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TXShare
Your Public Sector Solutions Center

MASTER SERVICES AGREEMENT #2025-018
Artificial Intelligence (AI) Solutions for Public Sector Entities

THIS MASTER SERVICES AGREEMENT ("**Agreement**"), effective the last date of signed approval ("**Effective Date**"), is entered into by and between the **North Central Texas Council of Governments** ("**NCTCOG**"), a Texas political subdivision and non-profit corporation, with offices located at 616 Six Flags Drive, Arlington, TX 76011, and

Spruce Technology, Inc. ("Contractor")
1149 Bloomfield Ave., Suite G
Clifton, NJ 07012

ARTICLE I
RETENTION OF THE CONTRACTOR

1.1 This Agreement defines the terms and conditions upon which the Contractor agrees to provide **Artificial Intelligence (AI) Solutions for Public Sector Entities** (hereinafter, "Services") to governmental entities participating in the TXShare program (hereinafter "Participating Entities"). The Contractor is being retained to provide services described below to Participating Entities based on the Contractor's demonstrated competence and requisite qualifications to perform the scope of the services described herein and in the Request for Proposals **#2025-018** (hereinafter, "RFP"). The Contractor demonstrated they have the resources, experience, and qualifications to perform the described services, which is of interest to Participating Entities and was procured via the RFP. NCTCOG agrees to and hereby does retain the Contractor, as an independent contractor, and the Contractor agrees to provide services to Participating Entities, in accordance with the terms and conditions provided in this Agreement and consistent with Contractor's response to the RFP.

ARTICLE II
SCOPE OF SERVICES

2.1 The Contractor will provide Services described in a written Purchase Order issued by NCTCOG or a SHARE Participating Entity. Any such Purchase Order is hereby incorporated by reference and made a part of this Agreement and shall be subject to the terms and conditions in this Agreement. In the event of a conflict between any term or provision in this Agreement and any term or provision in a Purchase Order, the term or provision in this Agreement shall control unless the conflicting term or provision in this Agreement is referenced, and expressly stated not to apply, in such Purchase Order.

2.2 All Services rendered under this Agreement will be performed by the Contractor: i) with due care; ii) in accordance with generally prevailing industry standards; iii) in accordance with Participating Entities' standard operating procedures and applicable policies, as may be amended from time to time; and iv) in compliance with all applicable laws, government regulatory requirements, and any other written instructions, specifications, guidelines, or requirements provided by NCTCOG and/or Participating Entities.

2.3 Any agreed-upon changes to a Purchase Order shall be set forth in a subsequent Purchase Order amendment. Contractor will not implement any changes or any new Services until a Purchase Order has been duly executed by Participating Entity. For the avoidance of doubt, the Contractor acknowledges that Participating Entity is under no obligation to execute a Purchase Order. Participating

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Entity shall not be liable for any amounts not included in a Purchase Order in the absence of a fully executed amendment of Purchase Order.

2.4 Percentage discounts for items in Appendix A represent the minimum discounts provided for each item within the category offered by the Contractor. Contractor and Participating Entity may mutually agree to a greater percentage discount for any item covered under this agreement.

2.5 **NCTCOG Obligations**

2.5.1 NCTCOG shall make available a contract page on its TXShare.org website which will include contact information for the Contractor(s).

2.6 **Participating Entity Obligations.**

2.6.1 In order to utilize the Services, Participating Entities must have executed a Master Interlocal Agreement for TXShare with NCTCOG. This agreement with the Participating Entity will define the legal relationship between NCTCOG and the Participating Entity.

2.6.2 In order to utilize the Services, Participating Entities must execute a Purchase Order with the Contractor. This agreement with the Participating Entity will define the Services and costs that the Participating Entity desires to have implemented by the Contractor.

2.7 **Contractor Obligations.**

2.7.1 Contractor must be able to deliver, perform, install, and implement services with the requirements and intent of RFP #**2025-018.**

2.7.2 If applicable, Contractor shall provide all necessary material, labor and management required to perform this work. The scope of services shall include, but not be limited to, items listed in Appendix A.

2.7.3 Contractor agrees to market and promote the use of the SHARE awarded contract whenever possible among its current and solicited customer base. Contractor shall agree to follow reporting requirements in report sales made under this Master Services Agreement in accordance with Section 4.2.

ARTICLE III
TERM

3.1 This Agreement will commence on the Effective Date and remain in effect for an initial term ending on May 31, 2027 (the "**Term**"), unless earlier terminated as provided herein. This Agreement will automatically be renewed, unless NCTCOG explicitly desires otherwise, for up to three (3) additional one (1) year terms through May 31, 2030.

3.2 **Termination.** NCTCOG and/or Participating Entities may terminate this Agreement and/or any Purchase Order to which it is a signatory at any time, with or without cause, upon thirty (30) days' prior written notice to Contractor. Upon its receipt of notice of termination of this Agreement or Purchase Order, Contractor shall follow any instructions of NCTCOG respecting work stoppage. Contractor shall cooperate with NCTCOG and/or Participating Entities to provide for an orderly conclusion of the Services. Contractor shall use its best efforts to minimize the amount of any non-cancelable obligations and shall assign any contracts related thereto to NCTCOG or Participating Entity at its request. If NCTCOG or Participating Entity elects to continue any activities underlying a terminated Purchase Order after termination, Contractor shall cooperate with NCTCOG or Participating Entity to provide for an orderly transfer of Contractor's responsibilities with respect to such Purchase Order to NCTCOG or Participating Entity. Upon the effective date of any such termination, the Contractor shall submit a final invoice for payment in accordance with Article IV, and NCTCOG or Participating Entity shall pay such amounts as are due to Contractor through the effective date of termination. NCTCOG or Participating Entity shall only be liable for payment of services rendered before the effective date of termination. If Agreement is terminated, certain reporting requirements identified in this Agreement shall survive termination of this Agreement.

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3.2.1 Termination for Convenience: Either party may terminate the agreement for its convenience in whole or in part at any time without cause, upon 30 days written notice. Upon termination for convenience, the contractor will be entitled to payment for goods or services satisfactorily performed or delivered.

3.2.2 Termination for Cause: Either party may immediately terminate this Agreement if the other party breaches its obligations specified within this Agreement, and, where capable of remedy, such breach has not been materially cured within thirty (30) days of the breaching party's receipt of written notice describing the breach in reasonable detail.

3.2.3 Termination for Breach: Upon any material breach of this Agreement by either party, the non-breaching party may terminate this Agreement upon twenty (20) days written notice to the breaching party. The notice shall become effective at the end of the twenty (20) day period unless the breaching party cures such breach within such period.

ARTICLE IV
COMPENSATION

4.1 **Invoices.** Contractor shall submit an invoice to the ordering Participating Entity upon receipt of an executed Purchase Order and after completion of the work, with Net 30 payment terms. Costs incurred prior to execution of this Agreement are not eligible for reimbursement. There shall be no obligation whatsoever to pay for performance of this Agreement from the monies of the NCTCOG or Participating Entities, other than from the monies designated for this Agreement and/or executed Purchase Order. Contractor expressly agrees that NCTCOG shall not be liable, financial or otherwise, for Services provided to Participating Entities.

4.2 **Reporting.** NCTCOG intends to make this Agreement available to other governmental entities through its TXShare cooperative purchasing program. NCTCOG has contracted Civic Marketplace as a digital marketplace for selected TXShare awarded contracts and to serve as NCTCOG's collector of reports and remunerative fees referenced in Section 5.2 of the Master Services Agreement. Unless otherwise directed in writing by NCTCOG, Contractor shall submit to Civic Marketplace on a calendar quarterly basis a report that identifies any new client Participating Entities, the date(s) and order number(s), and the total contracted value of service(s) that each Participating Entity has purchased and paid in full under this Master Service Agreement. Reporting and invoices should be submitted to:

Civic Marketplace, Inc.
6502 Glen Abbey
Abilene, TX 79606
Email: support@civicmarketplace.com

ARTICLE V
SERVICE FEE

5.1 **Explanation.** NCTCOG will make this Master Service Agreement available to other governmental entities, Participating Entities, and non-profit agencies in Texas and the rest of the United States through its SHARE cooperative purchasing program. The Contractor is able to market the Services under this Agreement to any Participating Entity with emphasis that competitive solicitation is not required when the Participating Entity purchases off of a cooperative purchasing program such as SHARE. However, each Participating Entity will make the decision that it feels is in compliance with its own purchasing requirements. The Contractor realizes substantial efficiencies through their ability to offer pricing through the SHARE Cooperative and that will increase the sales opportunities as well as reduce the need to repeatedly respond to Participating Entities' Requests for Proposals. From these efficiencies, Contractor will pay an administrative fee to SHARE calculated as a percentage of sales processed through the SHARE Master Services Agreement. This administrative fee is not an added cost to SHARE participants. This administrative fee covers the costs of solicitation of the contract, marketing and facilitation, as well as offsets expenses incurred by SHARE.

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5.2 **Administrative Fee.** NCTCOG will utilize an administrative fee, in the form of a percent of cost that will apply to all contracts between awarded contractor and NCTCOG or participants resulting from this solicitation. The administrative fee will be remitted by the contractor to Civic Marketplace on a quarterly basis, along with required quarterly reporting. The remuneration fee for this program will be 2.5% on sales.

5.3 **Setup and Implementation.** NCTCOG will provide instruction and guidance as needed to the Contractor to assist in maximizing mutual benefits from marketing these Services through the SHARE purchasing program.

ARTICLE VI
RELATIONSHIP BETWEEN THE PARTIES

6.1 **Contractual Relationship.** It is understood and agreed that the relationship described in this Agreement between the Parties is contractual in nature and is not to be construed to create a partnership or joint venture or agency relationship between the parties. Neither party shall have the right to act on behalf of the other except as expressly set forth in this Agreement. Contractor will be solely responsible for and will pay all taxes related to the receipt of payments hereunder and shall give reasonable proof and supporting documents, if reasonably requested, to verify the payment of such taxes. No Contractor personnel shall obtain the status of or otherwise be considered an employee of NCTCOG or Participating Entity by virtue of their activities under this Agreement.

ARTICLE VII
REPRESENTATION AND WARRANTIES

7.1 **Representations and Warranties**. Contractor represents and warrants that:

7.1.1 As of the Effective Date of this Agreement, it is not a party to any oral or written contract or understanding with any third party that is inconsistent with this Agreement and/or would affect the Contractor's performance under this Agreement; or that will in any way limit or conflict with its ability to fulfill the terms of this Agreement. The Contractor further represents that it will not enter into any such agreement during the Term of this Agreement;

7.1.2 NCTCOG is prohibited from making any award or permitting any award at any tier to any party which is debarred or suspended or otherwise excluded from, or ineligible for, participation in federal assistance programs under Executive Order 12549, Debarment and Suspension. Contractor and its subcontractors shall include a statement of compliance with Federal and State Debarment and suspension regulations in all Third-party contracts.

7.1.3 Contractor shall notify NCTCOG if Contractor or any of the Contractor's sub-contractors becomes debarred or suspended during the performance of this Agreement. Debarment or suspension of the Contractor or any of Contractor's sub-contractors may result in immediate termination of this Agreement.

7.1.4 Contractor and its employees and sub-contractors have all necessary qualifications, licenses, permits, and/or registrations to perform the Services in accordance with the terms and conditions of this Agreement, and at all times during the Term, all such qualifications, licenses, permits, and/or registrations shall be current and in good standing.

7.1.5 Contractor shall, and shall cause its representatives to, comply with all municipal, state, and federal laws, rules, and regulations applicable to the performance of the Contractor's obligations under this Agreement.

ARTICLE VIII
CONFIDENTIAL INFORMATION AND OWNERSHIP

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8.1 **Confidential Information.** Contractor acknowledges that any information it or its employees, agents, or subcontractors obtain regarding the operation of NCTCOG or Participating Entities, its products, services, policies, customer, personnel, and other aspect of its operation ("Confidential Information") is proprietary and confidential, and shall not be revealed, sold, exchanged, traded, or disclosed to any person, company, or other entity during the period of the Contractor's retention hereunder or at any time thereafter without the express written permission of NCTCOG or Participating Entity.

Notwithstanding anything in this Agreement to the contrary, Contractor shall have no obligation of confidentiality with respect to information that (i) is or becomes part of the public domain through no act or omission of Contractor; (ii) was in Contractor's lawful possession prior to the disclosure and had not been obtained by Contractor either directly or indirectly from the NCTCOG or Participating Entity; (iii) is lawfully disclosed to Contractor by a third party without restriction on disclosure; (iv) is independently developed by Contractor without use of or reference to the NCTCOG's Participating Entity's Confidential Information; or (v) is required to be disclosed by law or judicial, arbitral or governmental order or process, provided Contractor gives the NCTCOG or Participating Entity prompt written notice of such requirement to permit the NCTCOG or Participating Entity to seek a protective order or other appropriate relief. Contractor acknowledges that NCTCOG and Participating Entities must strictly comply with applicable public information laws, in responding to any request for public information. This obligation supersedes any conflicting provisions of this Agreement.

8.2 **Ownership.** No title or ownership rights to any applicable software are transferred to the NCTCOG by this agreement. The Contractor and its suppliers retain all right, title and interest, including all copyright and intellectual property rights, in and to, the software (as an independent work and as an underlying work serving as a basis for any improvements, modifications, derivative works, and applications NCTCOG may develop), and all copies thereof. All final documents, data, reports, information, or materials are and shall at all times be and remain, upon payment of Contractor's invoices therefore, the property of NCTCOG or Participating Entity and shall not be subject to any restriction or limitation on their future use by, or on behalf of, NCTCOG or Participating Entity, except otherwise provided herein. Subject to the foregoing exception, if at any time demand be made by NCTCOG or Participating Entity for any documentation related to this Agreement and/or applicable Purchase Orders for the NCTCOG and/or any Participating Entity, whether after termination of this Agreement of otherwise, the same shall be turned over to NCTCOG without delay, and in no event later than thirty (30) days after such demand is made. Contractor shall have the right to retain copies of documentation, and other items for its archives. If for any reason the foregoing Agreement regarding the ownership of documentation is determined to be unenforceable, either in whole or in part, the Contractor hereby assigns and agrees to assign to NCTCOG all rights, title, and interest that the Contractor may have or at any time acquire in said documentation and other materials, provided that the Contractor has been paid the aforesaid.

