



**THE CITY OF WINNIPEG**

# **REQUEST FOR PROPOSAL**

**RFP NO. 84-2021**

**WATER AND WASTE DEPARTMENT BUSINESS INTELLIGENCE AND ANALYTICS  
– PHASE 2**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

- B1.1 WATER AND WASTE DEPARTMENT BUSINESS INTELLIGENCE AND ANALYTICS – PHASE 2

### **B2. SUBMISSION DEADLINE**

- B2.1 The Submission Deadline is 12:00 noon Winnipeg time, January 14, 2022.
- B2.2 The Contract Administrator or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

### **B3. PROPONENTS' CONFERENCE**

- B3.1 The Contract Administrator will hold a Proponents' conference over Microsoft Teams at 10:30 A.M. Winnipeg time on November 25, 2021.

- B3.2 Attendance is optional but is recommended.

Proponents must register for the Proponents Conference by providing a valid email address to ekwan@winnipeg.ca to obtain the TEAMS meeting invitation not later than 4 P.M. on Monday, November 22, 2021.

- B3.3 The Proponent is advised that, at the Proponents' conference, a walkthrough of the RFP will be conducted to discuss compliance of RFP responses. The Proponent's conference will not provide clarification or interpretation of the specifications beyond what has already been stated in this RFP.
- B3.4 The Proponent shall not be entitled to rely on any information or interpretation received at the Proponents' conference unless that information or interpretation is provided by the Contract Administrator in writing.

### **B4. ENQUIRIES**

- B4.1 All enquiries shall be directed to the Contract Administrator identified in D5.1.
- B4.2 If the Proponent finds errors, discrepancies or omissions in the Request for Proposal, or is unsure of the meaning or intent of any provision therein, the Proponent shall promptly notify the Contract Administrator of the error, discrepancy or omission at least five (5) Business Days prior to the Submission Deadline.
- B4.3 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Request for Proposal will be provided by the Contract Administrator to all Proponents by issuing an addendum.
- B4.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Request for Proposal will be provided by the Contract Administrator only to the Proponent who made the enquiry.
- B4.5 All correspondence or contact by Proponents with the City in respect of this RFP must be directly and only with the Contract Administrator. Failure to restrict correspondence and contact to the Contract Administrator may result in the rejection of the Proponents Proposal Submission.
- B4.6 The Proponent shall not be entitled to rely on any response or interpretation received pursuant to B4 unless that response or interpretation is provided by the Contract Administrator in writing.
- B4.7 Any enquiries concerning submitting through MERX shall be addressed to:

MERX Customer Support  
Phone: 1-800-964-6379  
Email: merx@merx.com

**B5. CONFIDENTIALITY**

- B5.1 Information provided to a Proponent by the City or acquired by a Proponent by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the Contract Administrator. The use and disclosure of the confidential information shall not apply to information which:
- (a) was known to the Proponent before receipt hereof; or
  - (b) becomes publicly known other than through the Proponent; or
  - (c) is disclosed pursuant to the requirements of a governmental authority or judicial order.
- B5.2 The Proponent shall not make any statement of fact or opinion regarding any aspect of the Request for Proposal to the media or any member of the public without the prior written authorization of the Contract Administrator.

**B6. ADDENDA**

- B6.1 The Contract Administrator may, at any time prior to the Submission Deadline, issue addenda correcting errors, discrepancies or omissions in the Request for Proposal, or clarifying the meaning or intent of any provision therein.
- B6.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.
- B6.3 Addenda will be available on the MERX website at [www.merx.com](http://www.merx.com).
- B6.4 The Proponent is responsible for ensuring that he/she has received all addenda and is advised to check the MERX website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B6.5 The Proponent shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid/Proposal. Failure to acknowledge receipt of an addendum may render a Proposal non-responsive.
- B6.6 Notwithstanding B4, enquiries related to an Addendum may be directed to the Contract Administrator indicated in D4.1(a).

**B7. SUBSTITUTES**

- B7.1 The Work is based on the Plant, Materials and methods specified in the Request for Proposal.
- B7.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B7.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.
- B7.4 The Proponent shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
  - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;

- (c) identify any anticipated cost or time savings that may be associated with the substitute;
- (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates (if any) specified in the Supplemental Conditions for Total Performance;
- (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Total Performance.

B7.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his/her sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.

B7.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, to the Proponent who requested approval of the substitute.

B7.6.1 The Contract Administrator will issue an Addendum, disclosing the approved materials, equipment, methods and products to all potential Proponents. The Proponent requesting and obtaining the approval of a substitute shall be responsible for disseminating information regarding the approval to any person or persons he/she wishes to inform.

B7.7 If the Contract Administrator approves a substitute as an “approved equal”, any Proponent may use the approved equal in place of the specified item.

B7.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Proponent bidding that approved alternative may base his/her Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B23.

B7.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

## **B8. PROPOSAL SUBMISSION**

B8.1 The Proposal shall consist of the following components:

- (a) Form A: Bid/Proposal; and
- (b) Form B: Prices.

B8.2 The Proposal shall also consist of the following components:

- (a) Experience of Proponent and Subcontractors (Section C) in accordance with B11;
- (b) Experience of Key Personnel Assigned to the Project (Section D) in accordance with B12;
- (c) Project Schedule (Section E) in accordance with B13; and
- (d) Proponent’s Understanding and Fulfilment of the Broad Functional and Technical Requirements (Section F) in accordance with B14.

B8.3 Further to B8.1 all components of the Proposal shall be fully completed or provided in the order indicated, and submitted by the Proponent no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Proposal.

- B8.4 Further to B8.2, all components of the Proposal shall be fully completed or provided in the order indicated, and submitted by the Proponent no later than the Submission Deadline, with all required entries made clearly and completely.
- B8.5 Proposal format, including number of pages, size of pages and, font, etc., will not be regulated, except that the Proposal shall contain a table of contents, page numbering and shall be in the Sections identified above. Proponents are encouraged to use their creativity to submit a Proposal which provides the requested information for evaluation and other information which illustrates the strength of their proposed subscription/license
- B8.6 The Proposal shall be submitted electronically through MERX at [www.merx.com](http://www.merx.com).
- B8.6.1 Proposals will **only** be accepted electronically through MERX.
- B8.7 Proponents are advised that inclusion of terms and conditions inconsistent with the Request for Proposal, will be evaluated in accordance with B23.1(a).
- B8.8 Any cost or expense incurred by the Proponent that is associated with the preparation of the Proposal shall be borne solely by the Proponent.

## **B9. PROPOSAL**

- B9.1 The Proponent shall complete Form A: Bid/Proposal, making all required entries.
- B9.2 Paragraph 2 of Form A: Bid/Proposal shall be completed in accordance with the following requirements:
- (a) if the Proponent is a sole proprietor carrying on business in his/her own name, his/her name shall be inserted;
  - (b) if the Proponent is a partnership, the full name of the partnership shall be inserted;
  - (c) if the Proponent is a corporation, the full name of the corporation shall be inserted;
  - (d) if the Proponent is carrying on business under a name other than his/her own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B9.2.1 If a Proposal is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B9.2.
- B9.3 In Paragraph 3 of Form A: Bid/Proposal, the Proponent shall identify a contact person who is authorized to represent the Proponent for purposes of the Proposal.
- B9.4 Paragraph 13 of Form A: Bid/Proposal shall be signed in accordance with the following requirements:
- (a) if the Proponent is a sole proprietor carrying on business in his/her own name, it shall be signed by the Proponent;
  - (b) if the Proponent is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
  - (c) if the Proponent is a corporation, it shall be signed by its duly authorized officer or officers;
  - (d) if the Proponent is carrying on business under a name other than his/her own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.
- B9.4.1 The name and official capacity of all individuals signing Form A: Bid/Proposal shall be entered below such signatures.
- B9.5 If a Proposal is submitted jointly by two or more persons, the word "Proponent" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Proponents in the Proposal and the Contract, when awarded, shall be both joint and several.

**B10. PRICES**

- B10.1 The Proponent shall state a Total Bid Price in Canadian funds for each item of the Work identified on Form B: Prices.
- B10.1.1 Notwithstanding C12.2.3, prices on Form B: Prices shall not include the Goods and Services Tax (GST) or Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable.
- B10.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Proposals.
- B10.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.
- B10.4 Where applicable, payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).
- B10.4.1 Notwithstanding C12.2.3, the price on Form B: Prices shall not include the Goods and Services Tax (GST) or Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable.
- B10.5 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

**B11. EXPERIENCE OF PROPONENT AND SUBCONTRACTORS (SECTION C)**

- B11.1 Proposals should include:
- (a) details demonstrating the history and experience of the Proponent and Subcontractors in providing programming, design, project management, and contract administration services on two projects of similar complexity, scope, and value, and utilizing the same technology stack adopted by the City of Winnipeg, as per D2.2.
- B11.2 For each project listed in B11.1(a), the Proponent should submit a single page comprised of the following content:
- (a) description of the project;
  - (b) approximate contract value;
  - (c) duration of the project;
  - (d) impact/outcome of the project;
  - (e) role of the contractor;
  - (f) name of the client; and
  - (g) reference information (two current names with telephone numbers per project).
- B11.2.1 Where applicable, information should be separated into Proponent and Subcontractor project listings.
- B11.3 The Proposal should include general firm profile information, including years in business, average volume of work, number of employees and other pertinent information for the Proponent and all Subcontractors.

**B12. EXPERIENCE OF KEY PERSONNEL ASSIGNED TO THE PROJECT (SECTION D)**

- B12.1 Describe your approach to overall team formation and coordination of team members.
- B12.2 Include an organizational chart for the Project.



B12.3 Submit the experience and qualifications of all Personnel assigned to the Project for projects of similar complexity, scope and value, including the principals-in-charge, the Contractors Representative, managers of the key disciplines and all team members. Include educational background and degrees, professional recognition, job title, years of experience in current position, years of experience in business intelligence and analytics and years of experience with existing employer. Roles of each of the Key Personnel in the Project shall be identified in the organizational chart referred to in B12.2.

B12.4 For each person identified in B12.3, list at least two comparable projects in which they have played a primary role. If a project selected for a key person is included in, provide only the project name and the role of the key person.

**B13. PROJECT SCHEDULE (SECTION E)**

B13.1 Proponents should present a carefully considered Critical Path Method schedule using Microsoft Project or similar project management software, complete with resource assignments, durations (weekly timescale) and milestone dates or events. The resource assignments and amounts shall align with information provided in response to B12. City personnel and Proponent/Subcontractor resources need to be distinctly identified separately. The schedule shall address each requirement of the Scope of Services in D3. The schedule shall also be updated regularly with greater detail through the duration of the project after the contract has been awarded.

B13.2 The Proponent's schedule should include critical dates for review and approval processes by the City and other organizations anticipated during the design and tendering phases of the Project. Reasonable times shall be allowed for completion of these processes.

