



Program Solicitation

Information Innovation Office

National Security Economic Theory
(NASCENT)

DARPA-PS-26-14

February 23, 2026

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1. OVERVIEW INFORMATION

- **Federal Agency Name:** Defense Advanced Research Projects Agency (DARPA), Information Innovation Office
- **Funding Opportunity Number:** DARPA-PS-26-14
- **Funding Opportunity Title:** National Security Economic Theory (NASCENT)
- **Announcement Type:** Initial Announcement
- **Dates/Time:** *All Times are Eastern Time Zone (ET)*
 - **Posting Date:** February 23, 2026
 - **Proposers Day:** February 23, 2026
 - **Question Submittal Closed:** March 2, 2026, at 5:00 PM ET
 - **Proposal Abstract Due Date:** March 12, 2026, at 5:00 PM ET
 - **Oral Presentations:** By Government invitation only. Estimated to begin April 27, 2026.
- **Anticipated Individual Awards:** Multiple individuals awards are anticipated
- **Types of Instruments that may be Awarded:** Other Transaction (OT) for Prototype Agreements
- **Resource Sharing Requirements:** In accordance with [10 U.S.C. § 4022](#), resource sharing may be required for OT for Prototype Agreements.
- **NAICS Code:** 541715
- **Questions and Answers (Q&As):** All administrative, technical, and award questions should be emailed to the Agency Point of Contact (POC) stated below. All questions must be written in English. Q&A documents will be published on the NASCENT program page at: <https://www.darpa.mil/research/programs/nascent-national-security-economic-theory>
- **Agency POC:** The Solicitation Coordinator for this effort may be reached at:
NASCENT@darpa.mil
DARPA/ I2O
ATTN: DARPA-PS-26-14
675 North Randolph Street
Arlington, VA 22203-2114
- **Attachments to this Program Solicitation (PS):**
 - Template_NASCENT Abstract

NOTE: In accordance with Section 4.5 (Oral Presentations), selected proposers must be invited to submit a full proposal and participate in an oral presentation. An Invitation to Proceed letter will include comprehensive submission guidelines, proposal templates, and oral presentation instructions.

2. PROGRAM SOLICITATION AUTHORITY

Under the authority of 10 U.S.C. § 4022, the Government reserves the right to award one or more OT for Prototype Agreements or to make no award. Prototype projects may include, but are not limited to:

- Commercially available technologies fueled by commercial or strategic investment
- Concept demonstrations and pilots
- Agile development activities aimed at incrementally improving commercial technologies, existing Government-owned capabilities, or conceptual frameworks for broad defense or public applications

Furthermore, a follow-on production contract or transaction may be awarded pursuant to 10 U.S.C. § 4022 without the use of competitive procedures. The OT for Prototype Agreement will not require resource sharing unless the proposer is a traditional defense contractor who is not working with a non-traditional defense contractor participating in the project to a significant extent.

In all cases, the Agreements Officer (AO) shall have sole discretion to negotiate all agreement terms and conditions with selected proposers.

3. PROGRAM DESCRIPTION

DARPA is soliciting innovative proposals in the following technical area: Geoeconomic Theory. Proposed research should investigate innovative approaches that enable revolutionary advances in science and economics. Specifically excluded is research that primarily results in evolutionary improvements to the existing state of practice.

3.1 PROGRAM BACKGROUND

The United States' victory in World War II and the dissolution of the Soviet Union 46 years later once appeared to cement the United States' place as the world's foremost military, financial, and economic power in perpetuity.¹ In the intervening years, the illusion of perpetual invulnerability has been shattered by the emergence of novel threats to U.S. military readiness and economic vitality. These asymmetric challenges range from adversarial weaponization of critical mineral supply chains² to the escalating development of sophisticated cyber threats against the U.S.'s financial system³.

Recognizing the threats arrayed against it, the U.S. Government has engaged in strategic action to reestablish economic deterrence.⁴ However, the instruments available to the U.S. Government are profoundly inadequate. Current approaches to geoeconomics⁵ are based on an eclectic and

¹ E.g., see Fukuyama, F. (1989). The end of history?. *The National Interest*, (16), 3-18.

² E.g., see https://www.uscc.gov/sites/default/files/2025-11/Chapter_9--Chained_to_China_Beijings_Weaponization_of_Supply_Chains.pdf.

³ E.g., see <https://home.treasury.gov/news/press-releases/sb0042>.

⁴ E.g., see <https://home.treasury.gov/news/press-releases/sb0045>.

⁵ This PS uses the term "geoeconomics" to mean the academic field of study of usage of economic levers to achieve national security objectives and "economic statecraft" to mean the actual usage of economic levers to achieve national security objectives; economic statecraft is the reduction to practice of geoeconomics in much the same way that options trading is the reduction to practice of options pricing and market microstructure theory.

ill-justified selection of qualitative concepts from international relations and legal studies without a clear, overarching analytical framework. Isolated academic attempts to quantify geoeconomic competition, such as a hegemon's ability to enforce its will through coordinated actions, have been rife with unrealistic assumptions and severely limited in scope. As a result, the U.S. Government lacks tailored, effective, and predictable options, remaining equipped only with tools that are either too narrowly targeted for today's global competition (e.g., entity-level sanctions) or that can rapidly escalate tensions (e.g., nation-level embargoes).

The National Security Economic Theory (NASCENT) program aims to develop a coherent, logically consistent, empirically supported body of quantitative geoeconomic theory, ultimately leading to the creation of a U.S. economic statecraft toolbox. The theoretical framework developed by NASCENT will entail a joint analysis of precisely defined national security objectives and economic incentives for diverse public and private entities. Research conducted under NASCENT will propose mechanisms that facilitate voluntary, positive-sum economic interactions among commercial and public entities while also cost-effectively creating national security outcomes that benefit the United States. NASCENT will test the developed theory by accumulating experimental evidence for or against the hypothesis that such mechanisms would generate the proposed beneficial national security outcomes when implemented in an operational environment.

3.2 PROGRAM DESCRIPTION

The primary objective of the NASCENT program is to research and develop a geoeconomic toolbox to provide an operational advantage to the Department of War (DoW), other U.S. Government entities, and the U.S. private sector. This toolbox seeks to integrate a collection of prototype methodologies and processes developed under the program. The toolbox will consist of the algorithmic representations, process guides, and foundational research papers detailed in the deliverables (Section 3.6) resulting in the final prototype deliverable. The toolbox is the tangible culmination of the program's research, designed to translate novel geoeconomic theory into practical application.

NASCENT will test the theoretical underpinnings of the toolbox's prototypes via simulation and experimental wargaming. DARPA emphasizes that the objective of NASCENT is the creation of this toolbox and its underlying theory, not to provide specific economic statecraft recommendations; DARPA does not make policy or engage in policy debate.

3.2.1 Problem Decomposition

Economic statecraft today works forward from current economic^{6,7} structures to create national security outcomes. Today's geoeconomic analysis focuses on how today's financial, industrial,

⁶ Economic is defined in the academic sense, including structures related to financial markets, industrial organization, and macroeconomic policy, but also including institutional and organizational dynamics.

⁷ For an intriguing institutional economic analysis of the provision of security (albeit focused on internal security), see Bretschneider, W., Freytag, A., Rieckmann, J. P., & Stuchtey, T. H. (2024). State or private security supply? An analysis from the institutional economics perspective. *Security Journal*, 37(1), 110-128. The reader will note that this work, while interesting, is qualitative in nature.

and institutional systems (or minor perturbations thereof) might be used to create a desirable future national security environment. Today’s approach to economic statecraft – while certainly far better than “doing nothing” in the face of existential economic competition – is at best suboptimal and extraordinarily expensive and at worst creates myriad unintended consequences.⁸

Conversely, NASCENT works backward from a desired national security objective and accepts as given the current preferences of economic agents, using tools of economic mechanism design and experimental economics to identify the specific incentives and structures required to achieve the national security objective while creating positive-sum economic outcomes. Explicitly and precisely relating national security objectives to economic preconditions would supplant today’s qualitative, anecdote-driven analysis. An exceptionally coarse segmentation of the economic preference and national security objective space deconstructs geoeconomic problems along two core axes:

1. The National Security Objective: Whether the national security objective is “inward facing” (e.g. defense procurement, development of a domestic manufacturing base) versus “outward-focused” (e.g., traditional access, basing, and overflight considerations; strategic acquisition of foreign infrastructure; design of financial sanctions and embargoes).
2. Economic Agent Incentives: The motivations and constraints of economic actors (e.g., speculation, hedging risk, earning returns through transactions fees; maintaining industry dominance; etc.).

