

**Division of Industrial Innovation and Partnerships  
Response to the 2013 Committee of Visitors (COV)  
Report**

## **Introduction**

This report is the response to the Committee of Visitors (COV) Report for the Division of Industrial Innovation and Partnerships (IIP). The COV review of the IIP Division was conducted on April 24-26, 2013.

The IIP 2013 COV report was transmitted to Dr. Patrick Farrell, Chair of the Engineering Advisory Committee (ENG AdCom). This response is based on the report provided by Thomas Knight and Michael Silevitch, the Co-Chairs of the 2013 IIP COV, to the ENG AdCom on April 24, 2014. The report was accepted without additional comment by the ENG AdCom. This IIP COV review was originally scheduled for October 2013 but was delayed because of the government shutdown.

This IIP COV report covered the Industrial Innovation and Partnerships Programs, considering actions and active awards during FY 2010-12. The Division is pleased with the overall assessment of its performance and progress in meeting the Foundation's goals as well as the goals of related federal programs such as the SBIR/STTR programs.

Below responses focus on specific recommendations noted in the COV Report. Since related recommendations were cited in a number of sections in the COV Report, the recommendations have been summarized into the five major areas and response was provided to each major area separately.

### **1. Merit Review Process**

#### **1.1 COV Recommendations**

- (I.1; p.2; II.1; P.7) Strengthen the Broader Impact evaluations by including more commercial reviewers and providing the reviewers with a commercialization criteria template.
- (I.1; p.2, I.4; p.4, I.6; p.4) Provide coaching in the panel summary for the PI on declined proposals including citing appropriate educational resources. Provide clearer insight in individual reviews as to why a particular rating was assigned.
- (I.1; p.2) Continue to expand the use of virtual panels and consider site visits as part of the review process.

## **1.2 Division Response**

The Division continues to refine the definitions and criteria to evaluate Broader Impact. The SBIR/STTR solicitations are being revised to put more emphasis on the broader commercial impact by requesting applicants to address market needs, market opportunities, the value proposition of product/services etc.

In addition to providing information in individual reviews and panel summaries, the program director provides verbal debriefings when requested.

The division continues to expand the use of virtual panels (>20% of IIP proposals now reviewed virtually). Site visits, while not practical for Phase I proposals, are being considered as part of the award management for Phase II awards.

## **2. Selection of Reviewers**

### **2.1 COV Recommendations**

- (II.1; p.6 ) Continue to add diversity of perspective and experience by attracting participation from women and other underrepresented groups.
- (II.1; p.7) Expand the pool of panelist by encouraging “self-nomination”, asking existing panelist for referrals, and partner with other organizations to identify potential reviewers.
- (II. 3; p.7) Expand the use of the Panel and Reviewer Information Management (PRIM) database by including notations of entrepreneurial/commercialization experience, consider grading the reviewers on performance and share database with other NSF organizations.

### **2.2 Division Response**

The division continues to expand the pool of qualified reviewers from the underrepresented groups to assess IIP proposals.

The IIP Division has taken the lead in the development and implementation of the Panel and Reviewer Information Management (PRIM) system which has significantly improved the entire panel and reviewer management process. The PRIM system enables panelists to recommend other reviewers. Self-nominations are often received by program directors and are added to PRIM. The PRIM process is currently being adopted by the entire ENG directorate as well as other directorates throughout NSF.

## **3. Management of the Program**

### **3.1 COV Recommendations**

- (III, 4; p.11; IV, 3; p. 14) Develop metrics and targets for key IIP improvement efforts and share with the key stakeholders like COVs.
- (III, 2; p.10 ) Expand pre-proposal outreach to new SBIR PIs with particular focus on underrepresented groups with web links and webinars. Information needed for academic researchers may be different than that for non-academic entrepreneurs.
- (III, 1; p.9) Document best practice for pre-proposal coaching and proposal review and share these practices across all of the division to help reduce workload and improve quality.
- (III, 1; p.9) Reexamine the I/UCRC Evaluator role for cost effectiveness since it requires a significant amount of the NSF support for the center.
- (III, 4; p.11) Reexamine prior COV recommendations to strengthen the review process e.g. eliminate reviewers who provide marginal or superficial comments.

