



Dept. No.: J81A
Project No.: 25AOH810-N4

The views, opinions and/or findings contained in this report are those of The MITRE Corporation and should not be construed as an official government position, policy, or decision, unless designated by other documentation.

©2016 The MITRE Corporation.
All rights reserved.

McLean, VA

From Incentive Prize and Challenge Competitions to Procurement

Approaches for Transitioning the Results of an Incentive Prize or Challenge Competition to a Follow-On Acquisition

Michael Arendt, Ph.D.
Ryan Novak

Approved for Public Release; Distribution Unlimited.
Case Number 16-3025

This page intentionally left blank.

Executive Summary

After executing an incentive prize or challenge competition under the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science (COMPETES) Act of 2007 or other authority, the Government often wants to purchase the winning solution but cannot do so without initiating a prolonged and inefficient acquisition process as prescribed by the Federal Acquisition Regulation (FAR), adding unacceptable delays in providing the discovered solution to users. This document describes how the results of an incentive prize or challenge competition can be efficiently transitioned to the Government using the following approaches:

- Transition of Incentive Prize or Challenge Competitions to a Follow-on Sole Source Procurement
- Use of Incentive Prize and Challenge Competition Participation for Full and Open Competition
 - Design Incentive Prize and Challenge Competitions to Support FAR's Full and Open Competition Requirements
 - Incentive Prize and Challenge Competition Environment and Pre-Award In-Use Evaluation
 - Incentive Prize and Challenge Competition Results and Follow-on Proposal Evaluation
 - Incentive Prize and Challenge Competitions Results and the Follow-on Technical Proposal
 - Incentive Prize or Challenge Competition Results and the Advisory Multi-Step Process
 - Incentive Prize or Challenge Competition Participation and Follow-on Past Performance Evaluation
- Use of Government Purpose Rights from an Incentive Prize or Challenge Competition to a Follow-on Procurement

Acknowledgments

We would like to acknowledge the following individuals who contributed to the development of this document:

- Duane Blackburn
- Martin Edwards
- Patrick Hughes
- Margaret MacDonald
- Roy Santos
- Erin Schultz
- Frank Tavenner
- Nadine Tronick

Table of Contents

1	Introduction	1
1.1	Problem Statement	1
1.2	Assumptions, Scope, and Context	1
1.3	Acquisition Streamlining	2
1.4	Incentive Prizes and Challenge Competitions– A Definition	2
1.5	Challenge-Based Acquisition – A Potential Solution.....	2
1.6	Keys to Success for Transitioning Incentive Prize and Challenge Competitions to a Procurement	3
2	Alternative Approaches	5
2.1	From Incentive Prize or Challenge Competitions to a Follow-on Sole Source Procurement	5
2.2	Use of Incentive Prize and Challenge Competition Participation for Full and Open Competition.....	5
2.2.1	Design Incentive Prize and Challenge Competitions to Support FAR’s Full and Open Competition Requirements.....	5
2.2.2	Incentive Prize and Challenge Competition Environment and Pre-Award In-Use Evaluation	6
2.2.3	Incentive Prize and Challenge Competition Results and Follow-on Proposal Evaluation	6
2.2.4	Incentive Prize and Challenge Competitions Results and the Follow-on Technical Proposal.....	6
2.2.5	Incentive Prize or Challenge Competition Results and the Advisory Multi-Step Process	7
2.2.6	Incentive Prize or Challenge Competition Participation and Follow-on Past Performance Evaluation.....	7
2.3	Government Purpose Rights and the Follow-on Procurement	7
2.3.1	Negotiate Government Purpose Rights in Intellectual Property.....	7
3	Conclusion.....	9
Appendix A	Acronyms	10

This page intentionally left blank.