Figure 1 displays this coarse decomposition along with notional examples of classes of mechanisms in each cell.

Economic agent goals	Risk mitigation	<ul style="list-style-type: none"> - Security alliances and trade agreements - Market structures - ??? 	<ul style="list-style-type: none"> - Stockpile development - Public-private partnerships - Insurance - ???
	Market share	<ul style="list-style-type: none"> - Import/export restrictions - Strategic acquisitions - ??? 	<ul style="list-style-type: none"> - Foreign investment controls - Research and development design - ???
	Profit	<ul style="list-style-type: none"> - Strategic acquisitions - Information flows - ??? 	<ul style="list-style-type: none"> - Procurement and sustainment procedures - Operational testing - Subsidies - ???
		Outward	Inward
National security goals			

Figure 1: A coarse and incomplete decomposition of geoeconomic mechanisms along two axes: national security goals and economic agent goals.

3.2.2 Theory Development

NASCENT is concerned with the creation of fundamentally new mechanisms – market structures, contract structures, information streams, models, private-sector organizations, etc., –

⁸ An analogy can be made between forward search, which is generally very time-consuming (expensive) and unlikely to find a close-to-optimal solution to a problem, and reverse-search *a la* dynamic programming, which – when applicable – can rapidly find optimal solutions to problems.

the instantiation of which would jointly optimize private-sector economic incentives and create positive national security outcomes for the United States. Suggestions of small perturbations to existing real-world structures (e.g., modifications to existing markets, treaties, or contracts) are out-of-scope for NASCENT. It is not enough to be able to create novel mechanisms on an ad-hoc basis, which is likely to be a high-marginal-cost endeavor. Instead, NASCENT theory should be generic, i.e. widely applicable to many classes of mechanisms, and application of theory to a new class of mechanism should be possible at low marginal cost, i.e., with minimal additional theoretical work required.

NASCENT aims to foster the development of a technically mature field of quantitative geoeconomics that is ultimately accessible and useful to a wide variety of practitioners and underpins myriad applications that do not exist today. An analogous success story or goal state is that of derivatives pricing in finance; the layman commonly references and uses the Chicago Board Options Exchange's Volatility Index (VIX) for retail asset allocation purposes and so implicitly accesses – and, indeed, takes for granted – the deep, quantitative, and elegant theory of measurement of asset volatility via the prices of options portfolios.⁹

In describing in-scope and out-of-scope NASCENT theory development, applied examples are useful.

1. Consider a notional national security objective of increased capital outflow from Red, which could benefit Blue by destabilizing Red's central government. One approach to achieving this objective could be to build a predictive model of capital outflow from Red and then publicize this model's existence or forecasts; the existence and manner of revelation of the model and its forecasts, in this case, can serve as a mechanism to achieve Blue's desired effects.¹⁰
2. Consider a notional national security objective of transforming Blue's defense acquisition system into a system that focuses on development of instances of capabilities, not of

⁹ This analogy extends to the “things that are wrong” with the derivatives pricing theory underlying the VIX – e.g., Gaussianity assumption in implied volatility calculation – because at least that theory has been quantified to first order and has precisely defined assumptions the conditional validity of which are easy to verify empirically. In other words, that theory provides a very useful jumping-off point to the development of more realistic theory with higher predictive power. An excellent end-state of NASCENT would be the existence of a body of quantitative theory that, while acknowledged to be imperfect in many ways, is a precisely quantified jumping-off point for further development.

¹⁰ Purists will protest that the creation and revelation of a predictive model does not meet a strict academic definition of an economic mechanism – “a specification of how economic decisions are determined as a function of the information that is known by the individuals in the economy” Myerson, R. B. (2008). Mechanism design. In *The New Palgrave Dictionary of Economics* (pp. 1-13). Palgrave Macmillan, London. Yet, at a higher level – and per Myerson's following sentence (“In this sense, almost any kind of market institution or economic organization can be viewed, in principle, as a mechanism.”) – a predictive model, its forecasts, and the fact and manner of their revelation are productively viewed as mechanisms that can be designed to achieve a desired outcome in a strategic interaction. (In fact, in a theory containing agents with suitably granular decision logic, a predictive model, its forecasts, and fact and manner of their revelation constitute a mechanism even by the textbook academic definition – the mechanism designer creates them to strategically alter the information set of his adversary, thus altering how his adversary determines economic decisions.) This PS takes a very broad definition of what can be considered a mechanism, more in line with Myerson's second sentence and also including the optimal design of sub-organizational structures, such as contracts.

platforms.¹¹ This transformation could benefit Blue by decreasing the cost of materiel, increasing the resilience of materiel supply chains, and increasing Blue's lethality by enabling Blue's weaponry to be more rapidly tailored to specific operational contexts. One approach to achieving this objective could be to design a new market structure, an implementation of which Blue could use to acquire defense capabilities.

In-Scope

Submissions that are in-scope for NASCENT will explore the design of novel economic mechanisms that generate economic value while creating positive national security outcomes for the United States. In the context of example (1), rather than questions of *how* to build an accurate and precise predictive model, relevant questions to consider under NASCENT could include: What types of economic activity should be modeled to best cause maximal capital flow from Red (i.e., which endogenous variables are most important)? To whom should the model's existence be revealed (Blue officials, leaders of the adversarial nation, selected hedge funds?) and when, or conditioned on what events? What are the relative merits of using a predictive model versus another mechanism to achieve the capital outflow objective, such as simply creating a new information stream via collection and dissemination of raw sensor data? In the context of example (2), relevant questions to consider under NASCENT could include: what type of price discovery mechanism would be most likely to lead to truthful bids for capability creation? How could a price discovery mechanism be gamed either for profit or by Red for strategic advantage? How would Blue know if the price discovery mechanism were being gamed?

Out-of-Scope

Submissions considered out-of-scope are those that propose minor adjustments to existing real-world structures, such as small modifications to current markets, treaties, or contracts. The development of ad-hoc or single-use mechanisms is also out-of-scope. Specifics of the processes of implementing mechanisms are unlikely to be relevant for NASCENT unless the act of implementing the mechanism involves strategic considerations. In the context of example (1), questions that are *not* relevant for NASCENT include but are not limited to: What exogenous variables should be included in the model to best increase its accuracy? What functional form should the model take? On what data and using what algorithm should the model be trained? In the context of example (2), questions that are *not* relevant for NASCENT include but are not limited to: What software platforms would be used to implement a novel price discovery mechanism? Would the novel price discovery mechanism be able to achieve an authorization to operate on an operationally realistic timeframe?

Though performer output is expected to be relevant to the conduct of U.S. economic statecraft, NASCENT is, fundamentally, a theoretical program. **Explicitly out-of-scope is the generation of courses of action (COAs) intended for direct application by the U.S. Government or the development of theory relevant only to specific targets (i.e., named nations, non-**

¹¹ DARPA distinguishes between a platform – a defined design for a specific collection of physical, virtual, and service components – and an instance of a capability – an arbitrary object that meets certain constraints regarding its functionality. The concept of a platform is nominative (a platform is what it is called) while the concept of a capability is structural (a capability is what it does, *not* what it is called). There is, in general, a one-to-many mapping between a capability and platforms that can enable that capability. The logical extrema of the range are the cases for which (a) there is only one conceivable platform that can enable a capability and (b) every object that delivers a capability is unique.

governmental entities, or corporate entities). Proposals proposing the development of COAs intended for direct application by the U.S. Government or development of theory relevant only to specific targets will be deemed nonresponsive. Proposers **should not** include such information in their proposals.

