

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

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

Fuschia Services, Inc, dba Fushiaa ("<u>Contractor</u>") 8401 Orchard Hill Drive Plano, TX 75025

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

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 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 "<u>Term</u>"), 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.

- 3.2.1 <u>Termination for Convenience</u>: 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 <u>Termination for Cause</u>: 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 <u>Termination for Breach</u>: 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: <u>support@civicmarketplace.com</u>

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.

- 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

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 <u>elittrell@nctcog.org</u> If to Contractor:

Fuschia Services, Inc, dba Fushiaa Attn: Vijayalakshmi Rajaramanan 8401 Orchard Hill Drive Plano, TX 75025 Phone: 248-219-9442 Email: <u>viji@fushiaa.com</u>

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 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;

- 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.

- 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

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

<u>Compliance with Regulations:</u> 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.

<u>Nondiscrimination</u>: 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.

<u>Solicitations for Subcontracts, Including Procurement of Materials and Equipment:</u> 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.

<u>Information and Reports:</u> 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.

<u>Sanctions for Noncompliance</u>: 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.

<u>Incorporation of Provisions:</u> 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.

- 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).
- 1. 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

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.

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 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.

Fuschia Services, Inc, dba Fushiaa

05/04/2025 Date Signature

Vijayalakshmi Rajaramanan

Printed Name

Title

North Central Texas Council of Governments

	Signed by:		
	Mike Eastland	5/7/2025	
Signature		Date	
Michae	l Eastland		
Executi	ve Director		

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:

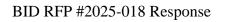
- a. Data Integrity and Accuracy: Ensure reliable data quality through lifecycle validation checks and automated error correction.
- b. Data Privacy Compliance: Adhere to all relevant privacy laws. Implement data anonymization and pseudonymization as needed and obtain/document user consent for data collection 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.

- 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.

TECHNICAL PROPOSAL





Service Category #1: Artificial Intelligence (AI) Solutions for

Public Sector Entities

Defining AI Solutions

AI solutions are technological systems that use artificial intelligence to tackle a wide range of problems and automate tasks that typically require human intelligence.

Definition of Terms

Artificial Intelligence (AI)	AI refers to the simulation of human intelligence in machines. It involves systems designed to perceive, reason, learn, and make decisions in ways that resemble human cognition. AI incorporates a variety of approaches, including rule-based systems, machine learning, and neural networks, which allows it to excel in tasks such as playing games, diagnosing medical conditions, and virtual assistance
Machine Learning (ML)	ML is a subset of AI that enables machines to learn from data without explicit programming. By analyzing patterns and statistical data, ML models can make predictions or decisions. ML is foundational to tasks such as recommendation systems, image recognition, and predictive analysis, empowering systems to improve performance over time as they process more data
Generative AI (Gen AI)	Generative AI is focused on creating new content, such as text, images, audio, and more, by learning from vast datasets. A subcategory includes Large Language Models (LLMs) like GPT, which are tailored to generating human-like text for applications in content creation and conversational agents. Generative AI is pivotal in applications beyond text, also generating visual content for creative fields
Natural Language Processing (NLP)	NLP enables machines to understand, interpret, and generate human language. It leverages deep learning to manage tasks like text classification, sentiment analysis, and language translation, aiming for seamless human-computer interaction. NLP applications have become integral to chatbots, virtual assistants, and automated translation tools
Deep Learning (DL)	Deep Learning is a specific type of ML that uses multi-layered neural networks to automatically identify patterns in large datasets. Unlike traditional ML, DL doesn't require manual feature extraction, making it ideal for complex tasks like image recognition, autonomous driving, and speech recognition. DL has advanced complex AI applications, powering advancements in self-driving vehicles, medical imaging, and high-accuracy voice recognition

Components for Analysis and Development

- Algorithms: These are sets of rules and statistical models that allow AI systems to learn from data, identify patterns, and make predictions or decisions.
- **Data:** Large amounts of data, either structured or unstructured, are used to train AI models and enable them to function effectively.
- **Infrastructure:** AI solutions often need significant computing power to process large datasets and run complex algorithms.

Fushiaa's Core Capabilities

Fushiaa stands out as a powerful AI solutions partner due to our deep expertise in developing and implementing cutting-edge AI technologies. We don't just offer theoretical knowledge; we possess a proven track record of delivering tangible results across diverse sectors. Our team comprises seasoned



AI specialists who are adept at tailoring solutions to meet the unique needs and challenges of each client, ensuring maximum impact and return on investment. We pride ourselves on staying ahead of the curve, constantly exploring and integrating the latest advancements in AI to provide our clients with the most effective and innovative solutions available.

- **Machine Learning:** Algorithms that allow AI systems to learn from data without explicit programming, improving their performance over time.
- **Deep Learning:** A more advanced form of machine learning that uses artificial neural networks with multiple layers to analyze data, enabling more complex tasks.
- **Natural Language Processing (NLP):** Enables AI systems to understand, interpret, and generate human language, making it possible for them to interact with humans through text or speech.
- **Computer Vision:** Allows AI systems to "see" and interpret images and videos, enabling tasks like object recognition, image classification, and facial recognition.

AI Principles

The following 6 principles form the basis of our AI Solution build

1	Principle Identification		Recognize and adopt fairness, transparency, accountability, and privacy in alignment with organizational values	Responsible Al Charter
2	Policy Integration	▮	Embed RAI principles in Policy Definition and Implementation	11 New Policies Referencing existing policies
3	Stakeholder Engagement		Collaborate with internal and external stakeholders to ensure RAI principles align with stakeholder expectations and ethical standards.	RAI Charter, RAI Council
4	Performance Metrics	£	Establish KPIs to measure the effectiveness of RAI initiatives and their alignment with strategic objectives.	Metrics and KPIs for Risk Scoring, Map and Measure
5	Risk Assessment Alignment	R R L L L	Conduct regular risk assessments to prevent data bias, discrimination, and adverse decision impact.	NIST AI RMF, HITRUST 2025-26 Roadmap
6	Compliance Tracking		Monitor alignment with industry regulations, standards, and frameworks, such as NIST Al RMF, to stay compliant and accountable.	AI Competency Center

Categories of AI Solutions

Fushiaa's Engineering team and Lab Engineers offer the capability of building and testing the following types of AI Solutions.

- Predictive Analytics: Forecasting future outcomes based on historical data, such as customer churn, equipment failure, or market trends.
- Personalized Recommendations: Providing tailored suggestions to users based on their preferences and behavior, such as product recommendations, movie suggestions, or personalized news feeds.
- Chatbots and Virtual Assistants: Automating customer service interactions, answering questions, and providing information through natural language conversations.
- Image and Video Analysis: Extracting insights from visual data, such as identifying objects in images, detecting anomalies in videos, or analyzing medical images for diagnosis.
- Fraud Detection: Identifying suspicious patterns and anomalies to prevent fraudulent activities in finance, insurance, and other industries.
- Robotics and Automation: Controlling robots and automating physical tasks in various industries, such as manufacturing, logistics, and healthcare.

Our AI capabilities are built on the various Operational pillars in the Enterprise to support the overall AI strategy



Automation and Al

1	Intelligent Process Automation RPA and AI driven automation	Unlock operational efficiencies by automating the manual business processes for business outcomes .
2	DevSecOps	Streamline <u>software development</u> and delivery process with speed, and reliability with continuous security mindset.
3	DataOps	A <u>data approach</u> that embraces agile methodology, automation and collaboration to improve efficiency and quality of data including data integration, quality and governance.
4	MLOps	Streamline and automate the life cycle of <i>machine learning models</i> across development, deployment, monitoring, and management disciplines.
5	SecOps	Leverage AI and ML techniques to optimize and automate IT and security operations for observability, resource optimization, prescriptive problem assessment, auto problem resolution etc.

