3.7	D	The Solution **should (D)** provide the ability to configure business rules for notification recipients within an organization according to user roles and groups (or sub-organization configuration), deliver the same notification to one or all qualifying recipients based on configuration; group and order notifications for users according to importance or urgency; and provide notification recipients the ability to filter, re-sort notifications, dispose of notifications, and action notifications in a single view.		

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Req't #		Requirement Text	Response	Details and Additional Comments
3.3.8	D	The Solution **should (D)** provide a consistent and easy to navigate capability for searching, identifying, selecting and reviewing details, drilling down into related / child entities, limiting visibility where appropriate, for the following entities: • Work Requests • Work Orders • Work Order Activities • Assets • Component Assets • Projects • Routes • Route Steps • Locations • Municipal Addresses • Equipment or Facility Types • Equipment or Facility Resources • Equipment Stores • Material Types • Material Stores • Purchase Requisitions • Divisional Purchase Orders, Corporate Purchase Orders and Contracts • Contract Release Orders • Goods / Service Receipts • Workforce Roles • Permit Types • City Services • Employees • Contracted Service Providers		
3.3.9	D	The Solution **should (D)** provide the ability to view search results for work requests, work orders, assets, asset types, asset categories/classification and defined locations in a map view and constrain searches according to a dynamically adjustable user definable (e.g., rubber-banded) area or map zoom level selected by a user in a map view.		

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Req't #			Requirement Text	Response	Details and Additional Comments
3.3.10	D		The Solution **should (D)** provide the ability to maintain (create, edit and remove) projects for an organization in the organization hierarchy or all organizations that can be referenced by work requests and work orders and identify the following significant associations: • Principle Asset; • Principle Location; • Originating Work Request; and contain other details such as: • Responsible Organization; • Cost Centre; • Contact Person.		
			Work Requests (e.g. service requests, complaints)		
3.3.11	M		The Solution **must (M)** support the creation of work requests that are distinct from work orders for acceptance or rejection by appropriate user roles, association of a work request with one or more existing work orders, and association of a work request with new work orders.		
3.3.12	D		The Solution **should (D)** support the creation of work requests for any organization within the organization hierarchy that identifies a subject/primary • Asset • Location • Project • City Service along with requestor information including name, municipal address, contact details and other configurable contact details and customer identifiers and the attachment of electronic documents, images, multimedia files.		
3.3.13	D		The Solution **should (D)** support the ability for a user to select and change the priority of a work request from a pre-defined or configurable list of priorities.		
3.3.14	D		The Solution **should (D)** support the configuration of approval requirements for work request acceptance and maintain the results of the approval review for the work request.		
3.3.15	D		The Solution **should (D)** support the ability to configure work plans consisting of template based work orders and work order dependencies (e.g., start-to-start, finish-to-start) for pre-defined work request types and propose these by default as part of a work request review in order to support the automation and consistent application of business operating policies and procedures for different types of work requests.		

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Req't #		Requirement Text	Response	Details and Additional Comments
3.3.16	D	The Solution **should (D)** support the generation and delivery of notifications back to originating requestors (to users through the application or external systems using the work management service interface) with the outcome of the work request review and identification of all work orders associated with the work request if it was accepted.		
		Work Order Creation and Cancellation		
3.3.17	M	The Solution **must (M)** support the ability for an appropriate user role such as a work manager to create a work order or copy an existing work order identifying a primary • asset; • location; and cancel work orders.		
3.3.18	D	The Solution **should (D)** support the ability for a user to associate a work order with projects, identify the percentage planned and actual resource usage/cost split/allocation rule for each project associated with the same work order, and roll-up and report work order planned and actual resource usage/cost information to associated projects applying split/allocation rules.		
3.3.19	D	The Solution **should (D)** support the ability for a user to request a priority change from a pre-defined or configurable list of available priorities for a work order and manage the review and approval of the priority change according to configured workflow and business rule requirements for an organization.		
3.3.20	D	The Solution **should (D)** support the ability to associate or remove work orders through the addition of dependencies that will constrain the scheduling of all activities within each work order. The types of dependency associations supported are: • Start-to-start; • Finish-to-finish; • Finish-to-start.		
3.3.21	D	The Solution **should (D)** support the ability for a user with appropriate user role to request the cancellation of an open work order and manage the review and approval of the request according to configured workflow and business rule requirements for an organization.		
3.3.22	D	The Solution **should (D)** support the ability to actively manage the review and approval of a requested work order cancellation based on configured cancellation approval rules.		

Req't #		Requirement Text	Response	Details and Additional Comments
3.3.23	D	The Solution **should (D)** support the following clean-up functions when a work order is moved to cancelled status: • Identification and cancellation of material requests no longer required • Identification and cancellation of asset requests no longer required • Identification and cancellation of resource (e.g., equipment, vehicle) bookings no longer required • Identification and cancellation of permit applications no longer required • Release of labour/workforce requirements planned for the work order • Notification or flagging to the appropriate user undertaking the scheduling of the work order of the need to review the scheduling of dependent and impacted work orders and contained activities. • Locking of the work order record to prevent further changes		
		Preventative Maintenance Plan and Service Delivery Plan Capabilities		
3.3.24	M	The Solution **must (M)** support the ability to create preventative maintenance plans for assets, identified individually and identified as a group, maintenance schedule/recurrence, and work order requirements for each plan item.		
3.3.25	M	The Solution **must (M)** support the ability to create service delivery plans for assets that identify a City service or location, delivery schedule/recurrence, and work order requirements for each plan item.		
3.3.26	M	The Solution **must (M)** support the ability for a user to review preventative maintenance and service delivery work plan items that are due or past due for a time period.		
3.3.27	D	The Solution **should (D)** support the ability to identify multiple template work order(s) for each preventative maintenance or service delivery item through the association of work order dependencies such as "start-to-start", "finish-to-start", and "finish-to-finish" in order to support the concept of a work plan that is more complex than a single work order.		

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Req't #		Requirement Text	Response	Details and Additional Comments
3.3.28	D	The Solution **should (D)** support the ability to define schedule/recurrence requirements for preventative maintenance plan and service delivery plan requirements, including the following: • Daily • Weekly, starting on specified day of the week • Bi-Weekly, starting on specified day of the week • Monthly, starting on specified day of the week • Seasonally, at season start date configured for the Season • Seasonally, at season end date configured for the Season including lead time or lag time factors for work order creation and configure business rules for preventative maintenance plan and service delivery plan requirement suppression or exclusion such as in the scenario that corrective maintenance for an asset was recently completed.		
3.3.29	D	The Solution **should (D)** provide the ability to define meter based (e.g., vehicle mileage) frequency / recurrence requirements for preventative maintenance plan and service delivery plan requirements.		
3.3.30	D	The Solution **should (D)** support the ability to create all required work orders for a preventative maintenance plan requirement or service delivery plan requirement when due according to the schedule/recurrence requirements.		
3.3.31	D	The Solution **should (D)** support the ability for an appropriate user role to defer work requirements identified and reviewed from preventative maintenance and service delivery work plans so that no corresponding work order(s) are created and the work requirement is moved to a deferred status so that it no longer appears as due or overdue.		
3.3.32	D	The Solution **should (D)** support the ability for an appropriate user role to action future (forecast) work requirements identified and reviewed from preventative maintenance and service delivery work plans through the creation of work order(s) required by the originating work plan.		
3.3.33	D	The Solution **should (D)** support the ability for an appropriate user role to action due, overdue, or deferred work plan requirements identified and reviewed from preventative maintenance and service delivery work plans through the creation of work order(s) required by the originating work plan.		

Req't #		Requirement Text	Response	Details and Additional Comments
		Condition Based Maintenance Plan Capabilities		
3.3.34	M	The Solution **must (M)** provide the ability to receive and process both continuous or periodic instrumentation readings from multiple meters and assets, maintain and evaluate multiple measurement threshold-based conditions, including: • Low warning point/value reached; • High warning point/value reached; • Low action point/value reached; • High action point/value reached; for the triggering of condition based maintenance plans that identify work order requirements for a condition.		
3.3.35	M	The Solution **must (M)** provide the ability to maintain (create, edit and remove) multiple meters for an asset that reflect operating values of interest to be observed and recorded through inspections, loaded in bulk from a file with pre-defined format, or obtained directly through integration with an asset / equipment monitoring or process control system.		
3.3.36	D	The Solution **should (D)** provide the ability to maintain rule-based conditions for the triggering of a condition based maintenance requirement for an asset that considers one or multiple meter measurement conditions for evaluation.		
3.3.37	D	The Solution **should (D)** provide the ability to identify multiple work order templates for each condition based maintenance requirement through the association of work order dependencies such as "start-to-start", "finish-to-start", and "finish-to-finish" in order to support the concept of a condition based maintenance work plan that is more complex than a single work order.		
3.3.38	D	The Solution **should (D)** provide the ability for an appropriate users to receive notifications and review condition based work requirements identified by the Solution from condition based work plans and monitored asset condition information and defer/reject or accept them for each organization in the organization hierarchy.		

Req't #		Requirement Text	Response	Details and Additional Comments
3.4		**Work Management Planning and Scheduling Capabilities** The City needs to better plan, track, monitor resources, manage capacity and work backlog, forecast needs, and facilitate long term planning. The Solution will facilitate planning and scheduling both intra- and inter-Divisionally. In particular, the City needs to plan and schedule its work crews for proactive service delivery work. Because much of the City's outside work crews are dependent upon seasons and daily weather, the ability to create job plans in advance and then to easily modify and update them on a daily basis is critical.		
		Work Order Planning		
3.4.1	M	The Solution **must (M)** support the ability to plan work order activities including: • Adding planned activities • Removing planned activities • Attaching document(s) to planned activities		
3.4.2	M	The Solution **must (M)** support the ability for a user to move work orders/activities for which planning is completed to a scheduling stage.		
3.4.3	D	The Solution **should (D)** support the ability to add or remove dependency associations for activities within a work order, for the purpose of constraining and/or informing scheduling, including the following dependency types: • Finish – to – Start • Start – To – Finish • Start – To – Start • Finish – To – Finish		
3.4.4	D	The Solution **should (D)** support the ability to plan a common location requirement, a distinct location requirement for individual activities in a work order, and a route which is a sequence of locations or assets for each activity.		
		Work Order Templates		
3.4.5	M	The Solution **must (M)** support the ability for a user role such as work order planner to create a template work order from an existing work order, and complete the planning of a work order by selecting an existing template work order.		
3.4.6	D	The Solution **should (D)** provide the ability to create work orders of type "template" corresponding to template work order plans that will contain activities only in a "planned" status and not be scheduled, released or otherwise used for operational work for each organization within the organization hierarchy.		

Req't #		Requirement Text	Response	Details and Additional Comments
3.4.7	D	The Solution **should (D)** provide the ability for an appropriate user role such as work planner to submit a new template work order for review and approval to establish it as an "active" template.		
3.4.8	D	The Solution **should (D)** support the configuration of workflow and business rules for template work order review and approval for each organization within the organization hierarchy.		
		Work Order Scheduling		
3.4.9	M	The Solution **must (M)** provide a graphical view of work order and work order activity scheduling identifying work orders and activities and their respective temporal relationships, dependency associations, and scheduling flags (e.g., purchase order/contract not available for associated purchase requisition, conflict with permit availability or permit timeframe conditions) on a graphical timeline referred to as the "schedule view".		
3.4.10	M	The Solution **must (M)** provide the ability to assign and track work order activities through different stages from planning to closure.		
3.4.11	D	The Solution **should (D)** provide the ability to filter and adjust the schedule view according to the following conditions in any combination: • Asset – view work orders and activities with a common principle asset association or common required asset association • Location – view work orders and activities with a common defined location requirement, or path, point or area graphically selected and identified on a map • Project – view work orders and activities with a common project association • Organization – view work orders associated with an organization within the organization hierarchy • Priority – view work orders with a particular priority • Work request priority – view work orders with related work requests with a particular priority • Date Range – view work orders and activities that are currently scheduled or released within the range of a specified start date or end date • Activity Status – view work order activities based on one or more selected status: Planned, Scheduled, Released, On Hold, Cancelled, Completed, Closed		

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3.4.12	D		The Solution **should (D)** provide the ability to maintain (add, edit, remove) scheduling constraints for work orders and activities that controls the scheduling of a work order / activity relative to a specified date including the following scheduling constraint types: • "As Soon As Possible" • "Finish No Earlier Than" • "Finish No Later Than" • "Start No Later Than" • "Start No Earlier Than"		
3.4.13	D		The Solution **should (D)** provide the ability to maintain (add, edit, remove) precedence constraints for work orders and activities that control the scheduling of a work order or work order activity relative to another work order or work order activity including the following precedence constraint types: • "Finish To Start" • "Start To Finish" • "Finish To Finish" • "Start To Start" and associated lead time or lag time for the precedence constraint.		
3.4.14	D		The Solution **should (D)** provide the ability to maintain the status of work order activities from the stage of work order planning through to closure with status indicators that address the following states: • Planned • Scheduled • Released • On Hold • Cancelled • Completed • Closed with the following state transitions: • Planned to Scheduled • Planned to Cancelled • Scheduled to Released • Released to On Hold • On Hold to Cancelled • On Hold to Scheduled • Released to Completed • Completed to Closed		

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Req't #		Requirement Text	Response	Details and Additional Comments
3.4.15	D	The Solution **should (D)** provide the ability to evaluate work order and activity resource requirements identified in planning (material requirements, equipment / facility resource requirements, procurement requirements, asset remove from service requirements, permit requirements) determine related scheduling constraints and apply configurable scheduling heuristics taking into account any resource dependency constraints that have been suppressed by the work scheduler.		
3.4.16	D	The Solution **should (D)** provide the ability for a work scheduler to selectively suppress different types of resource constraints for a work order, activity, or group of activities when scheduling.		
3.4.17	D	The Solution **should (D)** provide the ability to select specific shift schedules obtained from a Time and Attendance Provider system according to the Time and Attendance Provider interface requirements and can apply configurable resource levelling heuristics to the scheduling of work orders and activities.		
3.4.18	D	The Solution **should (D)** provide the ability to display current labour utilization information in the schedule view for a time period.		
3.4.19	D	The Solution **should (D)** provide the ability for a work scheduler to schedule a work order, activity or group of activities overriding any proposed/optimized scheduling determined by the Solution and release a work order, activity, or group of activities from scheduling so that scheduled date/time details for each activity are fixed/locked unless the status is subsequently updated to On Hold and then Scheduled.		
		Work Assignment and Recording Capabilities		
3.4.20	M	The Solution **must (M)** provide the ability to maintain work assignment roles and employees for each organization in the organization hierarchy including basic identifying information (employee number, name), associated jobs/roles for each employee, and system user identification (e.g., login identity)		
3.4.21	M	The Solution **must (M)** provide the ability to maintain work crews and employee associations to work crews to support employee work assignment.		
3.4.22	M	The Solution **must (M)** provide the ability for employees / assignees to view work order activity status information, report proposed activity status changes for assigned work order activities, and upload/attach multiple documents/images/objects to support a work order activity status change.		

