

xTechOverwatch Informational Session Frequently Asked Questions

This FAQ document is designed to address common and technical questions that were asked and sent during the xTechOverwatch Informational Session.

OVERALL COMPETITION 1

CONCEPT WHITE PAPER 5

EVALUATION CRITERIA..... 6

SBIR 7

TECHNICAL QUESTIONS 7

Question	Answer
OVERALL COMPETITION	
<p>If we were selected for the pitch phase of a previous xTech competition, and received a cash prize, does that violate no prior funding requirement?</p>	<p>Proposals submitted in response to this prize competition must be substantially different than another proposal that was funded, is now being funded, or is pending contract award with another federal agency. If you participated in a previous xTech Competition and did not receive a SBIR/STTR contract award, then there are no concerns submitting a proposal for this competition.</p> <p>Small businesses with any question(s) concerning prior, current, or pending support of similar proposals or awards must disclose those as early as possible to the xTech Program Office.</p>
<p>What gaps or unmet needs has the Army seen in past submissions under this topic that you hope to address with this new round of submissions?</p>	<p>Autonomous overwatch skill set has not yet been demonstrated in concert with a formation.</p>

<p>How can we be considered for a topic never covered by any Department of Defense (DoD) Small Business Innovation Research (SBIR), Broad Agency Announcement (BAA) or opportunity to submit a proposal?</p>	<p>The xTech program recommends looking into the xTechSearch competition, which is the U.S. Army's open-topic competition. Unlike traditional solicitations, xTechSearch invites small businesses to submit novel solutions that fall outside pre-defined topics—providing a unique pathway to showcase disruptive technologies directly to Army stakeholders. Focused on identifying and accelerating disruptive technologies, xTechSearch 9—launching next month—offers cash prizes and an opportunity for winners to submit a follow-on SBIR proposal. This is a great entry point for novel ideas not previously addressed through standard DoD R&D channels.</p>
<p>What are the restrictions/limitations if under contract through a different xTech program? i.e.. Can a company compete for xTech Overwatch if the proposal is different than the contracted proposal?</p>	<p>If you are a former xTech competition participant and/or winner, you can submit a proposal to this competition. If you are a current or previous SBIR contract awardee, proposals submitted in response to this prize competition must be substantially different than another proposal that was funded, is now being funded, or is pending contract award with another federal agency.</p>
<p>Do we need to provide hardware or partner with a hardware startup, or can we submit a software solution related to the topic?</p>	<p>You do not have to provide hardware, but if selected provide what you need to in order to demonstrate your solution independently.</p>
<p>These board mission objectives are not new to industry. A lot of foundational R&D and past work has already been performed in these areas of autonomy with 1-many drone, UGV, USV control objectives. How is existing proprietary information such as Patents & IP consider and protected in these xTech activities?</p>	<p>Per the RFI, The Army is a strong proponent of deliberate IP rights and management by the private sector and DoD. For the xTechOverwatch competition:</p> <ul style="list-style-type: none"> • The USG may not gain an interest in IP developed by a participant without the written consent of the participant; • Nothing in this xTechOverwatch prize competition 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 xTechOverwatch prize competition, or is entitled to, under any other government agreement or contract, or is otherwise entitled to under law; and <p>The USG may negotiate a license for the use of IP developed by a registered participant in the prize competition.</p>
<p>Are there specific mission profiles or scenarios the Army is prioritizing for this program—logistics, EW, perimeter security, etc.? Trying to understand what types of data matter most, and whether the goal is for sensors to be primarily static or mobile.</p>	<p>Autonomous overwatch as a skill is relevant in many scenarios. Specifically, we're interested in reconnaissance missions, movement to contact toward an enemy armored formation in the defense, mobile infantry in an urban environment, terrain shaping in depth, and combined arms breaching.</p>