3.2.3 Core Requirements

Reducible to Practice

In general, NASCENT theory should be readily reducible to practice in algorithmic form (i.e., as a procedure that is easily accomplished by a collection of humans or as code that is executable by a collection of computers) and, when applicable, the complexity of the algorithm(s) implementing the theory should be precisely specified. This requirement is not applicable in the proof of a negative result, e.g., when theory proves that, given a set of assumptions, a certain type of mechanism would never satisfy a precisely defined national security objective. Research agendas proposing development of negative results **are** in scope for NASCENT.

Sound Assumptions

Regardless of methodological approach, the geoeconomic theory developed under NASCENT should depend on assumptions that are precisely described, realistic, and minimal.

- **Precision:** Precisely described assumptions facilitate transparent evaluation and refinement of theory; if a theorem is proved in a precisely described context yet empirical evidence runs counter to the predictions of the theory, at least one of the assumptions / preconditions of the theory are not met by the real world.
- **Realism:** Very few theoretical assumptions ever perfectly reflect the real world, but geoeconomic theory's assumptions should **not** foreclose on the possibility of modeling dynamics or effects that are intrinsically important to national security. For example, a geoeconomic research paper by internationally renowned economists¹² makes the (common) assumption of a representative consumer in a country's economy while assessing the viability and utility of various state policies vis-à-vis a competitor nation. Setting aside that, by the Sonnenschein-Mantel-Debreu theorem, such a consumer does not in general exist, the representative consumer assumption destroys the operational utility of the paper. For example, some consumers could advocate for import restrictions (e.g., because they have monotone preferences over the fraction of products in a market that are manufactured domestically, and are willing to pay to increase that fraction) while other consumers advocate against import restrictions (e.g., because they have monetary preferences only, and some products can be produced less expensively in a foreign country). But *the fact that there could be* at least these two groups of consumers has substantial geoeconomic implications – the groups can *and, in the real world, do* engage in lobbying efforts, create domestic manufacturing businesses, or illicitly transship items from foreign countries, all of which are relevant to the core research question considered by the paper – and making the assumption of a representative consumer *categorically rules out the possibility of the theory ever modeling these phenomena at all.*
- **Minimalism:** All scientists are familiar with Occam's Razor. The number of assumptions, and the difficulty with which the world's adherence to them can be verified, should be considered in light of the explanatory power of a theory. DARPA is particularly interested

¹² The citation is omitted intentionally.

in research agendas that have the potential to develop operationally useful theory while making a minimum of assumptions regarding agent parameterization. An analogous historical example is the development of prior-free auction mechanisms, some of which are truthful with high probability and – remarkably – generate provable lower bounds on profit to the seller of an item while making minimal *a priori* assumptions regarding the structure of participants’ valuations of the item.¹³

3.2.4 Research Methodology Approaches

A wide variety of methodological approaches to geoeconomic theory development are anticipated. Approaches may range from novel approaches to “pencil and paper” mathematics, microeconomic theory, and theoretical computer science to usage of highly parameterized transformer-based models to conjecture results and application of formal methods tools (e.g., Isabelle, Rocq, Z3, etc.) to prove them. Whatever methodology chosen, DARPA is particularly interested in novel and risky approaches to rapid generation of quality geoeconomic theory (e.g., meaningful, rigorous, and arXiv- or SSRN-worthy results within 6 months). Approaches that are evolutionary and low risk may be found to be a weakness during the evaluation process; economics is notorious for very long lag times (>3 years) between ideation and publication of research results, dampening the speed of innovation in the field. Proposers should indicate methods to accelerate the pace of geoeconomic research and provide empirical evidence that these methods may be achievable. If empirical evidence is not available, the proposers should describe evidence supporting project feasibility and achievability.

DARPA reiterates that diversity in research methodology is expected and encouraged. DARPA **does not** have an *a priori* bias toward “pencil-and-paper” innovations (e.g., the acceleration of auction theory research in the late ‘00s and ‘10s through novel and elegant application of tropical geometry¹⁴) **or** toward technology-forward approaches, such as application of recent advances in highly parameterized neural systems, neurosymbolic artificial intelligence, or parallelized stochastic search. These examples are notional only and are **not** prescriptive.

3.2.5 Notional Operational Use of Theory

If NASCENT is wildly successful, geoeconomic theory developed under NASCENT may be ubiquitously applied across the DoW, other components of the executive branch, and in the private sector.

- An element of the U.S. Government or the private sector may ask an operationally relevant geoeconomic question. DARPA expects such questions to require answers on two widely separated timescales: one very short (e.g., ~24 hour – 1 week, which is a decision timescale often characteristic of the National Security Council, other offices within the Executive Office of the President, and the C-suite of private-sector organizations) and one very long (e.g., \geq 6 months, which is characteristic of policy

¹³ See, e.g.: Deng, Y., Schneider, J., & Sivan, B. (2019). Prior-free dynamic auctions with low regret buyers. *Advances in Neural Information Processing Systems*, 32; Braverman, M., Schneider, J., & Weinberg, S. M. (2021, July). Prior-free dynamic mechanism design with limited liability. In *Proceedings of the 22nd ACM Conference on Economics and Computation* (pp. 204-223).

¹⁴ See, for example: Baldwin, E., & Klemperer, P. (2013). Tropical geometry to analyze demand, Unpublished; Crowell, R. A., & Tran, N. M. (2016). Tropical geometry and mechanism design. *arXiv preprint arXiv:1606.04880*; Tran, N. M., & Yu, J. (2019). Product-mix auctions and tropical geometry. *Mathematics of Operations Research*, 44(4), 1396-1411.

development and acquisition planning within the DoW, and of corporate strategy development).

- A NASCENT transition partner (discussed in the paragraph immediately following this itemized list) assesses the body of research developed by NASCENT (or its successor research efforts) for results that are relevant to the operational question. If no such research results exist, the transition partner will translate the operational question – which may be classified or involve sensitive proprietary information – into an unclassified research question. Examples of such unclassified research questions are included at the end of this section.
- The NASCENT transition partner may contract with research organizations, such as NASCENT performers or similarly qualified entities, to create theory addressing the unclassified research questions.
- The NASCENT transition partner may back-translate the research result into the original context for operational use by the original question-asker. DARPA anticipates that performing this step of the process efficiently equates to creating a “playbook” of notional geoeconomic responses to preconditions created by adversary actions. More information about playbook creation is provided in Section 3.2.7 (Test and Evaluation).

The actual means by which the theoretical and algorithmic machinery developed by NASCENT are perpetuated, and to whom the machinery is transitioned, after the conclusion of the program is not fixed as of the issuance date of these PS. Non-mutually exclusive options include:

1. Entities within the DoW and other executive branch organizations devoted to strategic analysis and/or rapid capability development adopt theory developed by NASCENT. Such organizations currently exist within the Department of the Air Force, Undersecretary of Defense for Policy, and multiple intelligence community organizations.
2. A non- or not-for-profit entity could be created to perpetuate the development of logically consistent, empirically supported, and useful geoeconomic theory after the conclusion of the program.

The criteria for transition of NASCENT theory are that it is readily accessible to the executive branch and private-sector organizations who may need to rapidly apply it in operational settings and that continued development of the theory is cost effective and not co-opted through institutional power dynamics. Excellent proposals may outline methods other than (1) and (2) above for continuing the development of geoeconomic theory developed under NASCENT following the conclusion of the program that meets these criteria or may provide more detail on a notional implementation of (2) above.

3.2.6 Example Research Questions

These research questions are provided as notional examples only; proposers should not treat these as prescriptive. **The use of the following notional examples in an abstract will be considered a weakness during the evaluation process.** Proposers should develop their own examples in an abstract if they believe examples are required.

Example 1 - Payment Systems

DARPA uses the term “payment systems” to refer to messaging, clearing, and settlement networks (both the design and implementation thereof) through which the bulk of the world’s international financial messages and transactions flow. To the extent that stablecoins and other forms of digital asset may rise to international prominence (e.g., aggregate transaction volumes on the order of FedWire’s or T2’s¹⁵ transaction volumes), they may also be included in this structural definition of “payment systems.”