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Req't #			Requirement Text	Response	Details and Additional Comments
3.4.22	D		The Solution **should (D)** provide the ability to actively manage outstanding work order/activity employee assignments within different supervisor work queues based on the organization within the organization hierarchy as well as additional configurable workflow and business rules.		
3.4.23	D		The Solution **should (D)** provide the ability to recommend employee and work crew assignments for each work order/activity reviewed for assignment taking into account work order/activity workforce role and planned effort/time requirements, workforce shift schedules, crew / employee availability, employee jobs/roles, and existing crew / employee work order assignments.		
3.4.24	D		The Solution **should (D)** provide the ability to actively manage the approval of proposed activity status changes based on the assigning supervisor and organization according to configured business rules.		
3.4.25	D		The Solution **should (D)** provide the ability to defer proposed work order activity status changes until approved according to configured business rules.		
3.5			**Asset Registry Capabilities** Some City Divisions use an external asset registry and some do not. The new Solution must integrate with an external asset registry system(s). For those without an asset registry, it is expected that the work management system will provide this functionality.		
3.5.1	M		The Solution **must (M)** provide the ability to master assets directly and define and maintain asset relationships for non-spatial assets without relying on integration with an external GIS or external Asset Management system.		
3.5.2	M		The Solution **must (M)** provide the ability to support integration with an external Asset Management system such that non-spatial assets (e.g., mobile assets, rotating assets) can be mastered in the Asset Management system or mastered in the Solution and asset records, asset relationships, and key asset attributes synchronized between the two systems.		
3.5.3	M		The Solution **must (M)** provide the ability to setup a failure classification hierarchy for assets and record and review asset failures based on failure classification.		
3.5.4	D		The Solution **should (D)** provide the ability to support the following asset structure types: Water, Sewer, Storm, Street, Park, Plant/Tree, Facility, Fleet, Solid Waste, Reservoir		

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3.5.5	D		The Solution **should (D)** provide the ability to maintain asset categories which can be used to classify assets and asset groups based on asset classifications and location.		
3.5.6	D		The Solution **should (D)** provide the ability to maintain and view asset history including changes to asset specifications, changes to asset relationships and asset lifecycle events and movements (e.g., created, in service, removed from service, disposed, refurbished/renewed).		
3.5.7	D		The Solution **should (D)** provide the planning of asset requirements for an asset maintenance work order by providing a facility to identify registered asset based on map navigation and selection or tabular/textual navigation and manage a 'remove from service requirement' when In Situ maintenance work is not possible or permitted for the asset.		
3.5.8	D		The Solution **should (D)** provide the ability to manage and track the approval of asset 'remove from service requests' either within the Solution or through integration with an external Asset Management provider system, based on the technical requirements, when required for an asset, and cancel or release an 'asset remove from service request' when required.		
3.5.9	D		The Solution **should (D)** provide the ability for work order assignees to record asset classification and/or configuration changes and track the movement of rotating spares related to work orders and upload/attach supporting documents/images/objects to support asset changes.		
3.5.10	D		The Solution **should (D)** provide the ability for work order assignees to record asset utilization by work order activity or work order route.		
3.5.11	D		The Solution **should (D)** provide the ability to actively manage the approval of reported asset utilization based on the assigning supervisor and organization according to configured business rules for the organization.		
3.5.12	D		The Solution **should (D)** provide the ability to identify an asset and record its condition according to pre-defined condition index types associated with the asset or asset type including the optional upload/attachment of supporting documents/images/objects to support later analysis of the condition report.		
3.5.13	D		The Solution **should (D)** provide the ability to identify an asset and report failures including the optional upload/attachment of supporting documents/images/objects to support later analysis according to a configured failure classification hierarchy associated with the asset or asset type identifying failure modes and sub-failure modes.		

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3.5.14	D	The Solution **should (D)** provide support for asset failure history trending, root cause analysis and resolution reporting.		
3.5.15	D	The Solution **should (D)** provide the ability for users of an appropriate organization and role to review failure history and failures statistics for an asset such as: • Failure Rate (FR), • Mean Time to First Failure (MTFF), • Maintenance Free Operating Period (MFOP). • Mean Time Between Failure (MTBF), • Annualized Failure Rate (AFR), • Mean Time To Repair (MTTR), • Failure Rate (FR) trend, • Mean Time Between Failure (MTBF) trend, • Mean Time To Repair (MTTR) trend.		
3.5.16	D	The Solution **should (D)** provide the ability to manage asset warranty information related to scheduled maintenance and costs		
3.6		**Labour Management Capabilities** For resource planning, City Divisions use job plans that identify jobs and skills (certification and / or training) to complete the various work activities. For resource scheduling, staff availability is a critical piece of information.		
3.6.1	M	The Solution **must (M)** support the ability to plan (add, change and remove) labour requirements for work orders and activities through the specification of labour roles and planned/expected time for each role to complete an activity.		
3.6.2	M	The Solution **must (M)** provide the ability for employees / assignees to record labour utilization by labour role for assigned work.		

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3.6.3	D		The Solution **should (D)** provide the ability to integrate with an external employee information provider system for the loading and update of employee master record information for all active and inactive employees of an Organization identified within the Organization Hierarchy, including: • Employee name (first name, last name) • Employer number, • Employee Group (identifies status as "inactive" or "active"), • Employee Sub Area (identifies union group / collective bargaining unit), • Labour roles for employee: • List of Labour Roles ("job" in SAP), • Employee Cost centre, • Employee Functional area, as per the technical requirements.		
3.6.4	D		The Solution **should (D)** support the ability to plan the labour requirements for two distinct planning scenarios: • when activities are to be performed once at a location, and • when activities are to be performed for each step in a work order route, where the route identifies a series of assets, locations or both.		
3.6.5	D		The Solution **should (D)** support the ability to maintain (create, change, remove) work crew requirements, to support work order planning, based on the inclusion of required labour roles.		
3.6.6	D		The Solution **should (D)** support the ability to create and track the approval of a 'workforce schedule change request' identifying a shift schedule and details of the requested change including Cycle requirement, Labour role, Labour capacity change requirement according to the Time and Attendance Provider interface requirements.		
3.6.7	D		The Solution **should (D)** provide the ability to actively manage the approval and possible adjustment of reported labour utilization based on the assigning supervisor and organization according to configured business rules for the organization.		
3.6.8	D		The Solution **should (D)** provide different views and approaches for labour utilization reporting by organization such that the reporting period can be synchronized with a timesheet reporting period (e.g., weekly) and capture/confirm/adjust and approve all time reporting for an employee or assignee within the reporting period including "non-productive" or "indirect" time in addition to assigned work order time.		

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3.6.9	D		The Solution **should (D)** provide the ability to approve reported labour utilization through an external Time and Attendance system according to the requirements of the Time and Attendance and Work Management Service interfaces.		
3.7			**Material Management Capabilities** The City uses a combination of SAP Material Management and other systems, primarily work management system modules including Hansen and Avantis, for purchasing, inventory management, and material requirements planning. For resource planning, City Divisions = identify the type and quantity of materials (including parts) required to complete the various work activities planned in a work order. For resource scheduling, material (and parts) availability is a critical piece of information.		
3.7.1	M		The Solution **must (M)** support the ability to maintain (add, change, remove) a catalogue of material types and material warehouses, along with support for: • different unit types (e.g., weight, count, volume) for material types, • financial cost element coding material types, • planning of material types and quantities for work orders, • maintaining material type inventory levels for each warehouse through recording of actual work order material utilization, • adjusting material type quantities (inventory levels) at each warehouse to support inventory management events such as re-supply or disposal.		
3.7.2	D		The Solution **should (D)** support the ability to plan the total material requirements for an activity for two distinct planning scenarios: • when activities are to be performed once at a location, and • when activities are to be performed for each step in a work order route, where a route identifies a series of assets, locations or both.		
3.7.3	D		The Solution **should (D)** provide the ability to determine the availability of materials and reserve material quantities at preferred or alternate warehouses for planned work order requirements and release reservations if no longer required as a result of a planning change or cancellation.		

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3.7.4	D	The Solution **should (D)** provide the ability for work order employees / assignees to record material utilization for work orders by activity or route step (if the work order has an associated route) for each material type, identifying any unutilized material quantities and the location of unutilized material, and manage the approval of recorded material utilization according to configured business rules for an organization.		
3.7.5	D	The Solution **should (D)** support the ability to record unutilized material quantities for work orders and adjust warehouse inventory levels for returned material quantities.		
3.7.6	D	The Solution **should (D)** support the ability to track unutilized material returns through a 'material return to warehouse authorization' issued to the employee / assignee, and notify the authorizing user when a configured time period is exceeded without receipt of the materials, or automatically adjust the material utilization for related work order activities to reflect the actually inventory levels and costs of non-returned material according to business rules for an organization.		
3.7.7	D	The Solution **should (D)** support the ability to forecast re-supply requirements by material store and material type based on tracked material type quantities and historic usage and setup re-supply thresholds for a warehouse and material type to trigger notifications to appropriate user roles within the warehouse's organization when thresholds are reached.		
3.7.8	D	The Solution **should (D)** support the ability to associate asset identification and location information for material warehouses to support planning, scheduling, and material inventory management.		
		Procurement Management Capabilities		
3.7.9	D	The Solution **should (D)** support the ability to create a material procurement request/requisition and associate it with one or more work order material requirements when the required material type does not exist within the material catalogue or when re-supply of a material type is required for a work order.		
3.7.10	D	The Solution **should (D)** support the ability to create an equipment procurement request/requisition and associate it with one or more work order equipment requirements when the required equipment does not exist or is not available from any store room or when a new equipment resource is required for a work order.		
3.7.11	D	The Solution **should (D)** provide the ability to cancel a 'purchase requisition' when it is no longer required or when dependent work orders/activities are cancelled.		

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3.7.12	D	The Solution **should (D)** provide the ability to actively manage 'purchase requisition' approvals according to business rules and workflow configuration for an organization, flag and identify an unapproved 'purchase requisition' and convey the details of related issues or deficiencies to the requestor for re-submission, and track the availability of issued Purchase Orders, Contracts, or Divisional Purchase Orders to inform scheduling of dependent work orders.		
3.7.13	D	The Solution **should (D)** provide the ability to determine the appropriate handling for a 'purchase requisition' as either local to the Solution or externally to a Procurement Management Provider (SAP system for the Purchasing and Material Management Division within the City of Toronto) according to the Procurement Management Provider interface requirements in the technical requirements.		
3.8		**Tools / Equipment Management Capabilities** For resource planning, City Divisions use job plans that identify the type of tools / equipment that are required to complete the various work activities. For resource scheduling, tool / equipment availability is a critical piece of information.		
3.8.1	M	The Solution **must (M)** support the ability to maintain (add, change, remove) equipment and facility resources to support work order resource planning and scheduling.		
3.8.2	D	The Solution **should (D)** support the ability to organize equipment and facility resources into resource types (categories), and associate resource types or individual equipment resources with store rooms to support work order planning and scheduling.		
3.8.3	D	The Solution **should (D)** support the ability to integrate with Booking provider systems for the booking of equipment / facility resources according to the Booking Provider interface requirements in the technical requirements. Integration includes the ability to determine resource booking constraints to support optimized scheduling of work, processing the booking of a resource for a required timeframe, and releasing a booking if no longer required.		
3.8.4	D	The Solution **should (D)** support the ability to associate asset identification and location information for equipment / facility resources.		

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3.9		**Vehicle Management Capabilities** The City (Fleet Services) uses M-5, an Asset Works software, to track and manage the City's (vehicle) fleet. Since not all vehicles are included in the system, divisions must use other systems to track and manage those vehicles not included in the corporate system. For resource planning, City Divisions identify the type of vehicle(s) that are required to complete the various work activities planned in a work order planning. For resource scheduling, vehicle(s) availability is a critical piece of information therefore some form of integration to M-5, such as the included Booking Provider System interface integration requirement, is required.		
3.9.1	M	The Proponent **must (M)** demonstrate that the Solution capabilities support vehicle (fleet) management functionality. Note: the Solution must (M) also integrate with the City's vehicle management system, M-5, an Asset Works software (as per the Technical Capabilities).		
3.9.2	D	The Proponent **should (D)** describe how the Solution: • Supports vehicle/equipment asset management (record year, make, model, warranty, VIN numbers, GWV, vehicle components, parts specification, etc.); • Schedules and tracks preventative maintenance work done on vehicles, including third party repairs; • Tracks mileage/usage of vehicles; • Supports Capital Management - tracks estimated replacement cost and produces replacement schedule; and • Tracks history, fuel costs, accidents, meter readings, insurance including registration number.		
3.10		**Spatial and GIS Capabilities** The City's goal is to fully integrate the Solution with GIS to allow more efficient ways to communicate critical information, streamline work, and eliminate potential duplication and efforts.		
3.10.1	M	The Solution **must (M)** provide the ability to register, classify, and map assets and asset information and represent asset relationships according to multiple asset structure types, including hierarchical, network, segment, point, area and linear.		