Delivering Responsible and Secure AI

In today's rapidly evolving technological landscape, the need for responsible and secure AI is paramount. As artificial intelligence becomes increasingly integrated into various aspects of our lives, it is crucial to ensure that these systems are developed and deployed in a manner that prioritizes ethical considerations, safety, and societal well-being. This means ensuring fairness, transparency, and accountability in AI algorithms, safeguarding against potential biases and discriminatory outcomes, and protecting sensitive data from unauthorized access and malicious use. By prioritizing responsible and secure AI development, we can harness the transformative power of this technology while mitigating risks and fostering trust among users and the wider community.

Principles of Responsible AI

Enhancing Non-Discrimination Efforts

Bias Detection in Decision-Making AI can be used to analyze decisions to detect and mitigate potential biases. This ensures that decisions related to coverage, treatment, and care are free from discrimination based on race, color, national origin, sex, age, or disability.

Eliminate Challenges with AI-Induced Bias

- Algorithmic Bias AI systems, if not properly designed and monitored, may inadvertently perpetuate, or amplify existing biases. For instance, if AI models are trained on biased data, they might make decisions that disproportionately affect certain groups, leading to discriminatory outcomes.
- **Transparency and Accountability** AI-driven decisions can be complex and difficult to interpret (often referred to as the "black box" problem). Ensuring transparency in AI systems is crucial to maintaining compliance with non-discrimination laws

Improving Accessibility

- **AI-Powered Accessibility Tools** AI can enhance accessibility for individuals with disabilities, for example, by providing voice-activated services, predictive text for those with mobility impairments, and advanced screen readers for the visually impaired.
- **Personalized Care** AI can enable more personalized healthcare by analyzing patient data to recommend tailored treatments. When done correctly, this can help reduce disparities in care and improve health outcomes for marginalized groups.

Compliance and Monitoring

Automated Compliance Monitoring AI can be used to continuously monitor delivered use cases with model observability, eliminating model drift and data toxicity



• **Regulatory Enforcement** Adherence to NIST AI RMF

Potential Legal and Ethical Implications

Legal Scrutiny as AI becomes more integrated into healthcare in the public sector, there could be increased legal scrutiny around whether AI systems are in compliance Legal challenges may arise if AI systems are found to contribute to discriminatory practices.

• Ethical Considerations Healthcare providers must ensure that AI systems are designed and implemented in an ethical manner, with a focus on equity, fairness, and non-discrimination

Fushiaa's Solution Guardrails

We implement the following guardrails in our solutions

- **Data Quality and Diversity** Ensure that training data for AI systems is representative of the patient population and free from biases.
- **Regular Bias Audits** Conduct ongoing assessments of AI algorithms to identify and mitigate potential discriminatory impacts.
- **Transparency and Explainability** Develop AI systems that can provide clear and understandable explanations for their decisions.
- Human Oversight Implement robust human oversight processes to review AI-generated recommendations and intervene as needed.
- Staff Training Educate employees about AI, bias, and the importance of equitable care.
- **Risk Management** Develop comprehensive risk management plans to address potential harm caused by AI-related discrimination.
- Establishing guidelines and standards Developing regulations to ensure the safety, efficacy, and fairness of AI systems.
- Promoting transparency and accountability Encouraging the disclosure of AI algorithms and their performance metrics.



Procedures and Policies to adapt Methods for Bias Avoidance

• Data Quality and Diversity

- o Increase the diversity of data used to train AI models to better represent the population.
- o Implement data cleaning and preprocessing techniques to remove biases from the data.
- o Use synthetic data generation to augment datasets with diverse and unbiased information.

• Algorithmic Fairness

- o Develop and apply fairness metrics to evaluate AI models for bias.
- o Use techniques like fair machine learning to mitigate discriminatory outcomes.
- o Consider multiple fairness definitions to address different types of bias.

• Human-in-the-Loop

- o Incorporate human oversight into AI decision-making processes.
- o Develop mechanisms for human intervention to correct biased outputs.
- o Provide training to human operators on recognizing and addressing bias.

• Transparency and Explainability

- o Make AI models and their decision-making processes transparent to stakeholders.
- o Develop techniques to explain AI outputs in understandable terms.
- o Foster trust and accountability by providing clear information about AI systems

• Collaboration and Standards

- o Promote collaboration between researchers, policymakers, and industry to develop best practices.
- o Establish ethical guidelines and standards for AI development and deployment.
- o Create regulatory frameworks to ensure AI systems are safe and fair.

Program Objectives for NCTCOG Members- Use Cases			
Development Services	 Automated Permit Processing: AI systems use optical character recognition (OCR) to validate documents and auto-fill forms, reducing manual errors and processing time. Inspection Scheduling Optimization: Predictive analytics consider variables such as availability, workload, and weather conditions to allocate inspection resources efficiently. AI Chatbots: Intelligent assistants provide real-time responses to developers and residents, addressing common queries and facilitating application tracking. 		
Event Center	 Customer Engagement AI: Sentiment analysis and personalization algorithms provide tailored event recommendations and targeted marketing. Smart Ticketing: AI systems identify fraudulent activities, optimize pricing strategies, and ensure seamless entry with facial recognition. Operational Optimization: AI tools manage staff assignments, inventory, and logistics to enhance event execution efficiency. 		



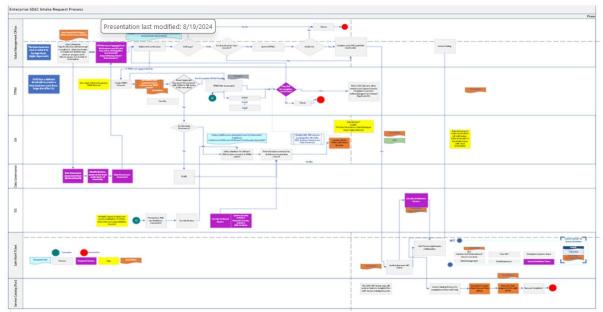
Economic Development Finance and Budget	 Investment Analytics: AI-powered market research tools analyze economic trends and identify investment opportunities to attract businesses. Business Development Automation: Automated lead generation and CRM integration facilitate streamlined business outreach. Process Streamlining: AI systems automate licensing and permitting processes, ensuring faster service delivery to businesses. Predictive Financial Forecasting: AI models analyze historical financial data and economic indicators to project revenue and expenditure trends. Fraud Detection: Machine learning algorithms identify anomalies in financial transactions, mitigating risks of fraud and ensuring compliance.
	• Budget Allocation Optimization: AI systems recommend resource allocation based on departmental priorities and performance metrics.
Human Resources (HR)	 Automated HR Processes: AI-powered applicant tracking systems screen resumes, rank candidates, and facilitate efficient recruitment workflows. Employee Engagement AI: Sentiment analysis tools gather employee feedback, enabling HR to address concerns proactively. Onboarding Automation: AI chatbots guide new hires through the onboarding process, answering queries and providing training resources.
Information Technology and Cybersecurity (IT)	 Automated Help Desk: AI-powered virtual assistants provide instant solutions to common IT issues, reducing workload on personnel. Cyber Threat Detection: AI monitors network activity in real-time to detect and respond to potential security breaches. Knowledge Management: AI-generated documentation aids in preserving institutional knowledge and streamlining IT processes.
Library Services	 Personalized Search Engines: AI enhances catalog searches by learning user preferences and recommending relevant resources. Automated Assistance: Virtual assistants provide real-time help with catalog searches, renewals, and availability inquiries. Inventory Management: Predictive analytics optimize book acquisitions and distribution based on user demand patterns.
Municipal Courts	 Case Management Automation: AI tools categorize and prioritize cases, ensuring efficient handling and reducing backlog. Chatbots for Legal Inquiries: Virtual assistants offer quick answers to common legal queries, improving citizen accessibility. Sentiment Analysis: AI analyzes public feedback on court services to identify areas for improvement.
Parks and Recreation	 Program Management AI: AI algorithms analyze participation trends to optimize program offerings. Automated Registrations: Online AI-enabled systems simplify the registration process and improve user experience. Personalized Recommendations: AI suggests activities based on user preferences, enhancing engagement.