**B14. PROPONENT'S UNDERSTANDING AND FULFILMENT OF THE BROAD FUNCTIONAL AND TECHNICAL REQUIREMENTS (SECTION F)**

B14.1 The Proponent should describe how their proposal addresses the following specifications in accordance with Part E – Specifications including:

- (a) BIA Program Governance Stand-up and Foundational Oversight as per E2.2;
- (b) Organizational Change Management as per E2.3;
- (c) Data and Analytics Operating Model Design and Implementation as per E2.4;
- (d) Data and Analytics Reference Architecture as per E2.5;
- (e) Data Governance and Data Quality Strategy as per E2.6;
- (f) Agile Process Design as per E2.7;
- (g) Data and Analytics Infrastructure Setup as per E2.8;
- (h) Practical Training as per E2.9;
- (i) Broad Spectrum Skill-up and Knowledge Development as per E2.10;
- (j) Safety Analytics as per E2.11;
- (k) Accounts and Billing Analytics as per E2.12; and
- (l) Water Meter Lifecycle Analytics as per E2.13.

**B15. DISCLOSURE**

B15.1 Various Persons provided information or services with respect to this Work. In the City's opinion, this relationship or association does not create a conflict of interest because of this full disclosure. Where applicable, additional material available as a result of contact with these Persons is listed below.

B15.2 The Persons are:

- (a) Deloitte Inc. (provided input for specifications)

- (b) Gartner Inc.

**B16. CONFLICT OF INTEREST AND GOOD FAITH**

- B16.1 Further to C3.2, Proponents, by responding to this RFP, declare that no Conflict of Interest currently exists, or is reasonably expected to exist in the future.
- B16.2 Conflict of Interest means any situation or circumstance where a Proponent or Key Personnel proposed for the Work has:
- (a) other commitments;
  - (b) relationships;
  - (c) financial interests; or
  - (d) involvement in ongoing litigation;
- that could or would be seen to:
- (i) exercise an improper influence over the objective, unbiased and impartial exercise of the independent judgment of the City with respect to the evaluation of Proposals or award of the Contract; or
  - (ii) compromise, impair or be incompatible with the effective performance of a Proponent's obligations under the Contract.
- (e) has contractual or other obligations to the City that could or would be seen to have been compromised or impaired as a result of its participation in the RFP process or the Work; or
  - (f) has knowledge of confidential information (other than confidential information disclosed by the City in the normal course of the RFP process) of strategic and/or material relevance to the RFP process or to the Work that is not available to other proponents and that could or would be seen to give that Proponent an unfair competitive advantage.
- B16.3 In connection with its Proposal, each entity identified in B16.2 shall:
- (a) avoid any perceived, potential or actual Conflict of Interest in relation to the procurement process and the Work;
  - (b) upon discovering any perceived, potential or actual Conflict of Interest at any time during the RFP process, promptly disclose a detailed description of the Conflict of Interest to the City in a written statement to the Contract Administrator; and
  - (c) provide the City with the proposed means to avoid or mitigate, to the greatest extent practicable, any perceived, potential or actual Conflict of Interest and shall submit any additional information to the City that the City considers necessary to properly assess the perceived, potential or actual Conflict of Interest.
- B16.4 Without limiting B16.3, the City may, in its sole discretion, waive any and all perceived, potential or actual Conflicts of Interest. The City's waiver may be based upon such terms and conditions as the City, in its sole discretion, requires to satisfy itself that the Conflict of Interest has been appropriately avoided or mitigated, including requiring the Proponent to put into place such policies, procedures, measures and other safeguards as may be required by and be acceptable to the City, in its sole discretion, to avoid or mitigate the impact of such Conflict of Interest.
- B16.5 Without limiting B16.3, and in addition to all contractual or other rights or rights at law or in equity or legislation that may be available to the City, the City may, in its sole discretion:
- (a) disqualify a Proponent that fails to disclose a perceived, potential or actual Conflict of Interest of the Proponent or any of its Key Personnel;
  - (b) require the removal or replacement of any Key Personnel proposed for the Work that has a perceived, actual or potential Conflict of Interest that the City, in its sole discretion, determines cannot be avoided or mitigated;

- (c) disqualify a Proponent or Key Personnel proposed for the Work that fails to comply with any requirements prescribed by the City pursuant to B16.4 to avoid or mitigate a Conflict of Interest; and
- (d) disqualify a Proponent if the Proponent, or one of its Key Personnel proposed for the Work, has a perceived, potential or actual Conflict of Interest that, in the City's sole discretion, cannot be avoided or mitigated, or otherwise resolved.

B16.6 The final determination of whether a perceived, potential or actual Conflict of Interest exists shall be made by the City, in its sole discretion.

## **B17. QUALIFICATION**

B17.1 The Proponent shall:

- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Proponent does not carry on business in Manitoba, in the jurisdiction where the Proponent does carry on business; and
- (b) be financially capable of carrying out the terms of the Contract; and
- (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.

B17.2 The Proponent and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

- (a) be responsible and not be suspended, debarred or in default of any obligations to the City. A list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <https://www.winnipeg.ca/matmgt/Templates/files/debar.pdf>

B17.3 The Proponent and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

- (a) have successfully carried out work similar in nature, scope and value to the Work; and
- (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract; and
- (c) meet the City's requirements for the confidentiality and security of information; including compliance with and ISO/IEC standards 27001, 27002, 27017, and 27018 (or equivalent).

B17.4 The Proponent shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Proponent and of any proposed Subcontractor.

B17.5 Further to B17.3(b) and B17.3(c), the Proponent shall, within five (5) Business Days of a request by the Contractor Administrator, provide proof satisfactory to the Contract Administrator of the following:

B17.5.1 That all information and materials acquired by the Proponent, or to which the Proponent may be given access, if successful under this Request for Proposal ("Confidential Information") shall be treated in accordance with D6.

- (a) Confirmation that Confidential Information shall be maintained for the full term of the Contract at minimum, unless otherwise directed by the City in writing;
- (b) A description of how the Proponent's proposed Subscription/license meets the requirements including:
  - (i) how the proposed Subscription/license meets the requirements for rapid repatriation of Confidential Information;

- (ii) the data format of the Confidential Information once extracted from the proposed Subscription/license;
- (iii) the proposed Subscription/license's ability to purge Confidential Information based on City-approved records retention and disposition schedules; and
- (iv) how the Proponent would address official, time-sensitive access to information requests.

B17.5.2 That any technology used by the Proponent is compliant with ISO/IEC standards 27001, 27002, 27017, and 27018 (or equivalent), by providing:

- (a) That the proposed Subscription/license is compliant with ISO/IEC standards 27001, 27002, 27017, and 27018 (or equivalent), by providing: a certificate of compliance with ISO/IEC 27001 (or a functionally equivalent standard, as determined by the City, such as the AICPA SOC auditing framework or NIST SP 800-53) from an accredited certification body; or
- (b) A written description of how the proposed Subscription/license complies with ISO/IEC 27001, 27002, 27017, and 27018 (or functionally equivalent standards, as determined by the City, such as the AICPA SOC auditing framework or NIST SP 800-53).

The City reserves the right to assess any proposed functional equivalents to the ISO/IEC standards, and may in its sole and absolute discretion determine whether such proposed functional equivalents provide satisfactorily equivalent level of protection.

The City further reserves the right to assess any written descriptions of compliance with the ISO/IEC standards (or equivalents) to determine whether such written descriptions provide evidence of compliance that is satisfactory to the City), in its sole and absolute discretion.

## **B18. OPENING OF PROPOSALS AND RELEASE OF INFORMATION**

B18.1 Proposals will not be opened publicly.

B18.2 After award of Contract, the Contract amount and the name of the successful Proponent and their address will be available on the MERX website at [www.merx.com](http://www.merx.com).

B18.3 The Proponent is advised any information contained in any Proposal Submission may be released if required by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law or by City policy or procedures (which may include access by members of City Council).

B18.3.1 To the extent permitted, the City shall treat as confidential information, those aspects of a Proposal Submission identified by the Proponent as such in accordance with and by reference to Part 2, Section 17 or Section 18 or Section 26 of The Freedom of Information and Protection of Privacy Act (Manitoba), as amended.

B18.4 Following the award of Contract, a Proponent will be provided with information related to the evaluation of his/her submission upon written request to the Contract Administrator.

## **B19. IRREVOCABLE OFFER**

B19.1 The Proposal(s) submitted by the Proponent shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid/Proposal.

B19.2 The acceptance by the City of any Proposal shall not release the Proposals of the other responsive Proponents and these Proponents shall be bound by their offers on such until a Contract for the Work has been duly formed and the contract securities have been furnished as herein provided, but any Bid shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 11 of Form A: Bid/Proposal.

**B20. WITHDRAWAL OF OFFERS**

B20.1 A Proponent may withdraw his/her Proposal without penalty prior to the Submission Deadline.

**B21. INTERVIEWS**

B21.1 The Contract Administrator may, in his/her sole discretion, interview Proponents during the evaluation process.

**B22. NEGOTIATIONS**

B22.1 The City reserves the right to negotiate details of the Contract with any Proponent. Proponents are advised to present their best offer, not a starting point for negotiations in their Proposal Submission.

B22.2 The City may negotiate with the Proponents submitting, in the City's opinion, the most advantageous Proposals. The City may enter into negotiations with one or more Proponents without being obligated to offer the same opportunity to any other Proponents. Negotiations may be concurrent and will involve each Proponent individually. The City shall incur no liability to any Proponent as a result of such negotiations.

B22.3 If, in the course of negotiations pursuant to B22.2, the Proponent amends or modifies a Proposal after the Submission Deadline, the City may consider the amended Proposal as an alternative to the Proposal already submitted without releasing the Proponent from the Proposal as originally submitted.