<p>If there are multiple potential solutions for different topics, can one company make multiple submissions?</p>	<p>Only one submission per firm is permitted. If your solution spans multiple topic areas, we recommend submitting it under the topic that best aligns with your core capability. You may also indicate in your white paper how your solution supports additional topics. The evaluation team will review all submissions and determine alignment as appropriate during their internal review process.</p>
<p>Are you able to give us more information on the type of tests that our technology will be put through if selected for the live demo?</p>	<p>Semifinalists who advance to Part 2 of the competition will conduct a live pitch/demonstration consisting of simple terrain in Texas, where objectives will be established to best showcase selected technologies. You'll likely be on the lane simultaneously with other company's technologies and used by a mechanized infantry platoon, with your ability to have "over-the-shoulder" support during the demonstration. There will also be a preparation period and initial training for the Army formation to familiarize with your technology. Once technologies are selected, we'll finalize demonstration scenarios for maximum output of your technology through ground and air, with a small urban setting and micro terrain for maneuver.</p>
<p>What is the entry point Technology Readiness Level (TRL) that you are ideally targeting for this opportunity?</p>	<p>xTech is generally TRL-agnostic, as firms can sometimes inaccurately assess their own technology readiness. However, for this competition, you are expected to have a well-defined prototype that can be integrated into the HMIF Summit, scheduled for October 2025. Your TRL is less important than your prototype's ability to be used by a Soldier, likely with support from you as a company, to showcase the technology's key abilities during the demonstration if selected to advance to Part 2 of the competition.</p>
<p>What types of devices will you expect the collected data to be integrated with for output?</p>	<p>Unspecified, come with devices on hand that demonstrate an output if required to showcase the capability.</p>
<p>How does the Army envision operators interacting with autonomous systems in high-stakes environments? Are there specific features or interfaces, that are particularly desirable for reducing cognitive load?</p>	<p>Optimize the decision cycle for a human - if it requires release authority from the human level, package and provide only necessary data. If you can generate confidence in release of payload from a series of sensors (visual, audio, seismic, etc.) that allows the human to not have to make a decision after setting parameters on payload release, this allows for more flexibility to cognitive decision making that matters in the moment.</p>
<p>Is cybersecurity relevant to any of the key technical areas of interests & their tech? If so which one of those areas will be of interest?</p>	<p>Yes, cybersecurity is relevant. Think about how you'll demonstrate this if selected. Critical cyber security concerns are transport layer on data requirements as well as embedded software safety for physically local cyber-attacks.</p>

<p>How will collaboration look between Small Business Concerns (SBCs) and will there be formal matchmaking for SBCs based on complementary capabilities?</p>	<p>We are expecting companies selected to self-organize, while the details of how that collaboration works, we're interested in helping create the environment for companies to partner formally or in-formally and protect IP from each company throughout the prototyping phase. We will also loosely pair you for demonstration based on through put during the second phase of the xTech competition.</p>
<p>Are the solutions limited to small businesses collaborating with other small businesses, FFRDC, and/or universities are large contractors included?</p>	<p>There are no restrictions on who small businesses may choose to partner with— collaboration is entirely optional and at the sole discretion of the participating firm. The government will not be involved in forming teams or influencing partnership decisions. However, opportunities such as the Collider Event will be offered to help participants explore whether collaboration may be beneficial for their solution.</p>
<p>Can companies that have won an xTech award/SBIR in the past propose to this program?</p>	<p>Yes, if you are a former xTech competition winner you can submit a proposal to this competition. If you are a current or previous SBIR contract awardee, proposals submitted in response to this prize competition must be substantially different than another proposal that was funded, is now being funded, or is pending contract award with another federal agency.</p>
<p>Am I correct in understanding the mention today that the presentations of the finalists will be at least partly demonstrations? The Phase II SBIR is meant for prototype development so how functional of a demonstration are we expected to have?</p>	<p>If selected for the live demo, the live demo will consist of simple terrain in central Texas, where objectives will be established to best showcase selected technologies. You'll likely be on the lane simultaneously with other company's technologies during each iteration. We will evaluate based on your potential to move forward to prototype for this specific use-case.</p>
<p>If you want a demo in October, before the D2P2 award...should we have a technology at TRL 5/6? Typically a Phase I ends at TRL 3, so a D2P2 starts with TRL 3 technology?</p>	<p>xTech is generally TRL-agnostic, as firms can sometimes inaccurately assess their own technology readiness. However, for this competition, you are expected to have a well-defined prototype that can be integrated into the Part 2 finals event, scheduled for October 2025.</p>
<p>Is there a plan/path for companies submitting part of a solution to show their openness to teaming? Will xTech folks play matchmaker for teaming if it makes sense or is the expectation that each aware will be standalone?</p>	<p>Selected winners from Part 1 will be invited to participate in an optional Collider Event that is scheduled to take place during Fed Supernova in Austin, TX from August 19-21, 2025, which will be widely publicized. This event is designed to provide finalists with a unique opportunity to network, exchange expertise, and explore strategic collaborations with other finalists or industry partners beyond the competition. While collaboration is highly encouraged, it remains optional and will not influence selection decisions. The government will not play a role in forming teams or structuring partnerships. The Collider Event exists solely to facilitate meaningful connections and potential synergies among participants. Additionally, the xTech team is exploring ways to offer finalists further opportunities to connect ahead of the finals event, should they wish to consider teaming options.</p>