ARTICLE IX
GENERAL PROVISIONS

9.1 **Notices.** All notices from one Party to another Party regarding this Agreement shall be in writing and delivered to the addresses shown below:

If to NCTCOG:

North Central Texas Council of Governments
P.O. Box 5888
Arlington, TX 76005-5888
Attn: Purchasing Agent
Phone Number: 817-704-5674
elittrell@nctcog.org

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If to Contractor: **Spruce Technology, Inc.**
Attn: Kristen Mazza
1149 Bloomfield Ave., Suite G
Clifton, NJ 07012
Phone: 862-225-9302
Email: kmazza@sprucetech.com

The above contact information may be modified without requiring an amendment to the Agreement.

9.2 **Tax.** NCTCOG and several participating entities are exempt from Texas limited sales, federal excise and use tax, and does not pay tax on purchase, rental, or lease of tangible personal property for the organization's use. A tax exemption certificate will be issued upon request.

9.3 **Indemnification.** Contractor shall defend, indemnify, and hold harmless NCTCOG and Participating Entities, NCTCOG's affiliates, and any of their respective directors, officers, employees, agents, subcontractors, successors, and assigns from any and all suits, actions, claims, demands, judgments, liabilities, losses, damages, costs, and expenses (including reasonable attorneys' fees and court costs) (collectively, "Losses") arising out of or relating to: (i) Services performed and carried out pursuant to this Agreement; (ii) breach of any obligation, warranty, or representation in this Agreement, (iii) the negligence or willful misconduct of Contractor and/or its employees or subcontractors; or (iv) any infringement, misappropriation, or violation by Contractor and/or its employees or subcontractors of any right of a third party; provided, however, that Contractor shall have no obligation to defend, indemnify, or hold harmless to the extent any Losses are the result of NCTCOG's or Participating Entities' gross negligence or willful misconduct.

9.4 **Limitation of Liability.** In no event shall either party be liable for special, consequential, incidental, indirect or punitive loss, damages or expenses arising out of or relating to this Agreement, whether arising from a breach of contract or warranty, or arising in tort, strict liability, by statute or otherwise, even if it has been advised of their possible existence or if such loss, damages or expenses were reasonably foreseeable.

Notwithstanding any provision hereof to the contrary, neither party's liability shall be limited by this Article with respect to claims arising from breach of any confidentiality obligation, arising from such party's infringement of the other party's intellectual property rights, covered by any express indemnity obligation of such party hereunder, arising from or with respect to injuries to persons or damages to tangible property, or arising out of the gross negligence or willful misconduct of the party or its employees.

9.5 **Insurance.** At all times during the term of this Agreement, Contractor shall procure, pay for, and maintain, with approved insurance carriers, the minimum insurance requirements set forth below, unless otherwise agreed in a Purchase Order between Contractor and Participating Entities. Further, Contractor shall require all contractors and sub-contractors performing work for which the same liabilities may apply under this Agreement to do likewise. All subcontractors performing work for which the same liabilities may apply under this contract shall be required to do likewise. Contractor may cause the insurance to be effected in whole or in part by the contractors or sub-contractors under their contracts. NCTCOG reserves the right to waive or modify insurance requirements at its sole discretion.

9.5.1 Workers' Compensation: Statutory limits and employer's liability of $100,000 for each accident or disease.

9.5.2 Commercial General Liability:

9.5.2.1 Required Limits:

$1,000,000 per occurrence;
$3,000,000 Annual Aggregate

9.5.2.2 Commercial General Liability policy shall include:

9.5.2.2.1 Coverage A: Bodily injury and property damage;

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9.5.2.2.2 Coverage B: Personal and Advertising Injury liability;
9.5.2.2.3 Coverage C: Medical Payments;
9.5.2.2.4 Products: Completed Operations;
9.5.2.2.5 Fire Legal Liability;

9.5.2.3 Policy coverage must be on an "occurrence" basis using CGL forms as approved by the Texas State Board of Insurance.

9.5.3 Business Auto Liability: Coverage shall be provided for all owned hired, and non-owned vehicles. Required Limit: $1,000,000 combined single limit each accident.

9.5.4 Professional Errors and Omissions liability:
9.5.4.1 Required Limits:
$1,000,000 Each Claim
$1,000,000 Annual Aggregate

9.6 **Conflict of Interest.** During the term of this Agreement, and all extensions hereto and for a period of one (1) year thereafter, neither party, shall, without the prior written consent of the other, directly or indirectly, whether for its own account or with any other persons or entity whatsoever, employ, solicit to employ or endeavor to entice away any person who is employed by the other party.

9.7 **Force Majeure.** It is expressly understood and agreed by both parties to this Agreement that, if the performance of any provision of this Agreement is delayed by force majeure, defined as reason of war, civil commotion, act of God, governmental restriction, regulation or interference, fire, explosion, hurricane, flood, failure of transportation, court injunction, or any circumstances which are reasonably beyond the control of the party obligated or permitted under the terms of this Agreement to do or perform the same, regardless of whether any such circumstance is similar to any of those enumerated herein, the party so obligated or permitted shall be excused from doing or performing the same during such period of delay, so that the period of time applicable to such requirement shall be extended for a period of time equal to the period of time such party was delayed. Each party must inform the other in writing within a reasonable time of the existence of such force majeure.

9.8 **Ability to Perform.** Contractor agrees promptly to inform NCTCOG of any event or change in circumstances which may reasonably be expected to negatively affect the Contractor's ability to perform its obligations under this Agreement in the manner contemplated by the parties.

9.9 **Availability of Funding.** This Agreement and all claims, suits, or obligations arising under or related to this Agreement are subject to and limited by the receipt and availability of funds which are received from the Participating Entities by NCTCOG dedicated for the purposes of this Agreement.

9.10 **Governing Law.** This Agreement will be governed by and construed in accordance with the laws of the State of Texas, United States of America. The mandatory and exclusive venue for the adjudication or resolution of any dispute arising out of this Agreement shall be in Tarrant County, Texas.

9.11 **Waiver.** Failure by either party to insist on strict adherence to any one or more of the terms or conditions of this Agreement, or on one or more occasions, will not be construed as a waiver, nor deprive that party of the right to require strict compliance with the same thereafter.

9.12 **Entire Agreement.** This Agreement and any attachments/addendums, as provided herein, constitutes the entire agreement of the parties and supersedes all other agreements, discussions, representations or understandings between the parties with respect to the subject matter hereof. No amendments hereto, or waivers or releases of obligations hereunder, shall be effective unless agreed to in writing by the parties hereto.

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9.13 **Assignment.** This Agreement may not be assigned by either Party without the prior written consent of the other Party.

9.14 **Severability.** In the event any one or more of the provisions contained in this Agreement shall for any reason be held to be invalid, illegal, or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision(s) hereof, and this Agreement shall be revised so as to cure such invalid, illegal, or unenforceable provision(s) to carry out as near as possible the original intents of the Parties.

9.15 **Amendments.** This Agreement may be amended only by a written amendment executed by both Parties, except that any alterations, additions, or deletions to the terms of this Agreement, which are required by changes in Federal and State law or regulations or required by the funding source, are automatically incorporated into this Agreement without written amendment hereto and shall become effective on the date designated by such law or regulation.

9.16 **Dispute Resolution.** The parties to this Agreement agree to the extent possible and not in contravention of any applicable State or Federal law or procedure established for dispute resolution, to attempt to resolve any dispute between them regarding this Agreement informally through voluntary mediation, arbitration or any other local dispute mediation process, including but not limited to dispute resolution policies of NCTCOG, before resorting to litigation.

9.17 **Publicity.** Contractor shall not issue any press release or make any statement to the media with respect to this Agreement or the services provided hereunder without the prior written consent of NCTCOG.

9.18 **Survival.** Rights and obligations under this Agreement which by their nature should survive will remain in effect after termination or expiration hereof.

ARTICLE X
ADDITIONAL REQUIREMENTS

10.1 **Equal Employment Opportunity**. Contractor shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, sexual orientation, gender identity, or national origin. Contractor shall take affirmative actions to ensure that applicants are employed, and that employees are treated, during their employment, without regard to their race, religion, color, sex, sexual orientation, gender identity, or national origin. Such actions shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

10.2 **Davis-Bacon Act.** Contractor agrees to comply with all applicable provisions of 40 USC § 3141 – 3148.

10.3 **Contract Work Hours and Selection Standards.** Contractor agrees to comply with all applicable provisions of 40 USC § 3701 – 3708 to the extent this Agreement indicates any employment of mechanics or laborers.

10.4 **Rights to Invention Made Under Contract or Agreement.** Contractor agrees to comply with all applicable provisions of 37 CFR Part 401.

10.5 **Clean Air Act, Federal Water Pollution Control Act, and Energy Policy Conservation Act.** Contractor agrees to comply with all applicable provisions of the Clean Air Act under 42 USC § 7401 – 7671, the Energy Federal Water Pollution Control Act 33 USC § 1251 – 1387, and the Energy Policy Conservation Act under 42 USC § 6201.

10.6 **Debarment/Suspension.** Contractor is prohibited from making any award or permitting any award at any tier to any party which is debarred or suspended or otherwise excluded from or ineligible for

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participation in federal assistance programs under Executive Order 12549, Debarment and Suspension. Contractor and its subcontractors shall comply with the Certification Requirements for Recipients of Grants and Cooperative Agreements Regarding Debarments and Suspensions.

10.7 **Restrictions on Lobbying.** CONTRACTOR agrees to comply with all applicable provisions of 2 CFR §200.450. CONTRACTOR shall include a statement of compliance with the Lobbying Certification and Disclosure of Lobbying Activities in procurement solicitations exceeding $100,000. Lobbying Certification and Disclosure of Lobbying Activities shall be completed by subcontractors and included in subcontractor contracts, as applicable. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. See Appendix C.

10.8 **Procurement of Recovered Materials**. Contractor agrees to comply with all applicable provisions of 2 CFR §200.322.

10.9 **Drug-Free Workplace.** Contractor shall provide a drug free work place in compliance with the Drug Free Work Place Act of 1988.

10.10 **Texas Corporate Franchise Tax Certification.** Pursuant to Article 2.45, Texas Business Corporation Act, state agencies may not contract with for profit corporations that are delinquent in making state franchise tax payments.

10.11 **Civil Rights Compliance**

Compliance with Regulations: Contractor will comply with the Acts and the Regulations relative to Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation (USDOT), the Federal Highway Administration (FHWA), as they may be amended from time to time, which are herein incorporated by reference and made part of this agreement.

Nondiscrimination: Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, sex, or national origin in the selection and retention of subcontractors, including procurement of materials and leases of equipment. Contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 45 CFR Part 21.

Solicitations for Subcontracts, Including Procurement of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by Contractor for work to be performed under a subcontract, including procurement of materials or leases of equipment, each potential subcontractor or supplier will be notified by Contractor of obligations under this contract and the Acts and Regulations relative to Nondiscrimination on the grounds of race, color, sex, or national origin.

Information and Reports: Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto, and will permit access to its books, records, accounts, other sources of information, and facilities as may be determined by the State or the FHWA to be pertinent to ascertain compliance with such Acts, Regulations or directives. Where any information required of Contractor is in the exclusive possession of another who fails or refuses to furnish this information, Contractor will so certify to NCTCOG, the Texas Department of Transportation ("the State") or the Federal Highway Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

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Sanctions for Noncompliance: In the event of Contractor's noncompliance with the Nondiscrimination provisions of this Agreement, NCTCOG will impose such sanctions as it or the State or the FHWA may determine to be appropriate, including, but not limited to: withholding of payments to the Contractor under this Agreement until the Contractor compiles and/or cancelling, terminating or suspension of this Agreement, in whole or in part.

Incorporation of Provisions: Contractor will include the provisions of the paragraphs listed above, in this section 10.11, in every subcontract, including procurement of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. Contractor will take such action with respect to any subcontract or procurement as NCTCOG, the State, or the FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier because of such direction, Contractor may request the State to enter into such litigation to protect the interests of the State. In addition, Contractor may request the United States to enter into such litigation to protect the interests of the United States.

10.12 **Disadvantaged Business Enterprise Program Requirements**

Contractor shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of any U.S. Department of Transportation (DOT)-assisted contract or in the administration of its DBE program or the requirements of 49 CFR Part 26. Contractor shall take all necessary and reasonable steps under 49 CFR Part 26 to ensure non-discrimination in award and administration of DOT-assisted contracts. Each sub-award or sub-contract must include the following assurance: *The Contractor, sub-recipient, or sub-contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Agreement. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this agreement, which may result in the termination of this agreement or such other remedy as the recipient deems appropriate*.

10.13 **Pertinent Non-Discrimination Authorities**

During the performance of this Agreement, Contractor, for itself, its assignees, and successors in interest agree to comply with the following nondiscrimination statutes and authorities; including but not limited to:

a. Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
b. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects).
c. Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), as amended, (prohibits discrimination on the basis of sex).
d. Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.) as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27.
e. The Age Discrimination Act of 1975, as amended, (49 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age).
f. Airport and Airway Improvement Act of 1982, (49 U.S.C. Chapter 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex).
g. The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, subrecipients and contractors, whether such programs or activities are Federally funded or not).
h. Titles II and III of the Americans with Disabilities Act, which prohibits discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38.

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i. The Federal Aviation Administration's Nondiscrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex).
j. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations.
k. Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, the parties must take reasonable steps to ensure that LEP persons have meaningful access to the programs (70 Fed. Reg. at 74087 to 74100).
i. Title IX of the Education Amendments of 1972, as amended, which prohibits the parties from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq.).

10.14 **Ineligibility to Receive State Grants or Loans, or Receive Payment on State Contracts**
In accordance with Section 231.006 of the Texas Family Code, a child support obligor who is more than thirty (30) days delinquent in paying child support and a business entity in which the obligor is a sole proprietor, partner, shareholder, or owner with an ownership interest of at least twenty-five (25) percent is not eligible to:

a. Receive payments from state funds under a contract to provide property, materials or services; or
b. Receive a state-funded grant or loan.

By signing this Agreement, the Contractor certifies compliance with this provision.

10.15 **House Bill 89 Certification**
If contractor is required to make a certification pursuant to Section 2270.002 of the Texas Government Code, contractor certifies that contractor does not boycott Israel and will not boycott Israel during the term of the contract resulting from this solicitation. If contractor does not make that certification, contractor state in the space below why the certification is not required.

_____
_____

10.16 **Certification Regarding Disclosure of Conflict of Interest**.
The undersigned certifies that, to the best of his or her knowledge or belief, that:

"No employee of the contractor, no member of the contractor's governing board or body, and no person who exercises any functions or responsibilities in the review or approval of the undertaking or carrying out of this contract shall participate in any decision relating to this contract which affects his/her personal pecuniary interest.