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Req't #		Requirement Text	Response	Details and Additional Comments
3.10.2	M	The Proponent **must (M)** demonstrate that the Solution capabilities manage work against assets that are depicted spatially (point, line, or polygon) and provide users within a seamless interface which combines geospatial capabilities with work management processes. Users should be able to spatially represent assets selected within the Solution and display work orders and service requests graphically.		
3.11		**Mobile Capabilities** Some City field workers currently use mobile devices for work management activities. In the future, the City's goal is to provide mobile tools to most of its workers to facilitate work management activities in the field using a hand-held device in both an offline mode and online mode over a wireless network.		
3.11.1	M	The Solution **must (M)** provide a mobile access capability that includes intuitive and easy to navigate functionality described in other requirement sections: • Productivity and Workflow Requirements • Work Request Requirements • Work Order Creation and Cancellation Requirements • Work Assignment and Recording Requirements • Asset Failure Reporting and Analysis Requirements		
3.11.2	D	The Solution **should (D)** provide a mobile access capability (subject to the included technical standards and requirements) that includes intuitive and easy to navigate functionality described in other requirement sections: • Work Order Planning and Scheduling Requirements • Asset Registry Requirements • Labour Management Requirements • Material Management Requirements • Equipment/Facility/Tool Management Requirements		

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Req't #		Requirement Text	Response	Details and Additional Comments
3.11.3	D	The Proponent **should (D)** describe: • the pre-built, pre-integrated functionality available to download the work orders, assets, and required details from the Solution to mobile devices, and to upload work order information and inspection results from mobile devices to the Solution, • the functionality available to easily input and configure new work management activities; • how business rules, validation rules are enforced in the Solution, including in a non-persistent mode, • the types of devices and form factors, the operating systems, connectivity options, and peripherals supported; • the deployment methods to manage and extend the Solution to multiple devices, • how usability will be addressed for the different types of devices; • the functionality available to field workers to continue to operate in a non-persistent environment, and ability to complete work management activities on a mobile device; and • describe the process to synchronize updates made on the mobile devices, detect and resolve conflict once connectivity is re-established.		
3.11.4	D	The Solution **should (D)** enable the required mobile device application to obtain location information via GPS and use it in the evaluation and application of transactional business rules.(e.g., when recording asset failure reports, asset conditions inspections, or activity status updates).		
3.11.5	D	The Solution **should (D)** enable the required mobile device application to integrate captured photos or videos as transactional information (e.g. when recording asset failures reports, asset condition inspections, or activity status updates).		
3.11.6	D	The Solution **should (D)** provide mapping capabilities for the required mobile device application, so that assets, work requests, and work orders can be identified and selected according to required business rules.		
3.11.7	D	The Solution **should (D)** enable the required mobile device application to obtain identification information from equipment, assets, materials, or other registered/tracked work management resources through the scanning of bar codes and reading of RFID tags. The Proponent **should (D)** describe how the Solution would provide for this requirement.		

Req't #		Requirement Text	Response	Details and Additional Comments
3.12		**Permit Management Capabilities** Many City Divisions issue permits, Transportation Services for utility cut and construction permits, street event and occupation permits and Urban Forestry for tree permits. Around 60,000 permits are issued per year, with the majority of them being utility cut permits.		
3.12.1	M	The Solution **must (M)** enable the City to manage a variety of permit types for each organization in the organization hierarchy, track status, track payments, generate documents, and initiate and monitor various types of work orders through different configurable life cycle stages of the permit type, including intake, application review, issuance, and appeal stages.		
3.12.2	D	The Solution **should (D)** provide the ability to track permit applications and track the completeness of applications, and readiness for each processing stage of intake, application review, and issuance according to intake requirements for required documents, credentials, evidence and application fee(s) for a configured permit type and organization.		
3.12.3	D	The Solution **should (D)** provide the ability for external requestors to create and submit permit applications, and obtain status information on permit applications as well as provide a mechanism for delivery of issued permit documents and notices via e-mail to requestors, subject to required security controls.		
3.12.4	D	The Solution **should (D)** provide the ability to maintain the sequence of activities such as • investigation, • inspection, • communication of findings to applicant(s), required in the Application Review stage for each permit type and create corresponding work orders based on pre-defined template work orders according to configured business rules.		
3.12.5	D	The Solution **should (D)** provide the ability to maintain or configure multiple types of conditions and restrictions, including fee and deposit conditions, time period restrictions, location restrictions, for association with different permit types and assign them to permit applications as part of the application review process.		

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Req't #		Requirement Text	Response	Details and Additional Comments
3.12.6	D	The Solution **should (D)** provide the ability to maintain and track conditions for permit issuance for each permit type, including, for example: • Fee payments; • Deposit payments; • Clearances; • Supporting evidence; and notify an appropriate user role within the permitting organization when all conditions for issuance of a permit have been met and the a permit can be issued, and notify an appropriate user role within the permitting organization when conditions for a permit have not been met and communication/notification to applicant(s) is required according to configurable business rules for notification timeframes.		
3.12.7	D	The Solution **should (D)** provide the ability to automatically identify conflicts for usage-based permits based on requested timeframe, location, permit type and/or usage type identified by a permit application to support right-of-way (ROW) permitting and asset usage permitting.		
3.12.8	D	The Solution **should (D)** provide the ability for a user to review and apply conditions and restrictions for issuance to a group or batch of related permit applications.		
3.12.9	D	The Solution **should (D)** provide the ability to maintain or configure permit document templates for each permit type to support the production of permit certificates or letters, and create/print permit documents using the permit template associated with a permit type including details of individual conditions and restrictions for the permit.		
3.12.10	D	The Solution **should (D)** provide the ability to configure different permit life cycle stages, following the issuance stage, for each permit type and define/configure a sequence of work orders required for follow-up work (e.g., compliance assessment, inspection, restoration / repair) and create the work orders required as each stage is initiated.		
3.12.11	D	The Solution **should (D)** provide the ability to track the completion of work orders associated with a permit stage as required follow-up and recommend/progress the permit to the next stage in the life cycle (e.g., permit completion) configured for the permit type.		
3.13		**Complaint Tracking, Compliance Assessment and Enforcement Capabilities** The City needs the ability to manage a variety of compliance complaint and compliance assessment activities.		

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Req't #		Requirement Text	Response	Details and Additional Comments
3.13.1	D	The Solution **should (D)** provide the ability to manage a variety of compliance complaint and compliance assessment types for an organization in the organization hierarchy, track status of compliance complaints and compliance assessments, generate documents, and initiate and monitor various types of work orders through different configurable life cycle stages, including complaint intake, compliance assessment, enforcement, and prosecution stages.		
3.13.2	D	The Solution **should (D)** provide the ability to record outcomes and events for compliance complaints and compliance assessments (e.g., compliance inspections) at each applicable life cycle stage, including: • outcome of complaint assessment and related events such as notifications or communications to various parties and complaint closure. • outcome of compliance assessment and related events • outcome of enforcement including related events such as issued notices or orders		
3.13.3	D	The Solution **should (D)** provide the ability to configure different complaint or compliance assessment life cycle stages, and define/configure a sequence of work orders required for follow-up work (e.g., inspection, enforcement, prosecution) and create the work orders required as each stage is initiated.		
3.13.4	D	The Solution **should (D)** provide the ability to issue and track payment of fines and cost recovery charges as an enforcement action for compliance violations.		
3.13.5	D	The Solution **should (D)** provide the ability to track and record the outcome of prosecutions, including identification of involved parties, evidence and other supporting information, maintaining the association of a prosecution with related compliance assessments and/or enforcement actions.		
3.14		**Contract Administration Capabilities** Many City Divisions use external service providers to provide goods or services for the municipality. The City is responsible for contract monitoring - ensuring the vendor(s) meets contract obligations, and paying the vendor.		

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Req't #			Requirement Text	Response	Details and Additional Comments

3.14.1	M		The Solution **must (M)** provide the ability to register the details of Purchase Orders and Contracts, both pre-existing and issued in response to purchase requisitions including the following:
			• PO/Contract reference numbers (e.g., contract number)
			• Key dates (e.g., effective date, expiry date)
			• Supplier identifiers (e.g., vendor, vendor site)
			• Contract bid items, with the following associated with each bid item:
			  • Contract bid Item / line Item reference
			  • Unit Type
			  • Quantity of Unit Type
			• Total PO/Contract value		

3.14.2	M		The Solution **must (M)** provide the ability to perform the following function: • Modify, copy and search existing contract items • Generate work quantities • Enter completed work quantities • Link with work orders for chargebacks and activity tracking • Generate progress payment certificate • Generate % holdbacks		
3.14.3	M		The Solution **must (M)** provide the ability for employees / assignees to record actual amounts/quantities for work orders/activities by planned contract and line item using the associated unit measures.		

3.14.4	D		The Solution **should (D)** provide the ability to group requirements by contract for multiple planned work orders and activities and associate them with common release authorization(s) (referred to in the City as a Contract Release Orders, or CROs) and generate the release authorization(s) for a contract based on a configured template, including such details as:
			• CRO Number
			• PO/Contract reference number
			• Date of Release Order
			• Authorization Details (multilple items):
			  • Contract Line Item / Requirement Item reference
			  • Unit Type
			  • Quantity of Unit Type authorized
			• Authorization limit (total cost of release order for the contract not to be exceeded)		

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Req't #		Requirement Text	Response	Details and Additional Comments
3.14.5	D	The Solution **should (D)** provide the ability to collaborate with an external Accounts Payable Provider system and provide / issue Contract Release Orders for corporate POs and Contracts according to the technical requirements.		
3.14.6	D	The Solution **should (D)** provide the ability to actively manage the verification/approval of reported contract utilization, providing the approver the ability to adjust recorded contract utilization amounts/quantities according to configured business rules for the organization,		
3.14.7	D	The Solution **should (D)** provide the ability generate Goods/Service Receipts for verified/approved corporate PO/Contract utilization.		
3.14.8	D	The Solution **should (D)** provide the ability submit Goods/Service Receipt to an Accounts Payable Provider system for all verified/approved corporate PO/Contract utilization according to the Accounts Payable provider interface requirements in the technical requirements.		
3.14.9	D	The Solution **should (D)** provide the ability to track and report overall verified/approved utilization for each registered DPO/PO/Contract at the individual line item level and at the total cost level as dollar amounts and percentages.		
3.15		**Route Management Capabilities** Many City Divisions use route management to plan and schedule their work crews' activities.		
3.15.1	M	The Solution **must (M)** provide the ability to maintain (create, edit and remove) routes for an organization in the organization hierarchy that can be associated with work orders, where a route is an ordered sequence of steps and each step is either an asset or location.		
3.15.2	D	The Solution **should (D)** provide the ability to maintain individual route step locations in a map view.		
3.15.3	D	The Solution **should (D)** provide the ability create new routes or replace existing routes from bulk-loaded / imported route definitions following a pre-defined file format in order to support route cost and performance optimization being performed by specialized software systems external to the Solution.		

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Req't #		Requirement Text	Response	Details and Additional Comments
3.16		**Reporting & Query Capabilities** The City requires a Solution that provides real-time operational reports, analytics and performance measures, spatial reports, and ad-hoc reports. Staff should have access to a report development tool in order to develop additional custom reports and ad-hoc reports as needed. It is expected that the application will include "preconfigured" or standard reports. The City conducts on-screen searches and queries responding to public inquiries, on-going operational activities and maintenance, etc.		
3.16.1	M	The Solution **must (M)** provide rich reporting and flexible report building capabilities for non-technical users for real-time operational reports, analytics and performance measures, spatial reports (e.g. heat maps for visualizing service request and work order frequency and other density patterns), and ad-hoc reports either as an integral offering or through integration with an SAP Business Objects reporting sub-system such as that currently deployed by the City.		
3.16.2	D	The Proponent **should (D)** describe how the Solution supports: • number and type of "preconfigured" or standard reports; • on-screen searches and queries with complex selection criteria, view details, print and/or export results to desktop applications (e.g. MS Excel, PDF, e-mail, etc), and view the query results on a map; and\ • report development tool in order to develop additional custom reports and ad-hoc reports as needed.		