1 Introduction

Governments and private organizations have used incentive prize and challenge competitions for centuries to encourage radical innovation in technology and as solutions to particularly difficult problems.¹ Implementing an incentive prize or challenge competition requires: 1) a description of a problem set; 2) a clearly defined assessment criteria for evaluating proposed solutions; and, 3) an incentive for participation based upon the pre-defined evaluation criteria. Incentives may be monetary in nature, such as a cash prize or contract award, or non-monetary in nature such as public recognition as the prize or challenge winner. The Federal Government understands the value of using incentive prize and challenge competitions to stimulate cutting-edge innovation given the depth and breadth of critical public sector missions.² The America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science (COMPETES) Act of 2007 provides additional authority for Government agencies to engage in high-risk, high-reward research in areas of critical national need. In pursuit of this work, the COMPETES Act specifically calls for the increased use of incentive prize and challenge competitions as one means of encouraging the development of cutting edge solutions.³

1.1 Problem Statement

After executing an incentive prize or challenge competition under the COMPETES Act or other authorities, the Government often wants to purchase and field the winning solution(s), but does not have the ability to do so expeditiously. Reasons for the inefficient transition from prizes to procurements include differing interpretations of the current Federal Acquisition Regulations (FAR), Agency Specific Regulations, and/or Other Transaction Authority (OTA) by program managers and contracting officers, as well as the overall methods by which incentive prize and challenge competitions are structured, executed, evaluated, and documented. When these two factors are combined, transitioning an incentive prize or challenge competition result to a Government procurement becomes inefficient and arduous.

1.2 Assumptions, Scope, and Context

This paper is not intended to be a “how” or “when” to use guide on conducting incentive prize and challenge competitions or Challenge-Based Acquisitions (ChBA). Rather, it assumes the reader is generally familiar with these acquisition strategies and provides relevant and targeted reference material about these topics. This paper also assumes that the Government has consciously chosen to conduct an incentive prize or challenge competition and desires that the result of this incentive prize or challenge competition be transitioned to a procurement. Thus, it is the purpose of this paper to provide high-level approaches for *more efficiently* transitioning solutions (hardware, software, and Intellectual Property [IP]), identified by the results of an incentive prize or challenge competition, to the Government.

¹ Hendrix, Michael. 2014. *The Power of Prizes: Incentivizing Radical Innovation*. U.S. Chamber of Commerce Foundation. Available at: https://www.uschamberfoundation.org/sites/default/files/article/foundation/Power%20of%20Prizes_0.pdf.

² White House Office of Social Innovation and Civic Participation. 2016. *Prizes and Challenges*. Executive Office of the President. Available at: <https://www.whitehouse.gov/administration/eop/sicp/initiatives/prizes-challenges>.

³ Office of Management and Budget. 2012. *Prize Authority in the America COMPETES Reauthorization Act*. Executive Office of the President. Available at: https://cio.gov/wp-content/uploads/downloads/2012/09/Prize_Authority_in_the_America_COMPETES_Reauthorization_Act.pdf.

1.3 Acquisition Streamlining

One approach to successfully transition includes streamlining the move from an incentive prize and challenge competitions to a follow-on acquisition or through the use of a ChBA from the start. Streamlining is delivered through foresight, communication, simple pre-planning, and developing the incentive or challenge competition strategy in parallel with the follow-on acquisition strategy. The strategic use of the incentive prize or challenge competition results to inform the follow-on acquisition, satisfies a federal acquisition's competition and evaluation requirements simultaneously, thus streamlining the acquisition process. Requiring offerors to submit a proposal or solution which, if awarded, would be contractually binding, naturally deters unqualified offerors from submitting proposals which streamlines the evaluation. Of equal importance, this transition substantially streamlines the Government's Request for Proposal (RFP) development time. In summary, this methodology simplifies the proposal submission and evaluation process because these functions are now done simultaneously.