<p>With 10 tech focus areas and 20 finalists, are 2 finalists per focus area anticipated?</p>	<p>There is no predetermined number of finalists per topic area. The selection process is designed to remain flexible, allowing the Army to identify and advance the best suited technologies across all areas of interest.</p>
<p>Which Army units are expected to test the prototypes during Phase II?</p>	<p>We will not disclose the unit that will use these technologies until after the competition concludes.</p>
<p>The RFI encourages SBC collaboration with another entity. Are those limited to nontraditional entities.</p>	<p>For entities who advance to Part 2 of the competition, you are encouraged to explore strategic collaborations with other finalists or industry partners beyond the competition. While collaboration is highly encouraged, it remains optional and will not influence selection decisions. The government will not play a role in forming teams or structuring partnerships, it is up to the firms to determine who they will partner with, if that is a desire.</p>
<p>Are companies that are licensing or leveraging technology developed at the Army Research Laboratory or DEVCOM Centers eligible to submit proposals?</p>	<p>Please reach out to the Army's IP Cell experts to provide them with additional information and to get clarity. You can reach out to them at army.ip.cell@army.mil.</p>
<p>Can we apply to both xTechOverwatch and xTechSearch 9?</p>	<p>Yes, you may apply to both competitions. However, if you submit the same technology solution to both and are selected for a SBIR award in one, you must notify the xTech team. Per SBIR guidelines, the same technology cannot receive multiple SBIR awards, and selection in one competition would disqualify that solution from receiving an award in the other.</p>
<p>CONCEPT WHITE PAPER</p>	
<p>Are there any white papers samples that we can reference? If the project involved two key area objectives, shall we submit one white paper or two?</p>	<p>Sample white papers are not provided for this competition. However, we encourage firms to carefully review the submission guidelines outlined in the official announcement to understand formatting and content expectations. Only one submission per firm is permitted. If your solution spans multiple topic areas, we recommend submitting it under the topic that best aligns with your core capability. You may also indicate in your white paper how your solution supports additional topics. The evaluation team will review all submissions and determine alignment as appropriate during their internal review process.</p>
<p>In our White Paper, do you prefer we highlight how our technology fits well within a single Key Technical Area or would you prefer we show that our technology combines aspects of multiple Key Technical Areas?</p>	<p>You will be required to select the primary Key Technical Area that best aligns with your solution. However, if your technology spans multiple areas, you are encouraged to highlight that in your white paper and explain how the solution applies across those domains.</p>

<p>Is the limit one whitepaper to the entire xTech or 1 whitepaper to each area? We have products in current development that support two of the areas. We are looking to invest in building a product for at least one additional area.</p>	<p>Only one submission per firm is permitted. If your solution spans multiple topic areas, we recommend submitting it under the topic that best aligns with your core capability. You may also indicate in your white paper how your solution supports additional topics. The evaluation team will review all submissions and determine alignment as appropriate during their internal review process.</p>
<p>Once submitted by May 21, 2025 How Long Does it take to receive feedback from the evaluators?</p>	<p>Eligible entities that submit valid proposals for the Part 1: Concept White Paper phase, will receive evaluators' feedback in Valid Eval NLT June 30, 2025.</p>
<p>Firms are only able to submit one white paper. However, you have many "key technical areas." How many of these areas do you expect a firm's single white paper to address?</p>	<p>Proposals are not required to address all technical areas listed on the RFI. SBCs with expertise in specific technical areas are encouraged to apply, even if they do not provide a full-spectrum solution.</p>
<p>Is there an opportunity to highlight potential partners in the white paper especially if we focus on a subsystem which we plan to show with a partner?</p>	<p>Yes, absolutely. We encourage applicants to highlight any potential partnerships, particularly when those partnerships enhance the overall capability of the proposed solution.</p>
<p>EVALUATION CRITERIA</p>	
<p>For the 'Army Customer Discovery & Validation' criterion, how can applicants best demonstrate 'Superior' level validation within the white paper itself, especially before a prototype exists?</p>	<p>We're interested in demonstrating your prototype if selected at an event that occurs in October 2025. Pre-prototype engagement is good, but we'll need to ensure you have a prototype on hand for the next phase.</p>
<p>To effectively perform the required 'Army Customer Discovery & Validation' for our white paper, particularly concerning the 'Sensor Fusion, Data Integration, and AI-Driven Target Recognition & Classification' topic, what practical guidance or starting points can you offer? How can small businesses best identify potentially relevant Army stakeholders, end-user communities, or specific programs for initial outreach and problem/concept validation interviews?</p>	<p>We recommend connecting on the C5ISR and Army Research Lab website, Army Futures Command website and YouTube channel, and other social platforms to better understand the HMIF community of interest.</p>
<p>Our system collects, compresses, and transmits sensor data at the edge, and is designed to plug into any existing sensor. For Phase II, would a solution that specializes in seamless edge connectivity and onboard processing, but doesn't itself execute autonomous robotic actions, still be considered competitive as a standalone submission,</p>	<p>Yes, a solution that specializes in seamless edge connectivity and onboard processing, that doesn't execute autonomous robotic actions would be considered a standalone submission. In your white paper submission, please elaborate how you would demonstrate this capability if selected.</p>