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Req't #			Requirement Text	Response	Details and Additional Comments
3.16.3	D		The Solution **should (D)** support Work Performance Indicator reports such as the following: • Percentage of unplanned work orders • Percentage of planned work orders • Schedule variance (measures variance between released activity schedules for work orders and actual activity completion) • Material variance (measures variance between planned material quantities for work orders and actual material utilization) • Workforce variance (measures variance between planned workforce requirements for work orders and actual workforce utilization) • Percentage of completed (closed) work orders • Percentage of cancelled work orders • Percentage of work order plans created from template work orders • Average time to plan a work order • Average time to schedule a work order • Average time to acknowledge a work order from time of workforce assignment • Average time to complete (close) a work order from point of work requirement identification • Percentage of work requests linked to existing work orders • Percentage of rejected work requests • Work distribution, which measures completed work by assigned work supervisor or organizational unit, district.		
3.16.4	D		The Solution **should (D)** support Work Actual reports such as the following: • Actual workforce usage for work orders • Actual material usage for work orders • Actual contracted service usage for work orders • Actual number of open unplanned work orders at beginning of period • Actual number of unplanned work orders opened within period • Actual number of unplanned work orders closed within period • Actual number of planned open work orders at beginning of period • Actual number of planned work orders opened within period • Actual number of planned work orders closed within period		

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Req't #			Requirement Text	Response	Details and Additional Comments
3.16.5	D		The Solution **should (D)** support Work Forecast / Projection reports such as the following: • Projected workforce usage for work orders within period • Projected material usage for work orders within period • Projected contracted service usage for work orders within period • Projected number of work orders opened within period • Projected number of work orders closed within period • Projected number of work orders open at end of period • Projected number of unplanned work orders opened within period • Projected number of unplanned work orders closed within period • Projected number of unplanned work orders open at end of period • Projected number of planned work orders opened within period • Projected number of planned work orders closed within period • Projected number of planned work orders open at end of period		
3.16.6	D		The Solution **should (D)** support the generation of Work Performance Indicator, Work Actual, Work Forecast/Projection reports according to combinations of different input parameters, such as: • Asset • Asset Failure Classification • Service • Route • Location • Project And, in addition, group report output and sub-totals by different requirements, such as: • Cost Center • Cost Element • Location • Service • Project • Asset • Asset Type • Asset Category/Classification • Asset Group • Organization Unit		
3.16.7	D		The Solution **should (D)** provide the ability to support the generation of asset condition reports including history of asset condition and failure statistics and also support the configuration of specialized asset condition reporting requirements unique to each asset category and custodian user / organization.		

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Req't #		Requirement Text	Response	Details and Additional Comments
3.17		**Usability** The Solution will be used by a wide variety of City users, at different levels within the organization. In particular, the four operating divisions have a large number of outside workers. Successful implementation of Solution is dependent on a simple, intuitive user interface for the City's field staff.		
3.17.1	M	The Proponent **must (M)** demonstrate that the Solution capabilities support a wide variety of users at different levels within the organization, and a simple, intuitive user interface for the City's field staff..		
3.17.2	D	The Proponent **should (D)** describe how the Solution: • accommodates different skill levels including power user, data entry, field staff, management, etc., • supports an intuitive user interface that is consistent, efficient and effective at completing tasks, and • allows users to efficiently review and effectively navigate through large data sets.		
3.17.3	D	The Proponent **should (D)** describe how the Solution provides efficient search/lookup functionality for addresses, work requests, work orders and other entities.		

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Appendix D.4 – Product Technical Requirements Compliance Table

(1) **There are both mandatory and non-mandatory Product Technical Requirements for the WMS project.**

(2) The designations "M" or "D" on the requirements tables are detailed below:

	Legend Description
D	Requirement listed is "Desirable"
M	Requirement listed is "Mandatory"

(3) Proponents **must** respond to the Product Technical Requirements using one (1) of two (2) possible responses:

Letter Code	**Response**
Y	Proponent complies with Requirement
N	Proponent does not comply with Requirement

(4) Responses with blank or "N" responses will be scored as 'Failure' For Mandatory items resulting in disqualification.

(5) Please note that the "Details and Additional Comments" section to the far right of each requirement is provided to allow Proponents space to provide detailed information on how their Solution satisfies the City's requirements. Proponents may use this space to provide a reference to the body of their Proposal where the details and additional comments may be found, or it may be filled in directly.

(6) The descriptions of the various interfaces defined in this Appendix are included in Tables A, B-1 and B2.

Req't #		Requirement Text	Response	Details and Additional Comments
4.1		**General Solution Integration Capabilities** The Solution must integrate interfaces from multiple systems, including other work management systems, customer relationship management system, enterprise resource planning system (Human Resources and Financial System).		
4.1.1	M	The Proponent **must (M)** provide a mechanism to manually and / or automatically bulk transfer upload and download data capability between the Solution and other systems, including SAP.		
4.1.2	D	The Solution **should (D)** provide interfaces for integration by other systems for the following requirements: • Search Work Order • Validate Work Order Reference • Get Work Order Details • Get Work Order Status • Process Work Request • Process Work Order Prioritization Request • Process Work Order Cancellation Request • Get Work Order Activity Assignments for Period • Get Work Order Activity Details • Get Work Order Activity Status • Get Work Request Status		
4.1.3	D	The Solution **should (D)** provide (publish) events for integration by other systems for the following requirements: • Receive Event Notification for the following events: • Work Request Reviewed • Work Order Created • Work Order Prioritization Changed • Work Order Status Changed • Work Order Activity Assignment		
4.1.4	D	The Solution **should (D)** have an open architecture to enable integration with systems in the City, through loosely coupled interfaces.		
4.1.5	D	Where practical, Solution interfaces **should (D)** be exposed through an Enterprise Services Bus, specifically webMethods Integration Server and/or Netweaver Process Integration to leverage prior investment, and to build further capacity for future integration.		

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Req't #		Requirement Text	Response	Details and Additional Comments
4.1.6	D	The Solution interfaces **should (D)** be bi-directional application programming interfaces (APIs) with operations for other systems/components to invoke. This includes direct and queued interactions, i.e. batch and real time. The APIs are to be based on industry interface standards and be supported, stable and proven (used in existing integrations).		
4.1.7	D	The Solution **should (D)** have a data mapping component that will allow data to be exchanged between it and other systems. The data mapping component will have the feature to allow business rules to be set for data mapping for syntax checking and edit validation.		
4.2		**CRM Integration Capabilities** The City's 311Office uses Lagan as its Customer Relationship Management system. Public and many staff service requests are initially logged in the CRM system. The City needs the ability to integrate the Solution to support service request and complaint processing.		
4.2.1	D	The Proponent **should (D)** describe CRM integration capabilities of the proposed Solution that are supported by software tools that provide configurable connectivity between the Solution and CRM to process requests and notifications.		
4.3		**SAP Integration Capabilities** SAP is the City's Enterprise Resource Planning (ERP) system. Modules implemented include Financials (FI/CO), Human Resources (HR), Project Systems (PS), Plant Maintenance (PM), Funds Management (FM) and Materials Management (MM).		
4.3.1	M	The Solution **must (M)** have the ability to integrate with SAP's Human Resources, Finance, including G/L, A/P, A/R, CO, AA, Budget, and Contracts, Public Budget Formulation, Funds Management, and Plant Maintenance modules.		

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Req't #		Requirement Text	Response	Details and Additional Comments
4.3.2	D	The City's preference is for the Solution to integrate with SAP using technologies and approaches that are endorsed by SAP as described in the document "SAP Integration and Certification Center - Integration Guide" [http://www.sdn.sap.com/irj/scn/go/portal/prtroot/docs/library/uuid/68dbab90-0201-0010-2790-a020dc38bfe1?overridelayout=true] The Proponent **should (D)** describe how the proposed approach to SAP integration aligns with these preferred technologies and approaches and any integration testing or certification obtained from the SAP Integration and Certification Center.		
4.3.3	D	The Solution **should (D)** support the ability to integrate with Procurement Management Systems (e.g., SAP) for the following interface: • Process Contract Release Order • Process Goods/Service Receipt		
4.3.4	D	The Solution **should (D)** support the ability to integrate with Employee Information Systems (e.g., SAP HR, SAP-PAY) for the following interface requirements: • Get employee information		
4.3.5	D	The Solution **should (D)** support the following system service integrations with SAP-MM and other material management systems: • Process New Material Request • Process Material Request • Get New Material Request Status • Get Material Availability • Cancel Material Request • Process Warehouse Return Authorization • Get Warehouse Return Status • Cancel New Material Request • Get Material Catalogue • Event: New Material Request Approval Result • Event: Material Request Fulfilled • Event: Material Availability Changed • Event: Warehouse Return Authorization Approval • Event: Warehouse Return Completed		

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Req't #		Requirement Text	Response	Details and Additional Comments
4.3.6	D	The Solution **should (D)** support the ability to integrate with Procurement Management Systems (e.g., SAP Materials Management) for the following interface requirements:: • Process New Purchase Requisition Request • Process Purchase Order or Contract Amendment Request • Get Issued PO or Contract • Event: Purchase Requisition Request Approval Result • Event: Purchase Order or Contract Amendment Approval Result • Event: Purchase Order or Contract Issued		
4.3.7	D	The Proponent **should (D)** describe the overall approach and strategy for integration with SAP as it relates to work order, G/L accounts, cost elements, materials, asset, purchase requisitions, purchase orders, departmental purchase orders, contract release orders employee data and services and SAP Business Warehouse. The Proponent **should (D)** define how the connectivity is supported when changes to connectivity are made by SAP during SAP software upgrades.		
4.4		**Address Repository, Integrated Spatial and GIS Capabilities** The City's GIS technology standard is ESRI ArcGIS with Oracle Spatial. The City uses One Address Repository as a common service interface for the validation and lookup of City of Toronto municipal addresses and intersections. Service based architecture is implemented where ever possible. Web services, both SOAP/WSDL and REST technology, are used to provide geospatial based services. The City's geospatial repository is the only authorized data source for information that are managed by the city, such as but not limited to Address, Centreline, Parcel, administrative areas etc. All applications must use city's authorized data directly instead of using third party data source or by creating duplicated data repository by exporting and importing. Preferable data access to the repository is by ArcGIS server map services. Direct access to databases is discouraged. The City's goal is to fully integrate with GIS to allow more efficient way to communicate critical information, streamline work, and eliminate potential duplication and efforts.		

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Req't #		Requirement Text	Response	Details and Additional Comments
4.4.1	M	The Solution **must (M)** integrate with the One Address Repository as a common system service interface for the validation and lookup of City of Toronto municipal addresses and intersections referenced by configured Locations, created Work Requests, Work Orders and Work Order Activities. The City provides web services for validation of address, in both SOAP and REST technology.		
4.4.2	M	The Solution **must (M)** provide the ability to view and select spatial assets within the context of a map view using multiple selectable map layers and feature sets from the City's Integrated Geospatial Environment (IGE) provided by the Geospatial Competency Centre (GCC) and implemented using ESRI ArcGIS.		
4.4.3	D	The Solution **should (D)** provide the ability to support integration with ESRI ArcGIS such that spatial assets can be mastered in ArcGIS or mastered in the Solution and asset records, asset relationships and key asset attributes can be synchronized between the two systems.		
4.4.4	D	The Proponent **should (D)** describe how the Solution: • provides a seamless integration between work management and GIS to spatially view service requests, work orders, asset location, and other features on a map, • supports validation and lookup of City of Toronto intersections, • spatially enables work management processes for planning maintenance work, creating service requests and work orders, sequence and re-sequence routes and beats, etc., • the basic GIS functionality available within the map viewer, and • the technology and tools to achieve the seamless integration.		
4.5		**Other Integration Capabilities** The Solution needs to integrate interfaces of other City systems and provide interfaces (operations and events) for integration by other City systems.		
4.5.1	M	The Solution **must (M)** have integration capabilities and supported tools and methods which can provide for configurable interface integration, or custom developed interface integration with other systems.		

Req't #		Requirement Text	Response	Details and Additional Comments
4.5.2	D	The Proponent **should (D)** describe the overall approach and strategy for 3rd party integration. The strategy should address the following: • Any pre-built integration that is offered for various products (i.e., SAP Materials Management, Time and Attendance, Resource Booking); • Any additional tools and middleware that is required; • The proposed method of integration to send and receive information (e.g. database level, web services, messaging…) for periodic updates, transactional updates, and real time updates; • Dynamic linkage to external documents created in Document Management System, or objects in a Geographic Information System.		
4.5.3	D	The Proponent **should (D)** describe the functionality available in the Solution to: • manage special process and specific maintenance activities, and • perform specific computations based on readings and capture results related to that activity for the asset.		
4.5.4	D	The Solution **should (D)** support the following system service integrations with an asset management system: • Search Asset • Validate Asset Reference • Get Asset Record • Get Asset Classifications • Record Asset Classification Change • Record Asset Configuration Change • Get Asset Access Requirements • Process Asset Remove From Service Request • Record Asset Utilization • Event: Asset Classification Changed • Event: Remove From Service Request Approval Result		

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Req't #		Requirement Text	Response	Details and Additional Comments
4.5.5	D	The Solution **should (D)** support the ability to integrate with Booking Systems (equipment/tool/vehicle resource availability and booking) for the following interface requirements: • Get Booking Requirements • Get Booking Constraints • Get Booking Availability • Process Booking Request • Cancel Booking • Event: Booking Changed or Cancelled • Event: Booking Created		
4.5.6	D	The Solution **should (D)** support ability to integrate with Permit Management Systems for the following interface requirements: • Search Permit • Validate Permit Reference • Retrieve Permit • Process Permit Application • Process Permit Application amendment/update • Cancel Permit Application • Event: Permit Application Request Approval Result • Event: Permit Issued		
4.5.7	D	The Solution **should (D)** provide the ability to support integration with more than one external Asset Management system according to a common interface such as the identified interface requirements for an Asset Management provider.		
4.6		**Security** The City treats application security is a key component to reducing the business and compliance risk of security breaches and the associated cost impact.		
4.6.1	M	The Proponent **must (M)** demonstrate that the Solution capabilities support a robust security functionality that includes authentication, role-based access controls, and secure data storage and transmission.		
4.6.2	D	The Solution should **(D)** provide the ability to manage user access to data through fine-grained or discretionary access control mechanisms.		

