# The Army xTech Program – xTech AI Grand Challenge Announcement

## I. Background and Purpose

The U.S. Army invites interested Artificial Intelligence (AI) focused businesses to participate in the xTech AI Grand Challenge, a competition for eligible businesses across the U.S. to engage with the Department of Defense (DoD), earn prize money, participate in a business accelerator program and potentially submit for follow-on contract efforts.

The Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA(ALT)) is partnering with the Program Executive Office Intelligence, Electronic Warfare & Sensors (PEO IEW&S) to deliver the xTech AI Grand Challenge. The Army recognizes that the DoD must enhance engagements with businesses across the U.S. by (1) understanding the spectrum of world-class technologies being developed commercially that may benefit the DoD in the AI space; (2) integrating the sector of non-traditional innovators into the DoD Science and Technology (S&T) ecosystem; and (3) providing expertise and feedback to accelerate, mature, and transition technologies of interest to the DoD.

The xTech AI Grand Challenge will consist of three rounds:
1. Call for concept white papers;
2. Testing; and
3. Final demonstration.

The competition will award up to $2,000,000 in cash prizes to selected participants. **Up to 20 finalists will receive a cash prize of $25,000 each and an invitation to pitch their innovative technology solutions to a panel of Army and DoD subject matter experts (SMEs) during an in-person event in August 2025.** The competition will select up to six (6) final winners who will receive a cash prize of first place: $500,000; second place: $300,000; third place: $150,000; fourth place: $75,000; fifth place: $50,000; and sixth place: $25,000. Details on the prize structure are listed in the announcement below.

In addition to non-dilutive cash prizes, participants will have the opportunity to engage with Army and DoD representatives through information-sharing and networking opportunities. Finalists will be entered into an optional accelerator to receive education, mentorship and strategic exposure to assist in growing their companies for DoD and commercial use.

The efforts described in this notice are being pursued under the authorities of 10 U.S.C. § 4025 to award cash prizes and 10 U.S.C. § 4022 (Prototype Projects) recognizing advanced technology achievements in the field of AI.

While the authority of this program is 10 U.S.C. § 4025, the xTech AI Grand Challenge may generate interest by another U.S. Army, DoD or United States Government (USG) organization for a funding opportunity outside of this program (e.g., submission of a proposal under a Broad Agency Announcement). The interested organization may contact the participant to provide additional information or ask for a request for proposal in a separate solicitation. Finalists of the prize competition may be invited to submit a separate proposal for further development of their proposed technology solution based on the needs of the Army. The Army may use a contract mechanism of their choice and will notify the participants accordingly.

**All xTech AI Grand Challenge submissions are treated as privileged information, and contents are disclosed to government employees or designated support contractors only for the purpose of evaluation and program support.**

The xTech Program will provide feedback from evaluators to participants during each part of the competition. The purpose of providing this feedback is to accelerate transition of the technology to an Army end-user by providing insight on best applications for the technology, suggestions for product improvement for Army use and recommended next steps for development. However, the government may not respond to questions or inquiries regarding this feedback.

## II.  Eligibility Requirements

Eligible entities include U.S. based nonprofit organizations, for-profit organizations (i.e., large and small businesses) only.

Each eligible entity:
- Shall be incorporated in, and maintain, a primary place of business in the U.S.;
- Shall not be a U.S. Federal government entity or employ a U.S. Federal Employee acting within the scope of their employment;
- Shall not be currently under contract, agreement or other providing similar capabilities to the Government for work described in the problem statement;
- Must have or be able to obtain a CAGE code if selected to advance in the competition (instructions on how to obtain a CAGE code can be found on the xTech AI Grand Challenge registration page); and
- Shall be at the sole discretion of the Government.

## III.  Topics and Problem Statement

The xTech AI Grand Challenge is seeking cutting-edge technology solutions focused on the importance of preparing data for AI applications and the tools and techniques available from industry to automate and streamline the process. The competition will present an opportunity for Army organizations to see first-hand the challenges of data preparation for AI and the benefits from partnering with industry for data-oriented solutions. By automating and streamlining the data preparation process, organizations can save time, reduce costs, and improve the accuracy and performance of their AI applications.

The focus areas will be supplemented with Army data curated for specific AI use cases identified by Project Linchpin. The competition seeks technology solutions that fit within one of the following topic areas:
- **Automated Data Verification and Validation**
  - Understanding the importance of data verification and validation in AI applications.
  - Exploring the latest tools and techniques for automated data verification and validation, such as data profiling, data cleansing, and data normalization.
  - Discussing the benefits and limitations of these tools and techniques, and how to choose the right ones for different use cases.
- **Data Augmentation and Feature Engineering**
  - Exploring the role of data augmentation and feature engineering in preparing data for AI.
  - Discussing the latest techniques for data augmentation, such as image rotation,

translation, and flipping, and feature engineering, such as one-hot encoding, binning, and polynomial features.
  o Providing practical guidance on how to apply these techniques to improve the quality and quantity of data for AI applications.

## IV. Program Submission

The xTech AI Grand Challenge is voluntary and open to all entities that meet eligibility requirements listed in Section II (Eligibility Requirements). **Only one submission per topic, per eligible entity is permitted; if submitting an application to more than one topic area, the technology solution must clearly be different.** The registration information and submission upload must be received by **5 p.m. ET on January 30, 2025**. Submissions received after the deadline will not be considered.