1. What features and dynamics of a payment system (dis)incentivize participation in that system by commercial entities?
2. What incentive structure would cause creation of an alternative to SWIFT¹⁶ (for messaging) and FedWire, T2, or CHAPS¹⁷ (clearing and settlement) for U.S.- and European Union (E.U.)-based commercial entities? What features (or lack thereof) of these existing systems could cause creation of an alternative?
3. What features of the international financial environment would have to exist for commercial entities to advocate for the adoption of the alternative system?
4. How could the incentive structures and features described in (1) and (2) be created (i.e., how could they be reduced to practice in the real world?)
5. If the alternative systems described in (2) were created, how would one know it?

Example 2 - Capability Creation

Consider the definition of “capability” given in Section 3.2.2. In the DoW, the confusingly named Major Capability Acquisition (MCA)¹⁸ governs acquisition of many large and expensive platforms today; in general, the United States today tends not to acquire capabilities except at the extreme tactical edge during times of war (e.g., materials for anti-IED armor plating on the HMMVW before introduction of the Armor Survivability Kit¹⁹).

1. What could be the features of an acquisition mechanism that incentivizes acquisition of instances of capabilities, not platforms?
2. Are there sources of moral hazard or principal-agent problems unique to such a new acquisition mechanism (i.e., sources of moral hazard or principal-agent problems that are not present in the current MCA process?)
3. Are there conceptual technical innovations that, if they existed, would reduce or eliminate the identified sources of moral hazard or principal-agent problems? What are the functional requirements of these innovations? Are there existing incentive structures that make it unlikely for these innovations to be developed?

¹⁵ FedWire is the Federal Reserve’s real-time gross settlement (RTGS) payment network; T2 is the European Central Bank’s RTGS payment network.

¹⁶ The Society for Worldwide Interbank Financial Telecommunication (SWIFT) runs the dominant international payments messaging network.

¹⁷ Clearing House Automated Payment System (CHAPS) is the UK’s RTGS payment network.

¹⁸ See <https://aaf.dau.edu/aaf/mca/>.

¹⁹ Briefly, during the Iraq War, U.S. servicemembers were subject to an unacceptably high casualty rate due to improvised explosive devices (IEDs) deployed by insurgents. Enterprising servicemembers improvised armor for the High Mobility Multipurpose Wheeled Vehicle (HMMVW) which reduced casualties. Eventually, the Army Research Lab developed the Armor Survivability Kit, formalizing the innovations made by servicemembers in the field.

3.2.7 Test and Evaluation

The Test and Evaluation (T&E) role is **not** being solicited under this PS; this section is for informational purposes only. All proposers should read this section closely as proposals under this PS will require an in-depth understanding of the T&E procedures.

The NASCENT T&E team will evaluate geoeconomic theory developed by NASCENT performers according to the metrics described in Section 3.4 (Program Metrics) and construct notional economic statecraft “playbooks” from geoeconomic theory. Evaluation of theoretical results will proceed via two distinct approaches: analytical and experimental.

In the analytical approach, economists and computer scientists on the T&E team will evaluate the logical rigor and quality of research conducted by performers, as well as evaluate the extent to which the theory meets the NASCENT program metrics as outlined in Section 3.4 (Program Metrics).

In the experimental approach, game theorists, statisticians, and wargaming experts on the T&E team will evaluate the effectiveness of NASCENT theory in experimental wargames and executive tabletop exercises (TTX). Experimental wargames are instances of wargames that are run many times with pre-designated experimental treatments to achieve a pre-specified level of statistical power. For example, consider a simple wargame pitting Red against Blue in a game of global strategic asset acquisition (e.g., acquisition of ports, natural resource sources, etc.). An experimental wargame could test whether Red’s access to a newly developed theory of market creation is positively associated with Red’s probability of victory in the game, the strength of that association, and its validity in specified operational contexts (e.g., it could be associated with victory when Red has a well-developed domestic capital base but not associated with victory otherwise).

In contrast, executive TTXs qualitatively evaluate the utility of geoeconomic theory in increasing senior executives’ understanding of options available to them in economic statecraft, simulating some of the social-psychological factors involved in real-world application of NASCENT results by executive decision-makers. Executive TTXs gather senior executives from relevant industries and government functions, such as managing partners of securities brokerages and investment banks, portfolio managers from emerging markets asset managers, owners of shipping companies, etc. and allow all game participants unfettered access to “playbook” forms of newly developed geoeconomic theory. Executives rate their perceived advantage gained from access to playbooks, while organizers of the executive TTX provide a third-party, unbiased estimate of advantage.

The T&E team will also translate between operational partners and program performers. Many (though certainly not all) questions posed by operational partners will be classified (if for no other reason than they deal with specifics of U.S. adversaries’ capabilities or intents). However, DARPA strongly believes that foundational research in geoeconomics is best accomplished at the unclassified level as this is the level at which virtually all academic work on the subject is conducted. A T&E partner will abstract away or obfuscate classified details of an operational question, ideally simultaneously generalizing the question, to make it suitable for NASCENT performers.

Finally, a T&E partner will also address the harder problem of back-translating NASCENT research results into forms that are suitable for operational application. For example, a NASCENT research effort could create decision criteria for identifying or constructing alternative financial data the publication of which is expected to maximize the flow of capital out of an adversary nation. This theory could be parameterized by features of the adversary nation (e.g., by exchange rate regime, degree of social control, or level of wealth inequality). The T&E partner would create a “playbook” that contains high-level preconditions for the applicability of the theory overall, applicability of specific instances of the theory given specific preconditions (e.g., what type of data to publish given that the adversary nation has a fixed exchange rate regime, high degree of social control, and high wealth inequality), and potential second-order consequences of the publication of the data.

Though performers will not be involved in playbook creation, proposers will be evaluated on how their theory can be developed in a manner that is both rigorous and amenable to representation in such a “playbook” form. To that end, DARPA is especially interested in approaches that facilitate easy enumeration of higher-order consequences of novel geoeconomic mechanisms.

3.3 PROGRAM STRUCTURE

The NASCENT program is structured in two phases. In Phase 1 (~4 months) all performers will collaborate to create a new or substantially refined version of the decomposition of geoeconomic problems. In Phase 2 (~2 years) performers will create novel geoeconomic theory over multiple research sprints.

3.3.1 Phase 1

In Phase 1 of the program, performers will build on the material contained in their proposals to construct novel decompositions of geoeconomic problems. Collaboratively with DARPA and the T&E team, performers will combine aspects of their respective decompositions into an ontology or common reference language to be used during Phase 2; performers will be strongly incentivized to collaborate in achieving the aforementioned objective.

During development of Phase 1, DARPA and the T&E team will assess interest (both near- and long-term) in various areas of geoeconomics from across the U.S. Government and the U.S. private sector and collate them into a menu of broad, but distinct, research topics. At the conclusion of Phase 1, DARPA will ask each performer team their preferences of at least two research topics and will assign at least two research topics for the initial research sprint partially on the basis of those preferences.

A collective failure to accomplish the Phase 1 objective will result in the Program Manager (PM) recommending cancellation of the NASCENT program upon the conclusion of Phase 1.

3.3.2 Phase 2

In Phase 2 of the program, performers will conduct geoeconomic research in areas that are of mutual interest to the performers and DARPA. As noted in Section 3.3.1 (Phase 1), each performer team will be assigned at least two research topics for the initial research sprints.

During each research sprint, performers will create geoeconomic theory addressing their assigned research topics. DARPA expects each research sprint to last approximately 8 months²⁰, though DARPA intends to provide incentives for performers that deliver high-quality accelerated results; see Section 4.3 (Research Topic Incentives) for more information regarding research sprint incentives. Although the length of each performer’s research sprint may conclude at different timelines, new research sprints will be initiated asynchronously across performers. Upon conclusion of each research sprint, the T&E team will evaluate the research, socialize the results with appropriate operational partners, and be assigned new research topics, which may build upon prior efforts or new areas of inquiry.