<p>or would it need to be paired with a partner that provides that capability?</p>	
<p>Will each solution be evaluated based on its complete capability or against only the most applicable problem statement?</p>	<p>Each solution will be evaluated based on the criteria outlined on the signup page. If your solution offers a complete or broader capability, you should still align it to the topic area it best supports. However, be sure to clearly highlight how your solution addresses multiple topic areas or provides broader applicability beyond the selected topic.</p> <p>The evaluation team will look at both instances, the capability's applicable uses and its broader potential.</p>
<p>SBIR</p>	
<p>If a technology is already deployed in industrial settings like mining or oil & gas, where similar constraints exist like long-range communication, lack of infrastructure, and remote monitoring, does that commercial traction factor meaningfully into Phase II or Phase III evaluation? And would including partner letters of support to validate that deployment be helpful?</p>	<p>Yes, these are comparative environments. Letters of support are relevant but not critical to validate that deployment. Your physical prototype and use in these environments are most critical to the white paper.</p>
<p>HUBZone Location Eligibility: As a HUBZone-certified business, we are keen to confirm whether our participation in the xTechOverwatch Competition would be fully acceptable under the SBA HUBZone criteria for this type of software application development. Does the HUBZone location status apply for this specific project category, and if so, are there additional compliance requirements we should be aware of?</p>	<p>The Army SBIR/STTR Program does not do small business set asides such as WOSB, SDVOSB, or HUBZone. There are questions on the proposal coversheet that firms may optionally answer with regards to small business categories, but they are not required to disclose this information and the SBIR/STTR Program does not limit or set aside participation from these designated groups.</p>
<p>TECHNICAL QUESTIONS</p>	
<p>Software Development Scope for Autonomous Systems: Autonomous Unmanned Systems: Can we design and develop a software application to manage and enhance the functionalities of UAVs, UGVs, and stationary sensors based on the described technical requirements? Specifically, will our solution need to integrate real-time terrain navigation, adaptive flight control, and sensor data integration for the systems as described?</p>	<p>Yes, your solution should incorporate real-time terrain navigation, with consideration for communications-degraded and GPS-denied environments (apriori data match matching, horizon matching and other techniques useful in this conte. Techniques such as a priori data matching, horizon matching, and other methods that enable autonomous operation in these conditions are highly encouraged.</p>
<p>If our UGV vehicle technology is not ready for a demonstration in October but aligns well with many of the topics, would the xTech competition still be a good opportunity to introduce Government stakeholders to the technology?</p>	<p>If you are not ready for an October demonstration, recommend other opportunities to showcase your technology</p>