Parks Maintenance	 Maintenance Scheduling Optimization: AI systems predict equipment failure and schedule proactive maintenance. Resource Allocation AI: Data-driven decisions optimize personnel deployment and equipment usage. Resident Communication Tools: AI-powered platforms provide updates on maintenance schedules and work progress.
Public Works	 Project Scheduling Optimization: AI tracks project timelines, identifies risks, and suggests corrective actions. Resource Management: Predictive analytics ensure optimal utilization of materials and manpower. Community Engagement: AI-driven platforms keep residents informed about ongoing infrastructure projects.
Utility Billing	 Automated Billing Queries: AI chatbots handle common inquiries, reducing customer service workload. Payment Process Streamlining: AI-driven systems automate bill reminders and fraud detection. Real-Time Usage Insights: Smart meters provide customers with insights into their consumption patterns.
Visitors Bureau	 Visitor Engagement AI: AI-powered applications offer personalized itineraries and travel suggestions. Tourism Management Analytics: AI predicts visitor trends and assists in planning promotional strategies. Chatbots for Tourists: AI assistants provide information on attractions, accommodations, and local events
Other Government Entity Departments	 Service Delivery Optimization: AI automates routine administrative tasks, enhancing service efficiency. Data-Driven Decision Support: AI provides actionable insights to support policy and planning. Routine Task Automation: AI assists in streamlining workflows and operational processes.
Administration	 AI-Powered Strategic Planning: Machine learning models analyze historical data to forecast future trends and inform policy decisions, ensuring proactive governance. Policy Analysis Tools: Natural Language Processing (NLP) systems can review and interpret policies, identifying areas for improvement and ensuring compliance with regulatory standards. Performance Dashboards: AI-driven analytics provide visual insights into key performance indicators (KPIs), enabling leadership to monitor progress and make data-driven decisions.



Integration to Existing SDLC



The program deliverables include a new future state SDLC intake process, SDLC process for AI and definition of required compliance and controls.

- **Evaluate Current Practices** Understand the existing SDLC methodology and identify its strengths and weaknesses across each phase (requirements, design, development, testing, deployment, maintenance).
- **Ensure Compliance** Assess adherence to relevant industry regulations and standards, particularly important in healthcare.
- **Optimize Efficiency** Identify areas for improvement to streamline the development process and reduce costs.
- **Improve Quality** Make recommendations to enhance the quality of software produced through the SDLC.
- **Develop Roadmap** Create a strategic plan for implementing the recommended changes to optimize the SDLC for future development efforts.

Evaluate the existing SDLC processes, methodologies, and tools deployed within ABCBS.

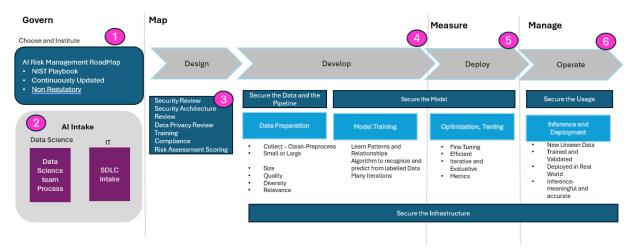
- Identify areas of improvement, risks, and bottlenecks in the SDLC.
- Develop recommendations and a roadmap for optimizing the SDLC to align with industry best practices, compliance standards, and ABCBS goals.
- Provide guidance on implementing suggested improvements and monitoring their effectiveness over time.
- Conduct interviews and workshops with key stakeholders including IT personnel, project managers, developers, testers, and business analysts to gather insights into current SDLC practices.
- Perform a comprehensive review of documentation, policies, and procedures related to software development, testing, deployment, and maintenance.
- Utilize industry-standard frameworks such as CMMI, ITIL, or Agile methodologies to assess the maturity and effectiveness of SDLC processes.
- Employ tools and techniques for process mapping, gap analysis, and risk assessment to identify areas for improvement.
- Benchmark ABCBS's SDLC practices against industry peers and standards.



Deliverables for SDLC Update

Detailed assessment report highlighting findings, recommendations, and a prioritized action plan for enhancing the SDLC.

Development For Scalability and Integration



We have a 6 step Process to Deliver AI Consulting Across Organizations

Choose and Institute AI RMF

Workshop to Choose and Institute the AI RMF of Choice: Audience Includes Senior Leadership and Mid to Senior Management, Informing, Training on using Risk Scoring for AI

Implement AI Review Assessments

- Establish a Security Review Board (SRB) process to assess AI solution security at different stages.
- Ensure the formation of a multidisciplinary team with defined roles for security and compliance reviews.
- Set up review cadences, deliverables, and documentation of findings.
- Implement a continuous assessment process for AI governance and compliance with security standards (e.g., NIST, ISO).
- Provide recommendations for remediation of identified risks and maintain ongoing oversight.

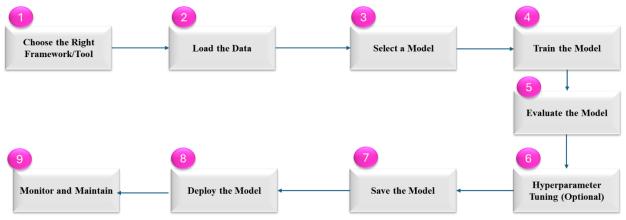
Develop AI Impact Assessment and Process

Requirements	 Human in the Loop Establishing policies that ensure AI-driven decisions are subject to human review, preventing potential biases and ensuring alignment with non-discrimination requirements. Initial Governance Defining and establishing the role of the governance council in overseeing compliance efforts and policy implementation. Policy Completion: Finalizing all necessary policies and procedures to meet full compliance. NIST Mapping: Ensuring that all policies are aligned with NIST standards, with clear mappings that demonstrate compliance. Measurement Framework: Developing tools and processes to measure compliance effectiveness and identify areas for improvement.
Deliverables	• Human-in-the-Loop Policy A clear framework ensuring that all AI-driven decisions undergo human review to prevent bias and ensure fairness.



 Governance Council Engagement Initial presentation and discussion of compliance strategies with the governance council, focusing on transparency and accountability. Final Policies and Procedures: A complete set of policies and procedures covering all aspects of Section 1557 compliance. NIST Compliance Map: A detailed mapping of all policies to NIST
 standards, including documentation of compliance measures. Transparency Index: A system for measuring and reporting the transparency and effectiveness of compliance efforts, to be presented to the governance council. All Templates for Successful Implementation

Build AI/ML Use Cases



Step 1: Choose the Right Framework/Tool

Before starting the build, select the appropriate machine learning framework based on your needs. Common options include:

Python-based frameworks: TensorFlow, PyTorch, Scikit-learn

Cloud-based tools: Azure Machine Learning, AWS SageMaker, Google Vertex AI

Step 2: Load the Data

Prepare the training and testing datasets. This is a critical step in annotating labeling cleaning and preparing the data.

Step 3: Select a Model

Choose an appropriate model depending on the problem type:

- Classification: Logistic Regression, Decision Tree, Random Forest, XGBoost, Neural Networks
- Regression: Linear Regression, Ridge/Lasso, Random Forest Regressor
- Clustering: K-Means, DBSCAN

Step 4# Train the model

model.fit(X_train, y_train)

Step 5: Evaluate the Model

Test the model to check its performance.