DARPA expects the average NASCENT performer to complete three research sprints during Phase 2 (24 months). Performers who demonstrate high quality accelerated results may experience an increase in research sprints. See Section 4.3 (Research Sprint Incentives) for more information. Performers who are unable to submit acceptable research results, specifically related to Section 3.4 (Program Metrics) of this PS, within the anticipated 8-month time period may experience a reduction in assigned research topics or be removed from the program. The maximum duration between delivery of working drafts of research is 12 months; failure to deliver research after 12 months of working on the assigned research topics will be grounds for removing a performer from the program.

3.4 PROGRAM METRICS

The geoeconomic theory developed under NASCENT will be evaluated according to three classes of metrics –cost-effectiveness, computational effectiveness, and operational effectiveness – each of which is intended to assess ability for future applied research programs and operational partners to use the theory to create tools of economic statecraft.

Metrics will be evaluated in two ways: analytical and live experimental exercises. When possible, properties of the theory will be proved by performers; the T&E team will corroborate the proofs and assess the realism of assumptions made in generating proofs. We term this process “analytical evaluation” of the metrics. Because the validity of the proof of a property is dependent on the extent to which model assumptions are met, sensitivity/tunability statistics (discussed later in this section; not in the following metrics table) and operational effectiveness metrics are also evaluated in live experimental exercises. The form of the exercises is described in the Technical Approach section. In the table that follows, F is a measure of impact (the units will vary depending on the application of the theory), C is monetary cost (units of dollars), G is collateral damage (the units will vary depending on the application of the theory), and Θ is a compact space of free parameters of the theory.

Metric class	Metric	Evaluation	Definition	Critical value
Cost effectiveness	Monetary	Analytical, experimental	Scalar: $ \Theta ^{-1} \int_{\theta \in \Theta} d\theta \frac{F(\theta)}{C(\theta)}$, where C has units of dollars. Vector: $\arg \min_{a \in A} \ u - u_a\ $, where $u = (F, C)$ and A is the	Current state-of-the-art scalar cost-effectiveness is almost certainly between 59 and 295

²⁰ This is an expected value figure only.

			Pareto frontier of impact (maximized) and monetary cost (minimized).	(unitless; dollars/dollars) ²¹
	Inverse collateral damage ratio	Analytical, experimental	Scalar: $ \Theta ^{-1} \int_{\theta \in \Theta} d\theta \frac{F(\theta)}{G(\theta)}$, where G is the collateral damage to the actor. Vector: $\arg \min_{a \in A} \ u - u_a\ $, where $u = (F, G)$ and A is the Pareto frontier of impact (maximized) and collateral damage (minimized).	Scalar average inverse collateral damage ratio should be greater than operationally accepted U.S. inverse collateral damage ratio, estimated to be 7.5 (unitless; dollars/dollars) ²²
Computational effectiveness	Computational hardness	Analytical	Big-Oh complexity of algorithmic implementation in relevant quantities (to be minimized)	0: Polynomial 1: Worse than polynomial but better than exponential 2: Exponential or worse
	Centralization	Analytical	Degree of decentralization enabled by algorithmic implementation (to be maximized)	0: Central control required 1: Federated algorithm 2: Fully asynchronous algorithm
	Genericity	Analytical, experimental	Number of distinct (economic context, national security context) dyads to which the theory is applicable with no modification	>1 required, <i>ceteris paribus</i> higher is better
Operational effectiveness	Experimental wargaming	Experimental	Bayes factor (BF) of the alternative hypothesis that the team with access to NASCENT theory will win engagement (as opposed to the null hypothesis that each team is equally likely to win)	BF > 10 (“strong evidence” favoring the alternative hypothesis)
	Executive tabletop exercises	Experimental	Forced-choice Likert scale (LS) 0 - 3 that NASCENT theory increases executive insight and effectiveness	LS > 1 at midpoint of Phase 2 (more useful than not); LS = 3 at end of Phase 2 (very useful)

Table 1: Program Metrics

DARPA expects that the importance of the computational hardness metric will vary substantially across specific thematic developments of theory and will weigh it accordingly in evaluation. For example, the worst-case space complexity of a pricing algorithm is very unlikely to be important

²¹ In this example, impact is defined as the dollar value of NVIDIA price reduction (\$589B) and cost as the total amount of capex and opex required to create the DeepSeek r1 artificial intelligence platform (almost certainly less than \$10B, almost certainly greater than \$2B, judging from multiple open-source reports).

²² For example, the cumulative direct dollar cost to Russia of the 2022 sanctions is may be at least \$750B (\$450B in lost state revenue, \$300B in frozen central bank assets) while the cumulative direct dollar collateral damage to the Western financial system may be at least \$100B (including frozen assets of Western investment banks and increased volatility of foreign exchange swaps and derivatives markets), judging from multiple open sources. This estimate is made in low confidence because there has not been a systematic effort to assess the collateral damage of the 2022 sanctions on Russia.

if it is expected that the total number of bids or asks submitted would be less than a small constant number.

Sensitivity to data and inferred random variables and tunability of parameters will be important features of tools of economic statecraft that may be eventually created using NASCENT theory. Therefore, NASCENT will assess the degree to which geoeconomic theory developed under the program is sensitive to observed data and inferred random variables, and the number and tunability of the theory’s parameters. Proposers should suggest and rigorously derive statistics by which NASCENT can assess sensitivity and tunability of tools of economic statecraft eventually created using NASCENT theory.

3.5 PROGRAM SCHEDULE, MEETINGS, AND MILESTONES

3.5.1 Program Schedule

DARPA intends Phase 1 to last 4 months and Phase 2 to last 24 months; the length of Phase 2 may vary substantially between performers. **Error! Reference source not found.** displays the anticipated program schedule for NASCENT, including an approximate timeline for program-wide events.

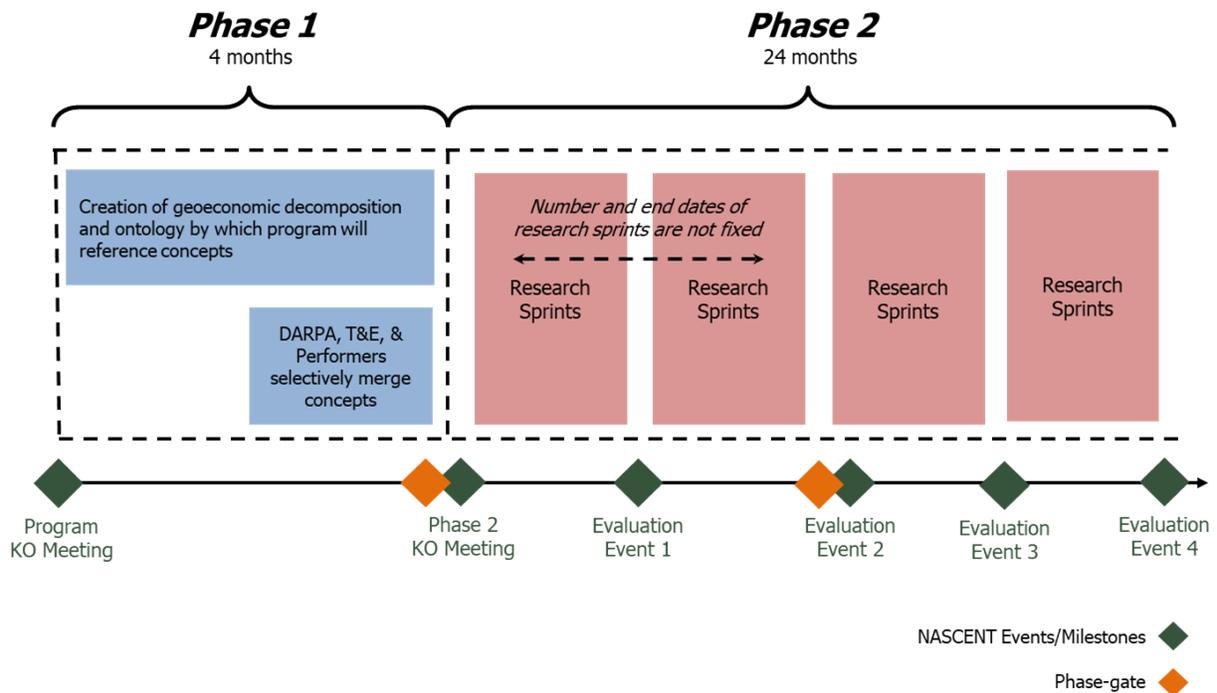


Figure 2: Anticipated program schedule for NASCENT

3.5.2 Program Meetings

DARPA intends to hold limited in-person meetings to include a Phase 1 Kickoff meeting, a Phase 2 Kickoff meeting, and semiannual “Reverse Site Visits.” Reverse Site Visits will occur during Phase 2 and will require performer teams to travel to Arlington, VA, Lexington, MA, and

Santa Monica, CA. DARPA may visit performer sites on an ad-hoc basis as required for program management.