Are advanced battery systems needed to power UAS for higher payloads and longer flight time part of the desired candidate technologies for this competition?	This can be a viable solution, if selected, think about how you would demonstrate this capability in October.
Our solution focuses on space-based telemetry, e.g., multispectral imagery. The solicitation mentions UAV sourced information. Will satellites imagery and information be applicable and accepted?	All solutions are considered if they work toward the overall outcome of autonomous overwatch. If selected, think about how you would demonstrate this capability.
Do you expect solutions to address all aspects of autonomy (hardware + software + networking), or are focused software-driven solutions eligible if they can integrate with existing or partner platforms? Are there any specific Army operational scenarios that you recommend focusing on in the white paper, or should we stay general to show broad applicability?	Focus on the skill of "overwatch" in various settings. If you have a software solution, think about how you would demonstrate this capability if selected.
For solutions addressing Topic A254-027, what level of modularity or interoperability with existing Army ISR or C-UAS systems would be most valuable to highlight in the white paper?	No specific interoperability priorities, reference the modular payload standards referenced in the RFI and look to reduce the complexity and draw from the platform you intend to interoperate with.
Is the Army only interested in terrestrial UAV applications for this xTech effort?	The Army is interested in capability that enables and is specific to the land component of multi-domain operations.
If our technology is focused on UAS, will our demonstration system for the HMI Summit in October need to be comprised of Blue UAS cleared list components?	We will allow you to demonstrate without Blue Cleared status. Your ETP must ensure critical components are in compliance with NDAA guidance for the ETP to be accepted.
If yes, re navigation tech over networks, which topic area is most appropriate? Autonomous systems? Comms & networks? Terrain navigation? Collaborative autonomy?	We recommend UGV/UAS systems. However, there is not a wrong answer here, the areas just help us organize the submissions.
For overwatch - persistence is obviously key - are there any metrics for persistence for UAS? If a drone is down for 60 minutes to charge - is that persistence enough?	Persistence and volume are important to most mission sets. If we're "recharging" during mission with a human, we've lost the advantage in most cases. It is okay if flight times are shorter, but what's the automation cycle that keeps multiple UAS in the air while others are taking off/landing and recharging?
Modular & Open Systems Architecture (MOSA): Is it acceptable for our proposal to include a modular and open architecture approach using plug-and-play components for hardware and software interfaces? This would ensure the long-term adaptability and integration with future military platforms.	Yes, incorporating a MOSA is highly desired and required for system engineering and integration.

<p>Sensor Fusion and AI-Driven Target Recognition: Can we leverage AI and sensor fusion technologies, specifically for real-time target recognition and classification from multiple sensor inputs (e.g., EO/IR, LiDAR, RF), to create a multi-modal sensing solution that integrates into existing platforms? How adaptable should our system be for working in low-visibility or GPS-denied environments, and are there specific capabilities or algorithms that must be prioritized for real-time analytics?</p>	<p>Yes, you can leverage AI and sensor fusion technologies to create a multi-modal sensing solution that integrates into existing platforms. It is always good to adapt for use in low-light/low-visibility and GPS-denied/intermittent environments. No specific algorithms for prioritization.</p>
<p>Could you provide more details on the specific types of sensors and data formats that the autonomous systems will need to integrate and process? What are the key performance metrics or benchmarks that will be used to evaluate the effectiveness of the AI-driven target recognition and classification systems? Are there any specific security or compliance requirements that need to be addressed in the proposal, especially concerning data handling and communications?</p>	<p>You will be informing these details and formats beyond what is provided in the RFI. The Army is thinking about the transport layer and the local cyber security on the embedded software.</p>
<p>For topic sensor fusion, data integration, and AI-Driven Target Recognition & Classification, is there a TRL requirement you have? Understanding that we will need to showcase the technology in the field in October.</p>	<p>There is no TRL requirement, as the xTech is generally TRL-agnostic, as firms can sometimes inaccurately assess their own technology readiness. However, for this competition, you are expected to have a well-defined prototype that can be integrated into the Part 2 finals event, scheduled for October 2025.</p>
<p>Is this forum interested in new sensor technology/capabilities as well as sensor analysis?</p>	<p>Yes, we are interested in new sensor technology/capabilities and sensor analysis. Think about how you'll demonstrate this if you are selected to advance to the Part 2 finals event.</p>
<p>For sensor fusion, what are the specific systems our software will need to integrate with?</p>	<p>Unspecified, if selected to advance in the competition, you will likely be integrating with others awarded on this effort.</p>
<p>Communication and Networking Capabilities: Regarding secure communication systems (e.g., SDRs, mesh networks), can we propose the use of cutting-edge technologies for encrypted, scalable networks that allow real-time collaboration across multiple autonomous systems? Does the system need to meet specific redundancy or self-healing criteria for operation in contested environments?</p>	<p>Yes, the system must be capable of operating in communications-degraded, GPS-denied, and contested environments where active spoofing may occur.</p>