**B23. EVALUATION OF PROPOSALS**

B23.1 Award of the Contract shall be based on the following evaluation criteria:

- (a) compliance by the Proponent with the requirements of the Request for Proposal or acceptable deviation therefrom: (pass/fail)
- (b) qualifications of the Proponent and the Subcontractors, if any, pursuant to B17: (pass/fail)
- (c) Total Bid Price; 5%
- (d) Experience of Proponent and Subcontractors; 5%
- (e) Experience of Key Personnel Assigned to the Project; 7%
- (f) Project Schedule; 3%
- (g) Proponent's Understanding and Fulfilment of the Broad Functional and Technical Requirements 80%
  - (i) BIA Program Governance Stand-up and Foundational Oversight; 2%
  - (ii) Organizational Change Management; 3%
  - (iii) Data and Analytics Operating Model Design and Implementation; 5%
  - (iv) Data and Analytics Reference Architecture; 3%
  - (v) Data Governance and Data Quality Strategy; 5%
  - (vi) Agile Process Design; 2%
  - (vii) Data and Analytics Infrastructure Setup; 5%
  - (viii) Applied Training; 9%
  - (ix) Formal Training; 6%
  - (x) Safety Analytics\*; 10%
  - (xi) Accounts and Billing Analytics\*; and 15%
  - (xii) Water Meter Life Cycle Analytics\*. 15%

*Note that the evaluation criteria is weighted based on criticality, not on effort or Contractor hours.*

*\*Note that these use cases may be subject to change based on changing priorities and demands. They may be replaced with requirements or use cases of similar size and complexity.*

- B23.2 Further to B23.1(a), the Award Authority may reject a Proposal as being non-responsive if the Proposal Submission is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Proposal, or waive technical requirements or minor informalities or irregularities if the interests of the City so require.
- B23.3 Further to B23.1(b), the Award Authority shall reject any Proposal submitted by a Proponent who does not demonstrate, in its Proposal or in other information required to be submitted, that it is qualified.
- B23.4 If, in the sole opinion of the City, a Proposal does not achieve a pass rating for B23.1(a) and B23.1(b), the Proposal will be determined to be non-responsive and will not be further evaluated.
- B23.5 Further to B23.1(c), the Award Authority may reject a Proposal as being non-responsive if it exceeds the funds available as shown in D3.5.
- B23.6 Further to B23.1(c), the Total Bid Price shall be the lump sum price shown on Form B: Prices.
- B23.7 Further to B23.1(d), Experience of Proponent and Subcontractors will be evaluated considering the experience of the organization on projects of similar size and complexity as well as other information requested, in accordance with B11.
- B23.8 Further to B23.1(e), Experience of Key Personnel Assigned to the Project will be evaluated considering the experience and qualifications of the Key Personnel and Subcontractor personnel on Projects of comparable size and complexity, in accordance with B12.
- B23.9 Further to B23.1(f), Project Schedule will be evaluated considering the Proponent's ability to comply with the requirements of the Project, in accordance with B13.
- B23.10 Further to B23.1(g), Proponent's Understanding and Fulfilment of the Broad Functional and Technical Requirements be evaluated in accordance with fulfilling specifications in B14.
- B23.11 Proposals will be evaluated considering the information in the Proposal Submission and any interviews held in accordance with B21.
- B23.12 Where references are requested, the reference checks to confirm information provided may not be restricted to only those submitted by the Proponent, and may include organizations representing Persons, known to have done business with the Proponent.
- B23.13 This Contract will be awarded as a whole.

## **B24. AWARD OF CONTRACT**

- B24.1 The City will give notice of the award of the Contract, or will give notice that no award will be made.
- B24.2 The City will have no obligation to award a Contract to a Proponent, even though one or all of the Proponents are determined to be qualified, and the Proposals are determined to be responsive.
- B24.2.1 Without limiting the generality of B24.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Work;
  - (b) the prices are materially in excess of the prices received for similar work in the past;

- (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
- (d) only one Proposal is received; or
- (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.

- B24.3 Where an award of Contract is made by the City, the award shall be made to the qualified Proponent submitting the most advantageous offer.
- B24.4 The Contract will be awarded as a whole.
- B24.5 Further to Paragraph 7 of Form A: Bid/Proposal and C4, the City may issue an award letter to the successful Proponent in lieu of execution of Contract Documents
- B24.5.1 The Contract documents as defined in C1.1(o)(ii) in their entirety shall be deemed to be incorporated in and to form a part of the award letter notwithstanding that they are not necessarily attached to or accompany said award letter.
- B24.6 Following the award of contract, a Proponent will be provided with information related to the evaluation of his/her Proposal upon written request to the Contract Administrator.
- B24.7 If, after the award of Contract, the Work is cancelled, the City reserves the right to terminate the Contract. The Proponent will be paid for all Services rendered up to time of termination.

## **PART C - GENERAL CONDITIONS**

### **C0. GENERAL CONDITIONS**

- C0.1 The *General Conditions for Supply of Services* (Revision 2020-01-31) are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for Supply of Services* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at [http://www.winnipeg.ca/matmgt/gen\\_cond.stm](http://www.winnipeg.ca/matmgt/gen_cond.stm)
- C0.2 A reference in the Request for Proposal to a section, clause or subclause with the prefix “**C**” designates a section, clause or subclause in the *General Conditions for Supply of Services*.



## PART D - SUPPLEMENTAL CONDITIONS

### GENERAL

#### D1. GENERAL CONDITIONS

D1.1 In addition to the *General Conditions for Supply of Services*, these Supplemental Conditions are applicable to the Work of the Contract.

#### D2. BACKGROUND

##### D2.1 Background

The Water and Waste Department (WWD) has identified the need for a Business Intelligence and Analytics (BIA) solution that will develop the governance, methodologies, people, processes, architectures and technologies that will transform the Department's data assets into accurate, trusted, and assured insights to enable evidence-based decision-making.

The BIA solution is being delivered through the WWD BIA program over three distinct phases:

Phase 1 – Scoping, Analysis and Plan (complete)

##### **Phase 2 – Execution**

Phase 3 – Expand and Enhance

Phase 1 was delivered through RFP 191-2018, which was awarded to Deloitte Inc. in 2018 and concluded in 2019. Specifications provided in E1 Applicable Specifications and Artifacts were outputs of that engagement that are relevant to the delivery of Phase 2 of the program.

The Contractor shall utilize the following three (3) technology components to design, develop and implement the BIA solution:

Microsoft Azure

Talend Cloud (Microsoft Azure)

Tableau

This RFP pertains to executing **Phase 2** as prescribed in the WWD BIA Strategy Future State Report in E1.2.

Phase 3 of the program may be executed through a series of additional engagements, but is unspecified at this time.

Prospective bidders shall note that the specification documents provided may contain language, materials and/or practices unique to Deloitte Inc. Bidders are responsible for understanding the body of work required to achieve the target future state, but may accomplish it by using their own methods and techniques. In the event such methods and techniques are different, the bidder is responsible for providing an explanation of its equivalence and/or substitution to the specifications supplied by the City. This shall be presented in a manner that is easy to comprehend and reference.

Prospective bidders shall include in their proposal a work schedule and plan that is fitted for a 24 to 36-month engagement duration.

##### D2.2 Technology Stack

The solution shall be designed, configured, developed, and implemented with any combination of the following technology services/tools:

- (a) Cloud Platform\*
  - (i) Microsoft Azure Data Lake Storage (ADLS) Gen 2
  - (ii) Microsoft Azure Data Factory (ADF)
  - (iii) Microsoft Azure Analysis Services
  - (iv) Microsoft Azure Synapse
  - (v) Microsoft Azure Storage Accounts
  - (vi) Microsoft Azure Data Bricks
  - (vii) Microsoft Azure Virtual Machine for Tableau Server
  
- (b) Integration Platform as a Service (iPaaS) (e.g. Azure-based ETL/ELT tool)\*
  - (i) Talend Cloud on Microsoft Azure\*\*
  
- (c) Visualization and Reporting\*
  - (i) Tableau Creator
  - (ii) Tableau Explorer
  - (iii) Tableau Report Server

*\*Components and features of the technology services/tools above are subject to change. Contractors shall adapt the design, development, implementation and support of data products and services to readily available technologies at the time of contract's initiation.*

*\*\*Any ETL pipelines created using Talend Cloud will utilize Talend's Cloud Engine to process the data. Two Cloud Engines are included with the City's current Talend subscription. Each Cloud Engine provides a throughput of approximately 250GB per hour. The ETLs can be designed using the Data Pipeline Designer (web-based) or Talend Studio (desktop).*

The costs associated with the technology stack (i.e., ordering of services, licenses and usages) is the responsibility of the City of Winnipeg and is not in scope of the Work.

The activities and effort to design, configure, develop, and implement the BIA solution is in scope of the Work.

### D2.3 **Project Management and Operational Tools**

The work shall utilize the City's cloud instances of Azure DevOps for Agile/SCRUM delivery, Azure DevOps Repos for build and version control, and Atlassian Confluence and/or Azure DevOps Wiki for technical and operational documentation/knowledgebase. The Contractor is responsible for developing appropriate workflows and workspaces within these tools to support project activities and set the framework for operations. Such workflows and workspaces shall be designed with simplicity and practicality in mind. At the time of the project's commencement, some combination of these tools may already be configured to manage project and development activities. In such cases, the contractor is responsible for reviewing and ensuring the City's workflows and workspaces are configured optimally to deliver on success.

All communications and scheduling of meetings shall be done either through telephone communications or the City's instance of Microsoft Exchange email service and/or Microsoft Teams. The consultant will be provided with a City email address and access credentials to the City's network to access the aforementioned services upon commencement of the engagement.

Guidance on styling of presentation materials such as slides or decks will be provided by the Coordinator, Data and Analytics. The Contractor is expected to chair various meetings and workshops throughout the length of the engagement that address the verticals (executive leadership, middle management, supervisory management, and frontline staff) and horizontals (Divisions and Branches) of the Department.

Contract administration templates such as goods acceptance, invoicing, change orders, etc. shall be determined upon the initialization of the engagement at the mutual discretion of the contract administrator and the Contractor.

Under no circumstances shall the engagement’s activities and work be managed or stored outside of the City’s approved hardware, software, storage, or service facilities.

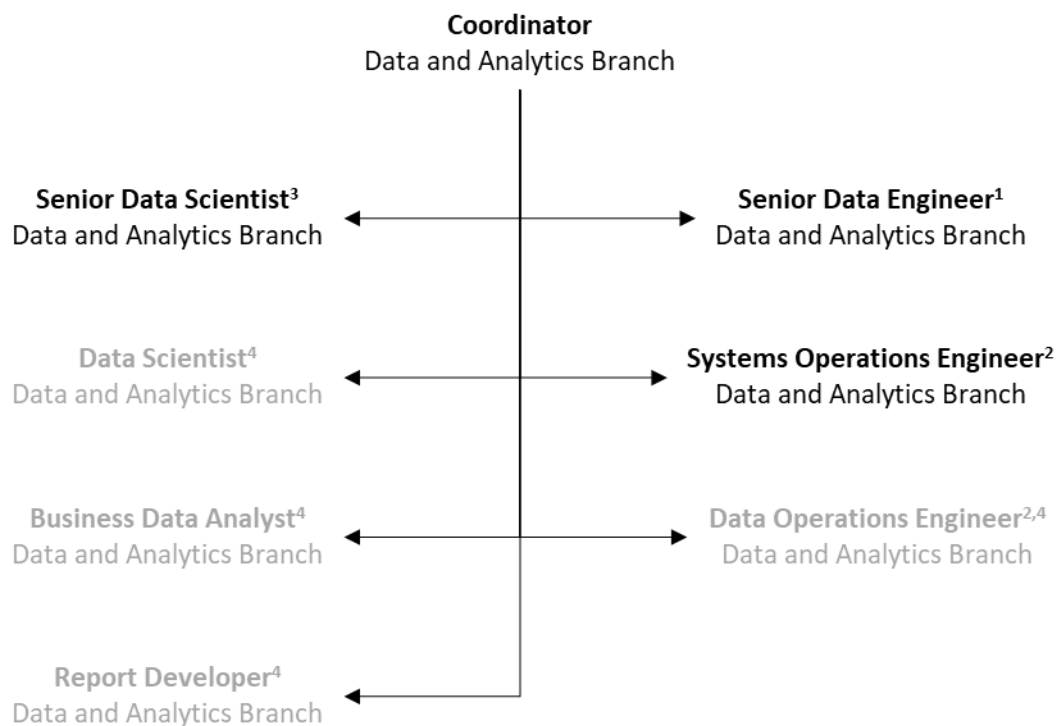
#### D2.4 Program Sponsor and Ownership

The BIA Program is sponsored by the Department’s Innovation and Technology (IT) Division Manager. The contract’s commitments shall be vetted and authorized by the Coordinator, Data and Analytics whom is the Contract Administrator of this RFP.

