Impact of Innovation Initiatives in a Federal Government Agency:

Measuring and Understanding the Influence of Culture and Employee Attitudes

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ABSTRACT

This report describes an approach undertaken by a large federal government agency to create and apply measures that assess the impact of employee participation in two innovation programs – an ideation testing incubator, known as the Ignite Accelerator, and an Entrepreneur-in-Residence employment initiative. The programs are components of a broader agency leadership initiative focused on policies that promote a culture of open innovation and entrepreneurship aimed at improving workforce problem-solving capabilities and mission results. Data were collected and analyzed over a five-year period of employee experience in the two programs. The evaluations included surveys and structured interviews conducted among the participants of both programs. Longitudinally, the curation of data about the value of these programs to employees in their self-assessed ability to pursue and achieve institutional objectives supported iterative adjustments in program operations. Results were also benchmarked against data from the Federal Employee Viewpoint Survey, an annual organizational survey designed to elucidate attitudes among federal employees across a variety of topics, including innovation and empowerment. This report provides insights into the qualitative and quantitative parameters capable of being leveraged to maximize the design, measurement, and impact of innovation-related programs and activities. The methods and data described herein represent a medium through which employee-based organizational perceptions about culture can be interrogated and examined. These findings also demonstrate the value of program assessment tools and data in guiding federal program leaders in institutional policymaking and selection of innovation methods to address distinct aspects of their organization's adaptive change towards a culture of innovation.

Key words: public sector innovation, entrepreneurship, metrics, government, workforce

Introduction

The design and implementation of institutional programs that promote innovation represent one manifestation of a heightened interest in the way management practices can be leveraged to stimulate global competitiveness, enhance human capital, develop a pipeline for new and more efficient products and services, and improve overall organizational productivity (Schrage, 2016). A great deal of discussion among leaders in the innovation community and authors of management literature, for instance, has focused on the role of open innovation practices, new business partnership models, and rapid scale development and dissemination of innovations in catalyzing organizational change (Chesbrough & Di Mini, 2014; pp. 169-188) (Sullivan, 2016). The rising degree of interest in innovation-related topics as potential drivers of such change underscores the importance of developing corresponding organizational capacity to

measure the impact of innovation-related efforts and initiatives, particularly as such efforts relate to outcomes such as developing solutions to common organizational problems, achieving program-specific goals, and increasing the probability of attaining longer-term organizational objectives (e.g., the five-year goals documented in an organization's strategic plan). It is commonplace for leaders of large established organizations to ponder what can be done to change their culture to become more innovative and adapt to changing times and needs.

The trends in current literature on the topic of measuring innovation-related impacts and outcomes typically focus on private sector strategic initiatives such as international development, small business creation, or employment training and workforce competencies that enhance competitiveness (Crespi, Maffioli, Mohnen, & Vasquez, 2011). In addition, the traditional outcome measures commonly used to assess the impact of innovation in these private sector areas (e.g., revenue, market share, shareholder value, and other aspects of business performance), though sound, are by their very nature generally inapplicable to the federal government or its respective entities, thus necessitating the exploration and creation of alternative measures by which to assess and demonstrate the value of innovation to publicly-funded programs. Generation of such measures is particularly important to demonstrate value in instances where "delivery science" methodology is used or employed. This methodology entails establishment of a specific functional unit within an organization, independent of that organization's overall operational infrastructure, but with an intense focus on solving problems and achieving or 'delivering' results. The degree of independence afforded such a functional unit provides for both added objectivity and the ability to independently test, scale, evolve, and apply new and non-traditional (i.e., more innovative) methodologies to existing problems without fear of penalization or reprisal (Barber, 2015). The ultimate impact of investments in such a methodology, however, can only be fully realized when accompanied by the ability to measure and evaluate it.

This report describes the evaluation tools, methodologies, metrics, and measures used to assess the design and impact of specific innovation programs sponsored by a "delivery science" entity within an agency of the United States federal government. Further, to demonstrate the impact of this unit and its associated programs on workforce culture, several of these evaluation methods were applied to the participants of such programs in order to measure perceptions about their individual and collective experiences. The findings presented herein represent one example of the manner in which evaluation methodologies, metrics, and measures can be successfully evolved, applied, and adapted to federal or public sector environments to assess the impact of innovation related efforts on program design, program implementation, program effectiveness, employee perceptions, and workforce culture.

This research also explores the applicability of evaluation tools in various stages of the innovation process. Effective evaluation of ideation, stakeholder engagement, testing, and scaling of innovation is essential in public programs particularly given the accountability requirements and low tolerance for risk typically found among managers and political leaders. Evaluation methods and data about the project management can serve to de-risk new programs and quantify the impact in various ways.

The Need for Innovation at HHS

The United States federal government has invested a significant amount of effort and resources to apply innovation-related methods toward improving the efficiency and effectiveness of its various programs. (Mergel & Desouza, 2013, 73;882-890) (Partnership for Public Service, 2016). These efforts have traditionally centered on both workforce enhancement (i.e., incentivizing and rewarding innovative thinking by employees) and the development of a relevant framework by which to test, scale, and disseminate new and better ideas across federal agencies (e.g., Small Business Innovation Research programs).