Executives and employees of contractor shall be particularly aware of the varying degrees of influence that can be exerted by personal friends and associates and, in administering the contract, shall exercise due diligence to avoid situations which give rise to an assertion that favorable treatment is being granted to friends and associates. When it is in the public interest for the contractor to conduct business with a friend or associate of an executive or employee of the contractor, an elected official in the area or a member of the North Central Texas Council of Governments, a permanent record of the transaction shall be retained.

Any executive or employee of the contractor, an elected official in the area or a member of the NCTCOG, shall not solicit or accept money or any other consideration from a third person, for the performance of an act reimbursed in whole or part by contractor or Department. Supplies, tools, materials, equipment or services purchased with contract funds shall be used solely for purposes allowed under this contract. No member of the NCTCOG shall cast a vote on the provision of services by that member (or any organization which that member represents) or vote on any matter

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which would provide a direct or indirect financial benefit to the member or any business or organization which the member directly represents."

No officer, employee or paid consultant of the contractor is a member of the NCTCOG.

No officer, manager or paid consultant of the contractor is married to a member of the NCTCOG.

No member of NCTCOG directly owns, controls or has interest in the contractor.

The contractor has disclosed any interest, fact, or circumstance that does or may present a potential conflict of interest.

No member of the NCTCOG receives compensation from the contractor for lobbying activities as defined in Chapter 305 of the Texas Government Code.
Should the contractor fail to abide by the foregoing covenants and affirmations regarding conflict of interest, the contractor shall not be entitled to the recovery of any costs or expenses incurred in relation to the contract and shall immediately refund to the North Central Texas Council of Governments any fees or expenses that may have been paid under this contract and shall further be liable for any other costs incurred or damages sustained by the NCTCOG as it relates to this contract.

10.17 **Certification of Fair Business Practices**
That the submitter affirms that the submitter has not been found guilty of unfair business practices in a judicial or state agency administrative proceeding during the preceding year. The submitter further affirms that no officer of the submitter has served as an officer of any company found guilty of unfair business practices in a judicial or state agency administrative during the preceding year.

10.18 **Certification of Good Standing Texas Corporate Franchise Tax Certification**
Pursuant to Article 2.45, Texas Business Corporation Act, state agencies may not contract with for profit corporations that are delinquent in making state franchise tax payments. The undersigned authorized representative of the corporation making the offer herein certified that the following indicated Proposal is true and correct and that the undersigned understands that making a false Proposal is a material breach of contract and is grounds for contract cancellation.

10.19 **Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment.**
Pursuant to Public Law 115-232, Section 889, and 2 Code of Federal Regulations (CFR) Part 200, including §200.216 and §200.471, NCTCOG is prohibited from using federal funds to procure, contract with entities who use, or extend contracts with entities who use certain telecommunications and video surveillance equipment or services provided by certain Chinese controlled entities. The Contractor agrees that it is not providing NCTCOG with or using telecommunications and video surveillance equipment and services as prohibited by 2 CFR §200.216 and §200.471. Contractor shall certify its compliance through execution of the "Prohibited Telecommunications and Video Surveillance Services or Equipment Certification," which is included as Appendix D of this Contract. The Contractor shall pass these requirements down to any of its subcontractors funded under this Agreement. The Contractor shall notify NCTCOG if the Contractor cannot comply with the prohibition during the performance of this Contract.

10.20 **Discrimination Against Firearms Entities or Firearms Trade Associations**
Pursuant to Texas Local Government Code Chapter 2274, Subtitle F, Title 10, prohibiting contracts with companies who discriminate against firearm and ammunition industries. NCTCOG is prohibited from contracting with entities, or extend contracts with entities who have practice, guidance, or directive that discriminates against a firearm entity or firearm trade association. Contractor shall certify its compliance through execution of the "Discrimination Against Firearms Entities or Firearms Trade Associations Certification," which is included as Appendix D of this Contract. The Contractor shall pass these requirements down to any of its subcontractors funded under this Agreement. The Contractor shall notify NCTCOG if the Contractor cannot comply with the prohibition during the performance of this Contract.

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10.21 **Boycotting of Certain Energy Companies**

Pursuant to Texas Local Government Code Chapter 2274, Subtitle F, Title 10, prohibiting contracts with companies who boycott certain energy companies. NCTCOG is prohibited from contracting with entities or extend contracts with entities that boycott energy companies. Contractor shall certify its compliance through execution of the "Boycotting of Certain Energy Companies Certification," which is included as Appendix D of this Contract. The Contractor shall pass these requirements down to any of its subcontractors funded under this Agreement. The Contractor shall notify NCTCOG if the Contractor cannot comply with the prohibition during the performance of this Contract.

10.22 **Domestic Preference for Procurements**

As appropriate and to the extent consistent with law, the CONTRACTOR should, to the greatest extent practicable, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). Consistent with §200.322,the following items shall be defined as: "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States. "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

10.23 **Trafficking in Persons**

Contractor agrees to comply with all applicable provisions of 2 CFR §175.15. NCTCOG, the Contractor, and its subcontractors are prohibited from (i) engaging in severe forms of trafficking in persons during the period of time that the award is in effect; (ii) procure a commercial sex act during the period of time that the award is in effect; (iii) use forced labor in the performance of the award or subawards under the award. The Federal award agency may unilaterally terminate the award, without penalty, if the Contractor (i) is determined to have violated an applicable prohibition; (ii) has an employee who is determined by the agency officially authorized to terminate the award to have violated an applicable prohibition of this award term. NCTCOG must notify the Federal award agency immediately if any information received from the Contractor indicates a violation of the applicable prohibitions.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the Effective Date.

Spruce Technology, Inc.

Signed by:
Cs. Banyai
9BFE439616C24F9...

9/17/2025

Signature Date

Csilla Banya

Printed Name

VP General Administration & HR

Title

North Central Texas Council of Governments

Signed by:
Todd Little
349D83294E7946E...

9/18/2025

Signature Date

Todd Little
Executive Director

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APPENDIX A
Statement of Work

The Contractor agrees to provide AI Solutions in accordance with the scope of work outlined in Request for Proposal (RFP) No. 2025-018, and as further detailed in the Contractor's technical response, which is incorporated herein and made a part of this Statement of Work.

1. The Contractor shall be responsible for the design, development, deployment, and ongoing support of customized Artificial Intelligence (AI) solutions. These solutions must:
    a. Address and solve specified operational and strategic challenges.
    b. Integrate seamlessly with existing agency systems and databases.
    c. Be intuitive, user-friendly, and accessible to a broad range of stakeholders.
    d. Include end-user training, system documentation, and ongoing support for staff.
    e. Provide ongoing maintenance, upgrades, and compliance assurance with applicable data security and privacy standards.
    f. Ensure data security and privacy compliance in alignment with state and federal regulations.
2. Technical Requirements
    The Contractor shall ensure that all AI solutions meet the following technical specifications:
    a. Scalability: Must support growth in both data volume and user interaction without degradation of performance.
    b. System Integration: Solutions must integrate with existing platforms.
    c. Security frameworks: MDM, IAM, SIEM, and related infrastructure
    d. Real-Time Analytics: Must provide real-time data analysis and reporting.
    e. Data Security & Privacy Compliance: Adherence to standards such as GDPR, HIPAA, and CCPA are required.
    f. Natural Language Processing (NLP): Advanced NLP capabilities must be embedded to support diverse and accurate user interactions.
    g. Accuracy & Validation: Contractor must demonstrate and maintain a high level of system accuracy and describe methods for validation and quality assurance.
    h. Algorithm Transparency: Solutions must include clear documentation of AI algorithms, approaches to mitigating bias, validation processes, and explainability.
    i. Continuous Improvement: Solutions must include features for ongoing learning, with mechanisms to incorporate feedback and improve performance over time.
    j. Interoperability: AI systems must comply with open standards and be capable of integrating with current and future digital infrastructure.
    k. Quality Control: Contractor shall maintain rigorous quality control protocols to ensure consistent and reliable system performance.
3. Data Governance
    The Contractor must implement the following data governance practices:
    a. Data Integrity and Accuracy: Ensure reliable data quality through lifecycle validation checks and automated error correction.
    b. Data Privacy Compliance: Adhere to all relevant privacy laws. Implement data anonymization and pseudonymization as needed and obtain/document user consent for data collection and use.
    c. Access Controls: Implement role-based access controls and multi-factor authentication (MFA) for all sensitive data access.
    d. Data Retention and Disposal: Define and adhere to policies for secure data retention and disposal.
    e. Data Auditing and Monitoring: Regular auditing must be conducted, and access/modification logs must be maintained and made available upon request.
4. Cybersecurity Requirements
    The Contractor shall maintain strong cybersecurity practices throughout the contract period:
    a. Threat Detection & Response: Deploy AI-based threat detection tools. Define incident response plans and test them regularly.
    b. Encryption: Utilize end-to-end encryption (AES-256, RSA-2048, etc.) for both data in transit and at rest.

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c. Vulnerability Management: Perform regular security assessments and penetration testing. Patch vulnerabilities promptly.
d. Security Governance Framework: Establish and follow a documented governance model with defined policies, controls, and responsibilities.
e. Risk Management: Identify risks, establish mitigation strategies, maintain a disaster recovery plan, and conduct root-cause analysis following incidents.
f. Training & Awareness: Provide regular cybersecurity training to all relevant agency staff. Training must address both technical procedures and general awareness.

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Technical Proposal

Respondents are required to clearly identify which project deliverables their proposed solution addresses (refer to Section 5.1) and detail their capabilities, knowledge, and skills related to the desired deliverables, objectives, technical requirements, and expectations as outlined in Section 5.0: Specifications.

The Spruce team's AI solutions have been designed to be flexible and be tailored to fit around client needs. As such, we believe that our solutions can help NCTCOG's TXShare members across virtually all challenge objectives identified in section 5.1 of the RFP.

AI for Public Sector Innovation

Governments today face increasing demands to deliver efficient, responsive, and equitable services in a complex and rapidly changing environment. Advances in Generative Artificial Intelligence (AI) present a transformative opportunity to improve public sector operations, enhance citizen engagement, and optimize service delivery. By harnessing AI's ability to process vast amounts of data, generate high-quality content, and automate routine tasks, public institutions can modernize operations and better serve their communities.

Realizing this potential requires a responsible and ethical approach to AI deployment. Transparency, security, and fairness must be foundational to any AI-driven solution. The Spruce team is committed to deploying AI solutions that prioritize transparency, data privacy, and security, aligning with ethical AI governance frameworks and ensuring equitable access to services. Safeguards must be in place to ensure that AI systems operate without bias, protect sensitive data, and maintain public trust. This framework emphasizes solutions designed to be transparent, secure, and aligned with ethical standards, ensuring equitable outcomes for all citizens.

Moreover, the Spruce team believes that the role of AI in the public sector should focus on augmenting human capabilities, not replacing them. Generative AI can automate routine tasks and streamline workflows, enabling government employees to focus on strategic, creative, and high-value work. This shift not only increases productivity but also empowers public servants to deliver more impactful and responsive services. AI technologies are designed to complement and empower public sector employees, enhancing their capacity to address complex challenges while minimizing repetitive, manual tasks.

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With this commitment to responsible AI adoption, the following framework outlines seven strategic areas where Generative AI can drive public sector innovation.

Information Intelligence

Information Intelligence solutions enable government agencies to efficiently access, organize, and analyze large volumes of structured and unstructured data, improving decision-making, policy development, and service delivery. Generative AI models, combined with advanced search and natural language processing (NLP), can extract relevant information from complex data sources, identify trends, and provide actionable insights. This capability reduces manual data analysis, accelerates policy review cycles, and supports evidence-based governance.

Key Use Cases:

- Advanced search tools for quick retrieval of legal documents, policies, and operational data.
- Automated summarization of lengthy reports, legislative texts, and meeting transcripts for faster decision-making.
- Cross-departmental data integration to identify service gaps and inform resource allocation.

Content Intelligence

Content Intelligence solutions automate the production of consistent, high-quality content for internal operations and public communication. Generative AI can generate reports, draft policy documents, and produce outreach materials with minimal human intervention. This reduces administrative burdens, speeds up communication, and ensures accuracy and compliance in documentation. AI-generated content can be dynamically updated to reflect new regulations, community updates, or operational changes.

Key Use Cases:

- Automatic generation of routine reports, policy drafts, and internal memos.
- Creation of real-time alerts and public service announcements for emergencies and critical updates.
- Development of instructional materials and training guides tailored for staff or public programs.

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Individualized Intelligence

Individualized Intelligence solutions improve the relevance and accessibility of public services through personalized communication and service delivery. AI models can analyze citizen data, preferences, and behavior to deliver targeted information and recommendations, ensuring that services meet the diverse needs of the community. This fosters stronger community relationships, increases program participation, and enhances public trust in government services.

Key Use Cases:

- Customized service recommendations based on user profiles, geographic location, and service history.
- Targeted notifications for community programs, public health initiatives, and emergency alerts.
- Adaptive websites and service portals that present content and services most relevant to each user.

Workflow Intelligence

Workflow Intelligence solutions enhance operational efficiency by automating routine tasks and optimizing complex workflows. AI systems can process forms, manage approvals, and predict resource needs, reducing administrative workload and minimizing human error. This allows government staff to focus on higher-value work, accelerates service delivery, and ensures timely maintenance of public assets.

Key Use Cases:

- End-to-end automation of permit applications, license renewals, and inspection scheduling.
- Predictive maintenance scheduling for critical infrastructure based on usage data and wear patterns.
- AI-optimized staff scheduling and resource deployment for public services and emergency response.

Assistive Intelligence

Assistive Intelligence solutions provide scalable, accessible, and responsive government services through intelligent conversational systems. AI-powered virtual assistants can manage inquiries, provide service guidance, and automate routine transactions, offering citizens 24/7 support. These systems improve service accessibility, reduce call center workloads, and streamline internal operations by handling frequently asked questions and service requests.

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Key Use Cases:

- AI chatbots to answer routine public inquiries and assist with service navigation.
- Voice-activated service portals and interactive kiosks for multilingual and accessible citizen engagement.
- Automated helpdesk agents for IT, HR, and administrative support, reducing staff workload.

Decision Intelligence

Decision Intelligence solutions support proactive and data-driven decision-making by identifying patterns, predicting trends, and detecting anomalies in operational data. AI models can analyze vast datasets to detect irregularities, classify service requests, and forecast resource demands. This enables government agencies to mitigate risks, allocate resources more effectively, and improve the reliability of services.

Key Use Cases:

- Fraud detection in financial transactions, grant distributions, and procurement.
- Predictive modeling for infrastructure usage, public service demand, and emergency preparedness.
- Automated classification and prioritization of citizen service requests for faster resolution.