Predict on test data

Evaluate the accuracy

Detailed evaluation report

Step 6: Hyperparameter Tuning (Optional)

Improve model performance by tuning hyperparameters using techniques such as Grid Search or Random Search.



Step 7: Save the Model

Once satisfied with the performance, save the trained model for future use.

Step 8: Deploy the Model (Optional)

If deploying the model, consider packaging it with a web API using Flask, FastAPI, or cloud platforms.

Step 9: Monitor and Maintain

After deployment, track performance using monitoring tools and retrain the model periodically with new data to improve accuracy.

QA for AI

- Create Compliance Evidence and Conduct comprehensive risk assessments for each AI use case, considering ethical, legal, and operational risks.
- Develop mitigation strategies to address identified risks and ensure responsible AI implementation.
- Validate AI Methods and Measures with a Fushiaa proprietary accelerator tool to determine algorithmic bias and model drift.

Operationalize AI

Security Practices

- Data Encryption: End-to-end encryption for data in transit and at rest.
- Authentication and Authorization: Multi-factor authentication (MFA), role-based access control (RBAC).
- Incident Response: Well-documented and tested incident response plan.
- Penetration Testing: Regular testing to identify and address vulnerabilities.
- Regulatory Compliance: Adherence to relevant standards (e.g., SOC 2, ISO 27001,

HIPAA, GDPR).

Privacy Management

- **Data Minimization:** Collect only necessary data and securely anonymize where possible.
- Consent Mechanisms: Transparent mechanisms for obtaining user consent.
- User Data Access: Allow users to review, export, or delete their data.
- Third-Party Integrations: Evaluation of third-party services for privacy risks.

AI Transparency

- Explainability: Clearly explain how AI models make decisions.
- Model Lineage: Track the development and deployment history of AI models.
- Bias Detection: Mechanisms to detect and mitigate biases in AI models.

Ethical AI Design

- Fairness: Evidence of fair AI practices across demographics.
- Human Oversight: Human-in-the-loop mechanisms for critical AI decision-making.
- Avoidance of Harm: Documented measures to prevent unintended harm from AI.

Compliance and Governance

- **NIST AI RMF Alignment:** Adherence to the NIST AI Risk Management Framework.
- Global Standards: Compliance with international AI frameworks (e.g., EU AI Act).
- Audit Trails: Comprehensive logging for auditing and accountability.

Robustness and Reliability

- Stress Testing: Regular testing to ensure system resilience under diverse conditions.
- Error Handling: Clear processes for identifying and mitigating errors.
- Version Control: Ensure version consistency and rollback mechanisms.

This comprehensive methodology enables our clients to achieve AI Implementation responsibly and securely.



Data Security Framework and Implementation Details

Data Preparation and Model Training

Our methodology begins with meticulous data preparation, which involves cleansing and standardizing data to remove biases and ensure high-quality inputs for model training. Diverse architectural approaches are then tested to find the optimal model configuration that best addresses the data characteristics and project requirements. This rigorous approach not only enhances model accuracy but also contributes to the robustness of the predictions, minimizing the risk of errors in real-world applications.

Advanced Anomaly Detection

Safeguard the integrity of our models, we employ advanced statistical methods and the latest machine learning techniques to detect and address anomalies and outliers. This proactive anomaly detection is crucial for pre-empting potential issues that could affect model performance or lead to security vulnerabilities. By identifying and mitigating these anomalies early, we ensure that the models operate reliably and securely, even under varying or unexpected data conditions.

Explainability

Transparency is achieved using state-of-the-art explainability tools like LIME and SHAP, which provide clear insights into the decision-making processes of our models. These tools are instrumental in breaking down complex model behaviours into understandable terms, facilitating greater stakeholder engagement and trust.

Security Enhancements Through Rigorous Checks

Our security strategy encompasses comprehensive measures to protect the models and their data. Regular model validation checks assess the accuracy and reliability against known benchmarks, ensuring that the models perform as expected. Threat modelling is conducted to identify and mitigate potential threats in the model deployment environment, safeguarding against both external and internal security risks.

Fushiaa's Solution Offering in AI ML using Gen AI

We have implemented the following methods at our clients in Healthcare, Distribution and Staffing.

	Supervised	Unsupervised
	Regression: Predicts continuous values based on input features. Linear Regression, Ridge	Clustering: Used to group data points with similar characteristics. K-Means Clustering,
	Regression, Lasso Regression	Hierarchical Clustering, Gaussian Mixture Models (GMM)
	Classification: Categorizes data into predefined classes. Decision Trees, Random Forests,	Association Rule Learning: Identifies relationships or associations between variables.
	Logistic Regression, Support Vector Machines (SVM), k-Nearest Neighbors (k-NN)	Apriori Algorithm, Eclat Algorithm
	Ensemble Methods: Combines multiple models to improve performance. Gradient Boosting	Dimensionality Reduction: Reduces the number of features while retaining key information.
Structured Data	Machines (e.g., XGBoost, LightGBM), AdaBoost	Principal Component Analysis (PCA), Independent Component Analysis (ICA)
	Image Classification: Labels images into predefined categories. Convolutional Neural	Clustering on Text or Image Data: Groups unstructured data based on similarity. K-Means
	Networks (CNNs), ResNet, Inception	Clustering (for text embeddings), Self-Organizing Maps (SOMs)
	Text Classification: Categorizes text into predefined classes. Recurrent Neural Networks	Topic Modeling: Extracts themes from large collections of text. Latent Dirichlet Allocation
	(RNNs), Bidirectional Encoder Representations from Transformers (BERT)	(LDA), Non-negative Matrix Factorization (NMF)
	Speech Recognition: Converts audio data into text labels. Hidden Markov Models (HMMs),	Anomaly Detection: Detects unusual patterns within unstructured data. Autoencoders,
Unstructured Data	Deep Neural Networks (DNNs) in speech-to-text systems	Isolation Forest (for text or image anomalies)

Delivered ML Methods

Fushiaa has demonstrated capability in the following ML Methods:

Structured data in Machine Learning (ML) refers to data that is organized in a clear, tabular format, often with rows and columns, making it easier for algorithms to analyze and process. This data typically has well-defined attributes, and each attribute is labeled with specific types or categories (like integers, floats, or strings). Examples of structured data include data in relational databases, spreadsheets, and CSV files.

ML methods for structured data often rely on traditional algorithms that can efficiently work with these organized datasets. Common ML algorithms for structured data include:



- Linear and Logistic Regression: These algorithms are frequently used for tasks involving numerical prediction (linear regression) or binary classification (logistic regression) with structured data.
- Decision Trees and Random Forests: These algorithms split the data based on certain attribute values, making them effective for handling categorical and numerical data. Random forests use multiple decision trees to enhance prediction accuracy.
- Support Vector Machines (SVMs): SVMs classify data by finding a hyperplane that best separates data into categories and are useful for structured data with high-dimensional features.
- Gradient Boosting Algorithms: Methods like XGBoost and LightGBM are popular for structured data due to their ability to optimize prediction accuracy and handle imbalanced datasets.
- K-Nearest Neighbors (KNN): This method is based on feature similarity and is useful for classification tasks in structured data by comparing a new data point to its nearest neighbors.

Structured data ML methods generally require preprocessing steps like normalization, handling missing values, and encoding categorical variables for optimal performance. The structured nature of the data allows these algorithms to be more efficient and interpretable than those used in unstructured data scenarios, like deep learning methods in image or language processing.