The Coordinator, Data and Analytics is the Head of the Data and Analytics Branch of the Water and Waste Department and is responsible for and is the owner of the BIA program and solution.

At the time of this RFP’s issuance, the Data and Analytics (DA) Branch is comprised of the Coordinator, Senior Data Engineer and Systems Operations Engineer. A Senior Data Scientist shall be recruited to the team in H2 2022.

The Data and Analytics Branch is projected to be comprised of the following City staff at the initialization of the engagement:



- Internal City Staff
- Staff Augmentation (as-required)

<sup>1</sup>The Senior Data Engineer will also serve the role of Senior Data Architect

<sup>2</sup>The Systems Operations Engineer will also serve the role as a Cloud and Data Operations Developer

<sup>3</sup>The Senior Data Scientist City employee will be staffed in Q3 2022

<sup>4</sup>These roles will be filled through staff augmentation as required

The internal City staff (Senior Data Scientist, Senior Data Engineer and Systems Operations Engineer) shall be cross-trained with knowledge and skills normally covered by a data analyst and report developer.

For more complex analytics use cases, a City-employed business analyst may be assigned and additional resources may be on-boarded through staff augmentations. Any modifications or extensions to City project team members is at the discretion of the Coordinator, Data and Analytics.

#### Program Stakeholders

The Department is comprised of 3 service divisions and 6 supporting divisions:

<b>Service Divisions</b>	<b>Support Divisions</b>
Water Services	Finance and Administration
Wastewater Services	Engineering Services
Solid Waste	Customer Service
	Environmental Standards
	Human Resources
	Information Systems and Technology

Please refer to the following link for more information regarding the Department and its Divisions: <https://winnipeg.ca/waterandwaste/dept/default.stm>.

The Director is the Department's executive leader. Each Division is led by a Manager. Each Division is organized further into Branches that are led by Branch Heads or Coordinators. Branches may be segmented further into additional business units/teams led by Supervisors.

It is anticipated that the Executive Leadership Committee shall be comprised of the Director and Division Managers.

It is anticipated that Branch Heads / Coordinators shall be engaged at a working level to execute project activities and fulfill deliverables. Additional subject matter experts may be onboarded at the discretion of the Coordinator, Data and Analytics.

The Coordinator, Data and Analytics shall be a participant in any other committees formed for the duration of the engagement.

In addition to Department stakeholders, the City's Corporate Department has an interest in the progress and success of the WWD BIA Program driven by the potential to leverage and scale WWD's data and analytics operating model and technologies to other areas of the City. Corporate interests may span several domains such as: Information Technology, Human Resources, Finance and Administration, Safety, Records Management, and Privacy.

In general, each Department is organized around the following leadership structure:

<b>Title</b>	<b>Responsibility</b>
Director	Department
Manager	Division
Branch Head/Coordinator	Branch
Supervisor	Team

In addition to the sponsor and beneficiary stakeholders, the program will be dependent on collaboration and inputs from the following business areas:

<b>Department</b>	<b>Division</b>	<b>Branch</b>	<b>Description</b>	<b>Affects</b>
<b>WWD</b>	<b>IT</b>	<b>Enterprise Systems</b>	Stewards of Oracle Customer	Customer Accounting

			Care and Billing (CCB) System, iTron Field Collection System (FCS), iTron Mobile, etc.	and Billing Analytics Water Meter Lifecycle Analytics
<b>WWD</b>	<b>IT</b>	<b>Application Solutions</b>	Stewards of Mobile Operations Management (MOM) Application, MyUtilityBill Portal, GeoMedia, GIS, SmarterU, Laboratory Information Management Systems, SharePoint, etc.	Customer Accounting and Billing Analytics Safety Analytics
<b>WWD</b>	<b>Engineering</b>	<b>Records Management</b>	Consult for record keeping practices	Advisory for Governance and Operating Model
<b>Corporate</b>	<b>Finance</b>	<b>PeopleSoft Finance</b>	Stewards of the PeopleSoft Finance module	Customer Accounting and Billing Analytics
<b>Corporate</b>	<b>Human Resources</b>	<b>PeopleSoft Human Resources</b>	Stewards of the PeopleSoft HR module	Safety Analytics
<b>Corporate</b>	<b>Safety</b>		Consult for general safety considerations and stewards of Worker's Compensation Board claims data	Safety Analytics
<b>Corporate</b>	<b>Privacy</b>		Consult for general privacy considerations	Customer Accounting and Billing Analytics Safety Analytics
<b>Corporate</b>	<b>IT</b>	<b>Data Science</b>	General awareness on as-needed basis	Knowledge sharing
<b>Corporate</b>	<b>IT</b>	<b>Information Governance Committee</b>	General awareness on as-needed basis	Knowledge sharing

### D3. SCOPE OF SERVICES

- D3.1 Scope is for consultant services to execute Phase 2 of the Water and Waste Department's Business Intelligence and Analytics Program as further described in D3.2 and PART E - Specifications.
- D3.2 The major components of the Work are as follows:
- (a) BIA Program Governance Stand-up and Foundational Oversight;
  - (b) Organizational Change Management;
  - (c) Data and Analytics Operating Model Design and Implementation;
  - (d) Data and Analytics Reference Architecture;
  - (e) Data Governance and Data Quality Strategy;
  - (f) Agile Process Design;
  - (g) Data and Analytics Infrastructure Setup;
  - (h) Applied Training;
  - (i) Formal Training;
  - (j) Safety Analytics;
  - (k) Accounts and Billing Analytics; and
  - (l) Water Meter Lifecycle Analytics.
- D3.3 Further to C7, the use cases identified in D3.2(j), D3.2(k) and D3.2(l) may be subject to change based on changing priorities and demands. They may be replaced with use cases of similar size and complexity (refer to E1.2 WWD BIA Use Case Reference.pdf for possibilities).
- D3.4 Notwithstanding D3.1, in the event that operational changes result in substantial changes to the requirements for Work, the City reserves the right to alter the type or quantity of work performed under this Contract, or to terminate the Contract, upon thirty (30) Calendar Days written notice by the Contract Administrator. In such an event, no claim may be made for damages on the grounds of loss of anticipated profit or work.
- D3.5 The funds available for this Contract are \$3,200,000.

### D4. DEFINITIONS

- D4.1 When used in this Request for Proposal:
- (a) **"AI"** stands for Artificial Intelligence.
  - (b) **"AICPA"** stands American Institute of CPAs;
  - (c) **"API"** stands for Application Programming Interface;
  - (d) **"AVRO"** refers to Apache Avro's row-oriented remote procedure call and data serialization framework;
  - (e) **"B2B"** stands for Business-to-Business;
  - (f) **"BI"** stands for Business Intelligence;
  - (g) **"BIA"** stands for Business Intelligence and Analytics;
  - (h) **"Cloud"** refers to Microsoft Azure Cloud service;
  - (i) **"Confidential Information"** means all information and/or materials, and any copies thereof, which the Contractor (and/or its Representatives) acquires or Uses, or to which it is given access, during the course of the performance of the Work and/or Contract (including, without limitation, City data assets), regardless of the source, format, or medium of said information and/or materials, and includes Personal Information (unless otherwise identified herein), but excludes information that is in the public domain, provided that the

information claimed to be in the public domain was not made public as a result of an unauthorized disclosure by the Contractor or its Representatives, or a third party;

- (j) **“COW”** means City of Winnipeg;
- (k) **“DA”** stands for Data and Analytics;
- (l) **“DG”** stands for Data Governance;
- (m) **“DQM”** stands for Data Quality Management;
- (n) **“ETL”** stands for Extract, Transform, Load;
- (o) **“FIPPA”** stands for The Freedom of Information and Protection of Privacy Act;
- (p) **“GDPR”** stands for the European Union’s General Data Protection Regulation;
- (q) **“iPaaS”** stands for Integration Platform as a Service;
- (r) **“JSON”** stands for JavaScript Object Notation;
- (s) **“ML”** stands for Machine Learning;
- (t) **“MLlib”** stands for Machine Learning Library;
- (u) **“NoSQL”** stands for Non-relational Structured Query Language;
- (v) **“PHIA”** stands for The Personal Health Information Act;
- (w) **“POC”** stands for Proof of Concept;
- (x) **“Proponent”** means any Person or Persons submitting a Proposal for Services;
- (y) **“Representatives”** means the directors, officers, shareholders, employees, parents, subsidiaries, subcontractors, partners, volunteers, affiliates, insurers, reinsurers, agents, delegates, elected officials, and other representatives of the identified party;
- (z) **“RDMS”** stands for Relational Database Management System;
- (aa) **“SaaS”** stands for Software as a Service;
- (bb) **“SAS”** stands for Statistical Analysis System;
- (cc) **“SOC”** stands for Service Organization Control;
- (dd) **“SQL”** stands for Structured Query Language;
- (ee) **“Use”** means the collection, storage, use, processing, reproduction, modification, disclosure, or destruction of, or access to, Confidential Information.
- (ff) **“WWD”** means Water and Waste Department;
- (gg) **“XML”** stands for Extensible Markup Language; and
- (hh) **“YARN”** stands for Yet Another Resource Negotiator.

## **D5. CONTRACT ADMINISTRATOR**

D5.1 The Contract Administrator is:

Ernest Kwan  
Coordinator, Data and Analytics  
Telephone No. 204- 986-8644  
Email Address.: ekwan@winnipeg.ca

D5.2 At the pre-commencement meeting, the Contract Administrator will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

## **D6. INFORMATION MANAGEMENT**

**The following provisions are in addition to any preceding obligations of confidentiality contained in these conditions.**