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Req't #		Requirement Text	Response	Details and Additional Comments
4.6.3	D	The Proponent **should (D)** describe how the Solution: • supports an end-to-end identity management functionality including provisioning, importing user account information, authorization functions and security logging; • authorization repository that will provide role based access control. The number and authority of roles will be defined by the City; • enforces security at different levels: the application level, and integration with 3rd party software using single sign-on, network authentication, and secured communication protocols; and • records and tracks changes made within the system, for auditing purposes. Additionally, the Proponent **should (D):** • describe the security model for users accessing data from 3rd party components (e.g. ESRI Desktop), or access to other 3rd party applications such as SAP, • provide the security standards that the Solution complies with, • provide the security protocols the Solution will utilize for communication over the web.		
4.7		**Mobility** Devices outside of the City's firewall cannot have direct access to the City's production systems through the firewall. The City's architecture and security policies require that a server be situated in the DMZ to receive and redirect traffic to and from the City's production systems and utilize a 2 Factor Authentication system for access control (e.g. RSA token or client certificate and LDAP password). Systems that send or receive information to/from the Internet are included in the classification as "production" systems and are subject to the City's security policies and change management processes. The City currently uses the following five methods for mobile device connectivity to access services within the City's network: (1) City Remote Access VPN Client. The City's Remote Access VPN Service based on the F5 ePass service can be used to provide remote access to specific internal services from City deployed/managed devices that meet City policies for mobile device security. Authentication is via RSA token or client certificate plus LDAP password.		

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Req't #		Requirement Text	Response	Details and Additional Comments
		(2) Dedicated WebSphere hosted application. A custom Java application deployed to the City's Internet facing WebSphere Application environment can be used to provide remote devices access to specific internal services. The Java application typically implements a webservice for the client to communicate with and relays requests to the internal service. Authentication is via RSA token (Java Client must implement a RADIUS client) or client certificate plus LDAP password. (3) BlackBerry Enterprise Server (BES). Device and product specific proxy deployed in the DMZ providing remote device access to internal services. Authentication is via BES Mobile Data Service and device passwords. (4) Air-Watch Mobile Access Gateway (MAG). Device and application specific proxy through Application wrapping providing remote device access to internal services. Authentication is via application assigned certificate, MAG service and device passwords. (5) Dedicated application proxy via Carrier VPN. An application specific proxy deployed in the DMZ with access limited to specific carrier networks provides remote devices access to specific internal services. Client devices must be provisioned on City specific Carrier networks (APN). Authentication is via SIM and LDAP password.		
4.7.1	D	The Proponent **should (D)** provide a description of how the Solution would comply with the City's Secure remote access policies and integrate with the City's existing remote access methods.		
4.8		**General Operating Environment** The Solution needs to integrate into the City's existing technology and architecture.		
4.8.1	M	The Solution **must (M)** be able to operate in both single and multiple instances model which allows the City maximized flexibility in satisfying different legislative requirements and business needs of various City Divisions now or in the future.		
4.8.2	D	The Proponent **should (D)** demonstrate, using diagrams, charts, text or any other form of Documentation, that each of the hardware infrastructure are able to integrate with each of the elements of the City's existing I&T infrastructure defined in Appendix D.6 – The City's Existing I&T Infrastructure. If there is no impact to a given element, or if the recommended hardware infrastructures do not apply to a given element, please indicate that.		

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Req't #		Requirement Text	Response	Details and Additional Comments
4.8.3	D	The Proponent **should (D)** provide the following description: • operating system(s) and versions that are supported; • database(s) and version(s) that the product operate on; • other software that is required to be installed on the desktop; • browsers and version(s) that are supported, including browser specifications, including requirements for Java, other languages, and plug-ins; • middleware that the product supports; • service bus that the product supports; • web application server that is used; • the minimum and recommended workstation hardware specifications and client PC configuration; and • the network connectivity, specifications, and network protocols required for the Solution.		
4.8.4	D	The Solution **should (D)** use a 3-tier client server model with a web server, application server and database in separate tiers. Public/Internet interfaces should be distinct and deployed separately from Administrative/Internal interfaces. The Proponent **should (D)** provide the Solution's deployment architecture including but not limited to how administrative functions are separated from end-users, and security zones are employed.		
4.8.5	D	The Solution **should (D)** be able to operate on the City's Websphere Portal Server and Websphere Application Server environments. The Solution should deploy Public/Internet interfaces in the City's Internet Web Application environment. The Solution should deploy Administrative/ Intranet interfaces in the City's Internet Web Application environment. The Proponent **should (D)** provide a description of how the Solution would utilize the City's existing Web Application environments.		

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Req't #		Requirement Text	Response	Details and Additional Comments
4.8.6	D	The Solution that is exposed to the Internet (portal / application server) should be designed with secure coding techniques to withstand common vulnerabilities as defined by industry security associations, e.g. SANS, OWASP. The Proponent **should (D)** provide a description of the security certifications and development policies, standards and practices that govern the development of the Solution.		
4.8.7	D	The Solution **should (D)** be able to interface with the City's Identity Management System(s). Administrative/Intranet interfaces **should (D)** use the City's internal E-Directory / Novell LDAP service to allow existing City employees that have a network and email account to use the existing user name and password to authenticate. The Proponent **should (D)** provide a description of the Solution's integration with external Identity Management Systems, including eDirectory.		
4.9		**Configuration and Custom Enhancements** The City needs the flexibility to meet future needs, and modify configurations and add custom modifications to the Solution.		
4.9.1	D	The Proponent **should (D)** describe the following: • the tools available to extend the functionality of the Solution to meet the City's specific needs, • the approach for custom enhancements, and • the development tools and pre-requisite software required.		

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Req't #		Requirement Text	Response	Details and Additional Comments
4.10		**Implementation Planning** Four of City's divisions, Parks, Forestry & Recreation, Solid Waste Management Services, Transportation Services and Toronto Water, will use the Solution. Deployment of the Solution will be phased over a number of years. Upon full Solution deployment, approximately 4,000 users or 1,000 concurrent users are expected to use the Solution: |	Total Users	Concurrent Users
---	---	---
Parks, Forestry & Recreation	800	200
Solid Waste Management Services	400	100
Transportation Services	1,200	300
Toronto Water	1600	400 | Although the City is not requesting specific pricing information for the RFPQ, to assist the City in budget preparation for the Solution and to better understand and evaluate the Total Cost of Ownership for the Solution, the City is requesting the Proponent provide information on the Solution's software licensing model, hardware requirements, support and sustainment model, and typical Solution implementation.		
4.10.1	D	The Proponent **should (D)** provide a description of the software licensing model (i.e. software license types such as named user, concurrent user and enterprise license), including definitions and descriptions for each license type, for each component of the proposed Solution. Based on the City's users and Solution requirements (Appendices D.3 and D.4), the Proponent **should (D)** provide the Manufacturer Suggested Retail Price for each of the licensing models, including annual software maintenance costs for each component of the proposed Solution.		

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Req't #		Requirement Text	Response	Details and Additional Comments
4.10.2	D	The Proponent **should (D)** provide a description of the range of support services, including definitions and descriptions for each support service type, offered for each component of the proposed Solution. Based on the City's users and Solution requirements (Appendices D.3 and D.4), the Proponent **should (D)** provide the Manufacturer Suggested Retail Price for each of the support services, including annual software support costs for each component of the proposed Solution.		
4.10.3	D	The Solution is expected to operate seven (7) days a week, twenty-four (24) hours per day with an expected 99.5% availability (with the exception of two (2) four (4) hour weekend maintenance windows per week). Approximately 1,000,000 Service Requests and Work Orders are recorded annually for the four divisions. The Proponent **should (D)** provide a hardware infrastructure recommendation and reference architectures, and (1) Specify the quantity and type of hardware as well as any other components that would comprise part of the "infrastructure" required to meet the technical and performance Requirements of this RFPQ. (2) Provide hardware sizing based on assigned resources (CPU, memory and storage) in either a virtualized (VMWare ESX, Solaris Container or Logical Domain, AIX Logical Partition) or a shared hosting environment.		
4.10.4	D	The Proponent **should (D)** provide a description of the high-level sustainment model, which describes the major roles and activities involved in sustaining/maintaining the Solution, including resource estimates and skill sets. This should address application maintenance support from both business and technical (software and hardware) perspectives and include: software management (user access, business rules and configuration), release management, interface management, database management, performance monitoring, backup and recovery management, system availability, capacity planning, security management, front-end client management and end-user support / help desk. The Proponent **should (D)** describe the typical release schedule for bug fixes, minor enhancement and major software upgrades for each component of the proposed Solution.		

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Req't #		Requirement Text	Response	Details and Additional Comments
4.10.5	D	The Proponent **should (D)** provide a description of a typical implementation for a project similar in size, nature and complexity to the Solution being proposed (the "other system"). The Proponent should provide the following information: • estimated length of implementation; • proposed team structure for the implementation of the other system; • high-level implementation plan, which describes the major activities involved in implementing the other system, including time and resource estimates. Plans that are more detailed, comprehensive and complete will be scored higher. The plan should address the Proponent's approach to system implementation issues such as: • overall implementation methodology • installation and configuration of all required software; and • any customizations that are required during implementation.		
4.10.6	D	If the Proponent offers a service implementation partner program that authorizes the resale of its software product and the provision of implementation, consultation, and Support Services, the Proponent **should (D)** describe the qualifications, certifications and / or levels of partnership that are offered.		

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Table A - External System Interface Integration Requirements

Interface Operation / Event	Interface Integration Requirement
Asset Management System Interface (Asset Related)	
Search Asset	Provide a listing of asset records that match the provided search criteria
Validate Asset Reference	Provide a valid/invalid determination response for a received Asset Reference Number, or other identifying asset attributes indicating whether or not the reference identifies an existing recognized asset.
Get Asset Record	Provide the primary (e.g., "tombstone") record for the asset based on the specified Asset Reference Number
Get Asset Classifications	Provide classifications recorded for an asset identified by the specified Asset Reference Number
Record Asset Classification Change	Receive and record a classification change for an asset and record it for the asset along with the provided cross reference to the work order activities that resulted in the asset classification change (details TBD)
Record Asset Configuration Change	Receive and record details of a configuration change (change to a component of an asset) to an asset according to the asset record and apply the details of the configuration change to the asset along with the provided cross reference to the work order activities that resulted in the asset configuration change. (details TBD along with relationship to Record Asset Classification Change operation)
Get Asset Access Requirements	Provide the access or remove from service requirements for the referenced asset (e.g., remove from service request and approval required, In Situ asset access required, No In Situ asset access permitted)
Process Asset Remove From Service Request	Receive and process a remove from service request for an asset and process to determine approval or rejection. Result of approval is provided as published event "Remove From Service Request Approval Result" The response includes a unique request identifier
Record Asset Utilization	Receive and record reported utilization of an asset according to the unit types determined from the asset record and/or asset classifications (e.g., for a vehicle, number of kilometers driven) along with cross reference to the work order activities that incurred the utilization.
Record Asset Utilization	Receive and record reported utilization of an asset according to the unit types determined from the asset record and/or asset classifications (e.g., for a vehicle, number of kilometers driven) along with cross reference to the work order activities that incurred the utilization.
Event: Asset Classification Changed	Event is published when an Asset classification is changed. The event identifies the Asset reference.
Event: Remove From Service Request Approval Result	Event is published when an Asset Remove from Service request is approved or denied (not approved). The event identifies the Asset Remove From Service Request identifier, and Asset reference.
Booking Provider System Interface (Tools/Equipment/Vehicle Resource Availability and Booking)	
Get Booking Requirements	Provide booking requirements for a resource.
Get Booking Constraints	Provide schedule un-availability for a resource
Get Booking Availability	Provide schedule availability for a resource=
Process Booking Request	Process a resource booking request for a specified date or date range.
Cancel Booking	Process a request for booking cancellation
Event: Booking Created	Event is published when a resource booking is changed or cancelled. The event identifies the resource reference with the new booking and the booking request reference.

Interface Operation / Event	Interface Integration Requirement
Event: Booking Changed or Cancelled	Event is published when an resource booking is changed or cancelled. The event identifies the resource reference and booking reference.
Event: Booking Created	Event is published when a resource booking is changed or cancelled. The event identifies the resource reference with the new booking and the booking request reference.
Materials Management System Interface (SAP Materials Management or other Inventory Management System)	
Process New Material Request	Process a request for new managed material not in the providers material catalogue.
Process Material Request	Process a request for managed material supply (delivery/pick-up)
Get New Material Request Status	Provides the requestor the latest expected availability date for a previously submitted New Material Request
Get Material Availability	Provides the requestor the expected availability /shipment/delivery date for a previously submitted Material Request
Cancel Material Request	Processes a cancellation request from a requestor for a previously submitted (not necessarily approved) Material Request
Process Warehouse Return Authorization	Processes a return to warehouse return authorization for material.
Get Warehouse Return Status	Provides the requestor the status of a previously requested material return based on identification of the Warehouse Return Authorization reference number
Cancel New Material Request	Processes a cancellation request from a requestor for a previously submitted (not necessarily approved) New Material Request
Get Material Catalogue	Provides the requestor information from the material catalog based on request/query parameters
Event: New Material Request Approval Results	Event is published when a new material request is approved. The event identifies the new material request identifier and the approval status.
Event: Material Request Fulfilled	Event is published when a material request is fulfilled. The event identifies the material request identifier.
Event: Material Availability Changed	Event is published when the availability of a managed material type is changed. The event identifies the material catalog reference.
Event: Warehouse Return Authorization Approval Result	Event is published when a warehouse return authorization approval is made. The event identifies the return to warehouse authorization request identifier and the approval status.
Event: Warehouse Return Completed	Event is published when an approved warehouse return authorization is completed (fully received). The event identifies the return to warehouse authorization request identifier.
Procurement Management System Interface (SAP Materials Management System)	
Process New Purchase Requisition Request	Process a purchase request
Process Purchase Order or Contract Amendment Request	Process a request for a Purchase Order or Contract Amendment request.
Get Issued PO or Contract	Provides an authorized requestor the details for an issued PO/Contract
Event: Purchase Requisition Request Approval Result	Event is published when Purchase Requisition is approved. The event identifies the Purchase Requisition reference.
Event: Purchase Order or Contract Amendment Approval Result	Event is published when Purchase Order / Contract Amendment is approved. The event identifies the Purchase Order / Contract Amendment reference.
Event: Purchase Order or Contract	Event is published when Purchase Order / Contract is Issued. The event identifies the Purchase Request or Purchase Order / Contract reference and PO/Contract reference.