Data Security and Privacy Policy

Set up of Data Security Policy, Process and Templates

This policy is designed to protect sensitive information from unauthorized access and to ensure that AI systems used in data analysis and decision-making adhere to ethical standards. It encompasses guidelines for the encryption of data, controlled access, and secure data retention and deletion practices, thus maintaining compliance with Section 1557 throughout the data lifecycle.

- **Data Security Protocols**: Implementing encryption and access control measures to protect data.
- **Privacy Protections**: Ensuring compliance with regulatory frameworks to prevent discrimination based on protected characteristics.
- **Data Retention and Deletion**: Establishing policies for the retention and secure deletion of data to meet legal and operational requirements.

It applies to all employees, contractors, and third-party vendors involved in the collection, processing, storage, and deletion of data. This includes any AI systems or tools used to analyze data or make decisions, ensuring that these technologies do not introduce biases or violate privacy standards.

Policy Statement

- **Data Encryption**: All sensitive data must be encrypted both during transmission (in transit) and storage (at rest) using industry-standard encryption methods (e.g., AES-256). This includes data processed or generated by AI systems.
- Access Controls: Role-Based Access Control (RBAC) and Multi-Factor Authentication (MFA) must be implemented to ensure that only authorized personnel have access to sensitive data. AI systems must also adhere to these access controls to prevent unauthorized manipulation or access.
- **Data Retention**: Data must be retained only as long as necessary to meet operational or legal requirements. Retention periods should be clearly defined and documented, and the rationale for retention must be aligned with Regulatory Frameworks
- **Data Deletion**: Upon expiration of the retention period, data must be securely deleted using methods that prevent recovery or misuse. This includes securely removing data from AI systems and ensuring that all backups are also deleted.

Policy Questions

- How do we ensure that AI models and systems comply with data encryption and access control standards?
- What procedures are in place to verify that AI-driven data analysis does not introduce or perpetuate bias or discrimination?
- How are data retention and deletion practices integrated with AI systems to ensure compliance with regulatory framework?

Policy Exceptions

• Legal Investigations: Data required for ongoing legal investigations or regulatory audits may be retained beyond the standard retention period. Such exceptions must be approved by the legal team and documented.



- Legacy Systems: In cases where legacy systems do not support current encryption standards, temporary exceptions may be allowed. However, compensatory controls must be implemented to mitigate risks.
- **Emergency Situations**: In emergency situations requiring immediate deployment of AI models, standard procedures may be bypassed. However, these exceptions must be documented, and post-deployment reviews should ensure compliance with all applicable regulations.

Compliance Management

To manage compliance with this policy, the ABCBS will implement the following measures:

- **Regular Audits**: Conduct periodic audits of data encryption practices, access controls, and data retention policies to ensure compliance with Section 1557 and the policy requirements. Audits should also include assessments of AI systems to detect potential biases or security issues.
- **Monitoring and Reporting**: Continuously monitor access to sensitive data and the operation of AI systems to detect and prevent unauthorized actions. Implement automated reporting tools to alert compliance teams to potential issues.
- **Incident Response**: Develop and maintain an incident response plan to address any data breaches, security incidents, or violations of Regulatory Frameworks. The plan should include procedures for investigating, mitigating, and reporting incidents.

Security Controls

To ensure effective data security and privacy, the following controls will be implemented:

- **Data Encryption**: Use AES-256 encryption for data at rest and TLS/SSL encryption for data in transit. AI models and tools must also comply with these encryption standards.
- Access Controls: Implement RBAC and MFA to restrict access to sensitive data. Regularly review and update access permissions to reflect changes in roles or responsibilities.
- **Data Masking**: Use data masking techniques to protect sensitive information during processing and analysis, particularly when handling data through AI systems.
- Monitoring and Logging: Maintain comprehensive logs of all data access and modifications. Utilize automated monitoring tools to detect unusual activity and potential security breaches.
- Threat Detection and Response: Implement AI-driven threat detection systems to identify and respond to potential security breaches in real-time. Integrate robust identity verification mechanisms to ensure secure access control and prevent unauthorized access, both internally and externally. Define incident response protocols, incorporating identity-related breach scenarios, and ensure they are regularly tested and updated to adapt to evolving security threats.
- **Implement Encryption**: Ensure that all sensitive data is encrypted by default. Regularly review and update encryption protocols to align with current standards.
- Maintain Access Control: Regularly update user roles and permissions to ensure appropriate access levels. Conduct periodic access reviews to prevent unauthorized access.
- **Develop Retention Plans**: Establish clear data retention schedules and ensure compliance with legal and operational requirements. Document retention policies and justify the retention periods.
- Secure Data Deletion: Use secure data deletion methods to ensure that data is permanently removed once the retention period expires. Verify that all backups and archives are also deleted.
- **Conduct Training**: Provide regular training for employees on data privacy, security protocols, and compliance with Regulatory Frameworks Emphasize the importance of ethical AI practices and non-discriminatory data handling.



Implement Robust Cybersecurity

- Establish a Security Review Board (SRB) process to assess AI solution security at different stages.
- Ensure the formation of a multidisciplinary team with defined roles for security and compliance reviews.
- Set up review cadences, deliverables, and documentation of findings.
- Implement a continuous assessment process for AI governance and compliance with security standards (e.g., NIST, ISO).
- Provide recommendations for remediation of identified risks and maintain ongoing oversight.

Security Review

- Review AI solution before formal approval to proceed with development, ensuring potential security risks are identified and addressed.
- Conduct a second comprehensive review after the AI solution is built but before final deployment, ensuring that security and compliance risks are mitigated.

Deliverables Summary

A **Security Architecture Review** evaluates the design and implementation of an organization's security architecture. The goal is to identify potential vulnerabilities, ensure compliance with security standards, and assess the effectiveness of security controls.

Qualitative Deliverables

- Change Management targeting critical areas such as network security, access control, application security, data governance, and incident response,
- Inclusion of the team in the overall SDLC process in a formal manner
- Program Communications
- Establish security review process.
- Establish Pre-Approval Security Review Team:
 - ♣ Key Roles:
 - AI Governance Lead Manages AI policy and compliance strategy.
 - Cybersecurity Expert Conducts security risk assessments specific to AI models.
 - AI Architect Provides technical insights into the solution design.
 - Data Privacy Officer Ensures compliance with privacy laws and regulations.
 - Legal Counsel Ensures adherence to regulations regarding AI ethics and data security.
 - o **Deliverables:**
 - An org chart with defined roles and responsibilities.
 - A formal communication plan for decision-making.

Templates

Fuchsia will supply reusable templates for the Security Architecture Review. Any existing templates will be evaluated and used as applicable.

1. Template for an Executive Summary of EIS report that contains.

- o A high-level overview of findings, key risks, and recommendations.
- o Tailored for C-level executives and non-technical stakeholders.
- o Emphasizes the overall security posture and potential business impacts.

2. Templates for Detailed Findings Report containing

- o A comprehensive document outlining vulnerabilities, misconfigurations, and areas of noncompliance.
- o Categorized based on risk levels (e.g., critical, high, medium, low).
- o Includes technical details of identified gaps and potential exploits.



3. Template for Gap Analysis that

- o Compares the current security architecture against industry best practices and frameworks (e.g., NIST, ISO 27001).
- o Identifies gaps in policies, procedures, and technology implementations.

4. Template for Risk Assessment Matrix indicating

- o Prioritization of identified risks based on impact and likelihood.
- o Includes a matrix or table format to quickly visualize high-risk areas.
- o Links each risk to potential business impacts and likelihood of exploitation.
- 5. Template for Remediation Recommendations identifying
 - o Actionable steps to mitigate identified risks.
 - o Includes short-term quick fixes as well as long-term strategic improvements.
 - o Prioritized based on the risk assessment.