<p>You speak of low power long range protocols in secure communications and networking; Is this beyond line-of-sight [BLOS] communications or short range?</p>	<p>Both BLOS and short range. High volume, 1000s of agents.</p>
<p>Regarding comms and networking, what kind of scale are you interested in?</p>	<p>We are interested in 1000s of agents.</p>
<p>What specific security features or communication protocols are most critical for ensuing resilient networking in autonomous systems, especially in contested or GPS-denied environments?</p>	<p>Transport layer security and local area security are important. With this many systems in the battlespace, we expect to be able to conduct over-the-air updates which creates security vulnerabilities. How do we protect our capabilities when transmitting data and at the point of physical security attack?</p>
<p>Human-Machine Interface (HMI) Design: We are exploring advanced visualization techniques, such as augmented reality (AR), to aid operators in decision-making. Would this type of user interface be aligned with your requirements, or is there a preference for more traditional methods for presenting data to operators under high-stress conditions?</p>	<p>Both traditional handheld and head mounted displays (HMDs) have their place on the battlefield. However, for dismounts, we should begin exploring Heads-up and Hands-free interfaces that leverage multi-modal inputs like gesture, voice, and head/eye tracking. A Soldier should never have to lower their weapon to pick up a controller. An ideal platform for integrating these capabilities is mixed reality rather than augmented reality. We cannot be limited to systems with egocentrically locked, fixed plane digital overlays. Instead, we want systems that can also embed and update information accurately in world space. To do this, the creation and maintenance of shared spatial (world) models between Soldiers and RAS is fundamental for enabling a contextually aware HMI. And where possible, this co-localization between HMDs and RAS must be done without the use of emissive sensors, such as Lidar.</p>
<p>When you say "Adaptive UIs" can you further explain. It seems like we would a common UI as warfighters move from one mission to another, one organization to another, one platform to another. This would eliminate need for restraining, varied software, and enable new personnel to easily integrate.</p>	<p>The goal for adaptive UI's is to ensure that a human machine interface can change (either by user intervention or automatically) to provide the best experience possible for a particular situation. Having a common look and feel across devices is certainly an option, such as with the TAK family of systems, however the form of this UI may differ depending on form factor (tablet, head mount, etc.) and mission context (repair/logistics vs in combat). The UI should be simple to understand, easy to train to use, but highly modular to what information is presented and how.</p>

<p>Edge Computing for Real-Time Decision Making: For the onboard processing requirements, are there any limitations or preferred specifications for low-power, embedded AI accelerators to process sensor data and make real-time decisions without network connectivity? Should our system prioritize minimizing latency in threat detection or focus more on processing power in remote conditions?</p>	<p>Size, Weight, and Power (SWAP) considerations are extremely significant, as mission dwell time is essential. You may want to consider balancing energy requirements with system functionality to maximize operational uptime. When evaluating latency vs processing power, recognize that these factors are interlinked. System autonomy will demand significant processing power, especially in communications-degraded environments, which can impact teleoperation and semi-autonomous behaviors. Threat detection can be handled internally or communicated Beyond Visual Line of Sight (BVLOS), depending on the mission—both may be critical in different scenarios. The key is to clearly understand your mission objectives and desired outcomes, then balance your system’s capabilities to achieve those goals effectively.</p>
<p>Mission-Focused Autonomy and Coordination: We plan to integrate multi-agent reinforcement learning (MARL) and distributed decision-making for autonomous coordination across multiple platforms. Does this approach align with the expectations outlined in the problem statement for mission-focused autonomy, or would a different methodology be preferred?</p>	<p>Operational environment will include a landscape potentially saturated with autonomous and unmanned systems as well as humans. Autonomous coordination across multiple platforms and interoperability within them highly desired. The solution will need common architecture compliant software/systems engineering.</p>
<p>Could you provide more detail on the specific standard of interfaces the Army is looking to support for modular and open architecture in autonomous systems? Are there any specific systems the Army wants compatibility with.</p>	<p>No specific systems are critical currently, however you should reference the provided links to ground and air standards published and maintained. You'll have a chance to inform these standards through this activity. Expect from a network connectivity standpoint to interface with software defined radio bridges to manage the various communications hardware on the battlefield. Reference the standards described in the RFI as a baseline.</p>
<p>We are currently developing 40mm size payloads for EW (PNT Attach, Comms Decoy, SAR Spoofer). Also ISR Ground Sensor, RF Detection and Comms Repeater. Would 40mm form factor be of interest for this effort?</p>	<p>Yes, 40mm form factor is of interest for this competition.</p>
<p>For UGV and UAS Payloads, would a drone agnostic modular munition be in line with what xTech is looking for? The munition itself does not have ISR or EW capabilities. It can be a droppable, FPV or FXW.</p>	<p>Yes, we would be interested in a drone agnostic modular munition for this competition.</p>
<p>There are many swappable enabling overwatch - batteries, sensors, munitions, ECM, EW, C-UAS... does the Army envision swappable "everything" or specific items prioritized?</p>	<p>The Army would prefer to modularize as much as possible. That is at odds with design specific constraints to every platform/payload, but ideally the ability to swap anything across the air/ground platform and payload would be considerably helpful. Designing the MOSA interfaces includes physical and data layers. To the maximum</p>