Visual Intelligence

Visual Intelligence solutions leverage AI-powered image and video analysis to improve monitoring, safety, and infrastructure maintenance. Computer vision models can process visual data from surveillance systems, drones, and sensors to detect issues, ensure compliance, and optimize asset management. Additionally, integrating image-to-text conversion with large language models (LLMs) enables deeper comprehension of visual data, enhancing decision-making and service delivery. This includes extracting information from scanned documents, signage, and forms, providing context-aware insights.

Key Use Cases:

- Automated infrastructure inspections using drones or fixed cameras to detect damage or compliance issues.
- Real-time surveillance analytics for crowd management and security during public events.
- Monitoring of parks and public spaces for maintenance needs and safety concerns.

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- Image-to-text extraction for processing scanned documents, handwritten forms, and public records.
- Analysis of signage and visual cues for accessibility improvements and public information dissemination.
- Integration of visual data with LLMs for context-aware decision-making in inspections and public safety monitoring.

Spruce, in partnership with Synaptiq, delivers custom AI solutions designed to meet the complex and evolving needs of public sector organizations. Guided by our Generative AI Framework for Public Sector Innovation, we develop tailored solutions that integrate seamlessly with existing systems and workflows. This framework encompasses seven strategic AI capabilities—***Information Intelligence, Content Intelligence, Individualized Intelligence, Workflow Intelligence, Assistive Intelligence, Decision Intelligence, and Visual Intelligence***—ensuring that every solution is purpose-built to address operational challenges while upholding the highest standards of security, transparency, and ethical AI practices.

The technical foundation of our approach is

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This is an illustration of the AIQ lifecycle. An organization's AI maturity is a function of people and process improvements, and successful technology implementations. The process and architecture we are proposing will help to grow the AIQ of participants on this contract.

AIQ Solutions Technical Architecture, which is designed to support a wide range of use cases across all of these seven capabilities and more. Our approach focuses on leveraging AI to augment human capabilities, streamline complex processes, and deliver actionable insights, all while aligning with the specific requirements and compliance standards of public institutions.

By combining Spruce's deep expertise in government technology services with Synaptiq's advanced AI development capabilities, we will deliver scalable, impactful solutions that empower public sector organizations to operate more efficiently, make data-driven decisions, and better serve their communities.

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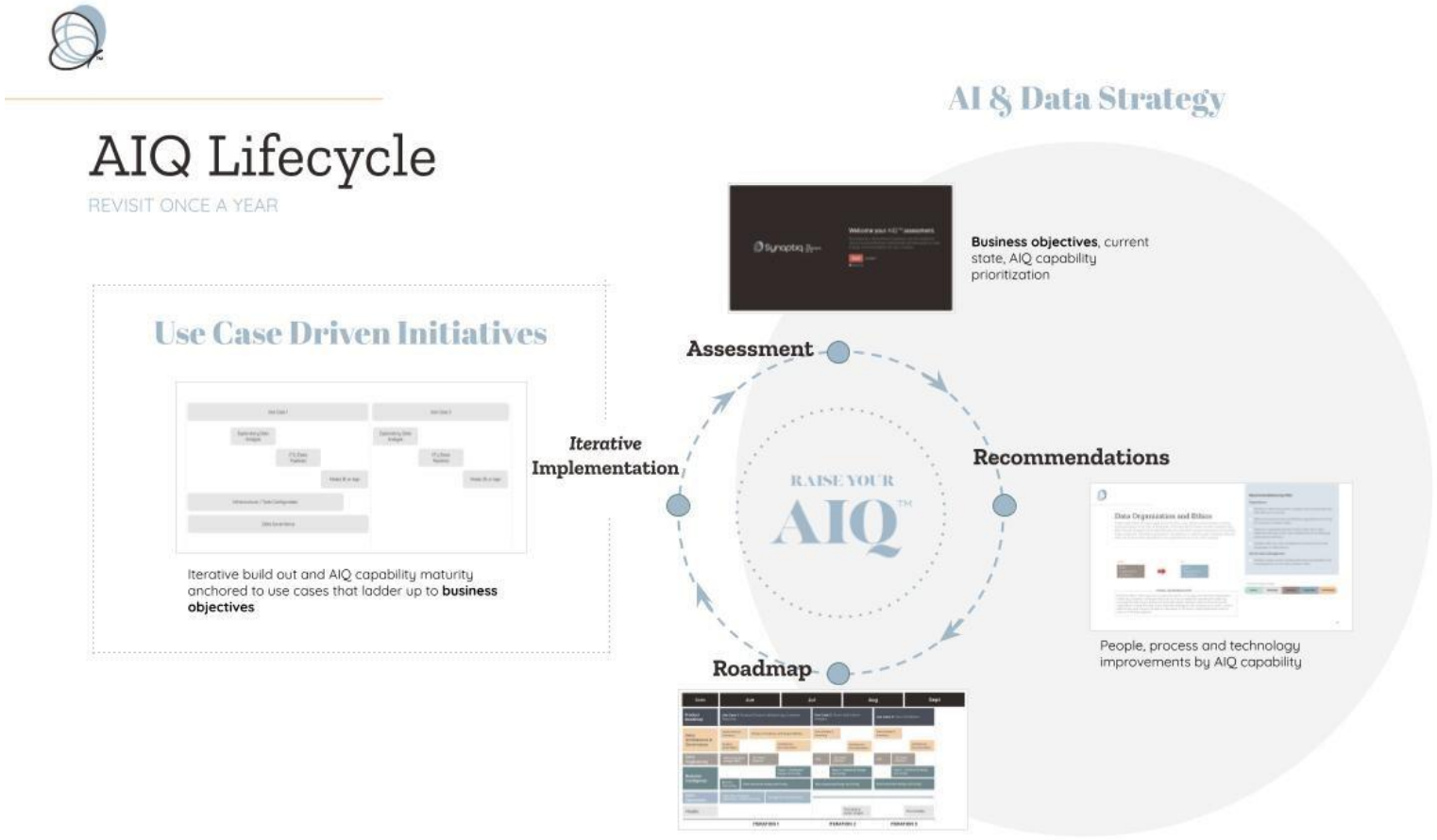

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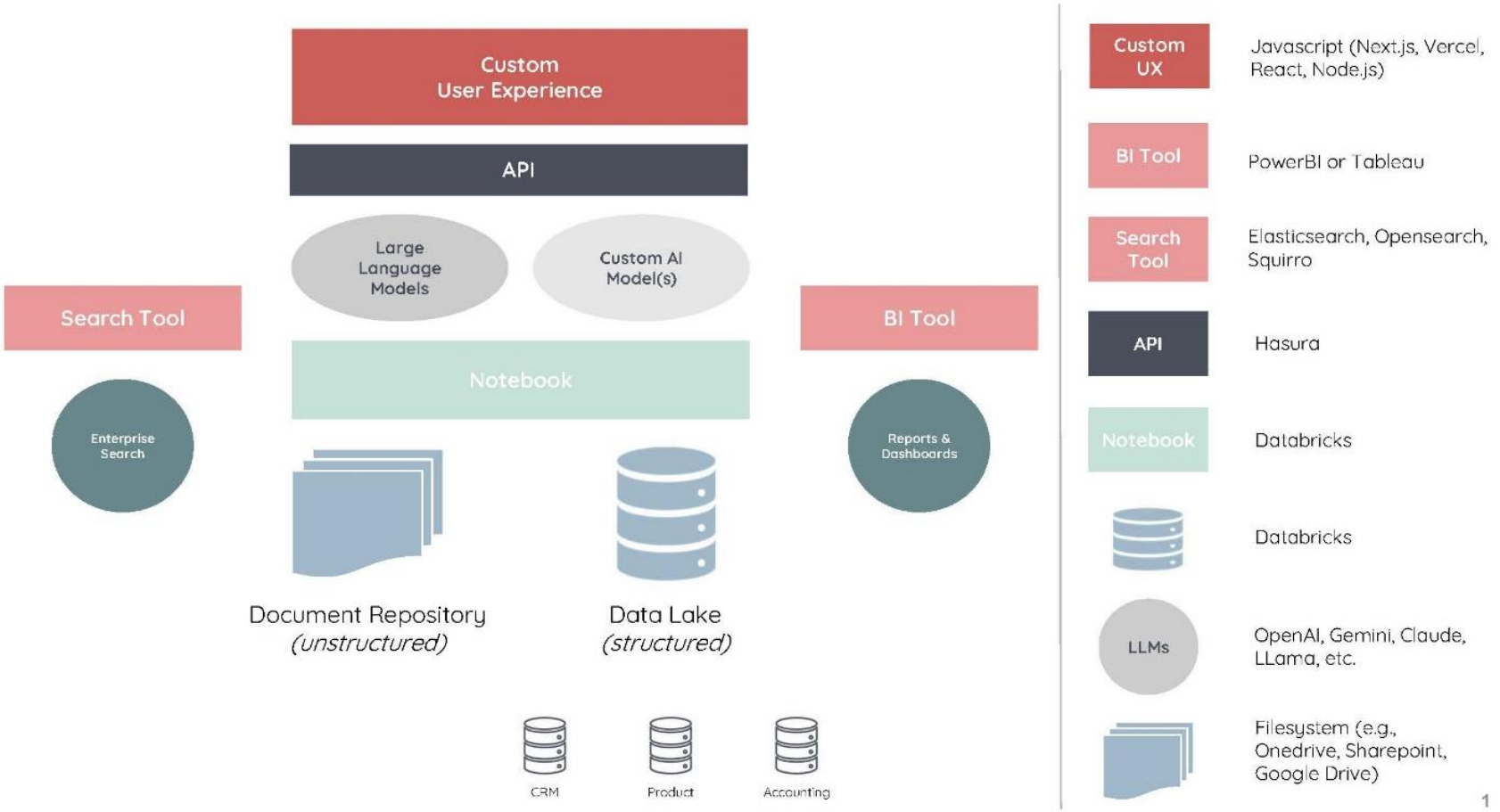
AIQ Solutions Technical Architecture



This updated architecture enables a robust and scalable solution for data-driven decision-making, combining the power of AI, advanced analytics, and user-friendly interfaces while leveraging the API tool for optimal integration and data access.

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Technical Solution Components

Data Storage Layer

Document Repository (Unstructured): Stores unstructured data, such as documents and files from systems like OneDrive, SharePoint, or Google Drive. This layer serves as a critical input for enterprise search and text-based analytics.

Data Lake (Structured): A centralized repository for structured data, integrating information from systems like CRM, product databases, and accounting tools. It acts as the backbone for analytics and machine learning processes.

Data Access and Processing

Notebooks (e.g., Databricks): A collaborative environment for data scientists and analysts to explore, preprocess, and analyze data. This layer supports the development of AI models, experimentation, and custom data analysis workflows.

AI and Search Integration

Large Language Models (LLMs): Advanced AI models like OpenAI, Gemini, Claude, or LLaMA, which enable natural language understanding, content summarization, and other AI-driven capabilities.

Custom AI Models: Specialized machine learning models tailored to address unique business problems, enhancing the insights and capabilities provided by general-purpose LLMs.

API Layer

API Tool (Hasura): A vital middleware component that facilitates efficient, real-time data access and management. Hasura integrates with both structured and unstructured data sources, allowing seamless querying and interaction between the backend systems and the user-facing applications. It ensures secure and optimized delivery of data insights to end-users.

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User Interaction Tools

Custom User Experience: A tailored interface built with modern web technologies (Next.js, React, Node.js, and Vercel). This component provides users with an intuitive, accessible, and interactive platform to engage with the system's insights and features.

BI Tool (e.g., Power BI or Tableau): Enables the creation of reports and dashboards for visualizing structured data and insights derived from AI models, empowering users to make data-driven decisions.

Search Tool (e.g., Elasticsearch, OpenSearch, Squirro): Provides powerful enterprise search capabilities, allowing users to quickly locate relevant information across large datasets, including unstructured documents and structured databases.

Outputs and Insights

Enterprise Search: Enhances user productivity by enabling comprehensive search functionality across unstructured repositories, supported by AI-driven insights and language models.

Reports and Dashboards: Visualizes structured insights from the data lake and notebooks, delivering actionable intelligence to users.

Key Improvements with the API Layer

The inclusion of **Hasura** as the API tool streamlines the architecture by providing:

Real-Time Data Access: Facilitates instant updates and responses across the platform.

Simplified Integration: Connects structured and unstructured data sources with user-facing applications and analytics tools seamlessly.

Optimized Data Queries: Reduces overhead in data retrieval processes, enabling faster and more efficient workflows.

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Because of the flexible design of our AI solution approach, we are confident that the Spruce team solution can be configured to meet needs in each of the challenge objectives identified the NCTCOG RFP. Additionally, the Spruce team has relevant domain expertise in several areas described by NCTCOG.

Mapping Spruce team Solutions to Challenge Objectives

Challenge Objective	**Administration:** How can AI assist in strategic planning, policy analysis, performance tracking, and enhance decision-making processes for effective city governance?
Solution Description	• Data Collection and Analysis: AI can collect and analyze large amounts of data from various sources, such as sensors, social media, and open data portals. This data can provide insights into urban trends, traffic patterns, crime rates, and other factors that affect city governance. • Predictive Analytics: AI can use predictive analytics to identify potential problems and opportunities. For example, AI can predict the impact of a new policy on traffic congestion or crime rates. This information can help policymakers make informed decisions. • Scenario Planning: AI can help policymakers develop and evaluate different scenarios for the future. This can help them identify the best course of action to take in a variety of situations. • Real-Time Decision-Making: AI can provide real-time insights to help city officials make decisions in real time. For example, AI can help identify the best way to respond to a natural disaster or traffic accident. • Public Engagement: AI can help city governments engage with the public. For

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	example, AI can be used to create chatbots that answer questions from residents or to collect feedback on new policies.

Challenge Objective	**Development Services:** How can AI streamline permit applications, automate inspection scheduling, and improve communication with developers and residents?
Solution Description	• AI can be used to create a user-friendly online permit application portal that guides users through the process step-by-step. • AI can also be used to automatically check for errors and omissions in applications, helping to reduce processing times. • AI-powered chatbots can be used to answer questions and provide guidance to applicants in real time. • AI can be used to create an intelligent inspection scheduling system that takes into account factors such as inspector availability, permit type, and property location to optimize scheduling. • AI can also be used to track the status of inspections and send notifications to applicants when inspections are complete. • AI can be used to create a centralized communication platform that allows developers and residents to interact with city officials and each other. • AI-powered chatbots can be used to answer questions and provide information to developers and residents in real time. • AI can also be used to analyze communication data to identify trends and patterns, which can help city officials improve their communication strategies.