6. Template for Architecture Diagram Review (Assessment Report) describing

- o Analysis of the organization's security architecture diagrams.
- o Identifies missing or outdated components, potential network vulnerabilities, and weaknesses in the overall structure.

7. Template for Compliance Check Report containing

- o Review of the architecture's compliance with relevant regulatory requirements (e.g., GDPR, HIPAA).
- o Includes suggestions for achieving compliance where gaps are identified.

8. Template for Threat Model Analysis containing

- o Assessment of potential attack vectors specific to the organization's environment.
- o Identifies key assets and assesses how well they are protected.

9. Template for Security Control Effectiveness Assessment

- o Evaluates the effectiveness of existing security controls, including firewalls, IDS/IPS, access controls, encryption, and more.
- o Provides recommendations for strengthening weak controls.

10. Template for Incident Response Readiness – BCDR process

- o Assessment of how well the architecture supports incident detection and response.
- o Recommendations for improving incident handling and reporting mechanisms.

11. Template for Roadmap for Improvement (if Applicable)

- o A phased approach to address vulnerabilities and enhance security maturity.
- o May include timelines, resource requirements, and estimated costs for implementation.

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Distinguishing Cyber Functions

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Category	Non AI Security Function	Al Security Function
Data Handling	Fixed protocols for data validation, access control and logging	Dynamic, Complex data sets, trained and processed – enhanced controls for privacy, integrity and explainability
Threat Detection	Rule based (Signature based antivirus, firewalls)	Suspicious patterns and zero day attacks with Predictive Analytics
Automation	Fixed Workflow and Repetitive tasks, Human Intervention for Incident Response	Adaptive automation in threat hunting and incident response
Vulnerability Management	Periodic manual scans and patching schedules	Continuous monitoring and predictive analytics for vulnerability management
Decision Making	Logical and Deterministic	Improving decision making over time with past learning
Scalability and Complexity	Requires addition of rules and system integration	Scale faster with minimum intervention
Ethics and compliance	Standard Security Policies(Access Control, Encryption and Audit)	Challenges like algorithmic bias, transparency and explainability. Policies must address Responsible AI principles ensuring fairness and ethical use
Attack Surface	Relatively Static (traditional vectors like networks, devices and applications)	Adversarial ML , model extraction, weights manipulation and inference attack

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Data Engineering for AI Strategy

This proposal outlines our approach to designing, implementing, and maintaining a comprehensive data engineering pipeline and certification framework optimized for AI applications. We will leverage cutting-edge technologies and best practices to ensure your data is accurate, consistent, and readily available for your AI initiatives. Our solution encompasses:

- **Data Acquisition and Integration:** Establishing robust pipelines to collect, cleanse, and integrate data from diverse sources.
- **Data Transformation and Preparation:** Implementing AI-powered data preprocessing techniques to enhance data quality and prepare it for AI model training.
- **Data Certification Framework:** Developing a comprehensive framework with clear metrics and automated processes to certify data quality and fitness for AI use.
- **AI Model Development Support:** Providing expertise in data preparation and feature engineering specifically for AI model training and optimization.
- **Ongoing Monitoring and Maintenance:** Ensuring the long-term health and efficiency of your data pipeline and certification process.

Data Engineering Pipeline

- **Data Acquisition:** We will design and implement efficient data pipelines to ingest data from various sources, including databases, APIs, cloud storage, streaming platforms, etc.
- **Data Integration:** We will employ data integration techniques like ETL (Extract, Transform, Load) and ELT (Extract, Load, Transform) to consolidate data into a unified and consistent format.
- **Data Transformation:** We will utilize AI-powered tools for data cleansing, deduplication, anomaly detection, and imputation to enhance data quality.
- **Data Storage:** We will recommend and implement appropriate data storage solutions, such as data lakes, data warehouses, or NoSQL databases, based on your specific needs.

Data Certification Framework



- **Data Quality Metrics:** We will define clear and measurable data quality metrics aligned with your AI objectives, including accuracy, completeness, consistency, timeliness, and validity.
- Automated Data Validation: We will develop automated data validation processes to continuously monitor data quality and identify potential issues.
- **Data Certification Process:** We will establish a robust data certification process with clear roles and responsibilities for data stewards and stakeholders.
- **Data Lineage and Traceability:** We will implement data lineage tracking to provide transparency and accountability for data transformations and certifications.

AI Model Development Support

- **Feature Engineering:** We will collaborate with your Data Governance and Data Engineering team to engineer relevant features from the data that improve model performance.
- **Data Splitting and Validation:** We will assist in splitting data into training, validation, and testing sets to ensure model generalizability.
- **Data Augmentation:** We will explore data augmentation techniques to increase the size and diversity of your training data, if applicable.

Specialized Offering AI and ML Model testing

Comprehensive QA Solutions for Machine Learning Models Service Overview

Fushiaa's QA service for ML models focuses on testing, validating, and optimizing machine learning algorithms throughout their lifecycle, from development through deployment, and into production. The service is tailored to ensure that models are accurate, secure, fair, and compliant with relevant standards.

Key Service Components

The Service Offering assists our clients in establishing the following testing within their organizations, enabling the teams to perform the testing with the right templates, frequency and cadences required to perform robust testing

Testing Type	Purpose	Testing		
Functional Testing	Ensure the ML model performs as intended.	Unit Testing Testing individual components of the ML pipeline (e.g., data preprocessing, feature extraction, model outputs)	Integration Testing Ensure that different parts of the ML workflow integrate seamlessly.	Regression Testing Verify that new updates don't negatively impact existing model functionality
Performance Testing	Ensure that the model performs under various conditions.	Scalability Testing Simulate varying workloads to evaluate the model's ability to scale efficiently.	Load Testing Assess how the model behaves under heavy usage or during peak loads.	Stress Testing Identify the model's breaking point when subjected to extreme conditions.
Security Testing	Safeguard the model from security vulnerabilities.	Adversarial Attacks Testing Evaluate how well	Data Privacy Checks Ensure that data used to	Model Integrity Perform checks to detect any



		the model can withstand malicious attempts to manipulate it.	train the model doesn't expose sensitive information, in line with privacy regulations (HIPAA).	tampering or unintended modifications to the model during its lifecycle.
Bias & Fairness Testing	Ensure that the model does not perpetuate or introduce bias.	Fairness Audits Evaluate the model's predictions across different demographic groups (e.g., race, gender).	Bias Detection Use statistical and algorithmic techniques to identify and mitigate bias in the model's decision- making process.	
Compliance Testing	Ensure that the model complies with relevant regulations and industry standards.	Regulatory Audits Ensure the model aligns with specific regulations, such as HIPAA for healthcare or GDPR for data privacy.	Documentation Reviews Verify that the model's decisions are auditable and transparent in compliance with frameworks like NIST AI Risk Management Framework (RMF).	
Continuous Monitoring & Post- Deployment Testing	Ongoing evaluation of model performance after deployment.	Real-Time Monitoring Utilize organizational tools of choice for continuous model performance tracking.	Data Drift Detection Regularly monitor for any changes in data distributions that may cause the model to become less effective.	Model Retraining and Recalibration Periodically retrain the model on fresh data or update it to adapt to evolving requirements.

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Methodology Initial Assessment Test Plan Development Testing Execution Reporting & Feedback Loop Post-Testing Optimization Evaluate the client's current ML Create a detailed OA test plan that Perform the tests (as outlined Provide a detailed test report with Provide ongoing support for model(s) and gather business above), with extensive logging and , findings, risk analysis, and optimization and fine-tuning defines testing methodologies, objectives, data requirements, and timelines, and milestones for each documentation to ensure actionable recommendations ensuring the model remains industry-specific compliance omponent of the ML model reproducibility. effective, fair, and compliant Provide guidance for improving the needs. lifecycle. model and ensure effective Understand the deployment communication with the environment (e.g., cloud, ondevelopment and operations teams premise).