1.4 Incentive Prizes and Challenge Competitions– A Definition

Incentive prize and challenge competitions are competitions among individuals, private industry, academia, and Government stakeholders, requiring them to submit solutions in response to a defined problem set. Challengers are incentivized through the use of monetary or non-monetary rewards. These incentives increase the attention on the problem set and help to diversify the vendor pool for proposed solutions beyond the traditional Government contractors alone.⁴

Over the past several years, incentive prize and challenge competitions have proven to increase innovation within the public, private, and philanthropic sectors.⁵ This approach to problem solving has proven itself a successful methodology based on the well-established and scientifically sound concept of crowd-sourcing. However, incentive prize and challenge competitions executed under the COMPETES Act or other authorities as currently written, do not allow for the efficient transition of solutions from prototypes to full production. Instead, current acquisition policy requires the Government to repeat most processes through the formal acquisition process, and lose most efficiencies realized through the incentive prize and challenge competition. Thus, for the Government to acquire and field the winning solution from an incentive prize or challenge competition, it's forced to re-visit what has already been achieved, through a laborious, yet no more effective, FAR process. This additional step in the process adds time and complexity to transitioning the winning solution from the challenge to the mission—without adding any value! Again, there are two alternatives to overcome this dilemma – first, employ ChBA, or second, use an incentive prize or challenge competition, leveraging some of the recommendations contained herein.

1.5 Challenge-Based Acquisition – A Potential Solution

ChBA takes the government-endorsed incentive prize and challenge competition concept, as described above, a step further by making it part of the procurement process. It brings the innovation opportunity of an incentive prize or challenge competition into the procurement framework of the FAR from the very beginning. ChBA incorporates free thinking, innovation, and efficiencies that result from Government incentive prize and challenge competition by bringing the approach under the umbrella of the federal acquisition process from the start. This

⁴ White House Office of Social Innovation and Civic Participation, 2016.

⁵ IBID.

allows the Government to use challenges as the core of its evaluations, and, most important, to test and purchase quantities beyond prototypes without having to make the transition from the incentive prize or challenge competition to a FAR-based procurement activity.⁶

By properly structuring an incentive prize or challenge competition within the formal acquisition's source selection framework or as part of the overall acquisition's scope, the Government can evaluate proposed solutions and also refine, test, and determine quantity requirements. If the scope is properly structured up-front, there is no need for the actual "transition" or start-up of a new, formal acquisition – streamlining the process and saving time!

1.6 Keys to Success for Transitioning Incentive Prize and Challenge Competitions to a Procurement

This document describes an innovative approach to the application of the FAR when transitioning an incentive prize or challenge competition to a follow-on procurement. To this end, it presents the following keys to success for agencies implementing the recommendations:

- Assess if an incentive prize or challenge competition meets the agency's particular needs (see *Incentive Prize and Challenge Competitions*) or if the use of a [Challenge-Based Acquisition](#) or other innovative acquisition approach would prove more appropriate (also see [Innovative Contracting Case Studies](#)).
- Consult *early* with the Contracting Office and General Counsel (GC) to discuss the statutory, regulatory, and legal requirements and gain their understanding and support for the proposed approach and next steps.
- Plan ahead and design the incentive prize or challenge competition structure to enable the efficient execution of a follow-on acquisition for the winning solution(s) under the FAR, Agency Specific Regulations, and/or OTA as appropriate. By planning the follow-on acquisition in parallel with execution of the incentive prize or challenge competition, agencies can reduce duplication of effort and streamline the follow-on source selection process through inclusion of incentive prize or challenge competition results.
- Embrace the flexibility that the FAR gives the Contracting Officer (CO) as they have "...the authority to the maximum extent practicable and consistent with law, to determine the application of rules, regulations, and policies, on a specific contract."⁷ Furthermore, the FAR mandates that "Contracting officers should take the lead in encouraging business process innovations and ensuring that business decisions are sound."⁸ The alternatives presented herein are wholly consistent with the FAR and ensuring good business decisions are executed.
- Consider the level of funding and resources needed to transition a solution from an incentive prize or challenge competition to a follow-on procurement. Undertake a preliminary assessment of the resources necessary for this transition, the key stakeholders, and the impact that resource constraints may have on the transition from an incentive prize or challenge competition to a procurement.

⁶ The MITRE Corporation. 2014. *Challenge-Based Acquisition*. The MITRE Corporation. Available at: <https://www.mitre.org/sites/default/files/publications/pr-13-3525-challenge-based-acquisition-handbook-2nd-ed-9-30-2015.pdf>.