- D6.1 The Contractor acknowledges that The Freedom of Information and Protection of Privacy Act (“**FIPPA**”, the “**Act**”) imposes obligations on the City to collect, store, use, disclose, and destroy “personal information”, as that term is defined in FIPPA, (“**Personal Information**”) in the strictest of confidence and in accordance with that Act..
- D6.2 While this Contract is in effect, and at all times thereafter, the Contractor and its Representatives shall treat as confidential any and all Confidential Information which it acquires or Uses, or to which it is given access, or which in any other way it comes into possession or knowledge of, during the course of the performance of the Contract. For the purposes of this Contract, Personal Information shall be considered to be Confidential Information.
- D6.3 The Contractor shall be deemed an “information manager”, as that term is defined by section 44.1 of FIPPA, and any Use of Personal Information by the Contractor or its Representatives shall be done pursuant to and in accordance with that Act.
- D6.4 Further to C23, all Confidential Information is and shall remain the property of the City.
- D6.5 Neither the Contractor nor its Representatives shall disclose or appropriate to their own use, or to the use of any third party, all or any part of the Confidential Information without the prior written consent of the City. The Contractor and its Representatives shall not at any time make any public announcement, press release, or statement of fact or opinion regarding the RFP, the Contract, the Work, the City and/or its Representatives, or the Confidential Information without the prior written authorization of the City.
- D6.6 While this Contract is in effect and at all times thereafter the Contractor shall:
- (a) only Use the Confidential Information for the purposes expressly permitted by the City, and only to the extent necessary to perform its obligations under this Contract;
  - (b) ensure that access to the Confidential Information is only provided or permitted a “need to know” basis, and that access, when given, shall be the minimum amount necessary to accomplish the task;
  - (c) not disclose or permit the disclosure of the Confidential Information or any copies thereof, whether in whole or in part, in any form or medium, to any third party, including Subcontractors or agents, without the prior written consent of the Contract Administrator;
  - (d) not reproduce any Confidential Information, in whole or in part, in any form or medium, without the express prior written consent of the City; and
  - (e) inform its Representatives of the obligations imposed upon it under this Contract and FIPPA, and shall take whatever steps are necessary to ensure that all of its Representatives comply with those obligations, including (but not limited to) binding said Representatives to terms no less strict than those herein through written confidentiality agreements.
- D6.6.1 Upon request, or upon expiration or termination of this Contract for any reason, the Contractor shall rapidly repatriate to the City a complete, accurate copy of the Confidential Information (in a form satisfactory to the City), and upon confirmation from the City that said copy is acceptable shall thereafter destroy the Confidential Information (including all copies in any form) in a manner which adequately protects the confidentiality of the Confidential Information within two (2) weeks, unless otherwise directed by the City in writing.
- D6.7 The Contractor shall put into place reasonable security arrangements, including administrative, technical, and physical safeguards that ensure the confidentiality and security of the Confidential Information. The standard of such security arrangements shall be the greater of:
- (a) the standards the Contractor has in place to protect its own confidential information; or
  - (b) the standards imposed on the Contractor by the City.
- D6.8 Upon becoming aware of any unauthorized Use of the Confidential Information (a “**Confidentiality Breach**”), the Contractor shall immediately notify the City in writing, take all



reasonable steps to prevent the recurrence of any such Confidentiality Breach, and notify the City of said steps in writing.

- D6.9 Upon receiving a subpoena or other validly issued administrative or judicial order seeking Confidential Information, the Contractor shall provide the City with prompt notice thereof, deliver a copy of its proposed response to the City, and thereafter be entitled to comply with the demand to the extent permitted or required by law (unless the demand has been time-limited, quashed, or extended). The Contractor shall cooperate with the City in the defense of the demand, if so requested by the City.
- D6.10 The Contractor and its Representatives shall comply with all directives issued by the City with respect to safeguarding or otherwise ensuring the confidentiality of the Confidential Information, and shall cooperate with the City so that the City can verify that the Contractor has complied, and is complying, with its obligations hereunder.

## **D7. NOTICES**

- D7.1 Except as provided for in C22.4, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid/Proposal.
- D7.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in, D7.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator identified in D4.
- D7.3 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following facsimile number:

The City of Winnipeg  
Legal Services Department  
Attn: Director of Legal Services  
Facsimile No.: 204 947-9155

## **SUBMISSIONS**

### **D8. AUTHORITY TO CARRY ON BUSINESS**

- D8.1 The Contractor shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Contractor does not carry-on business in Manitoba, in the jurisdiction where the Contractor does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

### **D9. INSURANCE**

- D9.1 The Contractor, who will be working exclusively remotely shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with the City added as an additional insured; such liability policy to also contain a cross-liability clause, blanket contractual liability, employer's liability, non-owned automobile liability and products and completed operations cover, to remain in place at all times during the performance of the Work;
  - (b) professional liability insurance including an amount not less than \$2,000,000 per claim and \$5,000,000 in the aggregate. Such insurance shall remain in place for twelve (12) months

after Total Performance or provide for a twelve (12) month extended reporting period after Total Performance.

- D9.2 Deductibles shall be borne by the Contractor.
- D9.3 All policies shall be taken out with insurers licensed in the Province of Manitoba.
- D9.4 The Contractor shall provide the Contract Administrator with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work on the Site and annually thereafter but in no event later than the date specified in C4.1 for the return of the executed Contract Documents, if applicable.
- D9.5 The Contractor shall not cancel, materially alter, or cause the policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.
- D9.6 The City shall have the right to alter the limits and/or coverages as reasonably required from time to time during the continuance of this agreement.

## **SCHEDULE OF WORK**

### **D10. COMMENCEMENT**

- D10.1 The Contractor shall not commence any Work until he/she is in receipt of a notice of award from the City authorizing the commencement of the Work.
- D10.2 The Contractor shall not commence any Work on the Site until:
- (a) the Contract Administrator has confirmed receipt and approval of:
    - (i) evidence of authority to carry on business specified in D8;
    - (ii) evidence of the insurance specified in D9;
  - (b) the Contractor has attended a meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a meeting.
- D10.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the notice of award.

### **D11. COVID-19 SCHEDULE DELAYS**

- D11.1 The City acknowledges that the schedule for this Contract may be impacted by the COVID-19 pandemic. Commencement and progress of the Work shall be performed by the Contractor with due consideration to the health and safety of workers and the public, directives from health authorities and various levels of government and in close consultation with the Contract Administrator.
- D11.2 If the Contractor is delayed in the performance of the Work by reason of the COVID-19 pandemic, the Work schedule may be adjusted by a period of time equal to the time lost due to such delay and costs related to such delay will be determined as identified herein.
- D11.3 A minimum of seven (7) Calendar Days prior to the commencement of Work, the Contractor shall declare whether COVID-19 will affect the start date. The Contractor shall provide sufficient evidence that the delay is directly related to COVID-19, including but not limited to evidence related to availability of staff, availability of Material or work by others.
- D11.4 For any delay related to COVID-19 and identified after Work has commenced, the Contractor shall within seven (7) Calendar Days of becoming aware of the anticipated delay declare the additional delay and shall provide sufficient evidence as indicated in D11.3. Failure to provide this notice will result in no additional time delays being considered by the City.
- D11.5 The Work schedule, including the durations identified in D3 where applicable, will be adjusted to reflect delays accepted by the Contract Administrator.

- D11.6 Any time or cost implications as a result of COVID-19 and in accordance with the above, as confirmed by the Contract Administrator, shall be documented in accordance with C7.

## **CONTROL OF WORK**

### **D12. RECORDS**

- D12.1 The Contractor shall keep detailed records of the services supplied under the Contract.
- D12.2 The Contractor shall record, as a minimum, for each item listed on Form B: Prices:
- (a) user name(s) and addresses;
  - (b) order date(s);
  - (c) service date(s); and
  - (d) description and quantity of services provided.
- D12.3 The Contractor shall provide the Contract Administrator with a copy of the records for each quarter year within fifteen (15) Calendar Days of a request of the Contract Administrator.
- D12.4 To satisfy City of Winnipeg recordkeeping requirements, the Contractor shall manage and maintain data/records and their associated metadata within the systems until they can be exported out;

## **MEASUREMENT AND PAYMENT**

### **D13. INVOICES**

- D13.1 Further to C12, the Contractor shall submit an invoice for each portion of work performed to:
- The City of Winnipeg  
Corporate Finance - Accounts Payable  
4th Floor, Administration Building, 510 Main Street  
Winnipeg MB R3B 1B9
- Facsimile No.: 204- 949-0864  
Send Invoices to [CityWpgAP-INVOICES@winnipeg.ca](mailto:CityWpgAP-INVOICES@winnipeg.ca)  
Send Invoice Inquiries to [CityWpgAP-INQUIRIES@winnipeg.ca](mailto:CityWpgAP-INQUIRIES@winnipeg.ca)
- D13.2 Invoices must clearly indicate, as a minimum:
- (a) the City's purchase order number;
  - (b) date of delivery;
  - (c) delivery address;
  - (d) type and quantity of work performed;
  - (e) the amount payable with GST and MRST shown as separate amounts; and
  - (f) the Contractor's GST registration number.
- D13.3 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.

### **D14. PAYMENT**

- D14.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

## **D15. PAYMENT SCHEDULE**

D15.1 Further to C11, payment shall be in accordance with progression and completion of each of these deliverables:

- (a) BIA Program Governance Stand-up and Foundational Oversight;
- (b) Organizational Change Management;
- (c) Data and Analytics Operating Model Design and Implementation;
- (d) Data and Analytics Reference Architecture;
- (e) Data Governance and Data Quality Strategy;
- (f) Agile Process Design;
- (g) Data and Analytics Infrastructure Setup;
- (h) Applied Training;
- (i) Formal Training;
- (j) Safety Analytics;
- (k) Accounts and Billing Analytics; and
- (l) Water Meter Life Cycle Analytics\*.

D15.2 Payment shall be in accordance to the completion of each deliverable as per D3.2. Under no circumstances shall compensation be based on hours worked.

D15.3 All costs shall be inclusive of any administrative or project management overhead.

D15.4 Further to C12, payment shall be in Canadian funds net thirty (30) Calendar Days after receipt and approval of the Contractor's invoice.

## **WARRANTY**

### **D16. WARRANTY**

D16.1 Notwithstanding C13, Warranty does not apply to this Contract.

## **THIRD PARTY AGREEMENTS**

### **D17. FUNDING AND/OR CONTRIBUTION AGREEMENT OBLIGATIONS**

D17.1 In the event that funding for the Work of the Contract is provided to the City of Winnipeg by the Government of Manitoba and/or the Government of Canada, the following terms and conditions shall apply, as required by the applicable funding agreements.

D17.2 Further to D17.1, in the event that the obligations in D17 apply, actual costs legitimately incurred by the Contractor as a direct result of these obligations ("Funding Costs") shall be determined by the actual cost to the Contractor and not by the valuation method(s) outlined in C7.4. In all other respects Funding Costs will be processed in accordance with Changes in Work under C7.

D17.3 For the purposes of D17:

- (a) "**Government of Canada**" includes the authorized officials, auditors, and representatives of the Government of Canada; and
- (b) "**Government of Manitoba**" includes the authorized officials, auditors, and representatives of the Government of Manitoba.