For planning purposes, proposers should estimate travel expenses based on a Phase 1 start date of October 1, 2026, and the following required in-person meetings:

- Phase 1 Kickoff Meeting: 1 day in Lexington, MA
- Phase 2 Kickoff Meeting: 1 day in Santa Monica, CA
- Reverse Site Visit 1: 1 day in Arlington, VA
- Reverse Site Visit 2: 1 day in Lexington, MA
- Reverse Site Visit 3: 1 day in Arlington, VA
- Reverse Site Visit 4: 1 day in Lexington, MA

DARPA also intends to hold frequent, recurring virtual meetings (anticipated to be triweekly) with performers during Phase 2 to assess performer progress and assist in removing barriers to research if necessary.

3.5.3 Program Milestones

NASCENT has two program-level milestones and anticipates multiple research sprint-based milestones within Phase 2.

Milestone 1 – Conclusion of Phase 1

At the conclusion of Phase 1, the performers, T&E team, and DARPA should have collectively created a common language or ontology for geoeconomics that will be used in Phase 2. If Phase 1 is unsuccessful, NASCENT will not proceed to Phase 2. NASCENT performers can expect to submit final deliverables, milestones, etc. and commence the Agreement closeout process with the respective AO. Conversely, if Phase 1 is successful, NASCENT performers will transition into Phase 2.

Milestone 2 – Phase-gate Decision

Roughly halfway through Phase 2, the Program Manager will justify the continued existence of the NASCENT program to the Director's Office at the Phase-gate decision point based on the progress toward achieving program metrics, future potential of program research, and operational utility of research (if applicable at this early date).

Phase 2 Research Sprint Milestones

Each performer will have multiple milestones in Phase 2 of the program. At the conclusion of each research sprint – modeled as taking approximately 8 months, but possibly shorter – the T&E team will evaluate the performer team's progress toward achieving the program metrics.

3.6 ANTICIPATED DELIVERABLES

3.6.1 VAULT

All deliverables should be uploaded to the DARPA Vault reporting system. Performers should anticipate submitting at a minimum the following deliverables, as applicable:

- Technical Papers: Any technical papers derived from work funded by NASCENT.
- Technical Status Reports: The technical status report will detail technical progress to date and report on all problems, technical issues, major developments, and the status of external collaborations during the reporting period.

The following deliverables should be submitted both to the DARPA Vault reporting system and the T&E team:

Phase 1: Deliver a working draft of an improved geoeconomic decomposition (represented as a research paper or algorithmically, e.g., as a strongly typed functional program or parseable ontology) at least 1-month prior to the end of the phase. Ideally, performers will share a working draft as early as possible in Phase 1 and refine their draft collaboratively with other performers for the balance of the phase.

Phase 2: Deliver working drafts of geoeconomic research at least three times during the phase. The maximum duration between delivery of working drafts of research is 12 months; failure to deliver research after 12 months of working on the assigned research topics will be grounds for removing a performer from the program. The form of the deliverables will vary depending on the research topics and the research methodologies used by the performer. However, DARPA expects the deliverables to take the following forms:

- Written research paper(s) detailing the specific research questions, main results and assumptions of the developed theory, and supporting mathematical or other theoretical developments; **and**
- An algorithmic representation of theoretical results, except where theoretical results are proofs of lack of existence; **and**
 - If theory **is** intended to be reduced to practice in software (e.g., a novel auction algorithm or pricing theory for a novel financial asset), relevant and well-documented source code and all material required for creating executable software from the relevant source code (e.g., compilation instructions); **or**
 - If theory **is not** intended to be reduced to practice in software, a formal written description (e.g., in research paper form) of what steps would be taken to realize tools created with the developed theory in the world (e.g., what sort of organizations would be formed, what communication channels would need to be created, etc.)

DARPA recognizes that the above deliverables imply that NASCENT requires theory to be constructive in many cases. This is intentional; if a mechanism exists to simultaneously achieve a national security objective and create positive-sum economic outcomes, DARPA would like to know how to create the mechanism.

4. ACQUISITION STRATEGY

4.1 ELIGIBILITY

This PS encourages submissions from all responsible sources capable of satisfying the Government's needs, including large and small businesses, nontraditional defense contractors as defined in 10 U.S.C. § 3014, and research institutions as defined in 15 U.S.C. § 632.

Federally Funded Research and Development Centers (FFRDCs), University Affiliated Research Centers (UARCs), and Government Entities to include National Laboratories are not eligible to propose to this solicitation.

4.2 OTHER TRANSACTION AGREEMENTS

OT Agreements offer DARPA and performers flexibility to negotiate terms and conditions which closely reflect private-sector or commercial contracts. Thus, standard Government regulations, such as the Federal Acquisitions Regulations (FAR) or Defense Federal Acquisitions Regulations Supplement (DFARS) do not apply. Most notably, performers will be provided the flexibility of using their existing accounting systems and negotiating intellectual property (IP) rights in accordance with their standard business practices.

4.3 RESEARCH TOPIC INCENTIVES

Upon commencement of Phase 2, each selected performer will be allocated 2 research topics. The Government will continuously assess performance throughout each 8-month duration against pre-defined program metrics.

Performers who are unable to deliver acceptable research results within this stipulated timeframe may, at the discretion of the Government, be subject to a reduction in future assigned research topics or, in some cases, be removed from the program. As noted in Section 3.3.2 (Phase 2), failure to deliver research after 12 months of working on the assigned research topics will be grounds for removing a performer from the program.

Performers that exceed expectation through demonstrating high-quality accelerated results may be awarded additional research topics. This provides an opportunity for an expanded scope of work and further investment in promising research avenues. This structure is designed to reward innovation, efficiency, and exceptional technical progress.

While DARPA does not intend to limit the number of research topics assigned to a top performer, the agency anticipates that successfully completing 8 topics over 2 years would represent a revolutionary achievement. Such a pace would produce high-quality scientific and economic research, leading to significant impacts across academia and industry.

4.4 ABSTRACTS (REQUIRED)

This PS contains an abstract phase. Proposers are **required** to submit an abstract in advance of a full proposal submission to minimize effort and reduce the potential expense of preparing an out-of-scope proposal. Abstracts are due as stated in Section 1 (Overview Information). Additional information including submission requirements, formatting, content, evaluation, and abstract feedback can be found in Section 6 (Abstract Guidelines).

NOTE: DARPA will not pay the costs associated with the preparation or submission of an abstract.

4.5 ORAL PRESENTATIONS

Oral presentations are by invitation only. Notifications to participate in oral presentations will be sent via an Invitation to Proceed. Additional information including submission requirements, formatting requirements, and content requirements can be found in Section 7 (Oral Presentations).

4.6 TWO-STEP AWARD PROCESS

NASCENT will have a two-step award process. The following describes the process proposers should anticipate if selected as a performer under NASCENT:

Step 1: Upon selection, and based on the availability of funds, proposers may receive a Kick-Start OT for Prototype Agreement to support Months 1-4 (Phase 1) of the NASCENT program.