Challenge Objective	**Event Center:** What AI-driven solutions can enhance customer engagement, streamline

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	ticketing processes, and optimize event management?
Solution Description	• Personalized Recommendations: AI can analyze customer data to provide personalized event recommendations, increasing the likelihood of ticket purchases and boosting customer satisfaction. • Chatbots and Virtual Assistants: AI-powered chatbots can handle customer inquiries, provide event information, and assist with ticket purchases 24/7, improving customer service and reducing the workload for human agents. • Fraud Detection: AI can identify and prevent fraudulent ticket activity, protecting both customers and event organizers. • Queue Management: AI can optimize queue management at events, reducing wait times and improving the overall customer experience. • Sentiment Analysis: AI can analyze social media and other online data to gauge customer sentiment and identify areas for improvement in event management.

Challenge Objective	**Finance and Budget:** What AI solutions can support financial forecasting, optimize budget allocation, detect anomalies, and improve overall financial management and reporting?
Solution Description	• Predictive analytics to forecast revenue, expenses, and cash flow. • Machine learning algorithms to identify patterns and trends in financial data. • Natural language processing (NLP) to extract insights from financial reports and other unstructured data. • Process automation (RPA) to automate repetitive financial tasks. • Anomaly detection algorithms to identify unusual financial transactions.

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Challenge Objective	**Human Resources (HR):** How can AI solutions automate HR processes, enhance employee engagement, and transform recruitment and onboarding experiences?
Solution Description	• AI-powered chatbots can handle routine HR inquiries, freeing up HR professionals for more strategic tasks. • AI algorithms can analyze employee data to identify trends and patterns, helping HR make data-driven decisions. • AI-powered tools can provide employees with personalized learning and development recommendations. • AI-driven sentiment analysis can monitor employee sentiment and identify potential issues early on. • AI-enabled chatbots can offer employees 24/7 support and assistance. • AI can help recruiters source and screen candidates more efficiently. • AI-powered tools can create personalized onboarding experiences for new hires. • AI algorithms can analyze employee data to identify top performers and high-potential employees.

Challenge Objective	**Information Technology and Cybersecurity (IT):** How can AI solutions alleviate the workload of IT personnel? Can they automate Help Desk support, streamline processes, create documentation for IT service domain knowledge, assist with cybersecurity threat detection, or take a proactive role in auditing and cyber defense?
Solution Description	• AI-powered chatbots can handle routine help desk inquiries, freeing up IT professionals to focus on more complex issues.

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	• Chatbots can provide immediate support 24/7, reducing response times and improving customer satisfaction. • AI can automate repetitive tasks such as user provisioning, password resets, and software updates. • This can significantly reduce the time and effort required for IT personnel to manage these processes. • AI can analyze IT service domain knowledge and create documentation automatically. • This documentation can be used for training new employees, troubleshooting issues, and improving overall IT efficiency. • AI algorithms can analyze network traffic and security logs to identify potential threats in real-time. • This can help IT personnel detect and respond to security incidents more quickly and effectively. • AI can assist with auditing IT systems for vulnerabilities and compliance issues. • AI can also play a proactive role in cyber defense by identifying and blocking malicious activity.

Challenge Objective	**Library Services:** What AI technologies can provide a personalized user experience, improve catalog searches, and offer automated assistance?
Solution Description	• Recommender Systems: AI algorithms that analyze user data to suggest relevant products, content, or services. • Natural Language Processing (NLP): AI technology that allows computers to understand and generate human

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	language, enabling personalized interactions. • Conversational AI: AI-powered chatbots and virtual assistants that provide customer service and support. • Semantic Search: AI technology that understands the meaning and intent behind search queries. • Intelligent Document Processing (IDP): AI technology that can extract data from unstructured documents, such as invoices and contracts. • Knowledge Management Systems: AI-powered tools that organize and provide access to corporate knowledge and information.

Challenge Objective	**Municipal Courts:** How can AI support efficient case management, automate routine inquiries, and improve citizens' access to legal information?
Solution Description	• AI can help automate tasks such as scheduling appointments, sending reminders, and tracking case progress. • AI can also help identify patterns and trends in case data, which can help improve the efficiency of case management. • AI-powered chatbots can answer common questions from citizens about legal issues. • This can help free up legal professionals to focus on more complex cases. • AI can help citizens find and understand legal information by providing personalized recommendations and summaries. • AI can also help translate legal documents into different languages.

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Challenge Objective	**Parks and Recreation:** What AI solutions can enhance program management, registration processes, and personalized recommendations for recreational activities?
Solution Description	• AI-powered scheduling tools: These tools can help program managers create and manage schedules for events, activities, and classes. They can also track attendance and manage waitlists. • AI-powered budgeting tools: These tools can help program managers track and manage budgets for events, activities, and classes. They can also identify potential cost savings. • AI-powered reporting tools: These tools can help program managers generate reports on attendance, revenue, and other metrics. They can also identify trends and patterns. • AI-powered online registration systems: These systems can make it easy for participants to register for events, activities, and classes online. They can also process payments and send confirmation emails. • AI-powered chatbots: These chatbots can answer questions and provide assistance to participants during the registration process. They can also help participants troubleshoot problems. • AI-powered fraud detection systems: These systems can help program managers identify and prevent fraudulent registrations. • AI-powered recommendation engines: These engines can provide personalized recommendations for recreational activities based on a participant's interests, preferences, and past behavior. • AI-powered content filtering: This technology can help program managers filter content and identify activities that are appropriate for different audiences.

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	• AI-powered social media monitoring: This technology can help program managers track and analyze social media conversations about their programs and activities.

Challenge Objective	**Parks Maintenance:** How can AI improve maintenance scheduling, optimize resource allocation, and facilitate better communication with residents?
Solution Description	• AI can help parks departments create and manage maintenance schedules that are more efficient and effective. AI-powered scheduling tools can analyze historical data on maintenance needs, weather patterns, and park usage to identify areas that need the most attention. They can also help schedule maintenance work around special events and holidays to minimize disruptions. • AI can help parks departments allocate their resources more effectively. AI-powered tools can analyze data on maintenance costs, equipment needs, and staff availability to identify areas where resources can be better utilized. They can also help parks departments track and manage their inventory of equipment and supplies. • AI can help parks departments communicate with residents more effectively. AI-powered chatbots can answer common questions from residents about park maintenance, hours of operation, and special events. They can also help residents report maintenance issues and track the status of their requests.

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Challenge Objective	**Public Works:** What solutions can help in optimizing project schedules, managing resources, and keeping residents informed about public infrastructure projects?
Solution Description	• AI-powered scheduling tools can help project managers create and manage detailed schedules for infrastructure projects. • These tools can track progress, identify potential delays, and suggest ways to optimize the schedule. • AI can also be used to create digital twins of infrastructure projects. These digital twins can be used to simulate different scenarios and identify potential problems before they occur. • AI-powered resource management tools can help project managers track and manage resources such as materials, equipment, and personnel. • These tools can identify potential bottlenecks and suggest ways to allocate resources more efficiently. • AI can also be used to create predictive models that can forecast future resource needs. • AI-powered chatbots can be used to answer questions and provide information to residents about public infrastructure projects. • These chatbots can be integrated with websites, social media platforms, and mobile apps. • AI can also be used to generate personalized updates for residents based on their location and interests.

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Challenge Objective	**Utility Billing:** How can AI automate billing inquiries, streamline payment processes, and provide real-time updates on utility usage?
Solution Description	• AI-powered chatbots can answer common questions from customers about their bills, payment options, and usage history. • AI can be used to develop virtual assistants that can help customers manage their accounts and make payments. • AI-powered fraud detection systems can help identify and prevent fraudulent transactions. • AI can be used to develop personalized recommendations for energy-saving measures. • AI-powered analytics can help utility companies track and analyze customer usage patterns to identify areas where improvements can be made.

Challenge Objective	**Visitors Bureau:** How can AI enhance visitor engagement, provide personalized recommendations, and improve tourism management?
Solution Description	• AI-powered chatbots can be used to answer questions and provide information to visitors 24/7. • AI can be used to create personalized itineraries for visitors based on their interests and preferences. • AI can be used to develop interactive maps and guides that help visitors navigate the city. • AI can be used to track visitor behavior and preferences to provide personalized recommendations for activities, restaurants, and attractions.

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	• AI can be used to create personalized marketing campaigns that target visitors with relevant offers and information. • AI can be used to analyze data on visitor behavior to identify trends and patterns. • AI can be used to develop predictive models that can forecast future visitor demand. • AI can be used to optimize tourism operations and improve efficiency.

Challenge Objective	**Other Government Entity Departments:** What AI-driven innovations can improve service delivery, streamline routine operations, and bolster data-driven decision-making?
Solution Description	• AI can be used for automation of routine tasks • AI can be used to leverage predictive analytics for decision making • AI can be used to create enhanced data processing and analysis

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Relevant Domain/Use Case Expertise – Licensing, Permitting & Inspections

Built on engagements with NYC Department of Building, Philadelphia Water Department, Houston Department of Planning and Design, and many others, Spruce brings core organizational expertise in implementation of licensing, permitting and inspections solutions. Our solutions have been built to serve more than a million users, automate repetitive tasks, increase staff productivity, decrease application processing turnaround times, and to manage dozens of different license and permit types.

Project Highlight – NYC Department of Buildings: DOB NOW

Spruce was tasked with designing a user-friendly licensing, permitting, and inspections system that would better facilitate the job filing process for the NYC DOB's hundreds of internal agency users, tens of thousands of industry professional users, and up to one million public users. First, the Spruce team worked with Agency stakeholders to analyze their existing mainframe-based processes, with the goal of helping the Agency to determine the best way to transition to a more flexible and accessible modern platform. Spruce conducted extensive interviews with Agency employees, analyzed existing processes, and examined legacy systems to understand the current state. Our team also worked with Agency stakeholders to identify opportunities to streamline business processes, with a focus on the elimination of operational functions that resulted from inefficient support systems and mainframe limitations.

Spruce worked in collaboration with DOB from the proof of concept stage through production to ensure DOB NOW was designed and architected for scalability, performance and security. The DOB NOW solution provides a user-friendly for job filings, and enables DOB to manage the compliance and safety of that job from initial approval all the way through completion and sign-off. The program has resulted in enhanced transparency into DOB internal processing and field operations, reduced task execution times, and improved customer service.

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Relevant Domain/Use Case Expertise – Strategic Planning

The Spruce team has helped numerous government clients across many domains through our advisory services. Our project teams have guided **strategic planning** for clients like the District Attorney of New York County and NYC Department of Environmental Protection; we've also implemented solutions to enhance decision making for the NYC Department of Education and the NYC Department of Health and Mental Hygiene.

Project Highlight – NYC Department of Education: STRIDES

The Spruce team worked with the DOE to develop a data management solution to enable the DOE to track student ridership information, including student location, distance to the specific school, optimal bus route and other information. The data solution provides real-time location and includes numerous features, such as:

- ✓ Extensibility to add new data sets
- ✓ Scalability to account for future data growth
- ✓ Platform independence with respect to both ingestion and consumption of data
- ✓ Role-based access and auditability
- ✓ Solution integration with the DOE's identity management systems
- ✓ More accurate transportation data to enable the DOE to meet reporting requirements
- ✓ An operational data store that houses data

The Spruce solution includes a management portal that features a user-friendly interface, empowering users to configure access to data sources, enrich data with security rules and metadata, monitor and address handling issues, and manage and govern the data environment.

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Relevant Domain/Use Case Expertise - Cybersecurity

Client Success Story – The Clio Awards

A leading marketing agency retained Spruce's Cybersecurity services to evaluate, document and upgrade its cloud security infrastructure, and respond to and mitigate frequent cyberattacks that it was facing and were taking their websites down. Spruce's security team was also entrusted with the security, administration and management of on-premise infrastructure necessary to run live in-person judging events across the country. This included multiple servers, hard drives, sophisticated cloud data sync'ing processes, a large volume of heavy media files, tablet devices, and multiple wireless/wired access points.

Over time, Spruce's team was also assigned to document the agency's Awards Platform, and assumed support and maintenance responsibilities for a network of websites on the DRUPAL CMS platform. In 2020, Spruce partnered with the agency to re-develop from scratch their Awards Engine platform on a modern technology stack.

Over the course of this multi-faceted cyber assignment, Spruce helped the client achieve a stronger security posture. Spruce's engineers performed advanced cyber security procedures, including using Splunk to analyze a large volume of data and pinpoint the source and nature of some recent cyberattacks, as well as running network scans and upgrading a range of cloud web-application firewalls, adding traffic filtering rules, running network stability and performance analytics, running database performance analytics, building a series of dashboards and alerts to monitor and analyze traffic and events, and also issuing recommendations to rebuild the organization's cloud infrastructure and IAM – Identity and Access Management – following best practices for security.

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Relevant Domain/Use Case Expertise – Case Management

Spruce has delivered case management solutions for a range of government agencies across the U.S. Our solutions have helped clients with payment processing, automation of administrative activities, compliance monitoring, tracking of workforce disciplinary actions, document management, and much more. Spruce's deep experience in this area of application development will prove critical.

. Please find below a small sample of the case management solutions Spruce has implemented.

New York City Department of Health and Mental Hygiene	Spruce delivered an Evaluation Standards Unit (ESU) system for the NYC Department of Health & Mental Health's Early Intervention (EI) program. The EI program has an important mission providing services to children in NYC experiencing developmental delays. ESU oversees evaluations and eligibility assessments by contract providers for children belonging to the NYC Early Intervention program. The ESU application tracks the review activities and status and is used by EI to ensure proper determination of eligibility, and to manage multiple workflows, including an appeals process.
New York City Department of Environmental Protection	As part of our relationship with DEP, Spruce has implemented numerous different case management solutions. One such project was the Equal Opportunity Employment Case Management Application (EEO). The DEP was in need of a modernized system to improve its case management practices surrounding Equal Opportunity Employment throughout the agency. Spruce worked with DEP to implement a new, modern, platform-based EEO case management solution that would automate workflows and improve the efficiency and auditability of HR processes surrounding EEO cases.
NYC Department of Buildings	Spruce partnered with numerous agencies across the City in an effort spearheaded by the Department of Buildings to implement a COVID-19 case tracking system known as the Return to School project. The application tracks and notifies users of potential outbreaks of COVID-19.
New York City Fire Department	Spruce was engaged to design and implement an Incident Management solution for the FDNY's Bureau of Fire Investigation (BFI). The BFI Solution was designed to optimize interactions between BFI Fire Marshals and their supervisors and to streamline approval processes for all Fire Marshals' activities over the course of an investigation.
New York City Department of Health and Mental Hygiene	DOHMH engaged with Spruce to enhance the existing application for Mobile food vendor units (MFVU) to facilitate compliance with a new public health law by implementing a grading system with location tracking that will result in a grade for each MFVU.