D17.4 Modified Insurance Requirements

- D17.4.1 Where applicable, the Contractor will be required to provide wrap-up liability insurance in an amount of no less than two million dollars (\$2,000,000) inclusive per occurrence. Such policy will be written in the joint names of the City, Contractor, Consultants and all sub-contractors and sub-consultants and include twelve (12) months completed operations. The Government of Manitoba and its Ministers, officers, employees, and agents shall be added as additional insureds.
- D17.4.2 If applicable the Contractor will be required to provide builders' risk insurance (including boiler and machinery insurance, as applicable) providing all risks coverage at full replacement cost, or such lower level of insurance that the City may identify on a case-by-case basis, such as an installation floater.
- D17.4.3 The Contractor shall obtain and maintain third party liability insurance with minimum coverage of two million dollars (\$2,000,000.00) per occurrence on all licensed vehicles operated at the Site. In the event that this requirement conflicts with another licensed vehicle insurance requirement in this Contract, then the requirement that provides the higher level of insurance shall apply.
- D17.4.4 Insurers shall provide satisfactory Certificates of Insurance to the Government of Manitoba prior to commencement of Work as written evidence of the insurance required. The Certificates of Insurance must provide for a minimum of thirty (30) days' prior written notice to the Government of Manitoba in case of insurance cancellation.
- D17.4.5 All policies must be taken out with insurers licensed to carry on business in the Province of Manitoba.
- D17.5 Indemnification By Contractor
- D17.5.1 In addition to the indemnity obligations outlined in C17 of the General Conditions for Services, the Contractor agrees to indemnify and save harmless the Government of Canada and the Government of Manitoba and each of their respective Ministers, officers, servants, employees, and agents from and against all claims and demands, losses, costs, damages, actions, suit or other proceedings brought or pursued in any manner in respect of any matter caused by the Contractor or arising from this Contract or the Work, or from the goods or services provided or required to be provided by the Contractor, except those resulting from the negligence of any of the Government of Canada's or the Government of Manitoba's Ministers, officers, servants, employees, or agents, as the case may be.
- D17.6 Records Retention and Audits
- D17.6.1 The Contractor shall maintain and preserve accurate and complete records in respect of this Contract and the Work, including all accounting records, financial documents, copies of contracts with other parties and other records relating to this Contract and the Work during the term of the Contract and for at least six (6) years after Total Performance. Those records bearing original signatures or professional seals or stamps must be preserved in paper form; other records may be retained in electronic form.
- D17.6.2 In addition to the record keeping and inspection obligations outlined in C6 of the General Conditions for Services, the Contractor shall keep available for inspection and audit at all reasonable times while this Contract is in effect and until at least six (6) years after Total Performance, all records, documents, and contracts referred to in D17.6.1 for inspection, copying and audit by the City of Winnipeg, the Government of Manitoba and/or the Government of Canada and their respective representatives and auditors, and to produce them on demand; to provide reasonable facilities for such inspections, copying and audits, to provide copies of and extracts from such records, documents, or contracts upon request by the City of Winnipeg, the Government of Manitoba, and/or the Government of Canada and their respective representatives and auditors, and to promptly provide such other information and explanations as may be reasonably requested by the City of Winnipeg, the Government of Manitoba, and/or the Government of Canada from time-to-time.
- D17.7 Other Obligations

- D17.7.1 The Contractor consents to the City providing a copy of the Contract Documents to the Government of Manitoba and/or the Government of Canada upon request from either entity.
- D17.7.2 If the Lobbyists Registration Act (Manitoba) applies to the Contractor, the Contractor represents and warrants that it has filed a return and is registered and in full compliance with the obligations of that Act, and covenants that it will continue to comply for the duration of this Contract.
- D17.7.3 The Contractor shall comply with all applicable legislation and standards, whether federal, provincial, or municipal, including (without limitation) labour, environmental, and human rights laws, in the course of providing the Work.
- D17.7.4 The Contractor shall properly account for the Work provided under this Contract and payment received in this respect, prepared in accordance with generally accepted accounting principles in effect in Canada, including those principles and standards approved or recommended from time-to-time by the Chartered Professional Accountants of Canada or the Public Sector Accounting Board, as applicable, applied on a consistent basis.
- D17.7.5 The Contractor represents and warrants that no current or former public servant or public office holder, to whom the Value and Ethics Code for the Public Sector, the Policy on Conflict of Interest and Post Employment, or the Conflict of Interest Act applies, shall derive direct benefit from this Contract, including any employment, payments, or gifts, unless the provision or receipt of such benefits is in compliance with such codes and the legislation.
- D17.7.6 The Contractor represents and warrants that no member of the House of Commons or of the Senate of Canada or of the Legislative Assembly of Manitoba is a shareholder, director or officer of the Contractor or of a Subcontractor, and that no such member is entitled to any benefits arising from this Contract or from a contract with the Contractor or a Subcontractor concerning the Work.

## PART E - SPECIFICATIONS

### GENERAL

#### E1. APPLICABLE SPECIFICATIONS AND ARTIFACTS

E1.1 These Specifications shall apply to the Work.

E1.2 The following are applicable to the Work:

<u>Specification No.</u>	<u>Specification Title</u>
1	WWD BIA Strategy Current State Analysis.pdf
2	WWD BIA Roadmap (Adapted).pdf
3	WWD BIA Strategy Gap Analysis Report.pdf
4	WWD BIA Strategy Future State Report.pdf
5	WWD BIA Use Case Reference.pdf

E1.3 Bidders are reminded that requests for approval of substitutes as an approved equal or an approved alternative shall be made in accordance with B7. In every instance where a brand name or design specification is used, the City will also consider approved equals and/or approved alternatives in accordance with B7.

E1.4 Any references to “Wave” or timing of certain stages or activities of the Phase 2 – Implementation in the materials (i.e. slide 14 of the WWD BIA Strategy Future State Report) provided are not prescriptive. Proponents are asked to propose a schedule that best delivers the scope of Work defined in this RFP within an 18 to 36-month period.

#### E2. SERVICES

##### E2.1 Handling of Confidential Information

Further to D5, the Contractor:

- (a) shall have access to Confidential Information via City facilities (both physical and virtual/remote), but shall not share, download, or distribute said Confidential Information with explicit prior permission from the City; and
- (b) shall vet every data field to determine whether said field contains Personal Information, and if so will consult with the City to determine whether the data in said field goes to the cloud, stays on local services, or goes onto the cloud with some form obfuscation or encryption, as directed by the City.

##### E2.2 BIA Program Governance Stand-up and Foundational Oversight

###### (a) Program Initiation and Planning

*Schedule Guidance: Week 1 – 4*

- (i) Engagement Kick-off.
- (ii) Program Charter.
- (iii) Program Plan.
- (iv) Review BIA Strategy and existing governance processes.
- (v) The program governance shall consider the interests of the Department, Records Management, Privacy, Legal, and Security.
- (vi) Validate committee sizing and structure and develop decision rights and escalation paths.
- (vii) Define high-level interaction model, Key Performance Indicators (KPI's), and terms of reference for program governance.
- (viii) Program Governance Plan.
- (ix) Communication Plan.

- (x) Risk Mitigation Plan.
- (xi) Team Assembly.
- (xii) Stakeholder onboarding.

(b) **Governance Stand-Up**

*Schedule Guidance: Week 4 – 5*

- (i) Review and approve Governance Stand-Up Plan
- (ii) Establish Executive Leadership Committee\*
- (iii) Establish Data and Analytics Working Committee\*

*\*Initialize committee based on available resources/commitment. These committees may grow to encompass other persons of interest over the length of the engagement.*

(c) **Foundational Oversight**

*Schedule Guidance: To be conducted throughout the length of the engagement*

- (i) Status Meetings.
- (ii) Status Reports.
- (iii) Monitor and Control Program and Project activities.
- (iv) Risk Management.
- (v) Vendor Coordination.
- (vi) Liaising.
- (vii) Chair and facilitate Executive Leadership and Working Committees.
- (viii) General Contract Administration (i.e. change orders, billing).
- (ix) Executive Presentations (as required).

**E2.3 Organizational Change Management**

*Schedule Guidance: To be conducted throughout the length of the engagement*

- (a) Identify gaps in skills and knowledge.
- (b) Identify degree of impact of new technologies and processes.
- (c) Conduct change readiness assessment (stakeholder capacity to embrace change and the operational implications of changes).
- (d) Create stakeholder engagement plan to garner alignment across leadership.
- (e) Review, tune and execute Communication Plan including establishing communication channels/forums.
- (f) Prepare and distribute communication materials.
- (g) Conduct OCM knowledge transfer.

**E2.4 Data and Analytics Operating Model Design and Implementation**

*Schedule Guidance: Week 5 – 7*

Define design principles to anchor and evaluate design options.

- (a) Develop Data and Analytics functional model to guide structure/role requirements for hub-spoke.
- (b) Develop structural options (i.e. L1 – L3) to deliver the operating model within given constraints.
- (c) Develop high-level role archetypes and profiles (3 to 5 total) for hub-spoke.
- (d) Design interaction model and high-level RACI for hub-spoke (i.e., owner for data collection, data analysis/visualization, business impact, etc.).
- (e) Develop approach to talent mapping to drive staffing decisions.
- (f) Develop human resource materials to map talent to future state roles.
- (g) Draft, review and finalize Data and Analytics Operating Model Design.



- (h) Apply Data and Analytics Operating Model to use cases.
- (i) Monitor and document the organization's maturity in business intelligence and analytics throughout the duration of the engagement.

#### **E2.5 Data and Analytics Reference Architecture**

*Schedule Guidance: Week 7 – 11*

- (a) Review current state architecture, future state architecture, selected technology toolset and strategy.
- (b) Leverage and enhance the conceptual model to logical and technical level details that align to the roadmap.
- (c) Conduct interviews with different stakeholders to deep-dive into different types of datasets
- (d) Design architecture patterns to support the agile delivery squads in the execution of BIA use cases.
- (e) Review reference architecture iterations and finalize.
- (f) Apply reference architecture to use cases.

#### **E2.6 Data Governance and Data Quality Framework**

*Schedule Guidance: Week 11 – 15*

- (a) Review existing data governance practices.
- (b) Identify data management capabilities in addition to data quality that need to be governed under the Data Governance (DG) and Data Quality (DQ) framework.
- (c) The DG framework shall adhere to the Freedom of Information and Protection of Privacy Act (FIPPA) and The Personal Health Information Act (PHIA) at a minimum.
- (d) The DG framework shall apply standards of the European Union's General Data Protection Regulation (GDPR) whenever feasible.
- (e) Develop DG and DQ policies, processes, and governance metrics. These shall adhere to the City of Winnipeg records management and privacy policies and practices.
- (f) Compile DG elements into data governance dashboard.
- (g) Design DG and DQ Operating Model.
- (h) Develop high-level conceptual data model at subject-area level.
- (i) Develop DG and DQ Roadmap.
- (j) Apply DG and DQ frameworks to use cases.

#### **E2.7 Agile Process Design**

*Schedule Guidance: Week 15 – 17*

- (a) Review existing Agile capabilities across people, process, and technology dimensions.
- (b) Develop Agile Operating Model including Interaction Model and Governance structures.
- (c) Develop Agile Analytics Delivery Framework.
- (d) Define Agile team structure and align with BIA Governance structure.
- (e) Design, configure and implement user structure and workflows to support Analytics Delivery Framework utilizing Jira and/or Azure DevOps.
- (f) Apply Agile Process Design to use cases.

#### **E2.8 Data and Analytics Infrastructure Setup**

*Schedule Guidance: Week 5 – 9*

- (a) Review Reference Architecture for platform setup.
- (b) Provision and configure Microsoft Azure services.
- (c) Provision and configure Talend Cloud services.
- (d) Provision and configure Tableau server.

- (e) Provision and configure Tableau developer tools.
- (f) Configure infrastructure integrations.
- (g) Configure security requirements.
- (h) Configure user access that leverages the City's Active Directory.
- (i) Smoke test infrastructure setup.
- (j) Setup processes to monitor and control the health of the infrastructure.
- (k) Implement general guidelines for utilization and optimization of Cloud services (i.e. cost-performance considerations).
- (l) On-going infrastructure support and remediation of open issues throughout the duration of the engagement.