### **3.2 Division Response**

The Division will continue to develop metrics and targets to evaluate short-term and long-term impacts of IIP programs.

The Division will continue to disseminate its pre-proposal tutorials through webinars and other media including social networks. The current process of capturing and sharing best practices will be evaluated and expanded as appropriate.

Previous COV recommendations to strengthen the review process will be reexamined particularly in light of the expanded use of virtual panels.

## **4. Portfolio Recommendations**

### **4.1 COV recommendations**

- (IV.1; p. 12; IV.7; p.15-16) Continue broaden participation by women and other underrepresented groups by building partnerships to attract more Phase I proposals from these groups.

- (IV.1; p. 13; IV.5; p.14) Continue to reach out to companies and principal investigators who have not had prior NSF funding.
- (IV. 2; p. 13) Continue to expand award size within budget and proposal load limitations.
- (IV. 1; p.13) Create guidelines for navigating through the barriers to commercialization related to intellectual property management.
- (IV. 1; p.12) Expand partnerships to achieve IIPs vision, e.g. community colleges, other federal agencies, professional societies, regional entrepreneurial support centers.

#### **4.2 Division Response**

IIP will continue the efforts of outreach and partnerships to broaden participation from underrepresented groups as well as new small businesses and new principal investigators.

IIP will consider the possibility of increased award sizes if proposal volume and budget allow.

IIP continues to develop its relationship with the United States Patent and Trademarks Office (USPTO), who provides assistance and advice to IIP grantees in building intellectual property strategy while pursuing commercialization. The SBIR/STTR Phase II commercialization assistance program now includes consultation on intellectual property strategies.

### **5. Other Topics**

#### **5.1 COV Recommendations**

- (V. 1; p.17) Develop targets for key objectives and measure performance.
- (V. 1; p.17, 18) Continue to expand the quantifiable measurement of broader /economic impact.
- (V. 1; p. 17) Continue to share highlights of programmatic successes.
- (V. 1; p. 17, 18) Share the performance measurements internally and with the 2016 COV.
- (V. 1; p. 17, 18) Continue the small business management enhancements to support the IIP mission including expansion of “Phase O” pre-proposal support;

expand commercialization assistance, continued stimulation of partnerships between SBIR grantees and universities.

- (V, 3; p.18,19) Cross pollinate best practices across IIP programs
- (V,5; p.19) Suggestions to improve future COV review processes including expanded use of metrics on broader impacts, data on the impact of outreach including attracting new PIs, and focusing highlights to illustrate broader impacts.

## **5.2 Division Response**

The response of IIP to these recommendations is already reflected in the Division Responses to Sections 1 through 4.

The recommendations to improve future COVs will be addressed as part of the next COV planning process just as this COV incorporated previous recommendations.

## **Acknowledgement**

The IIP Division thanks the members of the COV and in particular the work of the Co-chairs, Thomas Knight and Michael Silevitch, in providing the Engineering Directorate and the IIP Division with a comprehensive review and meaningful recommendations for improvement.

## **Appendix: Diversity and Conflict of Interest Report**

### 1. The diversity, independence and balance of the COV members

The 14 members of the COV included five individuals from the business community and nine from the academic community. The committee had four women and one African-American, and was geographically diverse.

### 2. Conflict of Interest report

A Conflict of Interest (COI) briefing was provided prior to the COV meeting as well as at the start of the COV meeting. All COV members completed the NSF COI form. All members of the COV were barred from seeing proposals from their home institution. None of the COV members was involved in the review of a program in which he or she had a pending proposal. The ENG COI officer was available at all times during the COV meeting to answer questions and/or resolve issues regarding conflicts of interest. No real or apparent conflicts arose during the course of the COV review of IIP programs.