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Interface Operation / Event	Interface Integration Requirement
Issued	
Event: Purchase Requisition Request Approval Result	Event is published when Purchase Requisition is approved. The event identifies the Purchase Requisition reference.
Time and Attendance Management System Interface (Workforce Scheduling And Attendance Related)	
Process Request for Work or Shift Schedule Change	Process a request for a schedule change by identifying a schedule (known and previously published schedule reference) and specifying the details of the change requirement
Record Attendance (*Report Time* in TAMS Logical Architecture)	Process a record of attendance for a workforce person.
Get Personnel Schedule Availability	Provides an authorized requestor the details of all workforce personnel scheduled shift availability for a future time period and specified organizational unit(s).
Get Reviewed Timesheet/Attendance Record	Provides an authorized requestor the details of an approved (and possibly adjusted) timesheet/attendance record for a specified attendance period and workforce person.
Event: Attendance Approved	Event is published when a recorded attendance is approved for a workforce person. The event identifies the workforce person and the attendance period.
Permit Management System Interface (Permitting Related)	
Search Permit	Searches & lists permits/licenses that match criteria provided, which can be client/account/case/service-request reference.
Validate Permit Reference	Validates that a reference is valid, and that the permit/license is active
Retrieve Permit	Retrieves permit/license document
Process Permit Application	Process a permit application for the issue of a new permit/license, including extension/replacement of existing license(s).
Process Permit Application amendment/update	Process update to an application, such as supporting documents, update on contact information or other part of license/permit application information.
Cancel Permit Application	Cancels the permit/license application.
Event: Permit Application Request Approval Result	Event is published when a permit application request is approved.
Event: Permit Issued	Event is published when a permit is issued.
Employee Information Service Interface (SAP Human Resources System)	
Get employee information	Provide information for all active and inactive employees of an Organization identified within the Organization Hierarchy
Event: Employee Information Changed	Event is published when a employee information is changed for a subscribed employee identifier
Financial Management Interface (SAP Accounts Payable, Financial Management Related)	
Process Contract Release Order	Process a Contract Release Order for vendor/supplier authorization relative to an active PO/Contract.
Process Goods/Service Receipt	Process a goods receipt for a PO/Contract and contract line item.

Table B.1 – Proposed Solution Interface Operations Required for Integration by Other City Systems

The following table describes the interface operations required from the proposed Solution for integration by other City systems:

Interface Operation	Interface Description
Search Work Order	Provides a search interface for providing a list of matching work order references
Validate Work Order Reference	Provides a means of validating a work order identifier as being valid or invalid
Get Work Order Details	Provides details of a Work Order identified in the request with Work Order reference number.
Get Work Order Status	Provides the current status or status history of a Work Order identified in the request with Work Order reference number.
Process Work Request	Accepts and processes the minimum/mandatory details required to review and approve a work request and create a corresponding work order.
Process Work Order Prioritization Request	Process a work order prioritization request a Work Order reference number, requestor identification and requested priority and begins the process of review and approval of the request.
Process Work Order Cancellation Request	Process a work order cancellation request a Work Order reference number, and requestor identification.
Get Work Order Activity Assignments for Period	Provides a listing of Work Order activities for which an identified workforce person is assigned within an identified time period.
Get Work Order Activity Details	Provides details of a Work Order Activity identified by a Work Order Activity reference
Get Work Order Activity Status	Provides the status of a Work Order Activity identified in the request with Work Order Activity reference.
Get Work Request Status	Provides the status of a Work Request.

Table B.2 – Proposed Solution Interface Events Required for Integration by Other City Systems

The following table describes the interface events required to be published by the proposed Solution for integration by other City systems:

Interface Event	Interface Event Description
Work Request Reviewed	Event is published for each Work Request when review determination is made and it is either Accepted or Rejected.
Work Order Created	Event is published for each Work Order created. It identifies the Work Order reference number and corresponding Work Request reference number.
Work Order Prioritization Changed	Event is published when a Work Order priority is changed. It identifies the Work Order reference and Work Order priority.
Work Order Status Changed	Event is published when a Work Order status is changed. It identifies the Work Order reference and Work Order status.
Work Order Activity Assignment	Event is published when a Work Order Activity workforce person assignment is changed or added. It identifies the Work Order reference, Work Order Activity reference, and Workforce person.

Appendix D.5 – Product Implementation Requirements References Compliance Table

(1) **All Product Implementation Requirements References for the WMS project are Mandatory ("M").**

(2) Proponents must provide at two (2) specific client references where the proposed Solution products and their respective business capability / functionality have been implemented and made fully operable using the Product Reference Form for each reference project.

(3) Both references must (M) be:

- related to the implementation of the Solution software product(s) proposed to this RFPQ;
- for client organizations located in North American and be for a client similar in size (>500,000 population or users) to the City;
- for either a municipal government or a utility; and
- fully completed (live) installations.

(4) Proponents must check off which business capability / functionality are relevant to each reference project.

(5) Proponents may use client references from Solution Implementation Partners that have implemented the Proponent's proposed Solution.

(6) Two reference projects must be cited for each business capability / functionality. The same reference project can be cited for multiple business capability / functionality.

(7) Proponents who do not cite two reference projects for each business capability / functionality will have their Proposals declared Informal and will NOT be considered for further evaluation.

(8) A separate Product Reference Table is to be completed for each reference project

(9) Reference checks will be performed for Proponents who make the initial shortlist after Stage 2A Response evaluations are complete. Proponents **must** not use a City of Toronto reference.

Product Reference Table

PROPONENT NAME	
Client Name	
Contact Name	
Contact Title	
Telephone Number	
Business Address	
Email Address	
Client Type	
Description of the Client's Business	
Size of Business	
Assets Managed by the Implemented Solution	
Implementation Timeframe (stated in months)	
Name of the Implementation Services Provider	
Total Contract Value ($)	
Contract Start Date	
Contract Completion Date	

Product Capability/ Functionality		Applicable to the Client Project (Yes/No)	Description of How the Capability / Functionality was Provided
1. Work Management Solution Enterprise Capabilities (Refer to Appendix D.3 – Product Functional Requirements 3.1).	M		
2. Work Management Asset Maintenance Management Capabilities (Refer to Appendix D.3 – Product Functional Requirements 3.2 and 3.3).	M		
3. Work Management Service Delivery Operations Capabilities (Refer to Appendix D.3 – Product Functional Requirements 3,2 and 3.3).	M		
4. Work Management Planning and Scheduling Capabilities (Refer to Appendix D.3 – Product Functional Requirements 3.4).	M		
5. Asset Registry Capabilities[1] and links to an external asset registry (Refer to Appendix D.3 – Product Functional Requirements 3.5 and Appendix D.4 – Product Technical Requirements 4.5).	M		
6. Labour Management Capabilities and can integrate with SAP Human Resources (Refer to Appendix D.3 – Product Functional Requirements 3.6 and Appendix D.4 – Product Technical Requirements 4.3).	M		

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PROPONENT NAME			
Client Name			
7. Material Management Capabilities[1] and can integrate with SAP Material Management. (Refer to Appendix D.3 – Product Functional Requirements 3.7 and Appendix D.4 – Product Technical Requirements 4.3).	M		
8. Tools / Equipment Management Capabilities[1] (Refer to Appendix D.3 – Product Functional Requirements 3.8 and Appendix D.4 – Product Technical Requirements 4.5).	M		
9. Vehicle Management Capabilities[1] (Refer to Appendix D.3 – Product Functional Requirements 3.9 and Appendix D.4 – Product Technical Requirements 4.5).	M		
10. Address Repository, Integrated Spatial and GIS Capabilities[1] (Refer to Appendix D.3 – Product Functional Requirements 3.10 and Appendix D.4 – Product Technical Requirements 4.4).	M		
11. Mobile Capabilities[1] (Refer to Appendix D.3 – Product Functional Requirements 3.11 and Appendix D.4 – Product Technical Requirements 4.7).	M		
12. Contact Administration[1] and CRM Integration Capabilities and integration capabilities with the City's Customer Relationship Management system - Lagan (Refer to Appendix D.3 – Product Functional Requirements 3.3 and Appendix D.4 – Product Technical Requirements 4.2).	M		
13. SAP Integration Capabilities that provides configurable connectivity with SAP's Human Resources, Finance (including General Ledge, Accounts Payable, and Accounts Receivable), Public Budget Formulation and Materials Management modules (Refer to Appendix D.4 – Product Technical Requirements 4.3).	M		
14. Other Integration Capabilities which provide configurable connectivity to 3rd party applications (Refer to Appendix D.4 – Product Technical Requirements 4.1 and 4.5).	M		
15. Permit Management Capabilities[1] (Refer to Appendix D.3 – Product Functional Requirements 3.12).	M		
16. Contract Administration Capabilities[1] (Refer to Appendix D.3 – Product Functional Requirements 3.14).	M		
17. Route Management Capabilities[1] (Refer to Appendix D.3 – Product Functional Requirements 3.15).	M		

[1]   The Proponent may choose to use functionality available within the core product, another product offered by the Proponent or a 3rd party certified and pre-integrated product.

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Repeat this table as required.

Appendix D.6 - City of Toronto I&T Infrastructure

(1) This document describes existing and planned Corporate I&T infrastructure and strategic products.

(2) All new approaches and options provided and proposed should leverage the existing infrastructure in place as well as planned upgrades and migrations. In addition all applications should integrate with existing and planned management services.

(3) **Data Centre Services**

(a) Corporate Information and Technology provides Data Centre facilities and services supporting I&T infrastructure for the I&T division and other City divisions. I&T occupies three Data Centres geographically within the City of Toronto, two of which are owned by the City (Don Mills, Tiffield Road) and the third (Laird Drive) is leased. All three facilities have redundant power, cooling, fire suppression, leak detection and the necessary security in place. This creates a highly available facility with an uptime of 99.9% to house critical network, server and storage infrastructure. These sites have a combined electrical capacity of 380 KVA and 6380 square footage.

(b) All moves, adds and changes that impact the Data Centre are processed through the Data Centre Management group. This internal group sets the standards for the Data Centres and strives to meet the TIA-942 standard. Products that the City has standardized on are Wrightline racks for servers, Cabletalk racks for network equipment and rack mountable intelligent APC power distribution units.

(4) **Network Infrastructure**

(a) CityNet is a single communication utility providing network services for IP based systems. CityNet comprises over 600 network sites, with the core composed around 7 major Civic Centres, the three Corporate Data Centres and 4330 Dufferin (Fire/EMS office). The Data Centres are connected via a 20 Gbps fibre ring. The other major sites are connected via high speed 100 Mbps/1 Gbps/20 Gbps Fast Ethernet/Optical Ethernet Wide Area Network Service.

(b) Remote sites are connected via HDSL or 10/100/1000 Mbps WAN fibre service. Most WAN connectivity terminates at the communications hubs at the Don Mills and Tiffield Road data centres.

(c) Extranet connections are in place connecting the CityNet to various external organizations (The Province of Ontario, The TTC, Toronto Police, etc.).

(d) Internet access is provisioned by our Primary ISP via a dedicated 100 Mbps reserved connection. Current average (monthly) bandwidth utilization is about 90-100 Mbps. Business day usage averages over 90 Mbps. Additional outbound Internet service is handled by a secondary 150 Mbps ISP connection.

(e) Standards based Internet services are also provisioned to support the City's Internet presence.
- SMTP mail gateways and Ant-Virus and Anti-Spam Scanning
- Domain Name Services (external).
- Domain Name Services (internal).
- Internal NTP Time Services.
- Bluecoat Proxy Caching System.
- Tumbleweed (SSH, FTPS based) File Transfer System.
- Accellion (HTTPS based) File Transfer System.

(f) Internet Services are configured to separate Internal and External networks, with no provision on Internal clients for Internet DNS resolution or direct Internet connectivity. All client applications must be proxy aware to access Internet based services.

Internet Services

(5) Security Services

(a) First level protection is provided by a stateful packet filtering firewalls. Security Configurations restrict traffic only to hosts in the DMZ (demilitarized zone) and the firewall. Other than SMTP, DNS, NTP, HTTP, all traffic is limited to outbound only.

(b) Second level protection is provided by another stateful packet filtering firewall. All standard protocols (HTTP, HTTPS, SMTP, DNS, NTP and SSH) are supported along with custom proxies for non-standard protocols.

(c) All internal access to servers in the protected networks are permitted only to authorized personnel by a secure encrypted tunnel via SSH (secure shell).

(6) Platform Infrastructure

(a) There are approximately 650 corporate mid-range to high-end servers housed in the City's three (Don Mills, Laird Drive, Tiffield Road) Data Centres. The Data Centre facilities all have redundant power, heating / ventilation / air conditioning (HVAC), and security infrastructure.

(7)   Strategic Network Operating System (NOS)

Network Operating System	NOS version	Hardware
SUN Solaris	V10 or above	SUN Microsystems
IBM AIX	V6.1 or above	IBM pSeries
VMware	ESXi 5.0 or above	Intel-based. Dell (i.e. R720)
Windows 2008	R2 SP1 or above	VMware or Intel-based. Dell
SLES (Linux)	V10.3 or above	VMware or Intel-based. Dell
Oracle Linux	V 5.5 or above	Vmware or Intel-based. Dell

All other NOS are considered as non-strategic platform.