⁷ FAR Subpart 1.1 – Purpose, Authority, Issuance. Available at: <https://www.acquisition.gov/sites/default/files/current/far/html/Subpart%201.1.html>.

⁸ IBID.

- Clearly articulate the plan to use the incentive prize or challenge competition results to support the follow-on source selection decision per FAR 7.105(b)(4) while addressing all acquisition considerations and benefits this approach would generate per FAR 7.105(b)(5). Using the results to support the source selection decision and potentially even testing can become part of an acquisition streamlining plan as described in FAR 7.105(a)(8). Furthermore, agencies may consider using the results of a prize challenge to further refine requirements and acquisition strategies as described in FAR 7.103(t).
- Communicate to industry that the results of the incentive prize or challenge competition will inform a follow-on RFP. In this case, if a vendor does not participate in the incentive prize or challenge competition, then they may be at a significant deficit in any follow-on evaluation for failure to adequately meet one of the primary factors of evaluation.

2 Alternative Approaches

The FAR, as currently written, supports the use of incentive prize and challenge competitions, demonstrations, and ChBA in the source selection process as part of a sole source justification, technical evaluation, past performance evaluation, and/or Intellectual Property (IP) strategy. The following approaches leverage justifications from current FAR language to properly structure incentive prize and challenge competitions for a more efficient transition of solutions to subsequent procurements.

2.1 From Incentive Prize or Challenge Competitions to a Follow-on Sole Source Procurement

This section describes the specific areas that may meet or exceed FAR sole source justification requirements following the execution of an incentive prize or challenge competition. As always, agencies should consult the CO and GC as early as possible and throughout the process to determine if a sole source procurement is a legal and valid approach for their present situation.

Current FAR definitions permit the interpretation that a sole source procurement after the execution of an incentive prize or challenge competition may be fully justified. If the incentive prize or challenge competitions terms and conditions have clearly stipulated that the intent of the effort is to identify a single, unique solution (e.g., not more than one) that does not exist within the current marketplace, then a sole source justification for only one responsible source may be considered.⁹ Likewise, should the circumstances exist, FAR 6.302-2 Unusual and Compelling Urgency and 6.302-6 National Security may also be considered as valid justifications for a follow-on sole source award.¹⁰ Furthermore, if the winner of the incentive prize or challenge competition is an educational or non-profit institution, FAR 6.302-3(b)(2) may be used, and FAR 6.302-7 may be worth discussing as a possible exception due to the Public Interest of furthering the goals of such statutes as the COMPETES Act.

2.2 Use of Incentive Prize and Challenge Competition Participation for Full and Open Competition

Incentive prize or challenge competition participation may meet the requirements for executing a full and open FAR-based competition. By planning the follow-on acquisition in parallel with the incentive prize or challenge competition, agencies can reduce duplication of effort and streamline the follow-on source selection process through inclusion of prize and challenge results. The recommendations described in the following sub-sections provide specific guidance for implementation.

2.2.1 Design Incentive Prize and Challenge Competitions to Support FAR's Full and Open Competition Requirements

Meeting full and open competition requirements of FAR 6 for an incentive prize and challenge competition, and articulating the intent to use this same competition in a parallel solicitation, may support the streamlined award of a follow-on contract directly with the prize or challenge winner. Per FAR 6.1, full and open competition means that all sources deemed responsible are permitted to compete and submit a bid or proposal on the Government's requirements. Furthermore, FAR 6.1 states that full and open competition (with certain exceptions) should be

⁹ FAR Subpart 6.3 - Other Than Full and Open Competition. Available at: https://www.acquisition.gov/sites/default/files/current/far/html/Subpart%206_3.html.

¹⁰ IBID.

promoted, maximized, and utilized for soliciting offers and awarding contracts.¹¹ The incentive prize or challenge competition environment may be designed in such a manner as to support streamlined and efficient competitive procedures for the follow-on acquisition.