#### E2.9 **Applied Training**

*Schedule Guidance: Applies to E2.11 Data and Analytics Infrastructure Setup and E2.15, E2.16 and E2.17.*

Applied training shall be incorporated in all aspects of technical analysis, design, development, quality assurance, implementation, support and optimization activities performed in the creation of data and analytics products and services throughout the length of the contract. This applies to all technical configurations and coding/programming of infrastructure and data and analytics products and services such as the Safety Analytics, Customer Accounts and Billing Analytics, and Water Meter Lifecycle Analytics.

#### E2.10 **Formal Training**

*Schedule Guidance: Various courses, workshops and learning opportunities to be scheduled throughout the duration of the engagement*

In general, the contractor shall train various City staff in data science and business intelligence as per Gartner's Map Skill Sets to Data Science Capabilities. The goal is not only to develop competency and capability but to create and nurture a data-driven culture.

The level of proficiency (on a basic → intermediary → advanced → expert scale) is based on the staff role and criticality to sustaining data and analytics products and services as noted below:

##### **Advanced**

Coordinator, Data and Analytics  
Senior Data Architect, Data and Analytics  
Data Operations Developer, Data and Analytics  
Senior Data Scientist, Data and Analytics  
Business Systems Analyst, Design and Planning  
Information Specialists/Developers, Various Branches

##### **Intermediary**

Select Staff, Enterprise Systems  
Select Staff, Application Solutions  
Other IT Staff  
Domain Expert / Business Champion

##### **Basic**

End-Users which may include senior management, middle management, supervisory management, and frontline staff

Other stakeholders external to the Water and Waste Department

It is not expected that the training provided will result in expert proficiency in data science or business intelligence. The training prescribed through this engagement shall be documented and packaged as a readily available toolkit for future use beyond the engagement such as for new hires.

Training shall cover the following **categories of skill development**:

- (a) Quantitative Skills
- (b) IT/Architecture Skills
- (c) Domain/Business Skills
- (d) Soft/Social/Leader Skill

Training shall cover the following **themes of knowledge**:

- (a) Guide, Inspire and Storytelling that lead to:
  - (i) Inspire business stakeholders about the art of the possible, for example, by citing use cases from industry peers.
  - (ii) Evangelize the organization on the return on investments of certain projects.
  - (iii) Present results of pilot projects and ongoing projects to sustain a high level of interest.
- (b) Formulate/Prioritize Projects
  - (i) Solicit project ideas from different business stakeholders.
  - (ii) Understand what the burning issues of the different business entities are.
  - (iii) Have a holistic problem-solving attitude.
  - (iv) Create a range of implementation scenarios from build, buy versus outsource.
- (c) Collect and Integrate Data
  - (i) Access various databases and other source systems in the application landscape.
  - (ii) Create sustainable and scalable data pipelines that can make different versions of data accessible for ongoing iterations of data science projects.
  - (iii) Define and communicate data governance to optimize data quality.
  - (iv) Catalog, document and manage different datasets, internal or external.
- (d) Prepare/Refine Data
  - (i) Code various scripting languages: SQL, Perl, Python, etc., to cleanse raw data and bring it into a usable form where relevant.
  - (ii) Appropriately vectorize (transform, convert and model) text, image, audio, machine/consumer data, time-series data and potentially geolocation or log data.
  - (iii) Perform data sampling and data aggregation, fuzzy encoding, etc.
- (e) Explore and Understand Data
  - (i) General statistical literacy.
  - (ii) Applying statistical analysis and visualization techniques.
  - (iii) Generating smart hypotheses of the underlying mechanics of the business process.
  - (iv) Having significant curiosity to learn and understand a business process to its core.
  - (v) Networking to understand which business mechanics produced the data.
  - (vi) Using various statistical and visualization tools, such as Excel, R, Python, MATLAB and SAS programming language.
- (f) Build ML Models

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- (i) Applying a wide array of machine learning models: various regression and clustering techniques, ensemble techniques (random forests, XGBoost) and time-series analysis.
  - (ii) Solving a variety of business contexts: for example, financial risk, customer journey modeling quality management, demand and supply, etc.
  - (iii) Real-world testing of ML models such as champion-challenger (A/B testing) and cross validation.
- (g) Operationalize ML Models
- (i) Understanding the data flows and sources at the business application level, and of the data necessary for the development and proper operation of models.
  - (ii) Integrating model performance management tools into the current business infrastructure.
  - (iii) Running champion-challenger (A/B tests) on production systems that analyze how the proposed ML model performs against the current methods for decision support and process automation.
  - (iv) Continuously monitoring the execution and health of models within the process environment — or at the very least providing a strong integration with the IT team in charge of the process/app operations.

### E2.11 Safety Analytics

*Schedule Guidance: Week 18 – 38 (Approximately 5 months)*

The Contractor shall be responsible for leading the detailed requirements gathering, analysis, detailed design, development, quality assurance, implementation, and operationalization of data and analytics products as it relates to Safety Analytics. This includes all features identified in the figure below, short term and medium-term outcomes as described in WWD BIA Strategy Gap Analysis Report.pptx slides 73 – 75, and the PoC plus a minimum of 3 predictive modelling solutions with variations of the dashboard/reports to be tailored across different roles across the Department.

The solution shall be delivered using the Data and Analytics Operating Model, Data and Analytics Reference Architecture, Data Governance and Data Quality Strategy, and Agile Process Design established within this engagement.

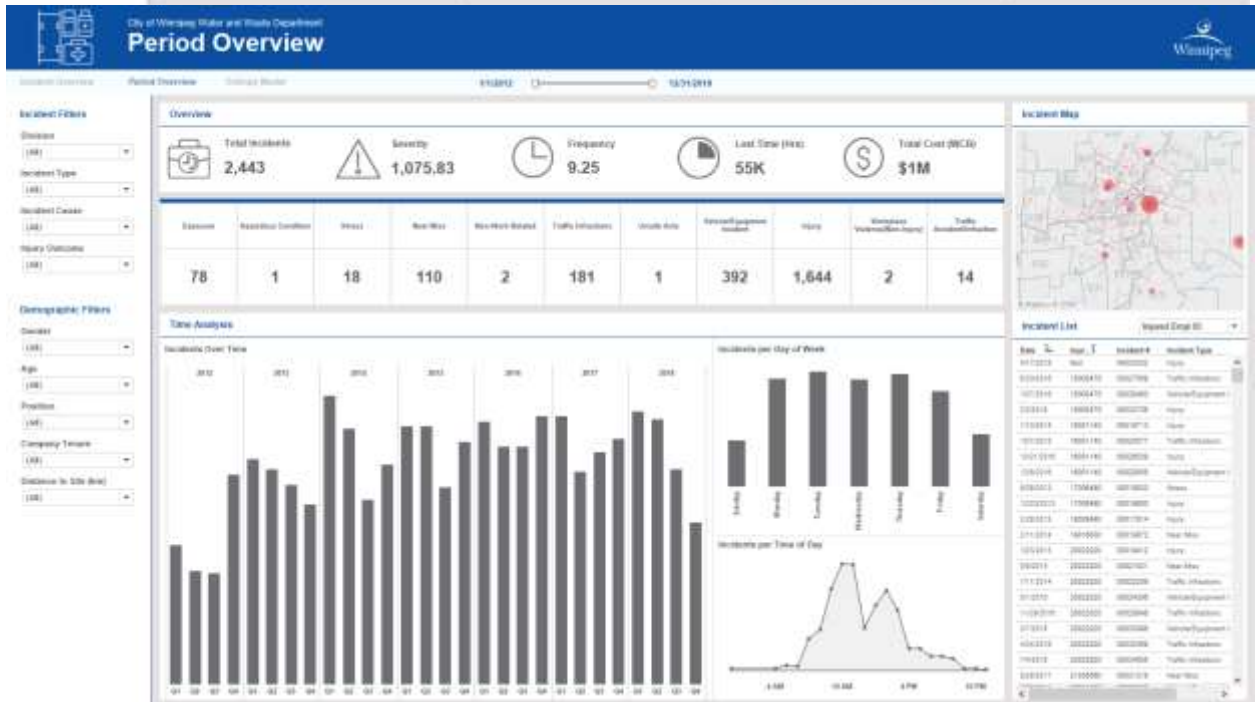
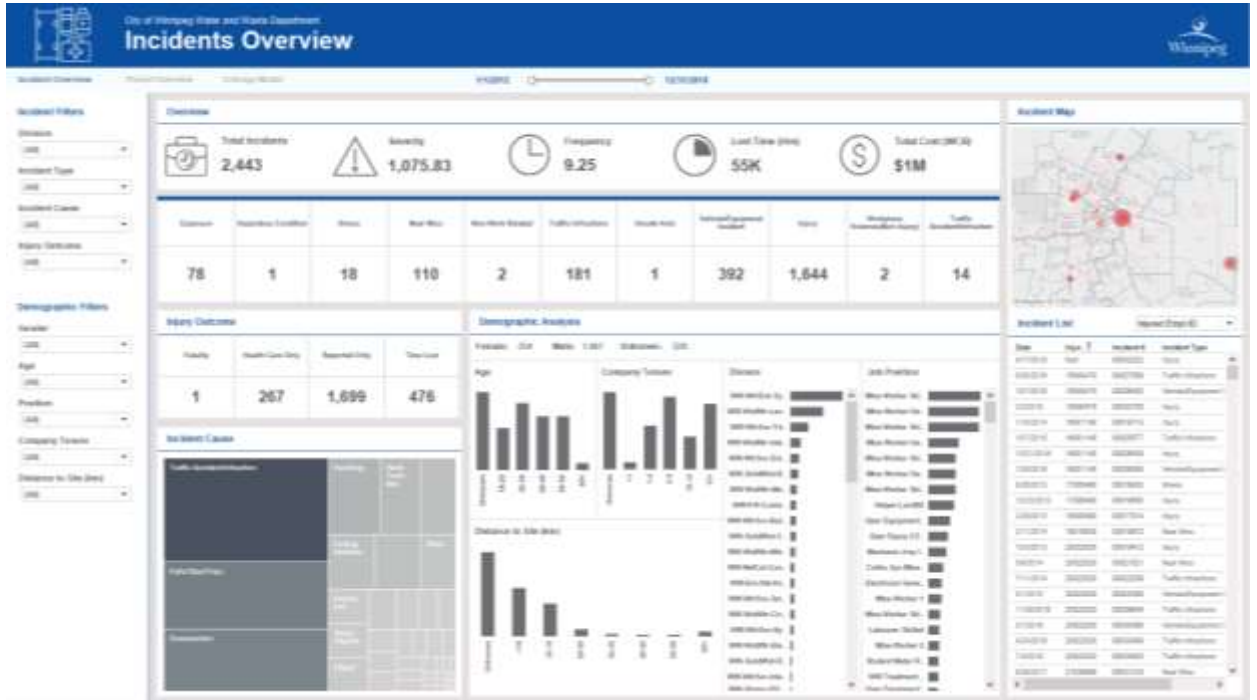
The figure below provides an overview of the key technical and business features of the use case:

Crucial Question	Objective	Key Data Sources	Data Format				Data Structure	Volume	Perceived Data Quality
			Database	Tablet	Digital	Paper			
How do we reduce incidents and injuries to improve health and safety at the workplace?	Reduce the number and frequency of injuries and other incidents to create a safer workplace.	PeopleSoft	✓				Structured	■■■■■■	★★★★
		WCB Claims Database		✓			Structured	■■■■■■	★★★★
		SmarterLI	✓				Structured	■■■	★★★
Dimensions & Measures Incidence Event, Incidence Date, Severity, Severity Score, Frequency, Cost Centre, Lost Hours, Claim Code, Training History, Certifications, Location, Action, Job Description, etc.	Reduce financial, legal, and reputational liabilities.	Job Planning			✓	✓	Semi-structured	■■■■■■	-
		Safe Work Procedures			✓		Unstructured	■	-
		Work Observations			✓	✓	Semi-structured	■■■■■■	-
		Incident Investigations			✓	✓	Semi-structured	■	★
		Safety Talks			✓	✓	Unstructured	■■■■	-
		Equipment Maintenance			✓		Structured	■	-
		Regulatory			✓	✓	Structured	■■■■	-
		Corporate Policies			✓		Unstructured	■	-
		Hazard Assessment			✓		Semi-structured	■	-

Since 2020, a number of manual/paper processes and workflows have been digitized through a number of Microsoft SharePoint-based solutions. The expectation is for the Contractor to develop solutions that leverage datasets generated from these recent solutions, as well as prepare, transform and consume historical data found in disparate source systems/processes as shown in the table above.