In 2009, the United States Department of Health and Human Services (HHS) elected to begin harnessing and expanding this capacity to innovate in response to certain organizational needs. First, there was evidence from past performance that raised concerns about the ability of large federal agencies like HHS to take on complex, national-level projects of high visibility and importance in a relatively short timeframe (e.g., advancing of a nation-wide health information technology network and electronic health records infrastructure). HHS leaders recognized that changes to the existing infrastructure were needed to more quickly and effectively respond and adapt to an ever-changing landscape of budgetary, legislative, technological, programmatic and mission-related challenges, thus raising the need for renewed efforts in ideation, lean startup methods, and agile technology development. Second, there was a need to revitalize enterprise-level technology to enable the expanded use of data to support new and expanded business processes. Customer service operations such as services to support Medicare beneficiaries needed to be enhanced due to the legislatively-authorized expansion of Medicare program operations; responses to public inquiries on product safety or privacy violations needed to be timely due to an increase in the volume of such inquiries and the necessity to protect the public from ever-increasing threats to privacy, particularly with regard to the electronic health records and personal health information; the infrastructure for developing health care quality metrics needed significant improvement, particularly as new metrics were applied to a growing number of health care services; and logistics for organ transplantation operations needed improvement to boost individual health outcomes. These series of needs and challenges necessitated a new level of capacity – in terms of both employee thinking and associated skill sets – that not only gave HHS the opportunity to address these challenges more robustly but that also provided the organization an enhanced degree of adaptability and flexibility. The innovation methodologies developed and employed by HHS to address these needs are linked to elements of everyday HHS operations such as program performance, particularly in areas where a history of such performance was poor or where new ideas and approaches were immediately necessary to help improve it. HHS innovation activities were therefore specifically geared toward building or enhancing employee skills in areas directly relevant to effective program management, design, and performance, including: 1) problem-solving, 2) strategic/design thinking, 3) data, analysis, interpretation, visualization, and communication, and 4) data-driven action.

Investing in Innovation: Building an Internal Capacity to Innovate

The above-described needs reflect the compelling reasons behind the establishment of HHS' innovation agenda that was formalized in 2009. In response to these needs and in order to effectively address them, HHS elected to re-direct its focus on innovation internally, that is toward building an in-house capacity to innovate through programs aimed at its own operational and staff divisions rather than focusing solely on supporting innovation externally. The motivation for this focused, internal effort on promoting innovation and entrepreneurship

originated from the HHS Secretary, who personally sought to create a culture of innovation within HHS to improve the performance of its various service functions to the public, as described above. To achieve this worthwhile aim, the agency's leadership sought to develop a medium to transform new and innovative ideas into concrete actions and results, by which to develop, test, refine, scale, and disseminate better solutions to long-standing and systemic challenges that might have prevented HHS from operating in a maximally efficient and effective manner. Thus, in 2013, a formal organizational unit called the HHS Innovation, Design, Entrepreneurship, and Action (IDEA) Laboratory was established within the HHS Secretary's office to oversee and coordinate this innovation- and solutions-focused agenda (United States Department of Health and Human Services, 2017). Importantly, commensurate with it being a "delivery science"-based entity, the IDEA Lab was designed as an institutional arm of the Immediate Office of the Secretary and physically based at the agency's headquarters in Washington, D.C. The IDEA Lab is currently supported by six federal full-time equivalent (FTE) positions and an annual budget of $2.3M US. Its program activities are overseen by a trans-agency Innovation Council that provides strategic input on goals and objectives. Distinct from traditional governmental office practices, the Lab's activities are modeled after incubators and accelerators that offer physical infrastructure, business services, unique partnerships, and a specialized network of internal and external subject matter experts having the necessary business acumen to develop non-traditional solutions to otherwise traditional barriers of organizational progress.

Underlying the principles of the IDEA Lab is the overt emphasis expressed by HHS leadership on emphasizing the importance of new and innovative thinking to the organization's mission by noting that every individual within the organization - by virtue of their knowledge and experience - possessed an inherent ability to help overcome long-standing and systemic organizational barriers and, in so doing, improve the health and well-being of all Americans. Implied in this perspective is the fact that the fundamental source and unit of innovation is the individual person (i.e., employee). Thus, to tap into this "local" and readily available source of new ideas, broad innovation methods that have been shown to be effective in multiple settings - such as those in the private sector areas referenced above - were leveraged to develop and frame employee-derived ideas about potential solutions to common workplace problems; to test these ideas with stakeholders as either a pilot or beta-versions of a working model; and to support scaling and dissemination of appropriate solutions, if successful. Thus, a key element of innovation support in the IDEA Lab is the engagement of employees as both the source and medium through which to establish, evolve, test, and disseminate new ideas (i.e., experimentation and subsequent propagation).