(8)   Intel Server Consolidation/Virtualization

(a)   The City has adopted a preference for "virtual first" with respect to any new Intel based services being introduced. The only exceptions should be where a virtual server is technically impossible. The City has chosen VMware vSphere ESXi v5.0 (or above) as its Intel Server virtualization platform running on Dell R720 (or above) at all three Data Centres. Vendors responding to RFP's/RFQ's should be prepared to support their submissions on a virtual platform, or be able to provide technical justification of why the proposed application(s) can NOT run on a virtual platform.

(9)   Unix Server Consolidation/Virtualization

(a)   The Unix server environment similarly adopts a primary virtualization strategy or large scale consolidation of similar workloads

(b)   Oracle Solaris is primarily used in consolidating and virtualizing our IBM Websphere workloads. These Solaris servers (operating system instances) are provided on large SPARC hardware platforms (ie T4's, M5000's) as zones and/or containers.

(c)   IBM AIX is primarily used in virtualizing our Oracle RDBMS workloads. These AIX server (operating system instances) requirements are provisioned by hosting them on large p-Series RISC hardware platforms (ie p770's) as LPAR's and/or MPAR's. Large scale consolidated Oracle workloads (including Oracle RAC) are deployed on non-virtualized Oracle SPARC platforms.

(d)   Linux requirements are hosted on the VMWare environment indicated above.

(e)   In exceptional cases where virtualization is not practical (ie software licensing issues) then stand alone hardware is used.

(10)   Endpoint Protection

(a)   The City uses Symantec Endpoint Protection (Version 11.6) on Windows Servers.

(11)   Storage Services

(a)   The City of Toronto has implemented Storage Area Networks (SAN) providing the levels of performance and availability necessary for Disk and Tape Storage devices to facilitate the mission-critical business operations. The SAN connects servers to the storage devices via multiple Fibre Channel Brocade Silkworm 48000 switches, configured as independent fabric SANs for High Availability.

(b) The Enterprise Storage infrastructure is comprised of over 700TB of disk storage at the three Data Centres, provisioned from the following storage systems:
- HP XP 12000 & XP 10000
- HP EVA 8100 & EVA 8400
- NetApp FAS3140 & FAS3240
- Centera

(12) Storage and High Availability Management

(a) It is a prerequisite for the City's High Availability servers to be attached to disk storage over the SAN utilizing dual Fiber-channel Host Bus Adapters (two physical cards, not two ports on one card) for SAN Path Failover and load balancing.

(b) The standard configuration for dual redundant paths has been implemented on Windows, SLES 10, Sun Solaris and IBM AIX platforms. For path failover to function, the High Availability servers require multipathing software. Multipath failover applications vary by platform in terms of implementation.

(13) Enterprise Backup

(a) All platforms are backed up utilizing the Symantec NetBackup (6.x) software. The software is a Client/Server application that backs up data over a private IP network dedicated to high-speed backups. Systems not connected to the private backup network utilize the City's Internal 'public' IP network. The backup window is weekdays from 18:00-7:00 and all weekend (Friday 18:00 – Monday 7:00).

(b) The Symantec NetBackup solution consists of one NetBackup Master server, and six NetBackup media servers that utilize 44 tape drive devices that reside within the following STK tape libraries, distributed at the two Data Centre locations:
- SL 500 – Tiffield Road
- SL8500 controlled by ACSLS (Automated Cartridge System Library Software) – 703 Don Mills

(c) The majority of the drives are LTO3 with a throughput of 324 GB/hr and a capacity of 400 GB uncompressed/800 GB compressed data.

(d) All NetBackup servers (Master, Media, ACSLS & BMR) reside on Sun Solaris platforms. The NetBackup client software is installed on all production, and most non-production, server platforms. The primary Master NetBackup server provides backup and recovery services to the majority of the systems at the three Data Centres, as well as a number of geographically remote servers. The primary NetBackup Master's catalog is replicated to DR site, which serves to expedite the recovery process.

(e) Symantec Bare Metal Restore (BMR) server is also part of Backup/Recovery infrastructure.

(14) Enterprise Management

(a) The City of Toronto utilizes monitoring, measurement, tracking and reporting technologies from Hewlett Packard. The product suite called "Business Technology Optimization" (BTO) includes four main technology suite components: Business Service Management, IT Service Management, IT Asset Management, and Configuration Management Database. The City has implemented version 9.x

(b) Business Service Management (BSM) includes agent based, agentless, and integration systems for monitoring of Business Services. It does so from the infrastructure level through to potential business impact to consolidate application, system, network, database and business transaction monitoring in order to assist in identifying reactive and proactive measures to help ensure health, performance and availability. Operational views of the business service are used to identify elements which are not operating properly and ensure necessary service staff can be alerted to provide resolution.

(c) Production OS platforms are managed using this technology to set thresholds for platform monitoring schemas to assist in early detection of potential problems to improve availability and enable proactive management

(d) All proposed Business Solutions should integrate into this technology either by using agentless tools to monitor them, or provide integration which interfaces in to the HP BSM application suite.

(e) IT Service Management is used for the automation of creation and logging of Incident Management, Problem Management, and Change Management tickets, as well as other ITIL/ITSM best practices processes.

(f) IT Asset Management is used to discover IP based network objects as assets, track their procurement and life cycle, attach contracts associated with them including maintenance and support agreements, and provide regular auditable reports.

(g) Configuration Management Database (provided by the HP Universal Configuration Management Database – uCMDB) provides a central repository of information from each of these application components through integration and federation of data.

(h) All proposed applications should integrate with the HP BTO suite. This will include, but is not limited, to use of necessary protocols to discover and collect information including SNMP, WMI, SSH, SSL.

(15) Operations Services

(a) The Operations Support group administers the backup/restore tools, optimizes the environment, and is responsible for ensuring backups are completed on a daily basis. Backup tapes are sent to a secure and temperature controlled offsite facility on a daily basis. Tape Inventory is tracked using SecureSync.

(b) Monitoring of servers and storage that are housed within the three Data Centres is done internally by a manned Control Room that operates 24x7x365. This group is also responsible for paging, problem escalation, restores and batch processing. After hours Service Desk requests are also processed by this team.

(16) Directory Services

(a) The City of Toronto has implemented a Directory Service for the automated Identity Management of computer user accounts. The Directory Service is based on Novell NDS eDirectory 8.8.5.3, Novell Identity Manager 3.5 & 3.61 DirXML technologies running on SUSE Linux Enterprise Server (SLES) 10 .

(b) The directory services environment consists of two separate directory Services.

(c) An external directory service (TOR-TREE) for authenticating outside clients such as citizens, businesses and other levels of government. The external directory service is used for the authentication to the City of Toronto Internet Web site to access secure, personalized Web services.

(d) An internal directory service (COT-IDENT-TREE) is used to manage approximately 27,000 computer accounts for all staff and non-staff that require access to City of Toronto computing resources.

(e) The COT-IDENT-TREE is a meta-directory hub and uses Novell Identity Manager connectors to provide complete automated management of associated userids in other connected computer environments. The directory service currently connects to and manages users in:
- COT_TREE – the NDS file and print infrastructure
- Novell GroupWise   - the corporate email system
- AD – the Active Directory environment which consists of 6 separate domains
- Oracle Internet Directory / TCHIS
- Solaris, Linux, and AIX systems

(f) The directory is updated bi-weekly with current SAP data using a flat file import into the directory. All modifications to user accounts are automatically synchronized to all connected systems. The SAP HR system is used as the authoritative source of organizational and employment status information for City employees and this information is used to create / disable / modify employee userids in COT-IDENT-TREE.

(g) The internal directory service is responsible for enforcing consistent user policies for 27,000 identities across multiple environments. Policies such as the minimum password length and the password expiration interval are set centrally in COT-IDENT-TREE and automatically propagated out to the other connected environments. Additionally passwords are synchronized and disabling a user account in the COT-IDENT-TREE will immediately disable their access in connected systems.

(h) The directory also provides a high availability LDAP v3 service for the LDAP authentication of internal web applications.

(i) Any new corporate applications should provide a connection to the directory service for user authentication and account management.

(17) Active Directory

(a) The City of Toronto's enterprise Active Directory is mainly used for user management, authentication, authorization and computer management for Microsoft based computers. It is a single forest directory containing an empty root domain and 6 child domains. Each domain represents a service cluster. There are a total of 26 domain controllers in various locations across the City's network. All domain controllers are running Windows 2008 R2.

(b) Provisioning of accounts and password management is managed in the City's Meta Directory (eDirectory) and synchronized with Active Directory. Group membership and AD specific attributes and configurations are managed within AD and not synchronized with eDirectory.

(18) File Services

(a) The City provisions end user networked file services using Novell SLES/OES2. Servers are organized into two separate eDirectory trees for organization purposes, one for general city usage (COT_TREE) and one for council (CNL_TREE). Replication is enabled with the City's eDirectory Meta Directory. All primary systems are deployed in 3 or 4 node clusters to provide high availability of hosted resources, mainly the network accessible volumes.

(b) COT_TREE consists of 50 TB of data in one 4-node cluster, six 3-node clusters and 17 standalone systems (36 systems total). In total, 100 volumes are hosted in clusters, and 62 are locally mounted on standalone servers.

(c) CNL_TREE consists of 10 TB of data in one 4-node cluster and one standalone system. Four NSS volumes are hosted on the cluster.

(19) 3rd party software

    (a)   The 3rd party software used on the file system servers are McAfee Anti-virus, Symantec Netbackup, Bluelance LT Auditor, CA Unicenter/HP BSM.

(20) Desktops and login scripts

    (a)   Users login using Windows XP desktops across the city to access their files on the network drives. Each desktop has the Novell client installed and integrates login authentication with eDirectory credentials. The Novell client utilizes the NCP protocol to communicate with Netware servers and NSS volumes for file transactions. Upon login, the Novell client has a login script that automatically maps certain drive letters (G, H, I, J, K, L) to specified NSS volumes depending on the user's context within eDirectory. This behavior is the same across both COT TREE and CNL TREE.

(21) Desktop Environment

    (a)   The City's minimum installed configuration for a desktop Computer is:
2.33 Ghz Core 2 Duo Processor
1 GB memory
80 GB Disk
Integrated Video Controller
Integrated 10/100/1000 network Interface
17" LCD monitor

    (b)   The City's minimum standard configuration for a mobile Computer is:
2.5 GHz mobile Processor
2 GB memory
160 GB Disk
Integrated Video Controller
Integrated 10/100/1000 network Interface
integrated 15.0" display

    (c)   Mobile and desktop computers are replaced on a 5 & 4 year lifecycle respectively, with current hardware specifications. In 2013 new desktop deployments utilize Intel i5 processors, 4 GB memory, 250 GB disk, 19" LCD monitors. New mobile deployments are configured with Intel i5 processors, 4 GB memory, 180 GB disk.

    (d)   The City's is currently migrating its desktop operating system from Windows XP Professional SP3 to Windows 7. All proposed desktop software must be Windows 7 compatible.

    (e)   The standard productivity environment includes: Novell Network Client; Symantec Anti-Virus; CA Unicenter agents; Microsoft Office, Project and Visio 2007, Microsoft Internet Explorer 8.0; Windows Media Player; Novell GroupWise messaging; Adobe Flash Player; Acrobat Reader and Writer 9; Sun Java; Microsoft .NET Framework.

(22) Enterprise Desktop Management

    (a)   The City of Toronto has implemented Computer Associates' IT Client Manager R12.5 Desktop Management Suite used in the management of desktop and mobile computers. The software suite is running on Windows 2008 R2 servers and contains the following main components:

    (b)   Software Delivery – Centralized management of installing, reinstalling, configuring, and uninstalling software

    (c)   Remote Control – Access, control, manage and modify remote servers, desktops and mobile systems.

(d) The City uses Symantec Endpoint Protection (Version 11.6) on Mac and Windows Computers to protect against virus and malware attacks.

(e) The City is currently implementing Symantec Endpoint Encryption and Symantec Endpoint Protection (Device and Application control) on all mobile computers.

(23) Enterprise Printing

(f) The City of Toronto has over 2,500 Network and local printers. Most network printers can be reached via normal Windows driver, Novell NDPS or line printer daemon (lpd) printer management protocol. The bulk of these printers will support PCL5 or Postscript Level 2 output print protocols. The City is consolidating some workgroup printers into Multi-Function Devices.

(g) High Volume and Specialty Media printing is supported at Civic Centre Copy Centres supported by the Clerks Division Information Production units. City Hall supports three Oce Digital Presses, Metro Hall two, and North York, Scarborough and Etobicoke have one unit each. MICR cheque printing is supported by two HP/Troy MICR 4050 printers.

(h) Specialty media, high volume, and SAP originated printing is managed through an InfoPrint Manager [IPM] version 4.3 system, running under AIX 6.1 server technology. This system directly manages and formats print to about 800 network printers, MICR printers, and to the Oce Digital network in the Copy Centres controlled by Information Production. IPM also provides the Output Management System [OMS] interface to SAP, as well as XMI-enable call back daemons for managing SAP printing sessions in real-time.

(i) IPM can take traffic from other City workstation and server systems via a number of methods:
- lpd protocol [including mainframe CA-Spool/VPS traffic]
- pdpr command line software for Windows, and UNIX [AIX, Solaris and Linux]
- The IPSelect print port management service for Windows
- A City developed Java-class interface for Java programmers

(j) Print document formatting under IPM is handled by our PDFlib [Version 8.0] xml2PDF transform engine, combined with our PDF format wrapper technology. Application data [ASCII, PCLx, or other datastreams] is converted into XML for dynamic composing to PDF version 1.4 and above, using PDF templates and font embedding libraries.