**Register by selecting the xTech AI Grand Challenge image at:**
**https://www.xtech.army.mil/**

## V. xTech AI Grand Challenge Structure

### Part 1: Concept White Paper

All eligible entities shall submit a four-page concept white paper outlining their technology, benefits, technical approach and requirements. Each concept white paper will be reviewed by DoD experts across the S&T ecosystem including Warfighter, acquisition, and research and development SMEs.

All concept white papers must adhere to the following requirements:
  - All concept white papers must be submitted using the template found on the Valid Eval registration page, "xTechAIGrand_White_Paper_Template.docx". **Any proposals submitted in a format other than the template provided will not be reviewed.**
  - Please list your company name and proposal title **EXACTLY** as you would like them to appear in any contest marketing materials. Use a clear and concise proposal title to give readers and potential stakeholders an understanding of how your technology would benefit the Army.

Evaluators will review and score concept white papers using the following scoring criteria (further details on each scoring dimension can be found on the xTech AI Grand Challenge website registration page):
  - Introduction – 10%
  - Army Benefits – 40%
  - Technical Approach – 45%
  - Submission Quality – 5%

Upon conclusion of the concept white paper evaluation period, the xTech Program will select up to **40 applicants as semifinalists to receive a prize of $10,000 each** and an invitation to Part 2: Testing.

**Part 2: Testing**

The xTech Program will invite selected participants from Part 1 (semifinalists) to submit their techniques and tools virtually that will be tested and evaluated by a panel of Army and DoD SMEs between April – June 2025.

Semifinalists will be provided with a dataset and tasked with developing AI models to analyze and extract meaningful insights. After preprocessing and training their models, participants will run their models against the dataset to generate predictions or results. The xTech Program will provide additional instructions and the detailed evaluation criteria at a later date.

Upon conclusion of the testing round, the xTech Program will select **up to 20 teams as finalists to receive a prize of $25,000 each**, an invitation to Part 3: Finals Demonstration and an invitation to participate in an accelerator program.

***Exact dates, times and details for this round will be provided to selected participants; information is subject to change.***

**Part 3: Finals Demonstration**

The xTech Program will invite selected participants from Part 2 (finalists) to conduct an in-person demonstration of their solution to a panel of Army and DoD SMEs during a live, public event, at or around Aberdeen Proving Ground, MD in August 2025. The xTech Program will provide additional instructions and the detailed evaluation criteria for the Part 3: Finals Demonstration at a later date.

Upon conclusion of the finals, the xTech Program will select **up to six (6) final winners of the competition. Winners will receive an additional cash prize of first place: $500,000; second place: $300,000; third place: $150,000; fourth place: $75,000; fifth place: $50,000; and sixth place: $25,000.**

***Exact dates, times and details for this round will be provided to selected participants; information is subject to change.***

Finalists of the prize competition may be invited to submit a separate proposal for further development of their proposed technology solution based on the needs of the Army. The Army may use a contract mechanism of their choice and will notify the participants accordingly.

**VI.    Proposed Schedule**

The proposed schedule is outlined below and subject to change without notice.

| Date | Activity |
|---|---|
| December 19, 2024 – January 30, 2025 | Part 1: Concept white paper submission period |
| March 18, 2025 | Semifinalists announced |
| April – June 2025 | Part 2: Testing |
| June 2025 | Finalists announced |
| June – August 2025 | Accelerator Programming |
| August 2025 | Part 3: Finals Demonstration |
| August 2025 | Final Winners announced |

## VII. Prizes and Incentives

Prizes will be offered under 10 U.S.C. §4025 (Prize Competitions). The total prize pool is $2,000,000. **The prototype project proposals will be offered under 10 U.S.C. §4022 and are separate from the prize competition**. Other non-monetary incentives are provided through the xTech AI Grand Challenge to help small and large businesses engage with the Army.

| Phase | Winners | Prize |
|---|---|---|
| **Part 1: Concept White Paper** | Up to 40 | $10,000 each |
| **Part 2: Testing** | Up to 20 | $25,000 each |
| **Part 3: Finals Demonstration** | Up to 6 | 1st place: $500,000<br>2nd place: $300,000<br>3rd place: $150,000<br>4th place: $75,000<br>5th place: $50,000<br>6th place: $25,000 |
| **Total** | | $2,000,000 |

## VIII. Disclaimers

Registered participants are required to assume any and all risks and waive claims against the USG and its related entities, except in the case of willful misconduct, for any injury, death, damage, or loss of property, revenue, or profits, whether direct, indirect, or consequential, arising from their participation in this prize competition, whether the injury, death, damage, or loss arises through negligence or otherwise.

## IX. Intellectual Property

The Army is a strong proponent of deliberate intellectual property (IP) rights and management by the private sector and the DoD. For the xTech AI Grand Challenge:
- The USG may not gain an interest in IP developed by a participant without the written consent of the participant;
- Nothing in this xTech AI Grand Challenge shall diminish the government's rights in patents, technical data, technical information, computer software, computer databases, and computer software documentation that the government had prior to this xTech AI Grand Challenge, or is entitled to, under any other government agreement or contract, or is otherwise entitled to under law; and
- The USG may negotiate a license for the use of IP developed by a registered participant in the prize competition.

## X. Point of Contact

The Army xTech Program Office
Office of the Deputy Assistant Secretary of the Army, Research and Technology
Email: usarmy.xtech@army.mil
Website: https://www.xtech.army.mil/