Value Proposition

Fushiaa's key value proposition is the Delivery of Knowledge, Methodology, Consulting and Talent where AI meets Cybersecurity and Data Governance

In addition, the testing achieves the following

- ✓ Efficiency Reduce the time spent on debugging, tuning, and validating models by using a structured, automated QA process.
- ✓ Compliance and Risk Management- Help clients adhere to industry regulations while maintaining high standards of model fairness and security.
- ✓ Scalability & Reliability Ensure that the model performs well at scale and can handle a variety of real-world challenges.
- ✓ Continuous Improvement Ensure that the model stays relevant and high-performing in dynamic environments.

Service Offering Scope and Objectives

We provide detailed framework for enhancing the security and transparency of machine learning models through targeted methodologies, With the rapid growth of AI adoption, ensuring model robustness, transparency, and compliance has become a critical challenge for organizations. As machine learning becomes increasingly central to technology solutions, the necessity for robust security measures, transparent model operations, and fair outcomes cannot be overstated. This document outlines our approach to implementing these aspects in machine learning applications across various sectors.

Key Objectives

- Security Enhancement Continuous model monitoring employed to detect anomalies and outliers effectively. This proactive approach helps identify potential security threats and vulnerabilities in real-time, ensuring the ongoing safety and integrity of our models.
- **Model Transparency** We utilize advanced explainability tools, such as LIME (Local Interpretable Model-agnostic Explanations) and SHAP (Shapley Additive Explanations) to enhance model transparency. These tools help demystify the decision-making processes of our models, making them more accessible and understandable to all stakeholders, thereby increasing trust and acceptance.

Our differentiation lies in our ability to integrate a cybersecurity focus into AI, supporting the implementation of Responsible AI through a risk management approach and leveraging key cybersecurity functions to oversee and monitor AI adoption.



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Fushiaa AI Solution Capabilities for Natural Language Processing (NLP) Accuracy

Fushiaa's AI solutions leverage state-of-the-art natural language processing (NLP) models to ensure high levels of accuracy in processing diverse inquiries. Our solutions employ advanced techniques such as contextual embeddings, transformer-based architectures (e.g., BERT, GPT), and domain-specific fine-tuning to enhance precision.

Measurement and Maintenance of Accuracy

- Evaluation Metrics: We utilize industry-standard metrics such as F1-score, precision, recall, and BLEU scores to assess the accuracy of our NLP models.
- Data Augmentation: Continuous enrichment of training datasets to include diverse linguistic variations.
- Human-in-the-loop: Incorporation of human oversight to validate AI-generated responses and improve model performance.
- Automated Testing Pipelines: Deployment of rigorous automated testing pipelines to detect and correct anomalies.

Algorithm Transparency

Fushiaa is committed to transparency in our AI solutions. We employ explainable AI (XAI) methodologies to provide stakeholders with insights into decision-making processes. Our solutions are built using:

- Algorithmic Frameworks: Our models include neural networks, decision trees, and probabilistic models, each selected based on their interpretability and performance.
- Bias Mitigation Strategies: We proactively identify and mitigate biases using techniques such as re-sampling, adversarial debiasing, and fairness-aware model training.
- Validation and Testing: Models undergo rigorous testing using fairness benchmarks and bias detection tools, ensuring ethical and equitable outcomes across diverse demographics.

Continuous Improvement

Our AI solutions incorporate mechanisms for continuous learning and improvement, ensuring sustained performance enhancements over time.

- Adaptive Learning Pipelines: Algorithms are designed to self-improve by incorporating user feedback and retraining on updated data.
- Performance Monitoring: Continuous tracking of key performance indicators (KPIs) such as response accuracy, latency, and user satisfaction.
- User Feedback Integration: Mechanisms for real-time user feedback collection, enabling iterative refinements.
- Periodic Model Refresh: Scheduled model retraining cycles to adapt to evolving language patterns and user needs.

Interoperability

Fushiaa's solutions are designed to seamlessly integrate with existing digital infrastructures, ensuring compatibility and flexibility.

- Open Standards Compliance: Adherence to industry standards such as HL7, FHIR, and OpenAPI.
- API Capabilities: Our solutions provide robust RESTful and GraphQL APIs to facilitate seamless communication with legacy systems.
- Data Format Compatibility: Support for widely used data formats such as JSON, XML, and CSV.
- Scalability: Architectures designed for horizontal and vertical scaling to accommodate future growth and integration needs.

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• Interoperability Testing: Comprehensive test plans including system integration testing (SIT) and user acceptance testing (UAT), with prior successful deployments across multiple healthcare and financial systems.

Quality Control

Fushiaa maintains stringent quality control measures to ensure our solutions consistently meet performance expectations.

- Validation Processes: End-to-end testing covering functional, performance, and security aspects.
- Quality Assurance Protocols: Implementation of industry best practices such as ISO 9001 and NIST guidelines.
- Automated and Manual Testing: A hybrid approach leveraging automated scripts for regression testing and manual audits for critical validations.
- Continuous Monitoring: Real-time anomaly detection and alerting mechanisms to maintain system reliability.

Fushiaa's AI solutions are dedicated to delivering cutting-edge NLP capabilities with a strong focus on accuracy, transparency, adaptability, interoperability, and quality control, ensuring seamless and effective AI-driven communication for our clients.

APPENDIX A.1

Pricing for TXShare Cooperative Purchase Program Participants

Service Category 1 – Artificial Intelligence (AI) Solutions for Public Sector Entities:

Description	Add additional description if necessary:	% Discount	Notes/Comments (Scope include Complexity Use Cases, 3 High Cor
1. Software Licensing and Subscription Costs:			
Provide the cost breakdown for software licenses, subscriptions, or any	Compute, Storage, VMs, other cloud		We will leverage the existing pricing co
other software-related fees.	services	2%	leverage our partnership with Microsoft
2. Implementation and Customization Costs:			
Outline the costs related to the implementation of the AI solution,			
including setup, integration with existing systems, customization, and			All Resources are all onshore. Costs ca
deployment.	WorkForce Cost	2%	be engaged
3. Training and Support Costs:			
Include costs for training government staff, technical support, and			All Resources are all onshore. Costs ca
customer service, both during and after implementation.	Training Material and Training Costs	2%	be engaged
4. Ongoing Maintenance and Updates:			
Provide costs for ongoing software maintenance, updates, and any			
regular services required to keep the AI system running smoothly.	Software Upgrades	2%	We will leverage the existing pricing co
5. Optional Add-Ons or Features:	Legal Regulatory and Other Costs		
List any additional features or services available that are not included in	(optional) in case of GDPR, SOC2 ,		
the core proposal but can be added at an additional cost.	external audit	2%	These are legal regulatory and risk mana
6. Total Cost of Ownership (TCO):			
Summarize the Total Cost of Ownership (TCO), which includes all costs			
over 3 years. This should reflect software, implementation, support,			
maintenance, and optional add-ons.	3 year TCO	2%	For 3 years
Category 2 - Ancillary Goods and/or Services			
Describe Below:		% Discount	Notes/Comments
Fushiaa AI Lab Service QA for AI Optional Service to test models and			
model performance		7%	Use of Proprietary Methodology for AI Assu

le 10 Low Complexity Use Cases, 6 Medium omplexity Use Cases)

contracts and discounts available to the city. We will
ft, Snowflake, Splunk, Palo Alto Networks and Databricks

can drastically reduce if offshore resoruces are allowed to

can drastically reduce if offshore resoruces are allowed to

contracts and discounts available to the city

anagement costs

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Scope that will be delivered in the cost

• As the participating organizations vary in size, budget, data volume and complexity, the pricing is based on several assumptions.