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A functional proof of concept (PoC) was created as part of work completed on RFP #181-2018. The PoC was created as a portable workbook with Tableau. Mock-up screenshots of each tab of the dashboard is shown below:





### Deliverable Summary

- Recreate features and functionality of PoC to the data and analytics platform including establishing the necessary integrations/data pipelines.
- Address short term and medium-term outcomes in WWD BIA Strategy Gap Analysis Report.pptx slides 73 – 75.
- Modernize styling and apply current visualization design standards.
- Ensure cross-compatibility of dashboards/reports/visualizations on mobile and desktop devices
- Create multiple versions of the dashboard based on role.
- Contractor to propose and deliver 2 predictive analytics solutions.
- Design and implement data encryption and/or data masking techniques for personal, identifiable information as directed by the City of Winnipeg.
- Contractor to provide end-user training.

### E2.12 Customer Accounts and Billing Analytics

*Schedule Guidance: Week 42 – 74 (Approximately 8 months)*

In 2019, the Department’s Oracle Utilities Customer Care and Billing (OUCCB) system version 2.2 was upgraded to 2.6. Version 2.2 supported a companion BI tool called Oracle Utilities Business Intelligence (OUBI). This BI tool is no longer supported by Oracle on OUCCB 2.6. The BI tool provided a plethora of canned internal management reports that were used by business users – four (4) of which were deemed business-critical.

Due to the discontinuation of OUBI, datasets pertinent to generating the business-critical reports were loaded into a standalone Oracle database from OUCCB 2.6 with Talend Community edition. As it pertains to the 4 business-critical reports, stored procedures, calculations, and report experience were re-engineered to mimic the reporting previously available in OUBI. These results were presented in a dynamic Excel workbook that connected to the database with an Oracle connector. This interim solution is named Accounts/Billing Business Analytics (ABBA).

The Contractor shall be responsible for leading the requirements gathering, analysis, design, development, quality assurance, implementation, and operationalization of data and analytics products as it relates to Customer Accounts and Billing Analytics. This includes modernizing the existing ABBA solution and creating additional reports as requested by the business such as rate model reporting for water, sewer, and solid waste services.

In addition, the solution shall include analytics or reports that address short term and medium-term outcomes in WWD BIA Strategy Gap Analysis Report.pptx slides 60 – 61 and the following:

- Adjustments Report.
- Bill Segment by GL Detail.
- Bill Segments Summary Report.
- Adjustment of Sewer Charges program including but not limited to: date of applications, tracking dips in consumption, detect anomalies, link to precipitation, classify type of sewer such as irrigation, historical consumption, and determination of credit to customer.

The solution shall be delivered using the Data and Analytics Operating Model, Data and Analytics Reference Architecture, Data Governance and Data Quality Strategy, and Agile Process Design established within this engagement.

#### **Deliverable Summary**

- Recreate features and functionality of ABBA to the data and analytics platform including establishing the necessary integrations/data pipelines.
- Address short term and medium-term outcomes in WWD BIA Strategy Gap Analysis Report.pptx slides 60 – 61.
- Design, develop and implement the Adjustments Report, Bill Segment by GL Detail, Bill Segments Summary Report, and Adjustment of Sewer Charges program including but not limited to: date of applications, tracking dips in consumption, detect anomalies, link to precipitation, classify type of sewer such as irrigation, historical consumption, and determination of credit to customer.
- Modernize styling and apply current visualization design standards.
- Ensure cross-compatibility of dashboards/reports/visualizations on mobile and desktop devices.
- Create multiple versions of the dashboard based on role.
- In addition, Contractor to suggest, propose and deliver 4 descriptive analytics reports and 2 predictive analytics solutions. One of the predictive analytics solutions shall include rate model forecasting for water and wastewater services.
- Design and implement data encryption and/or data masking techniques for personal, identifiable information as directed by the City of Winnipeg.
- Contractor to provide end-user training.

#### **E2.13 Water Meter Lifecycle Analytics**

*Schedule Guidance: Week 74 – 98 (Approximately 6 months)*

The Contractor shall be responsible for leading the requirements gathering, analysis, design, development, quality assurance, implementation, and operationalization of data and analytics products as it relates to Safety Analytics.

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The solution shall be delivered using the Data and Analytics Operating Model, Data and Analytics Reference Architecture, Data Governance and Data Quality Strategy, and Agile Process Design established within this engagement.

The figure below provides an overview of the key technical and business features of the use case:

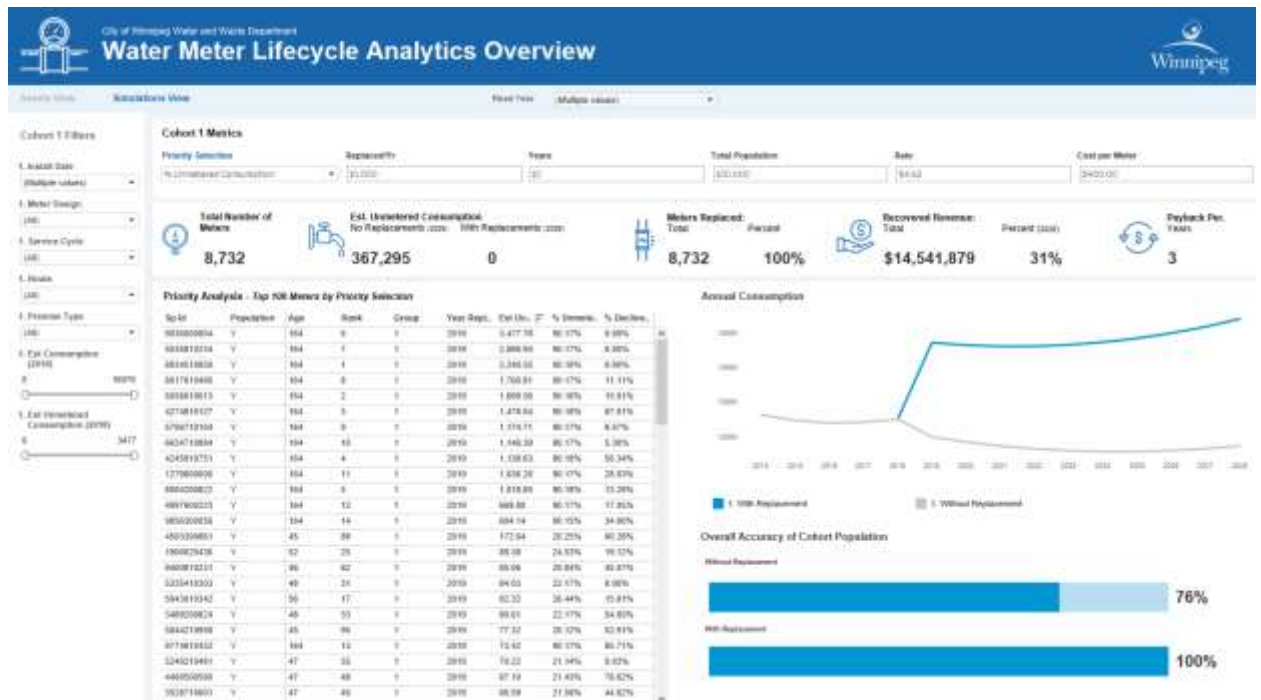
Crunchy Question	Objective	Key Data Sources	Data Format				Data Structure	Volume	Perceived Data Quality
			Database	Flatfile	Digital	Paper			
How do we optimize meter population?  Dimensions & Measures Water consumption meter read (estimated and actual), Service Point, Address, Meter Type, Meter Location, Meter Age, Read Change, etc.	Determine the optimum time to exchange a meter (i.e., weighing replacement cost against unmetered revenue)?	Oracle CCS	✓	✓	✓		Structured	██████████	★★★★
		Geomedix GIS System	✓				Structured	██████████	★★★★
		iTron PCS	✓				Structured	██████████	★★★★
		Meter Test Data			✓		Structured	██	★★★★
		Meter Maintenance Report	✓	✓	✓		Structured	██████████	★★★★

A functional proof of concept (PoC) was created as part of work completed on RFP #181-2018. The PoC was created as a portable dashboard/workbook with Tableau. Mock-up screenshots of each tab of the dashboard is shown below:





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In addition, the solution shall include analytics or reports that address short term and medium-term outcomes in WWD BIA Strategy Gap Analysis Report.pptx slides 64 – 65 and the following:

- Link meter to customer.
- Determine if customer is registered in MyUtilityBill.
- Leak detection by square footage, size of meter, age of meter and location.
- By-pass history and status (# of times a meter seal has been replaced, meter is currently by-passed).
- Distinguish between type of customer.
- Oversized meter analysis to suggest downsizing of meters.
- Consumption and revenue analysis by season, customer type (residential vs commercial), and geographical location.

The realization of benefits is dependent on data collection, and therefore, will be evaluated at month 8 and 12 post-operationalization.

### Deliverable Summary

- Recreate features and functionality of PoC to the data and analytics platform including establishing the necessary integrations/data pipelines.
- Address short term and medium-term outcomes in WWD BIA Strategy Gap Analysis Report.pptx slides 64 – 65.
- Modernize styling and apply current visualization design standards.
- Ensure cross-compatibility of dashboards/reports/visualizations on mobile and desktop devices.
- Create multiple versions of the dashboard based on role.

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- Contractor to suggest, propose and deliver an additional 3 descriptive analytics solutions and 2 predictive analytics solutions.
- Design and implement data encryption and/or data masking techniques for personal, identifiable information as directed by the City of Winnipeg.
- Contractor to provide end-user training.