Step 2: NASCENT performers will negotiate additional terms and conditions of the OT for Prototype Agreement with the AO for Months 5-28 (Phase 2) work. The AO will determine if research sprints will be broken into options for exercise. Selected performers should anticipate Step 2 negotiations may take up to 90-120 calendar days to finalize Phase 2 awards. As such, DARPA anticipates Step 2 awards will be finalized prior to the close of the Kick-Start period of performance at month 4 of the NASCENT program.

NOTE: If Phase 1 is unsuccessful, Step 2 awards will not be finalized.

5. SECURITY

5.1 PROGRAM CLASSIFICATION

All submissions and work performed under the NASCENT program will be at the **UNCLASSIFIED** level. All submissions containing classified or CUI information will not be accepted.

Individuals who possess security clearances and knowledge of economic statecraft are reminded **NOT** to submit any material that is CUI or classified and to follow any relevant security classification guidelines (SCG).

Compilation of information by individuals who possess a security clearance and knowledge of economic statecraft must be carefully reviewed against relevant security guidance on the respondent's existing contracts, as the aggregation of unclassified elements could require classification.

Responses must **NOT** contain information that may reveal potential U.S. national interests or concerns related to economic information and analysis of specific named foreign government situations, planning, policies or data related to international trade, finance, investment, technological capabilities that are directly relevant to U.S. national security, economic development, or proposed geoeconomic strategies. Responses must also refrain from identifying potential or current vulnerabilities in specific global or national financial systems or ways to exploit those vulnerabilities. Responses that contain information previously described in this paragraph will be considered non-conforming.

5.2 DARPA FUNDAMENTAL RESEARCH RISK-BASED SECURITY REVIEW

It is DoW policy that the publication of products of fundamental research will remain unrestricted to the maximum extent possible. National Security Decision Directive (NSDD) 189 defines fundamental research as follows:

‘Fundamental research’ means basic and applied research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community, as distinguished from proprietary research and from industrial development, design, production, and product utilization, the results of which ordinarily are restricted for proprietary or national security reasons.

As of the date of publication of this solicitation, the Government expects that program goals as described herein may be met by proposed efforts for fundamental research **and** non-fundamental research. Some proposed research may present a high likelihood of disclosing performance characteristics of military systems or manufacturing technologies that are unique and critical to defense. Based on the anticipated type of proposer (e.g., university or industry) and the nature of the solicited work, the Government expects that some awards will include restrictions on the resultant research that will require the awardee to seek DARPA permission before publishing any information or results relative to the program. For additional information on fundamental research, please visit [Proposer Instructions: General Terms and Conditions](#).

5.2.1 DARPA Fundamental Research Risk-Based Security Review Required Documents

As part of the oral presentation response to this PS the proposer will provide to the Government the forms listed below for all key personnel identified in the proposal:

- Common Form for Biographical Sketch
- Common Form for Current and Pending (Other) Support

Instructions for how to fill out the Common Disclosures Forms can be found through [NSF.gov](https://www.nsf.gov).

6. ABSTRACT GUIDELINES

Proposers are **required** to submit an abstract in advance of a full proposal submission, as stated in Section 4.4 (Abstracts).

6.1 ABSTRACT SUBMISSION REQUIREMENTS

Abstracts are due by the date and time stated in Section 1 (Overview Information). Abstract submission requirements are stated in “Template_NASCENT Abstract”.

6.2 ABSTRACT CONTENT AND FORMATTING REQUIREMENTS

Abstracts content and formatting requirements are stated in the attached “Template_NASCENT Abstract”. Use of the aforementioned abstract template is ***required*** in the development of abstract submission. Failure to comply with all stated content and formatting requirements may result in the abstract submission being deemed non-conforming. Information not explicitly requested in Template_NASCENT Abstract will not be reviewed.

6.3 ABSTRACT BASIS OF EVALUATION

Abstracts will be evaluated using the following criteria listed in descending order of importance:

- **Technical Comprehension:** The proposed technical approach is innovative, feasible, and operationally useful. The proposed approach focuses on multiple distinct classes of economic preferences and national security objectives, and crosses domain boundaries either within economics or between economics and other research areas. Key technical challenges and risks are identified.
- **Technical Ability:** The proposer demonstrates an ability to achieve the goals of the program.
- **Cost Considerations:** The proposer demonstrates an understanding of an appropriate level of effort required to achieve the program objectives.

6.4 ABSTRACT FEEDBACK

DARPA anticipates sending notification letters via email to all designated Technical and Administrative POC(s) for conforming abstract submissions within 30 calendar days. Each letter will communicate one of two outcomes:

Invitation to Proceed: Selected proposers will be invited to submit a full proposal and participate in an oral presentation. An Invitation to Proceed letter may include:

- Full proposal templates with content and formatting requirements
- Submission requirements, deadlines, and procedures
- Non-conformance consequences
- Oral presentation logistics and expectations
- PM feedback on the abstract evaluation

Only proposers receiving an Invitation to Proceed may advance to the oral presentation phase. Proposers should understand that an Invitation to Proceed does not guarantee final selection or a resultant award.

Non-selection notification: Proposers will be informed that their abstract was not selected for advancement, and they will not be permitted to submit a full proposal or participate in oral presentations. A non-selection letter may include the PM's feedback regarding their decision.

7. ORAL PRESENTATIONS

As outlined in Section 6.4 (Abstract Feedback), proposers invited to the oral presentation stage will receive a notification letter titled "Invitation to Proceed," which serves as the formal request for full proposal submission.

Proposers can assume the following in advance of an Invitation to Proceed:

- A presentation slide deck in English, cost or price proposal spreadsheet(s), a Kick-Start OT Agreement and the FRRBS Common Forms will be required and may constitute a full proposal submission.

- Oral presentations will be conducted exclusively in person at DARPA (675 N Randolph St., Arlington, VA 22203) – virtual participation will not be permitted.
- Oral presentations and presentation material will be submitted and presented at the **UNCLASSIFIED** level.
- Oral presentations should focus on technical content rather than promotional material. Proposers should ensure that essential technical personnel who can effectively explain the proposed technical methodology and respond to detailed technical inquiries are present. Upon notification of an Invitation to Proceed, proposers should plan accordingly to guarantee the availability of all critical technical personnel for in-person attendance.

Each oral presentation session may be structured as follows:

Total duration: 1 hour, 30 minutes

- DARPA Opening Remarks: 5 minutes
- Oral Presentation: 30 minutes
- Break: 10 minutes
- Q&A Session: 45 minutes

NOTE: DARPA will record all presentations.

8. ORAL PRESENTATION PROCESS AND BASIS OF EVALUATION

8.1 PROCESS OF EVALUATION

The NASCENT PM and panel of two or more Government Subject Matter Experts will evaluate the presentation slide deck, cost proposal spreadsheet, oral presentation, and the Q&A session against the Basis of Evaluation.

8.2 BASIS OF EVALUATION

The evaluation criteria are listed in descending order of importance.

- **Technical Approach:** The proposed technical approach is innovative, feasible, and operationally useful within the program schedule. The proposed approach focuses on multiple distinct classes of economic preferences and national security objectives, and crosses domain boundaries either within economics or between economics and other research areas. Key technical risks are identified and planned mitigation efforts are clearly defined and feasible.
- **Technical Qualifications:** The proposed technical team has the expertise and experience to accomplish the proposed tasks. Key personnel proposed are proposed at a level of effort that will be meaningful and impactful to proposed research.
- **Budget:** The proposed solution is realistic and affordable. The resources proposed are necessary, realistic, defensible, and affordable for the level of effort anticipated to accomplish the proposed technical approach.

8.3 PROCESS OF NOTIFICATION AND FEEDBACK

All proposers will receive electronic correspondence stating whether their submission was selected for negotiation of potential award. Upon notice of selection, proposers should anticipate the commencement of the two-step award process; see Section 4.6 (Two-Step Award Process).

Additionally, upon notification of a selection determination, DARPA may conduct informal feedback sessions. Subcontractors shall note that informal feedback sessions must be requested by the prime proposer; subcontractors may attend the informal feedback session at the invitation of the prime proposer.