(k) The PDF format wrapper, PDFlib facility, HTMLDoc, GraphicsMagick, and Ghostscript document transform and formatting engines are all available to other City systems, applications and servers via SSH2 compatible gateways.

(24) Strategic Products

(25) RDBMS

(l) The City's RDBMS platform for Business Critical and 24/7 applications is Oracle Enterprise and Standard Server editions (Version 11g Release 2) on a supported Unix based OS. The strategic high availability application for Oracle databases is Oracle Real Application Cluster (RAC). In total, the City has 350 Database instances deployed on 60 servers.

(m) Microsoft SQL Server (2008 or above) is also supported for select business applications where vendor support is not available for the Oracle RDBMS platform. There are approximately 70 Corporately managed SQL Server Databases on both physical and VMWare environments, including 9 High Availability database clusters.

(n) All other RDBMS products are considered to be non-strategic platforms.

(26) Messaging

(a) The City currently uses Novell GroupWise 8 collaboration software for email, calendaring, task management and group scheduling for over 22,000 users and 500 resource accounts. The environment is comprised of 28 post offices and 4 gateways running on 36 SUSE Linux Enterprise Server (SLES) 10 servers in 17 clusters with a total of 18 TB of storage. For email archiving and ediscovery the City uses SilverDane Archive Enterprise Edition for GroupWise.

(b) Every month 7.5 million internal messages are delivered, 2.5 million messages are sent to the Internet and 1.5 million received.

(c) The City plans to upgrade post offices and core infrastructure to GroupWise 2012 by Q42013.

(d) The City is planning to migrate from GroupWise to Microsoft Exchange 2013 including In-Place Archiving in Q32014 to be completed by Q42015.

(27) Fax

(a) The City employs XMedius Fax v6.5.5 VOip fax server application for centralized fax services. The system encompasses a primary and backup fax server and a dedicated rasterizer to manage 150 direct inbound numbers and one thousand users utilizing the desktop, web and SMTP clients.

(28) Thin Client

(a) Citrix XenApp 6 provides desktop and business applications to remote access and Extranet users. A total of 20 servers host 30 core enterprise applications for 2300 users.

(29) Report and Document Presentation

(a) The City utilizes ViewDirect for Networks v4.2 for document management and archiving of documents from legacy systems Client software. The environment contains 50 document repositories containing 500 GB of documents for 500 clients.

(b) ViewDirect will be upgraded to version 4.4 in Q4 2012.

(c) DocumentDirect for the Internet is used for client presentation.

(30) Web Application Environment

(a) The City supports internally developed and commercially supported J2EE applications in two independent and segregated web application environments for internal Intranet and public Internet use respectively. The environments are based on IBM WebSphere Application Server Network Deployment version 8.0) on Solaris 10 with applications deployed in 2-node clusters. Separate systems host IBM HTTP Server (version 8) instances on Solaris 10 configured with WebSphere plugins for forwarding of requests to application clusters.

(b) WebSphere Portal (version 7), Open Text Web Experience Management (Vignette Content Management) version 8.1, Lotus Domino (version 8.5.2) and Google Search Appliance (version 6.108) are also deployed into these environments.

(c) All primary Web based services are deployed minimally in 2-node configurations for High Availability and clustered via F5 BigIP Local Traffic Managers.
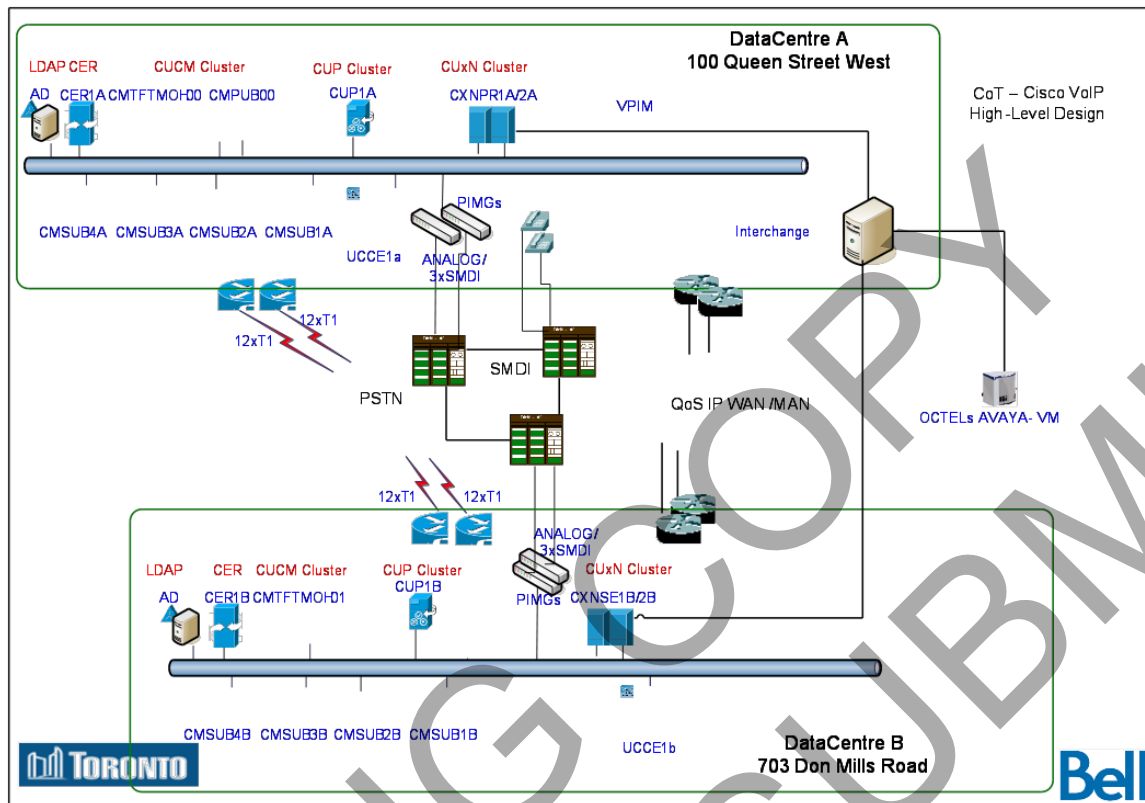
City of Toronto
ESD Web Infrastructure – WebSphere
Production
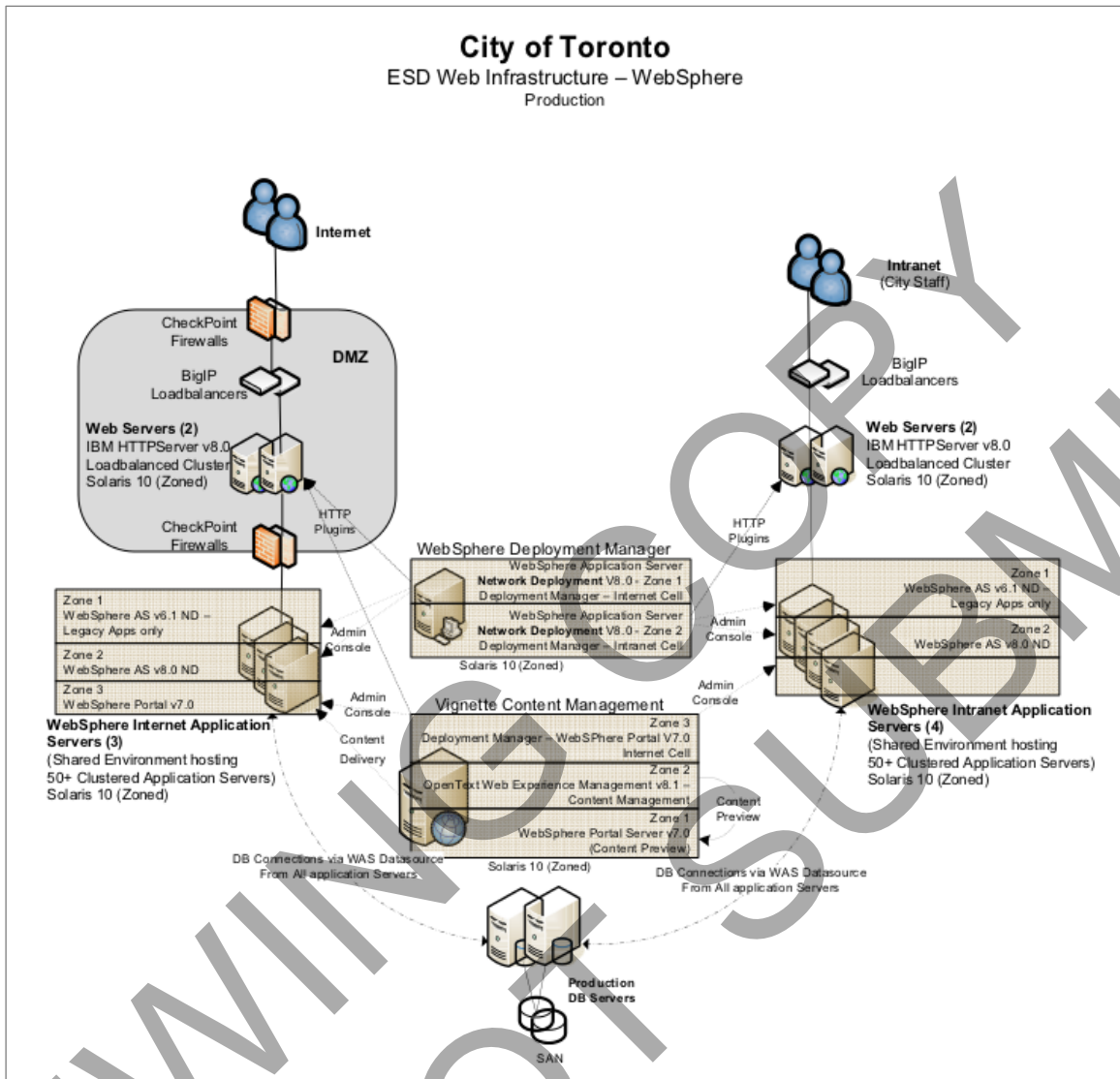
(31) Enterprise Application Integration Platform

(a) The City uses Software AG WebMethods Broker (Version 8.2) and Integration Server (Version 8.2) as its common Enterprise Application Integration (EAI) platform. MyWebMethodsServer (Version 8.2) is used for administration and monitoring.

(32) Telecom Platform

(a) The City of Toronto uses a hybrid of Centrex and Unified Communications/Voice over Internet Protocol (UC/VoIP) solution for 22,000+ subscribers across 1,400+ locations.

(a)   The heart of any IP telephony network is the Call Control or Call Processing engine. For the City of Toronto network, call processing will be performed by a cluster of eleven (11) Cisco Communication Manager Servers located at two DataCentres, this will provide a high availability service through call processing servers failover, redundant links between the two DataCentres, and Geographical diversity in case either of the two sites go off-line.

(b)   Four Cisco voice gateways 2951 will enable Cisco Unified Communications Manager (Unified CM) to communicate with non-IP telecommunications devices.

(c)   Cisco Emergency Responder will be deployed as part of the 911 emergency call system.

(d)   Analog devices such as fax/modems or existing paging system, will connect to either analog voice gateway(s) such as VG202, VG204,VG224, or ATA187(Analog Terminal Adapter) depending on density required per site and specific location.

(e)   The IP Phone Directory service will use the CUCM embedded database. CUCM will integrate with the City of Toronto Corporate Directory service via Active Directory. The embedded database for end-user information will be replicated from Active Directory. With the authentication to Active Directory integrated, the CUCM end-user web access authentication will look against AD database. However the end-user PIN used on the Phone set will still use the CUCM embedded local database.

(f)   The voicemail processing system (which supports all of the City's users; both UC and Centrex), consists of four Cisco Unity Connection 8.0 servers into two DataCentres with two clusters CUxN system connected via Intrasite-network (also called digital-network in Unity Connection 7.x).

(g) In addition to the integration of Unity Connection with the CUCM cluster via SCCP protocol, Integrated Messaging via IMAP into the existing GroupWise environment.

(h) The Cisco UCCE (Unified Contact Centre Enterprise) system provides contact center features in conjunction with Unified CUCM and the IP-IVR platform. Features provided by the UCCE software include **agent state management, agent selection, call routing and queue control, IVR control and contact center reporting.**

(i) The UCCE system will host 1000 agents and will have 300 IVR ports total.

(33) Wireless Platform

(a) The City of Toronto maintains service agreements with multiple wireless telecommunications carriers, with Telus Mobility as the primary/preferred vendor. However, Rogers Wireless and Bell Mobility are authorized alternate vendors if required due to technical requirement of a proposed Solution. These contracts provide preferential service and pricing agreements that recognize the City's size and business requirements.

(34) Existing Mobile Infrastructure:

(a) BlackBerry Enterprise Server for GroupWise 4.1.7 MR2,

(b) BlackBerry Enterprise Server for GroupWise 5.0.1 MR6

(c) Novell Datasync/Mobility Pack for Activesync service 1.2.5 (package 299)

(d) Air-Watch Mobile Device Management (6.4)

(e) 3900 BlackBerry handheld devices, multi-server, on-premise distributed BlackBerry

(f) Server environment and dedicated clustered Microsoft SQL 2008 Enterprise edition

(g) Currently in pilot and scaled to support eventual 5000+ devices, iOS and Android devices, multi-server on-premise distributed Air-Watch Server environment and dedicated Microsoft SQL 2008 Standard edition in Virtual environment

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