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Meeting Technical and Functional Requirements

a. Project Deliverables: Clearly specify how your proposed solution addresses each deliverable outlined in Section 5.1, including detailed descriptions of functionalities and approaches for each challenge objective.

Our proposed solution framework offers the foundation for which numerous types of solutions can be developed. Because of this inherent solution flexibility, the Spruce team's solution can be configured to meet challenges described in each objective outlined in Section 5.1. In the sections below, we have provided more detail on how the solution aligns with technical and functional requirements.

Scalability

Leveraging cloud technologies, the solution can be infinitely scaled to meet evolving client needs.

- Cloud Computing: Leverage cloud platforms (AWS, Azure, GCP) for scalable infrastructure.
- Microservices Architecture: Design the AI system as a collection of small, independent services.
- Horizontal Scaling: Easily add more computing power by adding more machines to the system.

Integration

Our project teams can utilize numerous integration strategies to ensure that new solutions connect with all required third-party systems.

- APIs: Create well-defined APIs for seamless integration with other systems and applications.
- Data Pipelines: Establish robust data pipelines to efficiently move and transform data between different sources and destinations.
- Integration Platforms: Utilize enterprise integration platforms (EIPs) to manage and orchestrate complex integrations.

Real-Time Analytics

The Spruce team's solution has repeatedly demonstrated its capability in empowering data-driven decision-making for clients through real-time analytics.

- Stream Processing: Implement stream processing technologies (e.g., Apache Kafka, Flink) for real-time data analysis and insights.
- Low-Latency Infrastructure: Optimize the system for low latency to enable real-time decision-making.

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Data Security & Privacy

The Spruce team focuses on data security and privacy as a core approach to all solution implementations. Our strategy accounts for the following:

- Data Encryption: Encrypt data both in transit and at rest using strong encryption algorithms (e.g., AES, RSA).
- Access Control: Implement fine-grained access controls to restrict access to sensitive data based on user roles and permissions.
- Data Masking: Mask sensitive data to protect privacy while still allowing for data analysis and training.
- Privacy-Preserving Techniques: Utilize techniques like differential privacy and federated learning to minimize privacy risks.

Natural Language Processing Capabilities

The Spruce team's solution offers our clients the ability to process and analyze large amounts of natural language data. Relevant solution components include:

- Large Language Models (LLMs): Utilize LLMs for a wide range of NLP tasks, such as text generation, translation, summarization, and question answering.
- NLP Libraries: Where applicable utilize powerful NLP libraries (e.g., spaCy, Transformers) for tasks like text classification, sentiment analysis, and machine translation
- Pre-trained Models: Where applicable Leverage pre-trained models (e.g., BERT, GPT) to fine-tune for specific NLP tasks.
- Text Processing Techniques: Implement techniques such as tokenization, stemming, and lemmatization to prepare text data for analysis.

Accuracy

The Spruce team is accustomed to delivering data optimization solutions that help our clients make better decisions using real-time data. Our AI solution implementation approach will focus on the following elements:

- Model Evaluation: Rigorously evaluate model performance using appropriate metrics (e.g., accuracy, precision, recall, F1-score).
- Data Quality: Ensure high-quality data is used for training and validation.
- Regular Retraining: Regularly retrain models with new data to improve accuracy and adapt to changing conditions.

Algorithm Transparency

The Spruce team believes in deliver a clear and open algorithm design and underlying logic so that it is easily understandable by developers, users, and stakeholders. We provide insight into how our

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algorithms work, focusing on explainability, interpretability, access to data, reproducibility, and accountability.

- Explainable AI (XAI): Utilize XAI techniques to understand and explain the decision-making process of AI models.
- Model Documentation: Document model architecture, training data, and evaluation results to improve transparency and reproducibility.

Continuous Improvement

As a part of every Spruce team implementation, one of the clear focuses is placed on making continuous improvements. This is inclusive of all of our professional services implementations, including AI implementations and others. Included in the Spruce solution approach is a strategy for continuous improvement.

- Monitoring and Logging: Monitor model performance and system behavior in production.
- A/B Testing: Conduct A/B testing to compare different model versions and identify the best performing models.
- Feedback Loops: Incorporate user feedback and system performance metrics to continuously improve the AI system.

Interoperability

With all Spruce implementations, we recognize that our solutions do not operate in a vacuum and not only design them to interface with existing client systems, but also to be extensible to meet future integration needs. Our solution includes:

- Standardization: Adhere to relevant standards and protocols to ensure interoperability with other systems.
- Data Exchange Formats: Use common data exchange formats (e.g., JSON, XML) to facilitate data sharing.

Quality Control

AI implementation data quality control is a critical aspect of deploying AI and machine learning models effectively. It involves ensuring that the data used to train, validate, and test AI models is accurate, reliable, and appropriate for the intended task. High-quality data is essential for creating models that make informed, accurate predictions and avoid biases or errors.

Key components of the Spruce team solution include:

- Data Validation: Implement data validation checks to ensure data quality and integrity.
- Testing and Validation: Conduct thorough testing and validation of the AI system at different stages of development.

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- Version Control: Use version control systems (e.g., Git) to track changes to the code and models.

Data Integrity & Accuracy

The Spruce team solution maintains high levels of data accuracy, consistency, completeness, and relevance. Our solutions are designed to ensure clean data.

- Data Cleaning and Transformation: Clean and transform data to ensure accuracy and consistency.
- Data Validation: Implement data validation rules to detect and correct errors in data.
- Data Governance: Establish data governance policies and procedures to ensure data quality and integrity.

Data Privacy & Compliance

The Spruce team solution has consistently proven to be compliant with all state, federal and local mandates to date in regards to data privacy. The Spruce team approach includes:

- Compliance with Regulations: Ensure compliance with relevant data privacy regulations of the State of Texas and other regulations where applicable.
- Implementation of Strong Data Governance Policies: Establish clear policies for data collection, storage, and processing, ensuring compliance with regulations like GDPR, CCPA, or HIPAA, and regularly audit these processes to maintain adherence.
- Use of Privacy-Preserving Techniques: Employ techniques such as data anonymization, encryption, and federated learning to protect sensitive information and reduce the risk of data breaches.
- Ensure Transparent User Consent: Clearly communicate data usage practices to users, obtain explicit consent where required, and provide easy-to-access mechanisms for users to review, manage, or delete their data.
- Privacy Impact Assessments: Conduct privacy impact assessments to identify and mitigate privacy risks.

Data Access Controls

The Spruce team solution includes numerous components for data access control, including:

- Role-Based Access Control (RBAC): Where applicable implement RBAC to control access to data based on user roles and responsibilities.
- Attribute-Based Access Control (ABAC): Where applicable complement RBAC with ABAC to enforce access decisions based on dynamic attributes such as user location, time of access, device type, or data sensitivity, providing granular control tailored to specific contexts.
- Least Privilege Principle: Grant users only the minimum necessary access to data.
- Access Logs: Monitor and audit access to data to detect and investigate unauthorized access.

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Data Retention and Disposal

Spruce's project teams follow best practices for data retention and disposal, including:

- Data Retention Policies: Establish data retention policies that define how long data should be stored.
- Data Disposal: Securely dispose of data when it is no longer needed.
- Data Archiving: Archive data for long-term storage and retrieval.

Data Auditing and Monitoring

All of the Spruce team's solutions are developed with auditability and tracking in mind. Our solutions offer the ability to monitor data usage trends.

- Data Audits: Conduct regular audits of data quality, security, and compliance.
- Data Monitoring: Monitor data usage and access patterns to detect anomalies and potential security threats.

Threat Detection and Response

The Spruce team implements solutions with a focus on proactive cybersecurity threat detection and response.

- Intrusion Detection Systems (IDS): Implement IDS to detect malicious activity on the network.
- Security Information and Event Management (SIEM): Utilize SIEM systems to collect and analyze security logs.
- Incident Response Plan: Develop and test an incident response plan to handle security breaches effectively.

Encryption

All data in the Spruce team's solutions will adhere to state, local, federal security requirements.

- Data Encryption: Encrypt data both in transit and at rest using strong encryption algorithms.
- Key Management: Implement robust key management practices to protect encryption keys.

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Vulnerability Management

The Spruce team implements solutions with a focus on proactive cybersecurity threat detection and response.

- Regular Vulnerability Scans: Conduct regular vulnerability scans to identify and address security vulnerabilities.
- Patch Management: Promptly apply security patches to software and systems.

Security Governance Framework

The Spruce team implements solutions with a focus on proactive cybersecurity threat detection and response.

- Security Policies: Establish and enforce security policies and procedures.
- Risk Assessments: Conduct regular risk assessments to identify and prioritize security threats.

Risk Management

The Spruce team follows industry best practices for risk assessment, management, and mitigation in project management and solution implementations.

- Pre-Mortem Exercise: A proactive risk management technique used in project planning to identify potential problems before they occur. Unlike a post-mortem, which analyzes what went wrong after a project fails, a pre-mortem assumes that the project has already failed and asks participants to think backward to identify the causes of that failure.

Training and Awareness

The Spruce team employs a tested and proven training methodology that has been developed to cater to both technical and non-technical users.

- Create Accessible Knowledge Resources: Develop easily accessible resources, such as playbooks, tutorials, and FAQs, to help teams quickly reference policies and technical workflows when needed.

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Design & Implementation Approach

b. Technical Approach: Detail the technical approach for implementing the proposed solution, including:

- *Methodologies for design and development.*
- *Integration strategies with existing government systems.*
- *User-friendliness and accessibility considerations.*

This section details Spruce's technical approach for implementing a proposed solution, focusing on design and development methodologies, integration strategies, and user-friendliness and accessibility considerations.

Methodologies for Design and Development:

Agile Development: We employ an Agile development methodology, typically Scrum or Kanban, to ensure iterative development, continuous feedback, and rapid adaptation to changing requirements. This involves:

- **Short Sprints:** Working in short development cycles (e.g., 2-week sprints) to deliver incremental functionality.
- **Daily Stand-ups:** Conducting brief daily meetings to track progress and identify roadblocks.
- **Sprint Reviews and Retrospectives:** Holding sprint reviews to demonstrate completed work and retrospectives to identify areas for improvement.
- **Continuous Integration/Continuous Delivery (CI/CD):** Implementing automated build, test, and deployment pipelines to ensure rapid and reliable releases.

Modular Design: We design the system using a modular architecture, breaking it down into smaller, independent components. This improves maintainability, scalability, and reusability.

Microservices Architecture (Where Applicable): For complex systems, we consider a microservices architecture, which allows for independent deployment and scaling of individual services.

Infrastructure as Code (IaC): We use IaC tools like AWS CloudFormation or Azure ARM templates to manage and provision infrastructure in an automated and repeatable way. This ensures consistency and reduces the risk of manual errors.

Test-Driven Development (TDD) / Behavior-Driven Development (BDD): We encourage TDD or BDD practices to ensure code quality and prevent defects.

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Integration Strategies with Existing Government Systems:

API-First Approach: We prioritize an API-first design, creating well-defined RESTful APIs or other appropriate standards for seamless integration with existing systems.

Integration Patterns: We utilize established integration patterns such as:

- **Direct Database Connections (with appropriate security measures):** Establishing secure connections to existing databases using database connectors or drivers.
- **Message Queues (e.g., SQS, Azure Service Bus, RabbitMQ):** Implementing asynchronous communication using message queues to decouple systems and improve performance.
- **API Gateways (e.g., AWS API Gateway, Azure API Management):** Managing and securing APIs, providing features like authentication, authorization, and rate limiting.
- **Event-Driven Architecture:** Utilizing event-driven architectures to enable real-time data exchange and trigger actions in other systems based on events.

Data Transformation and Mapping: We implement data transformation and mapping logic to ensure compatibility between different data formats and schemas.

Security Considerations for Integrations:

- **Authentication and Authorization:** Implementing strong authentication and authorization mechanisms (e.g., OAuth 2.0, API keys) to control access to APIs.
- **Encryption:** Encrypting data in transit and at rest to protect sensitive information during integration.
- **Input Validation:** Validating all input data to prevent injection attacks and other security vulnerabilities.

User-Friendliness and Accessibility Considerations:

User-Centered Design: We follow a user-centered design approach, focusing on understanding user needs and creating intuitive and easy-to-use interfaces.

Accessibility Standards: We adhere to accessibility guidelines such as WCAG (Web Content Accessibility Guidelines) to ensure that the system is accessible to users with disabilities. This includes:

- **Keyboard Navigation:** Ensuring that all functionalities can be accessed using a keyboard.
- **Screen Reader Compatibility:** Designing the interface to be compatible with screen readers.

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- **Color Contrast:** Using sufficient color contrast to improve readability for users with low vision.
- **Alternative Text for Images:** Providing alternative text for images to convey their meaning to users who cannot see them.

Intuitive User Interface (UI): We design clear and consistent user interfaces with logical navigation and clear instructions.

Responsive Design: We ensure that the system is responsive and works well on different devices (desktops, laptops, tablets, and mobile phones).

User Training and Documentation: We provide comprehensive user training and documentation to help users effectively use the system.

Multilingual Support (If required): Implementing multilingual support to cater to diverse user populations.

c. Performance Metrics: Describe how you will measure success and performance, including key performance indicators (KPIs) for each deliverable. Include approaches to ensure accuracy, reliability, and continuous improvement of the AI solutions.

Spruce maintains standard practices for frequent communications with client stakeholders about project status, risks, and issues needing escalation. Regular and ongoing monitoring of risks, issues, and overall status is key to ensuring that Spruce's delivery team is accomplishing the real goals of client stakeholders, and that we are quickly and effectively resolving any roadblocks to on-time and on-budget completion. As part of

Spruce knows that close collaboration with client stakeholders at all levels is critical to achieving those objectives, but also that our clients' time is limited and we need to set clear expectations. To facilitate collaboration at the proper levels of daily activity and communications cadence, Spruce implements a structure and cadence for monitoring and communications in advance of project start.

Spruce's expected Governance structure incorporates several elements:

- Designated Spruce personnel with a clear path of accountability from the Project Manager through multiple layers of escalation
- A regular cadence of meetings at all levels of project involvement, which can be scheduled in advance to ensure client stakeholders' schedules are respected.
- Standard documentation and terminology to enable consistent and meaningful communication across both Spruce and agency teams regarding any problems.