9. AWARD GUIDELINES

The AO reserves the right to negotiate directly with the proposer on the Award Articles (terms and conditions) prior to execution of the resulting OT Agreement, including payment terms, and will execute the agreement award on behalf of the Government. Be advised, subject to the availability of funds, only a AO has the authority to enter into, or modify, a binding agreement on behalf of the United States Government.

In order to receive an award:

Proposers must also register in the prescribed Government invoicing system (Wide Area Work Flow) at <https://wawf.eb.mil/xhtml/unauth/registration/notice.xhtml>.

Proposers must be determined to be responsible by the AO and must not be suspended or debarred from award by the Federal Government nor be prohibited by Presidential Executive Order and/or law for receiving an award.

Being asked to submit a proposal does not guarantee that a proposer will receive an award. The Government reserves the right to not make any award.

10. AWARD ADMINISTRATION INFORMATION

Controlled Unclassified Information (CUI) and Controlled Technical Information (CTI) on Non-DoW Information Systems

As of the time of publication of this solicitation, all proposal submissions are anticipated to be unclassified (i.e., no classified submissions will be accepted) and will not contain controlled unclassified information (CUI). If a proposer anticipates submitting a proposal with CUI, the proposer should first consult the Agency POC stated in Section 1 (Overview Information) prior to submitting a proposal.

For unclassified proposals containing CUI, applicants will ensure personnel and information systems processing CUI security requirements are in place.

If an unclassified submission contains CUI or the suspicion of such, as defined by Executive Order 13556 and 32 CFR Part 2002, the information must be appropriately and conspicuously marked CUI in accordance with DoDI 5200.48. Identification of what is CUI about this DARPA program will be detailed in a CUI Guide and will be provided upon request.

Proposers submitting proposals involving the pursuit and protection of DARPA information designated as CUI must have, or be able to acquire prior to contract award, an information system authorized to process CUI information IAW NIST SP 800-171 and DoDI 8582.01.

Further information on CUI identification, marking, protecting and control, to include processing on Non-DoW Information Systems, is incorporated herein and can be found at www.darpa.mil/work-with-us/additional-baa.

Competition Sensitive Information

DARPA policy is to treat all submissions as competition sensitive and to disclose their contents only for the purpose of evaluation. Restrictive notices notwithstanding, during the evaluation process, submissions may be handled by support contractors for administrative purposes and/or to assist with technical evaluation. All DARPA support contractors performing this role are expressly prohibited from performing DARPA sponsored technical research and development and are bound by appropriate nondisclosure agreements. Input on technical aspects of the proposals may be solicited by DARPA from non-Government consultants/experts who are strictly bound by the appropriate non-disclosure requirements.

Intellectual Property / Data Rights

DARPA expects most research accomplished under NASCENT to be open-sourced in the form of publicly posted (e.g., arXiv, SSRN) or published papers and source code and encourages performers to retain rights in their source code by using an open-source license.²³ However, DARPA intends to retain Government Purpose Rights (GPR) in all NASCENT deliverables, including in source code. Proposers that do not intend to open-source aspects of their research shall explain their rationale in their oral presentation, if they are invited.

Procurement Integrity Act (PIA)

All awards under this solicitation shall be treated as Federal Agency procurements for purpose of 41 U.S.C. Chapter 21. Accordingly, the solicitation, competitive solicitation process, and awards made thereof must adhere to the ethical standards required by the PIA.

Follow-On Production

The Government reserves the right to negotiate and award follow-on production contracts and transactions to performers who successfully complete the prototype phase of OT awarded under this solicitation, without further competition, per 10. U.S.C. § 4022.

Human Subjects Research (HSR) and Animal Use

This solicitation does not anticipate HSR in proposal submissions. Proposers that anticipate involving HSR or animal use in the proposed research must contact the Agency POC stated in Section 1 (Overview Information) prior to submitting a proposal with an explanation for why HSR or animal use is necessary to successfully complete the proposed research objectives. Proposers that anticipate involving human subjects or animals in the proposed research must comply with the approval procedures detailed at <https://www.darpa.mil/work-with-us/humanresearch> to include providing the information specified therein as required for proposal submission.

²³ Please visit the following link for a list of acceptable open-source licenses:
<https://opensource.org/licenses?categories=popular-strong-community>

Organizational Conflict of Information (OCI)

Proposers, through submission of a proposal, are required to identify and disclose all facts relevant to a potential OCI involving the proposer, the proposer’s organization, and/or any proposed team member (proposed subawardee). Along with the disclosure, the proposer shall submit a mitigation plan, which is a description of the action the performer has taken to avoid, neutralize, or mitigate the stated OCI. The Government may require proposers to provide additional information to assist the Government in evaluating the OCI mitigation plan. See Appendix A of Attachment B.

If the Government determines a proposer failed to fully disclose an OCI; failed to provide the affirmation of DARPA support; or failed to reasonably provide additional information requested by the Government to assist in evaluating the proposer’s OCI mitigation plan, the Government may reject the proposal and withdraw it from consideration for award.

11. PS DEFINITIONS

“**Data**” refers to recorded information, regardless of form or method of recording, which includes but is not limited to, technical data, software, mask works and trade secrets. The term does not include financial, administrative, cost, pricing, or management information and does not include inventions.

“**Limited Rights**” means the rights to use, modify, reproduce, release, perform, display, or disclose Data, in whole or in part, only within the Government for the limited purpose of evaluation of satisfying the requirements of the Agreement. The Government may not, without the written permission of the party asserting limited rights, release or disclose the Data outside these limited rights, use the Data for manufacture, or authorize the Data to be used by another party, except that the Government may reproduce, release, or disclose such Data or authorize the use or reproduction of the Data by persons outside the Government if—

The reproduction, release, disclosure, or use is—

Necessary for emergency repair and overhaul; or

A release or disclosure to—

- A covered Government support contractor in performance of its covered Government support contract for use, modification, reproduction, performance, display, or release or disclosure to a person authorized to receive limited rights technical data; or
- A foreign Government, of technical data other than detailed manufacturing or process data, when use of such data by the foreign Government is in the interest of the Government and is required for evaluation or informational purposes;
- The recipient of the Data is subject to a prohibition on the further reproduction, release, disclosure, or use of the technical data; and
- The contractor or subcontractor asserting the restriction is notified of such reproduction, release, disclosure, or use.

“**Nontraditional Defense Contractor**” is defined in 10 U.S.C. § 3014 as an entity that is not currently performing and has not performed, for at least the one-year period preceding the solicitation of sources by the DoW for the procurement or transaction, any contract or subcontract for the DoW that is subject to full coverage under the cost accounting standards

prescribed pursuant to 41 U.S.C. § 1502 and the regulations implementing such section. This includes all small business concerns under the criteria and size standards in 15 U.S.C. § 632 and 13 C.F.R. Part 121.

"Other Transaction" refers to the type of OT that may be awarded as a result of this PS. This type of OT is authorized by 10 U.S.C. § 4022 for prototype projects directly relevant to enhancing the mission effectiveness of military personnel and the supporting platforms, systems, components, or materials proposed to be acquired or developed by the DoW, or for the improvement of platforms, systems, components, or materials in use by the armed forces.

"Prototype Project" is described in the DoW Prototyping Guidebook (Version 2.0, July 2023) issued by the Office of the Under Secretary of Defense for Acquisition and Sustainment.

"Restricted Rights" applies only to noncommercial computer software and means the Government's right to use, modify, reproduce, perform, display, release disclose, or transfer computer software are restricted, except that the Government may use a computer program on a limited number of computers and make the minimum number of copies of the computer software required for safekeeping (archive), backup, or modification purposes. The Government will not transfer the software outside of the Government or for any purpose other than the NASCENT program, except that the Government may allow the use of the noncommercial computer software outside of the Government under a limited set of circumstances, including use by a covered Government support contractor in performance of its covered Government support contract (management and administrative support), and after the contractor or subcontractor asserting the restriction is notified in writing as far in advance as practicable that a release or disclosure to particular contractors or subcontractor is planned to be made.

"Small Business Concerns" is defined in the Small Business Act (15 U.S.C. § 632).