• Fushiaa can deliver a maximum of 10 low complexity use cases or 6 medium complexity use cases or 3 high complexity use cases for the quoted price. Note: We have given examples of what constitutes low, medium and high complexity in the excel.

• Scope covered for the price listed: 3-4 Low complexity use cases OR 2-3 Medium Complexity Use cases or 1-2 High Complexity Use Cases Per Year

• We will leverage our partnership with Microsoft, DataBricks, Snowflake, Splunk and Palo Alto Networks to get the lowest possible cost, plus 10% margin for Fushiaa.

Research Around Cost (Justification for Scope and Proce)

Our research and AI Delivery Experience indicates the following:

• All use cases assume that a new data delivery cloud (like snowflake) or any cloud requires to be built with the right controls.

• Any AI Implementation involving Agentic AI or Gen AI cost over 2M per use case on a conservative estimate (chatgpt, gemini, gartner and AI overview) with an average duration of 2 years per use case, requiring all data to be available readily, new technology may be involving drones, video equipment or IoT

• Simpler implementations using Chatbots and light NLP can cost over 1M per use case assuming all data is available for high accuracy chatbot conversations, with an average duration of 6 months per use case

• Medium complexity implementations involving predictions and regression are likely to cost over 1.5M per use case with an average duration of 1 year per use case.

DepartmentUse Cases: Low ComplexityUse Cases: Medium ComplexityAdministrationChatbot for citizen feedback collectionAl dashboards for real-time performance traDevelopment ServicesChatbot to assist with permit FAQsML-based inspection schedule optimizerEvent CenterChatbot for event FAQs and ticketing queriesPersonalized event recommendation engine

Economic Development	FAQ chatbot for small business resources	
Finance and Budget	Automated invoice classification and filing	
Human Resources	Resume screening chatbot	
IT and Cybersecurity	AI help desk assistant for IT issues	
Library Services	Virtual assistant for catalog navigation	
Municipal Courts	Chatbot for legal process FAQs	
Parks and Recreation	Automated registration chatbot	
Parks Maintenance	Resident chatbot for issue reporting	
Public Works	FAQ chatbot for projects and closures	
Utility Billing	Chatbot for billing and payment issues	
Visitors Bureau	Tourist chatbot with directions and info	
Other Gov Entities	AI assistant for internal FAQs and docs	'

Al dashboards for real-time performance tracking	Po
ML-based inspection schedule optimizer	NL
Personalized event recommendation engine	Al-
Predictive analysis for identifying investment zones	AI-
Budget forecasting using historical trends	Re
Employee sentiment analysis tool	AI-
Threat detection using ML on network traffic	Au
Personalized book recommendation system	Μι
Intelligent case scheduling tool	Ge
Recommendation system for events/classes	AI
Predictive maintenance for irrigation/lighting	AI
Project schedule optimizer	Di
Bill forecasting tool	Re
Personalized itinerary generator	AR
Workflow automation via document classification	Ge

Department	Al Type(s)
	Low: Chatbot, Sentiment Analysis
	Medium: Regression, Data Visualization, Predictive
	Analytics
Administration	High: Generative AI, Systems Modeling, Simulation Low: Chatbot, Intent Classification
	Medium: Scheduling Optimization, Supervised
	Learning
Development Services	High: NLP, Document Analysis, Classification Low: Chatbot
	Medium: Recommendation System, User Profiling
Event Center	High: Predictive Modeling, Pricing Optimization Low: Chatbot
	Medium: Regression, GIS Integration
Economic Development	High: Generative AI, NLP Low: Document Classification, OCR
	Medium: Time Series Forecasting, Regression
Finance and Budget	High: Anomaly Detection, Unsupervised Learning Low: NLP, Classification
	Medium: Sentiment Analysis, Text Mining
Human Resources	High: Recommendation System, Predictive Modeling Low: Chatbot, RPA
	Medium: Anomaly Detection, Supervised Learning
IT and Cybersecurity	High: Reinforcement Learning, Cyber Defense Al Low: Chatbot, NLP
	Medium: Recommendation Engine
Library Services	High: Generative AI, NLP, User Modeling Low: Chatbot, Intent Recognition
	Medium: Scheduling Optimization
Municipal Courts	High: Generative AI, NLP, Legal LLMs Low: Chatbot
	Medium: Recommendation Engine
Parks and Recreation	High: Optimization, Predictive Modeling Low: Chatbot, Incident Classification
	Medium: Regression, Forecasting
Parks Maintenance	High: Computer Vision, Anomaly Detection Low: Chatbot
	Medium: Predictive Analytics
Public Works	High: Digital Twin, Simulation Modeling, IoT + AI Low: Chatbot
	Medium: Time Series Forecasting
Utility Billing	High: Anomaly Detection, IoT Integration Low: Chatbot
	Medium: Recommendation System, NLP
Visitors Bureau	High: Generative AI, Augmented Reality
	Low: Chatbot, Knowledge Retrieval
	Medium: Document AI, RPA
Other Gov Entities	High: Generative AI, Summarization, Reasoning Models

Use Cases: High Complexity

Policy impact simulations using Generative AI NLP model that auto-reviews permit applications N-powered dynamic ticket pricing and segmentation N-driven business development advisor Real-time anomaly detection and fraud alerts N-based career path advisor

Autonomous cybersecurity defense system

Aultilingual GenAI tutor using library resources

GenAI legal assistant for document drafting AI planner for park scheduling and resource use

drone system for park inspections

Digital twin for infrastructure simulation

Real-time anomaly detection in utility usage

AR-based GenAl guide with virtual experiences

GenAI-based strategic report summarizer

APPENDIX A.2 Service Area Designation Forms

(Exhibit 3 continued)

	Nationwide Service Area Designation or Identification Form				
Proposing Firm Name:	Fuchsia Services, Inc DBA Fushiaa				
Notes:	Indicate in the appropriate box whether you are proposing to provide service to all Fifty (50) States.				
	Will service all fit	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				
Itom	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				

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		
		E. 1. FE-1:1:4.2	

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.

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.

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.

Signature of Authorized Person

Vijayalakshmi Rajaramanan Name of Authorized Person

Fuchsia Services, Inc Name of Company

05/04/2025

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 <u>include</u> profits from any federal action), which would be prohibited if paid for with appropriated funds.

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.

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Signature

President, CEO, Founder Title

Fuchsia Services, Inc Agency

05/04/2025

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:

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.

Signature of Authorized Person

Vijayalakshmi Rajaramanan

Name of Authorized Person

Fuchsia Services, Inc

Name of Company

05/04/2025

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:

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.

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Signature of Authorized Person

Vijayalakshmi Rajaramanan

Name of Authorized Person

Fuchsia Services, Inc

Name of Company

05/04/2025

BOYCOTTING OF CERTAIN ENERGY COMPANIES

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:

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.

Signature of Authorized Person

Vijayalakshmi Rajaramanan

Name of Authorized Person

Fuchsia Services, Inc

Name of Company

05/04/2025

APPENDIX E DEBARMENT CERTIFICATION

Vijayalakshmi Rajaramanan

being duly

(Name of certifying official)

sworn or under penalty of perjury under the laws of the United States, certifies that neither

, 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:

NONE

ayalakskni Pagaram

Signature of Certifying Official President, Founder, CEO

Title 05/04/2025

Date of Certification Form 1734 Rev.10-91 TPFS