	extent possible the submitted solutions should meet these specifications to enable interoperability.
For solutions addressing Topic A254-027, what level of modularity or interoperability with existing Army ISR or C-UAS systems would be most valuable to highlight in the white paper?	Ideally the modularity allows for multiple delivery mechanisms depending on size of the air or ground delivery platform. If it operates independently to include power requirements that is fine, we'll look to generate more elegant solutions as we launch into prototyping. any existing integrations and hardware specifications you have are good to know. There are a series of payload standards called out in the RFI but expect to inform and shape those standards throughout the project.
Could you elaborate on the specific capabilities the Army is seeking in autonomous systems for identifying and occupying optimal overwatch positions? For example, how important is the ability for these systems to autonomously adjust their payload in real-time based on mission objectives?	Automation of user tasks is the expressed desire of this capability. It's critical for the system to recognize and respond to the environment with minimal user input/feedback while meeting mission needs. Payload type also drives this need - hazardous or lethal payloads and equipment may require user intervention/input.
Is Cybersecurity relevant to any of the key technical areas of interests & their tech? If so which one of those areas will be of interest?	Cyber security for the embedded software and any c2 solutions is always relevant. Think about how you would demonstrate this capability, and we are interested in the lightest overhead possible for these solutions whether embedded or transport layer protection.
For Collaborative Mission-focused autonomy: While the goal is for multi-agent, decentralized autonomy, do you envision leveraging network availability to allow for updating a common operating picture to each agent that is potentially orchestrated by a centralized mission planner?	Potentially, there are also ideas around local updating between agents until a more sophisticated agent with communications can update the centralized C2 planning component. We're looking for all ideas in this space.
For resilient robotics for adaptive terrain navigation (or any of the topics) are subterranean autonomous systems of similar interest for uses such as moving landmines, tunneling and thwarting tunnels, and excavating for operational needs.	We are open to all ideas in adaptive terrain navigation. The effect is to delay, deter, and deny the enemy in depth.
What are, particularly in terms of latency, data throughput, and power efficiency for real-time decision making?	The key performance metrics the Army is prioritizing for onboard processing in autonomous systems are data cube/packet size, transmission and processing latency, necessity for network connection to inform onboard capability, and minimizing transmission data for decision. Ideally information sent from any forward compute platform back to a human decision maker is only the minimum information necessary to make the context decision.
Are you interested in precise navigation tech that takes advantage of networks between platforms?" I'm here, you're there, let's move together."	Yes, think about how you'll demonstrate this if selected.

<p>Re: the cyber security piece, would you consider a hardware solution based on optical tech that is unclonable and believed to be unhackable by digital based tech like AI. Current form factor is a small rack but can get to a small USB device to secure any I/O port.</p>	<p>Yes, think about how you'll demonstrate this if selected.</p>
<p>What terrain shaping obstacles are you interested in? could you please elaborate?</p>	<p>Effects to enemy ground forces that achieve a delay, deny, or deter outcome. As the enemy ground forces get into direct contact with the front line of troops, think about blocking, turning, or fixing the enemy.</p>
<p>With the critical shortage of ordinance in the United States, why are kinetic UAV/UGV payloads excluded from this call?</p>	<p>This opportunity is an SBIR effort, which requires a commercialization plan. Kinetic payloads are not excluded. Companies will need to justify the dual-use component of the payload and its associated commercialization pathway.</p>
<p>Is xTechOverwatch interested in receiving proposals for the delivery of component technologies (i.e. novel sensor system) alone?</p>	<p>Yes, we are interested in receiving proposals for the delivery of components. Please explain in your submission how you plan to demonstrate this sensor in practicality if selected. Also consider potential partners.</p>