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This structure will support effective **risk management** across the Employee Lifecycle System program. To properly monitor and manage risk, Spruce has adapted PMBOK guidelines and best practices for Risk Management. Because of Spruce's lengthy experience within the public sector, we have encountered and successfully mitigated all of the most common IT project risks—including risks around scope, cost, time, technology, resources, communication, and more—within City agencies, and we understand the unique risk factors that can be caused by the City's specific IT environments, as well as procurement cycles, budget procedures, and politically high-profile initiatives.

Spruce will measure the success and performance of the proposed AI solution, including key performance indicators (KPIs) for each deliverable and our approaches to ensure accuracy, reliability, and continuous improvement.

Overall Project Success Metrics:

- **On-Time Delivery:** Percentage of project milestones completed on schedule.
- **Budget Adherence:** Percentage of project budget spent within allocated limits.
- **Stakeholder Satisfaction:** Measured through surveys and feedback sessions.
- **Meeting Functional Requirements:** Verification that all specified functionalities are implemented and working as expected.

Approaches to Ensure Accuracy, Reliability, and Continuous Improvement of AI Solutions:

- **Rigorous Testing and Validation:** We use rigorous testing and validation techniques, including cross-validation, A/B testing, and user acceptance testing, to ensure model accuracy and reliability.
- **Continuous Monitoring and Feedback:** We continuously monitor model performance in production and gather feedback from users to identify areas for improvement.
- **Regular Model Retraining:** We retrain our models periodically with new data to maintain accuracy and adapt to changing data patterns.
- **Version Control and Model Management:** We use version control for our code and model artifacts to track changes and facilitate rollback if necessary.
- **MLOps Practices:** We implement MLOps practices to automate the model development, deployment, and monitoring process, ensuring consistency and reliability.

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d. Risk Management: Outline any potential risks associated with the proposed solution and describe your strategies for mitigating these risks.

Problem mitigation naturally extends from Spruce's approach to managing risk and communications. At times, despite our best efforts, risks may evolve into issues or roadblocks. Just as in every other aspect of our approach, Spruce handles issues with transparently and with a collaborative, solution-focused approach. All projects have inherent risks, but identifying and monitoring risks is a critical function in Spruce's project governance process.

Type of Risk	Considerations
Technical Risks	Is this a proven technology in the marketplace? Does the agency have the right skillsets to implement and maintain the technology? What are the contingency plans in case the proposed solution is not viable at go live?
External Risks	Are there new regulations that may impact the design and development of the solution? What is the ability for external stakeholders to comply with new system requirements? What are the reputational risks in the case that the solution does not work?
Organizational Risks	What is the impact of change on the agency? What is the level of institutional knowledge of the agency? Is there strong executive support for this project?
Project Management Risks	Are there budget, schedule, and resource risks? Are there sufficient SME and technical internal resources assigned to support the project? Is there a proper governance structure and executive ownership?

Once **Risks** are categorized, the team evaluates them in terms of project impact and likelihood. As is described elsewhere, project risks will be documented in the Spruce risk register. All Spruce team members and client personnel are encouraged to register risks that may be identified as part of the delivery process. Client personnel will address any risks to the client Project Manager, who will consolidate and communicate all risks to the Spruce PM for addition to the register. Spruce personnel will likewise address risks to the Spruce PM, who consolidates reported risks and adds them to the register. In collaboration with client stakeholders, we identify mitigation strategies with owners and due dates. The Spruce project leadership team drafts a mitigation plan (also documented) for presentation at each status meeting.

Issues are often the outcome of risks that are not effectively mitigated. Issues impact the project's schedule, quality, budget, resources, or other key success factors and are documented in the Spruce issue list and addressed according to a documented remediation plan. For any

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identified issue, Spruce's project leadership will work to suggest remediation steps and collaborate with the client PM to jointly develop a remediation plan. As with Risks, all project personnel are encouraged to report issues as they occur, and address those issues to the client and Spruce PMs respectively.

Roadblocks are potential issues that can or should be addressed immediately to ensure they do not impact project delivery. During daily meetings, roadblocks will be identified and immediate action plans initiated by the Spruce PM in consultation with the client PM. Any Roadblock that cannot be immediately removed becomes either a Risk or an Issue.

During each weekly status meeting, and each monthly steering committee meeting, open issues can be escalated for priority address through pre-established paths of accountability.

e. Compliance and Standards: Confirm adherence to relevant regulations and standards, including data privacy laws (e.g., GDPR, HIPAA), and detail how your solution will maintain compliance.

The Spruce team understands the critical importance of compliance with relevant regulations and standards, especially regarding data privacy. Our proposed solutions will be designed with compliance as a core principle, and we are committed to adhering to all applicable laws and regulations. Our solution will be designed to comply with relevant regulations and standards, including but not limited to Data Privacy laws such as: General Data Protection Regulation (GDPR), Health Insurance Portability and Accountability Act (HIPAA) and other relevant State and Federal Privacy Laws.

Further, the Spruce team's solutions utilize security standards and frameworks such as: NIST Cybersecurity Framework, ISO 27001 and FedRAMP (Federal Risk and Authorization Management Program) where applicable.

If utilizing AWS or Azure, we will leverage their built-in compliance features and certifications:

- **AWS:** We will utilize services and features that are compliant with relevant certifications such as FedRAMP, HIPAA, SOC 2, and PCI DSS.
- **Azure:** We will leverage Azure's compliance offerings and certifications, including FedRAMP, HIPAA, SOC 2, and ISO 27001.

If a custom build is required, we will implement all necessary security controls and processes to ensure compliance with relevant regulations and standards. This includes secure coding practices, vulnerability management, and regular security audits.

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Additional measures considered in solution design are:

- ✓ **Data Minimization:** We will collect and process only the data that is necessary for the specified purpose.
- ✓ **Data Encryption:** We will encrypt data at rest and in transit using strong encryption algorithms and secure key management practices.
- ✓ **Access Control:** We will implement strict access control measures based on the principle of least privilege, using role-based access control (RBAC) and multi-factor authentication (MFA).
- ✓ **Data Anonymization and Pseudonymization:** We will use data anonymization and pseudonymization techniques to de-identify data when appropriate.
- ✓ **Data Governance:** We will establish a data governance framework that defines data ownership, responsibilities, and policies.
- ✓ **Data Retention and Disposal:** We will implement clear data retention and disposal policies in accordance with legal and regulatory requirements.
- ✓ **Audit Logging and Monitoring:** We will implement comprehensive audit logging and monitoring to track data access and usage.
- ✓ **Regular Security Assessments and Audits:** We will conduct regular security assessments, vulnerability scans, and penetration testing to identify and address potential vulnerabilities.
- ✓ **Compliance Training:** We will provide regular compliance training to our team members to ensure they are aware of their responsibilities.

In general, we will continuously monitor changes in regulations and standards and update our solution and processes accordingly to maintain ongoing compliance. By prioritizing compliance at every stage of the project lifecycle, we ensure that our solution meets the highest standards of data privacy and security.

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Proposed Value-Add

Respondents are encouraged to include a Value-Add section in their submission to showcase innovative approaches or supplementary functionalities that could enhance the efficiency and effectiveness of our public sector operations beyond the primary scope of this RFP. This section should highlight any additional capabilities or services not explicitly detailed in the Scope of Work but that the respondent believes would be of benefit.

The Spruce team offers an ideal combination of extensive public sector expertise and experience delivering impactful AI solutions for a range of clients. Spruce was born and raised in the Public Sector, and many of our solutions and methodologies are built on the foundation of lessons learned by our core team's many years of service to state and local governments. Spruce has worked with dozens of public sector organizations of all sizes and in an expansive range of verticals. The lessons learned from this experience have enabled us to continually finetune our approach, improve the quality of our services, and build on the value we bring to our clients. Spruce also offers considerable experience delivering solutions that support many of the needs described in the NCTCOG RFP, which will bring critical contextual understanding to each Spruce team engagement. Meanwhile, Synaptiq's considerable history developing and implementing AI solutions across both the public and private sectors are of considerable importance in this engagement.

Maximizing Contract Value

We recognize the importance of maximizing the value and impact of technology investments in the public sector. Beyond the core requirements outlined in this RFP, we propose the following value-add features and approaches that can significantly enhance efficiency and effectiveness:

Proactive Analytics and Predictive Modeling:

While the RFP may focus on specific analytics or reporting, we can integrate proactive analytics and predictive modeling capabilities. By leveraging machine learning, we can identify trends, predict future outcomes, and proactively address potential issues. **Example: Optimized Service Delivery:** Predicting service usage patterns to optimize service delivery schedules and improve efficiency.

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Citizen Engagement and Communication Enhancements:

Improved public engagement and transparency through reports and visuals. **Examples: Interactive Dashboards and Visualizations:** Creating user-friendly dashboards that allow citizens to easily access and understand key data and performance metrics. **Chatbots and Virtual Assistants:** Implementing conversational interfaces to provide citizens with quick and easy access to information and services. **Personalized Communication:** Tailoring communication to individual citizen needs and preferences.

Automation and Process Optimization:

Reduced administrative burden, increased efficiency, and reduced errors with automation. **Examples: Robotic Process Automation (RPA):** Automating repetitive tasks such as data entry, form processing, and report generation. **Intelligent Document Processing:** Using AI to extract information from documents and automate document processing workflows.

Knowledge Management and Collaboration Platform:

Improved knowledge sharing and collaboration within the government agency. **Example: AI-Powered Search and Discovery:** Using AI to improve search and discovery of relevant information within the knowledge base.

Training and Knowledge Transfer:

Empowering government staff to effectively use and maintain the AI system. Training government staff to become trainers and provide ongoing support to other users. **Knowledge Transfer Workshops** to share knowledge and best practices with government staff.

Implementation Approach for Value-Add Features:

We understand that budget and scope constraints may limit the immediate implementation of all value-add features. We propose a phased approach, prioritizing the features/AI services that provide the greatest value and aligning them with the government's strategic objectives. We can work closely with the government agency to develop a roadmap for implementing these features over time.

By incorporating these value-add features, we can help the government agency not only meet its immediate needs but also achieve long-term strategic goals related to efficiency, effectiveness, citizen engagement, and security. We are confident that these enhancements will provide a significant return on investment and contribute to improved public sector operations through strategic AI projects.

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APPENDIX A.1
Pricing for TXShare Cooperative Purchase Program Participants

SKU #	Engagement Type	Description	Software Licensing*	Training and Support*	Optional Add-Ons*	Additional Costs*	BAFO Discount (5%) Amount
STI-03AI-RAEDA	AI Readiness Assessment - Exploratory Data Analysis	This engagement focuses on evaluating the organization's data landscape, identifying AI opportunities, and assessing data quality and governance readiness. It includes exploratory data analysis to uncover potential use cases and define strategic AI objectives. Suitable for agencies seeking to establish a foundational understanding of AI possibilities before full-scale implementation.	TBD	$ -	N/A	$ -	5%
STI-03AI-SN1XS	AI Solution Implementation - Solution Team XS	Fits highly targeted, narrowly scoped AI solutions such as automated document classification, chatbot prototypes, or small-scale analytics dashboards. This engagement is suited for organizations looking to develop proof-of-concept (PoC) solutions that validate AI feasibility within a specific department or function.	TBD	$ -	N/A	$ -	5%
STI-03AI-SN01S	AI Solution Implementation - Solution Team S	Suitable for small-scale AI implementations such as intelligent workflow automation, targeted predictive analytics models, or customized chatbot solutions. This engagement addresses department-level needs where AI can enhance operational efficiency with limited system integration requirements.	TBD	$ -	N/A	$ -	5%
STI-03AI-SN01M	AI Solution Implementation - Solution Team M	Mid-sized engagement suitable for moderately complex AI projects such as AI-driven performance dashboards, policy analysis engines, and intelligent case management solutions. This team size allows for deeper integration with existing government systems and ensures scalable automation capabilities across multiple workflows.	TBD	$ -	N/A	$ -	5%
STI-03AI-SN01L	AI Solution Implementation - Solution Team L	Appropriate for large, multi-faceted AI initiatives such as cross-departmental data integration platforms, advanced predictive analytics for budgeting and resource planning, or citizen engagement portals utilizing generative AI. This engagement provides a comprehensive approach to AI adoption with a focus on scalability and compliance.	TBD	$ -	N/A	$ -	5%
STI-03AI-SN1XL	AI Solution Implementation - Solution Team XL	Enterprise-scael AI solutions that require significant customization, integration with multiple legacy systems, and rigorous compliance adherence. Examples include intelligent document processing systems spanning multiple agencies, large-scale complex chatbots, and AI-powered decision support systems for government and public sector leadership.	TBD	$ -	N/A	$ -	5%
STI-03AI-SN2XL	AI Solution Implementation - Solution Team XXL	This engagement is suited for strategic AI initiatives involving complex multi-agency collaborations and or complex problem domains.	TBD	$ -	N/A	$ -	5%
STI-03AI-SN3XL	AI Solution Implementation - Solution Team XXXL	Designed for large-scale, transformational AI system implementations that span organizational departments and require extensive infrastructure, security, and regulatory considerations.	TBD	$ -	N/A	$ -	5%

	Note that implementation price and TCO assumes minimum project duration.		*Software Licensing costs depend on the specifics of the solution and the existing infrastructure and licensing entitlements of the organization, and wiill be determined as part of the detailed solution design and prototyping.	*Training for the implemented solution is included as a standard component of solution implementation. Ongoing training is incorporated into Ongoing Support and so we have not included a separate pricing item.	Our solutions are custom-built to organizations' requirements so there are no standard add-ons.	All costs are included in the other supplied pricing elements. No other costs are anticipated.	