2.2.2 Incentive Prize and Challenge Competition Environment and Pre-Award In-Use Evaluation

Setting the right incentive prize and challenge competition environment is important in the future transition to a follow-on acquisition. Conducting the incentive prize or challenge competition event and evaluating competitors' results under realistic operational conditions will help to expedite the Government's proposal evaluation process for the follow-on acquisition. Per FAR 11.801, "Supplies may be evaluated under comparable in-use conditions without a further test plan, provided offerors are so advised in the solicitation. The results of such tests or demonstrations may be used to rate the proposal, to determine technical acceptability, or otherwise to evaluate the proposal."¹² In other words, if the incentive prize or challenge competition environment meets this standard, the follow-on acquisition could use the winner's (or all challenger's) results from the competition to augment or potentially substitute for the requirement of submitting a full technical proposal.

2.2.3 Incentive Prize and Challenge Competition Results and Follow-on Proposal Evaluation

Agencies must define the incentive prize and challenge competition's scoring factors and sub-factors in a way that is easily translated into evaluation factors and sub-factors for the follow-on acquisition. Per FAR 15.305(a), "Proposal evaluation is an assessment of the proposal and the offeror's ability to perform the prospective contract successfully. An agency shall evaluate competitive proposals and then assess their relative qualities solely on the factors and sub-factors specified in the solicitation."¹³ Thus, if structured appropriately and communicated in the incentive prize or challenge competition terms and conditions and solicitation for the follow-on acquisition, then the results of the incentive prize or challenge competition may become part of the offeror's proposal. These results may serve as a major evaluation factor(s) for the follow-on contract, ultimately streamlining the proposal evaluation and contract award process.

2.2.4 Incentive Prize and Challenge Competitions Results and the Follow-on Technical Proposal

The results of a full and open incentive prize or challenge competition may be considered analogous to oral presentations and may be used to substitute for, or augment, an offeror's proposal for the follow-on acquisition. If the Government intends to use the results in this manner, it should clearly communicate this in the incentive prize and challenge competition terms and conditions. Per FAR 15.102, "Oral presentations by offerors as requested by the Government may substitute for, or augment, written information. Use of oral presentations as a substitute for portions of a proposal can be effective in streamlining the source selection process."¹⁴ Using the incentive prize or challenge competition results as part of an offeror's technical proposal would not only streamline the acquisition process, but also provide an

¹¹ FAR Subpart 6.1 – Full and Open Competition. Available at: https://www.acquisition.gov/far/html/Subpart%206_1.html.

¹² FAR Subpart 11.8 – Testing. Available at: https://www.acquisition.gov/far/html/Subpart%2011_8.html.

¹³ FAR Subpart 15.3 – Source Selection. Available at: https://www.acquisition.gov/far/html/Subpart%2015_3.html.

¹⁴ FAR Subpart 15.1 – Source Selection Processes and Techniques. Available at: https://www.acquisition.gov/far/html/Subpart%2015_1.html#wp1095850.

opportunity to produce evidence-based and previously evaluated offeror performance for use in a subsequent source selection evaluation and decision.

2.2.5 Incentive Prize or Challenge Competition Results and the Advisory Multi-Step Process

The terms and conditions of the incentive prize or challenge competition should stipulate that the agency may use the results of a challenger’s participation as a basis for inviting the offeror to participate in a follow-on acquisition. Per FAR 15.202(b), “The agency shall evaluate all responses in accordance with the criteria stated in the notice, and shall advise each respondent in writing either that it will be invited to participate in the resultant acquisition or, based on the information submitted, that it is unlikely to be a viable competitor.”¹⁵ The results of the incentive prize or challenge competition may augment this “information submitted” by the offeror for evaluation by the Government in recommending further participation in the follow-on acquisition as part of the Advisory Multi-Step Process. Thus, the use of an incentive prize or challenge competition in combination with the Advisory Multi-Step Process for the follow-on acquisition streamlines the acquisition process by economizing the evaluation and award process as only offerors who have participated in the incentive prize or challenge competition may be considered satisfactory in the evaluation.