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EXHIBIT 3: SERVICE DESIGNATION AREAS

	Texas Service Area Designation or Identification		
Proposing Firm Name:	Spruce Technology, Inc.		
Notes:	**Indicate in the appropriate box whether you are proposing to service the entire state of Texas**		
	Will service the entire state of Texas	Will not service the entire state of Texas	
	☑	☐	
	If you are not proposing to service the entire state of Texas, designate on the form below the regions that you are proposing to provide goods and/or services to. By designating a region or regions, you are certifying that you are willing and able to provide the proposed goods and services.		
Item	**Region**	**Metropolitan Statistical Areas**	**Designated Service Area**
1.	North Central Texas	16 counties in the Dallas-Fort Worth Metropolitan area	
2.	High Plains	Amarillo Lubbock	
3.	Northwest	Abilene Wichita Falls	
4.	Upper East	Longview Texarkana, TX-AR Metro Area Tyler	
5.	Southeast	Beaumont-Port Arthur	
6.	Gulf Coast	Houston-The Woodlands-Sugar Land	
7.	Central Texas	College Station-Bryan Killeen-Temple Waco	
8.	Capital Texas	Austin-Round Rock	
9.	Alamo	San Antonio-New Braunfels Victoria	
10.	South Texas	Brownsville-Harlingen Corpus Christi Laredo McAllen-Edinburg-Mission	
11.	West Texas	Midland Odessa San Angelo	
12.	Upper Rio Grande	El Paso	

(Exhibit 3 continued on next page)

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(Exhibit 3 continued)

	Nationwide Service Area Designation or Identification Form		
Proposing Firm Name:	Spruce Technology, Inc.		
Notes:	**Indicate in the appropriate box whether you are proposing to provide service to all Fifty (50) States.**		
	Will service all fifty (50) states ☑	Will not service fifty (50) states ☐	
	If you are not proposing to service to all fifty (50) states, then designate on the form below the states that you will provide service to. By designating a state or states, you are certifying that you are willing and able to provide the proposed goods and services in those states. **If you are only proposing to service a specific region, metropolitan statistical area (MSA), or City in a State, then indicate as such in the appropriate column box.**		

Item	**State**	**Region/MSA/City (write "ALL" if proposing to service entire state)**	**Designated as a Service Area**
1.	Alabama		
2.	Alaska		
3.	Arizona		
4.	Arkansas		
5.	California		
6.	Colorado		
7.	Connecticut		
8.	Delaware		
9.	Florida		
10.	Georgia		
11.	Hawaii		
12.	Idaho		
13.	Illinois		
14.	Indiana		
15.	Iowa		
16.	Kansas		
17.	Kentucky		
18.	Louisiana		
19.	Maine		
20.	Maryland		

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21.	Massachusetts		
22.	Michigan		
23.	Minnesota		
24.	Mississippi		
25.	Missouri		
26	Montana		
27.	Nebraska		
28.	Nevada		
29.	New Hampshire		
30.	New Jersey		
31.	New Mexico		
32.	New York		
33.	North Carolina		
34.	North Dakota		
35.	Ohio		
36.	Oregon		
37.	Oklahoma		
38.	Pennsylvania		
39.	Rhode Island		
40.	South Carolina		
41.	South Dakota		
42.	Tennessee		
43.	Texas		
44.	Utah		
45.	Vermont		
46.	Virginia		
47.	Washington		
48.	West Virginia		
49.	Wisconsin		
50.	Wyoming		

End of Exhibit 3

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APPENDIX B

NCTCOG FEDERAL AND STATE OF TEXAS REQUIRED PROCUREMENT PROVISIONS

The following provisions are mandated by Federal and/or State of Texas law. Failure to certify to the following will result in disqualification of consideration for contract. Entities or agencies that are not able to comply with the following will be ineligible for consideration of contract award.

REQUIRED 2 CFR 200 CLAUSES
Uniform Administrative Requirements, Cost Principles & Audit Requirements for Federal Awards (Contractor)

1. Equal Employment Opportunity. CONTRACTOR shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, sexual orientation, gender identity, or national origin. CONTRACTOR shall take affirmative actions to ensure that applicants are employed, and that employees are treated, during their employment, without regard to their race, religion, color, sex, sexual orientation, gender identity, or national origin. Such actions shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

2. Davis-Bacon Act. CONTRACTOR agrees to comply with all applicable provisions of 40 USC § 3141 – 3148.

3. Contract Work Hours and Safety Standards. CONTRACTOR agrees to comply with all applicable provisions of 40 USC § 3701 – 3708 to the extent this agreement indicates any employment of mechanics or laborers.

4. Rights to Invention Made Under Contract or Agreement. CONTRACTOR agrees to comply with all applicable provisions of 37 CFR Part 401.

5. Clean Air Act, Federal Water Pollution Control Act, and Energy Policy Conservation Act. CONTRACTOR agrees to comply with all applicable provisions of the Clean Air Act under 42 USC § 7401 – 7671, the Energy Federal Water Pollution Control Act 33 USC § 1251 – 1387, and the Energy Policy Conservation Act under 42 USC § 6201.

6. Debarment/Suspension. CONTRACTOR is prohibited from making any award or permitting any award at any tier to any party which is debarred or suspended or otherwise excluded from or ineligible for participation in federal assistance programs under Executive Order 12549, Debarment and Suspension. CONTRACTOR and its subcontractors shall comply with the special provision "Certification Requirements for Recipients of Grants and Cooperative Agreements Regarding Debarments and Suspensions".

7. Restrictions on Lobbying. CONTRACTOR of these funds is prohibited from using monies for lobbying purposes; CONTRACTOR shall comply with the special provision "Restrictions on Lobbying". CONTRACTOR shall include a statement of compliance with the Lobbying Certification and Disclosure of Lobbying Activities in applicable procurement solicitations. Lobbying Certification and Disclosure of Lobbying Activities shall be completed by subcontractors and included in subcontractor contracts, as applicable.

8. Procurement of Recovered Materials. CONTRACTOR agrees to comply with all applicable provisions of 2 CFR §200.322.

9. Anti-Israeli Boycott. By accepting this work order, CONTRACTOR hereby certifies the following:

1. CONTRACTOR's Company does not boycott Israel; and
2. CONTRACTOR's Company will not boycott Israel during the term of the contract.

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The following definitions apply to this statute:
(1) "Boycott Israel" means refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations specifically with Israel, or with a person or entity doing business in Israel or in an Israeli- controlled territory, but does not include an action made for ordinary business purposes; and
(2) "Company" means an organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, or limited liability company, including wholly owned subsidiary, majority-owned subsidiary, parent company, or affiliate of those entities or business associations that exists to make a profit.

10. Domestic Preference for Procurements

As appropriate and to the extent consistent with law, the CONTRACTOR should, to the greatest extent practicable, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). Consistent with §200.322, the following items shall be defined as: "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States. "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

11. Trafficking in Persons

Contractor agrees to comply with all applicable provisions of 2 CFR §175.15. NCTCOG, the Contractor, and its subcontractors are prohibited from (i) engaging in severe forms of trafficking in persons during the period of time that the award is in effect; (ii) procure a commercial sex act during the period of time that the award is in effect; (iii) used force labor in the performance of the award or subawards under the award. The Federal award agency may unilaterally terminate the award, without penalty, if the Contractor (i) is determined to have violated an applicable prohibition; (ii) has an employee who is determined by the agency officially authorized to terminate the award to have violated an applicable prohibition of this award term. NCTCOG must notify the Federal award agency immediately if any information received from the Contractor indicates a violation of the applicable prohibitions.

Initial

Check one of the following:

☐ The Contractor or Subrecipient hereby certifies that it ***does*** comply with the requirements of 2 CFR 200 as stipulated above and required by the NCTCOG.

-OR-

☐ The Contractor or Subrecipient hereby certifies that it ***cannot*** comply with the requirements of 2 CFR 200 as stipulated above and required by the NCTCOG.

Signed by:
Cs. Banyai
9BFE439616C24F9...
Signature of Authorized Person

Csilla Banya
Name of Authorized Person

Spruce Technolgy, Inc.20-5656502
Name of Company

9/17/2025
Date

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APPENDIX C
RESTRICTIONS ON LOBBYING

Section 319 of Public Law 101-121 prohibits recipients of federal contracts, grants, and loans exceeding $100,000 at any tier under a federal contract from using appropriated funds for lobbying the Executive or Legislative Branches of the federal government in connection with a specific contract, grant, or loan. Section 319 also requires each person who requests or receives a federal contract or grant in excess of $100,000 to disclose lobbying.

No appropriated funds may be expended by the recipient of a federal contract, loan, or cooperative agreement to pay any person for influencing or attempting to influence an officer or employee of any federal executive department or agency as well as any independent regulatory commission or government corporation, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered federal actions: the awarding of any federal contract, the making of any federal grant, the making of any federal loan the entering into of any cooperative agreement and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.

As a recipient of a federal grant exceeding $100,000, NCTCOG requires its subcontractors of that grant to file a certification, set forth in Appendix B.1, that neither the agency nor its employees have made, or will make, any payment prohibited by the preceding paragraph.

Subcontractors are also required to file with NCTCOG a disclosure form, set forth in Appendix B.2, if the subcontractor or its employees have made or have agreed to make any payment using nonappropriated funds (to include profits from any federal action), which would be prohibited if paid for with appropriated funds.

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LOBBYING CERTIFICATION
FOR CONTRACTS, GRANTS, LOANS, AND COOPERATIVE AGREEMENTS

The undersigned certifies to the best of his or her knowledge and belief, that:

(1) No federal appropriated funds have been paid or will be paid by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension continuation, renewal amendment, or modification of any federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, US Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

Signed by:
Cs. Banyai
9BFE439616C24F9...
Signature

VP General Administration & HR
Title

Spruce Technolgy, Inc.20-5656502
Agency

9/17/2025
Date

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APPENDIX D
PROHIBITED TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT CERTIFICATION

This Contract is subject to the Public Law 115-232, Section 889, and 2 Code of Federal Regulations (CFR) Part 200, including §200.216 and §200.471, for prohibition on certain telecommunications and video surveillance or equipment.

Public Law 115-232, Section 889, identifies that restricted telecommunications and video surveillance equipment or services (e.g. phones, internet, video surveillance, cloud servers) include the following:

A) Telecommunications equipment that is produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliates of such entities).

B) Video surveillance and telecommunications equipment produced by Hytera Communications Corporations, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliates of such entities).

C) Telecommunications or video surveillance services used by such entities or using such equipment.

D) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, Director of the National Intelligence, or the Director of the Federal Bureau of Investigation reasonably believes to be an entity owned or controlled by the government of a covered foreign country.

The entity identified below, through its authorized representative, hereby certifies that no funds under this Contract will be obligated or expended to procure or obtain telecommunication or video surveillance services or equipment or systems that use covered telecommunications equipment or services as a substantial or essential component of any system, or as a critical technology as part of any system prohibited by 2 CFR §200.216 and §200.471, or applicable provisions in Public Law 115-232 Section 889.

Check one of the following:

Initial

☐ The Contractor or Subrecipient hereby certifies that it ***does*** comply with the requirements of 2 CFR 200 as stipulated above and required by the NCTCOG.

-OR-

☐ The Contractor or Subrecipient hereby certifies that it ***cannot*** comply with the requirements of 2 CFR 200 as stipulated above and required by the NCTCOG.

Signed by:

Cs. Banyai

9BFE439616C24F9...

Signature of Authorized Person

Csilla Banya

Name of Authorized Person

Spruce Technolgy, Inc.20-5656502

Name of Company

9/17/2025

Date

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DISCRIMINATION AGAINST FIREARMS ENTITIES OR FIREARMS TRADE ASSOCIATIONS

This contract is subject to the Texas Local Government Code chapter 2274, Subtitle F, Title 10, prohibiting contracts with companies who discriminate against firearm and ammunition industries.

TLGC chapter 2274, Subtitle F, Title 10, identifies that "discrimination against a firearm entity or firearm trade association" includes the following:

A) means, with respect to the entity or association, to:
   I. refuse to engage in the trade of any goods or services with the entity or association based solely on its status as a firearm entity or firearm trade association; and
   II. refrain from continuing an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association; or
   III. terminate an existing business relationship with the entity or association based solely on its status as a firearm entity or firearm trade association.

B) An exception to this provision excludes the following:
   I. contracts with a sole-source provider; or
   II. the government entity does not receive bids from companies who can provide written verification.

The entity identified below, through its authorized representative, hereby certifies that they have no practice, policy, guidance, or directive that discriminates against a firearm entity or firearm trade association; and that they will not discriminate during the term of the contract against a firearm entity or firearm trade association as prohibited by Chapter 2274, Subtitle F, Title 10 of the Texas Local Government Code.

Check one of the following:

Initial

☐ The Contractor or Subrecipient hereby certifies that it does comply with the requirements of Chapter 2274, Subtitle F, Title 10.

-OR-

☐ The Contractor or Subrecipient hereby certifies that it cannot comply with the requirements of Chapter 2274, Subtitle F, Title 10.

Signed by:
Cs. Banya
9BFE439616C24F9...
Signature of Authorized Person

Csilla Banya
Name of Authorized Person

Spruce Technolgy, Inc.20-5656502
Name of Company

9/17/2025
Date

BOYCOTTING OF CERTAIN ENERGY COMPANIES

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This contract is subject to the Texas Local Government Code chapter 809, Subtitle A, Title 8, prohibiting contracts with companies who boycott certain energy companies.

TLGC chapter Code chapter 809, Subtitle A, Title 8, identifies that "boycott energy company" means, without an ordinary business purpose, refusing to deal with, terminating business activities with, or otherwise taking any action that is intended to penalize, inflict economic harm on, or limit commercial relations with a company because the company:

I. engages in the exploration, production, utilization, transportation, sale, or manufacturing of fossil fuel-based energy and does not commit or pledge to meet environmental standards beyond applicable federal and state law; and
II. does business with a company described by paragraph (I).

The entity identified below, through its authorized representative, hereby certifies that they do not boycott energy companies, and that they will not boycott energy companies during the term of the contract as prohibited by Chapter 809, Subtitle A, Title 8 of the Texas Local Government Code.

Check one of the following:

Initial

☐ The Contractor or Subrecipient hereby certifies that it ***does*** comply with the requirements of Chapter 809, Subtitle A, Title 8.

-OR-

☐ The Contractor or Subrecipient hereby certifies that it ***cannot*** comply with the requirements of Chapter 809, Subtitle A, Title 8.

Signed by:
Cs. Banyai
9BFE439616C24F9...

Signature of Authorized Person

Csilla Banya

Name of Authorized Person

Spruce Technolgy, Inc.20-5656502

Name of Company

9/17/2025

Date

Docusign Envelope ID: B0266667-7D6F-436A-8C09-66214D1AFDAB

APPENDIX E
DEBARMENT CERTIFICATION

Csilla Banya
_____being duly
(Name of certifying official)
sworn or under penalty of perjury under the laws of the United States, certifies that neither

Spruce Technolgy, Inc.20-5656502
_____, nor its principals
(Name of lower tier participant)
are presently:

- debarred, suspended, proposed for debarment,
- declared ineligible,
- or voluntarily excluded from participation in this transaction by any federal department or agency

Where the above identified lower tier participant is unable to certify to any of the above statements in this certification, such prospective participant shall indicate below to whom the exception applies, the initiating agency, and dates of action.

Exceptions will not necessarily result in denial of award but will be considered in determining contractor responsibility. Providing false information may result in criminal prosecution or administrative sanctions.

EXCEPTIONS:

_____

_____

_____

Signed by:
Cs. Banyai
9BFE439616C24F9...

Signature of Certifying Official

VP General Administration & HR

Title

9/17/2025

Date of Certification

Form 1734
Rev.10-91
TPFS