2.2.6 Incentive Prize or Challenge Competition Participation and Follow-on Past Performance Evaluation

The use of incentive prize or challenge competition results as a source of past performance information for the follow-on acquisition can help to establish the “currency” and “relevance” of the offeror to meet the agency need. Specifically, FAR 13.305 (a)(2)(i) focuses on the assessment of past performance information as “one indicator of an offeror’s ability to perform the contract successfully.”¹⁶ Participation in an incentive prize or challenge competition that uses a consistent and repeatable evaluation process with supporting documentation for factors such as relative strengths, deficiencies, significant weaknesses, and risks in addition to competitor’s overall evaluated performance, may provide current and relevant past performance information and thus be used to substantiate the offeror’s ability to deliver results in the follow-on effort. Using incentive prize or challenge competition results as a source of established past performance information for the follow-on acquisition streamlines the acquisition process because it exists in the desired format and has already been evaluated by the Government.

2.3 Government Purpose Rights and the Follow-on Procurement

The Government must consider its IP needs prior to the execution of an incentive prize or challenge competition. In the event that an agency acquires Government Purpose Rights (GPR) in IP, it may use these rights in support of a follow-on or on-going acquisition (using competitive or other than competitive procedures) and may be provided to a third party as Government Furnished Information (GFI) or Government Furnished Equipment (GFE).

2.3.1 Negotiate Government Purpose Rights in Intellectual Property

Early identification of the desire to obtain GPR in technical data and computer software can help to facilitate the streamlined acquisition of solutions resulting from an incentive prize or challenge

¹⁵ FAR Subpart 15.202 – Advisory Multi-Step Process. Available at https://www.acquisition.gov/sites/default/files/current/far/html/Subpart%2015_2.html#wp1125249.

¹⁶ FAR Subpart 13.3 – Simplified Acquisition Methods. Available at: https://www.acquisition.gov/far/html/Subpart%2013_3.html.

competition. For example, in incentive prize or challenge competitions conducted under the Department of Defense's (DoD) Prize authority, GPR may be negotiated upfront as part of the terms and conditions for participation. This IP may then be provided to another vendor as GFI or GFE in support of a government purpose (such as the execution of a contract). An example where this may be a desirable strategy is if a vendor who has developed a solution and participated in a prize challenge does not have the interest or capacity to mass produce and field their solution. In these cases, a vendor may rather choose to exit the government market after a solution has been identified and purchased while allowing for others with more familiarity with federal acquisition to produce and support the solution over the life cycle.

While, the DoD Federal Acquisition Regulations (DFAR) contain specific language on the use of GPR in technical data and computer software in DoD acquisition,¹⁷ civilian agencies may be able to negotiate similar rights as part of an incentive prize or challenge competition participation agreement prior to execution of the event. All military departments or civilian agencies considering the use of an incentive prize or challenge competition should discuss with their GC the most effective strategy for securing any IP that may be under consideration for transition to a follow-on or on-going acquisition.¹⁸

¹⁷ Defense Information Systems Agency. 2016. *Data Rights*. Available at: <http://www.disa.mil/about/legal-and-regulatory/datarights-ip/datarights>

¹⁸ IBID.

Tereschuk, George B. Undated. Government Purpose Rights in Technical Data and Computer Software in DoD Acquisition. Available at: www.wifcon.com/anal/GPR_TD.doc.

3 Conclusion

The efficient transition of a winning solution from an incentive prize or challenge competition to an agency procurement can play a key role in meeting mission needs if the follow-on acquisition is planned in parallel with the prize or challenge event. By doing so, the Government leverages the benefits of real-world competition and evidence-based results that can augment or supplement contractor's proposals while streamlining and economizing the government's evaluation process. This paper has sought to provide thought leadership on potential approaches for bridging the gap between prizes to procurements to enhance cost, schedule, and performance across the Federal enterprise.

Appendix A Acronyms

ChBA Challenge-Based Acquisition

CO Contracting Officer

FAR Federal Acquisition Regulations

GC General Counsel

GFE Government-Furnished Equipment

GFI Government-Furnished Information

IP Intellectual Property

OTA Other Transaction Authority