The approach taken by HHS to build its innovation capacity through the establishment of the IDEA Lab was informed by a variety of data sources, chief among them was a finding by McKinsey & Co. that across business sectors, large gaps existed between the aspirations of executives to innovate and the ability of these same executives to execute on such aspirations (Barsh, Capozzi, & Davidson, 2008). The McKinsey analysis indicated that employee talent and experience coupled to an enabling organizational culture – rather than wholesale changes to existing organizational structures and processes – were the most important drivers of innovation and impact. Similar research on employee attitudes toward innovation and change indicated that over time, general workforce attitudes or perspectives evolve to reflect the outcomes desired or valued by organizational leadership (Katsaros, Tsirikas, & Bani, 2014; 9:36-50). Thus,

leadership support and establishment of 'tone at the top' were equally important to change management and success. The development of specific programs and initiatives was also informed by extensive examination of international experiences with government innovation laboratories and initiatives. Building upon these foundations, the IDEA Lab sought to successfully engage HHS employees and to evolve the HHS workforce culture by focusing its innovation-related activities in three distinct areas. First, innovation was integrated into organizational strategic plans and management agendas throughout HHS in order to establish the importance of innovative thinking as an organizational ideal. Second, dynamic innovation networks were created to provide technical assistance, guidance, and a means of ongoing peer support to employee-entrepreneurs as they engaged in their endeavors. Finally, efforts were undertaken by HHS leadership to provide employee-entrepreneurs with access to key organizational leaders via meetings and use of social media. The desired result of these collective efforts was an enhanced understanding by employees that innovative ideas were valued, safe to express without fear of penalization or reprisal, and capable of being further developed or matured to promote organizational change.

Measurement and Evaluation of Innovation-Related Efforts in the Federal Sector

For federal agencies that are well-versed in evaluation methods to shape policies and programs, establishing new methods and tools to assess program integrity and performance are common place. However, evaluating results of workplace innovation programs has been evasive and difficult to attain, yet important, given the prominent aspect of human capital in government program performance. Measurement of the impact of innovation-related laboratories, incubators, and accelerators has been the focus of a number of research reports and studies (Pauwels, Clarysse, Wright, & van Hove, 2016; 50-51:13-24) (Bruneel, Ratinho, Clarysse, & Groen, 2012; 32:110-121) (Patton, 2014; 32:897-917) (Tavoletti, 2013; 4:423-443) (Weeks, 2015; 17:417-428). Given government investments in innovation-related programs and practices as described above, developing the capacity to assess return-on-investment (ROI) for government or public-sector innovation programs is an important yet comparatively untapped activity. Traditional metrics and measures used to assess innovation ROI in the private sector may not be well suited to federal entities due to the inherent differences between private industry and the federal ecosystem (e.g., revenue generation and/or profit sharing versus provision of common services through tax-funded means). Within the US federal government, the Government Accountability Office (GAO) recently conducted a study of the Office of Personnel Management (OPM) Innovation Laboratory, an organization that was established during the same timeframe as the HHS IDEA Lab and with similar goals (Government Accountability Office, 2014). The GAO study examined personnel level assessments, project level outcomes, and overall program performance to assess the efficacy of the OPM Innovation Lab. Among the recommendations cited in the GAO report was the necessity to develop more robust evaluation methods to reflect the true impact of OPM innovation activities. This finding and recommendation by the GAO highlights the need to develop not only innovation programs, but also a series of evaluation strategies and metrics that are specific to the public sector in order to assess ROI. The development of such items takes on particular importance in instances where taxpayer dollars are used to fund innovation efforts. Assessing impact is a theme that is also expressed elsewhere, as indicated in a recent study evaluating the impact of technology incubators in Europe (van Weele, van Rijnsoever & Nauta, 2017; 59:18-33).

Assessing Representative Programs at HHS

Building on the concept of developing both an innovation and measurement capacity in parallel, this report presents a series of tools, methodologies, mediums, and measures by which to potentially assess impact and ROI for federally-funded innovation programs. The impact measures employed and analyzed in what follows reflect those at the individual HHS employee and project team levels for two key and representative HHS innovation initiatives: 1) the HHS Ignite Accelerator, a competitive ideation program aimed at establishing and/or demonstrating proof-of-principle or minimal viable product for new and un-tested/un-validated theories and ideas, and 2) the HHS Entrepreneur in Residence (EIR) program, an initiative that recruits non-government entrepreneurs into term-limited federal employee positions (1 to 4 years), identified as IDEA Lab entrepreneurs (i.e., EIRs), to work exclusively on specific priority projects with teams of existing HHS employees (referred to as intrapreneurs) and, in so doing, create a knowledge transfer process among HHS employees, their programs, and the private sector. Rather than being aimed at testing new ideas or theories, these latter projects are geared more toward *scaling and delivering results* - including better, faster, and/or cheaper products and services related to the HHS mission - and thus constitute a later stage in the development and dissemination process. Creating this 'continuum' of program types in which both exploration/testing and development/dissemination are supported is important to both catalyzing (Ignite Accelerator) and sustaining (EIR) innovation efforts, as illustrated by similar, long standing and successful exploratory and developmental innovation awards at specific HHS agencies like the National Institutes of Health (NIH) (Aragon, 2011).

The HHS Ignite Accelerator

The purpose the HHS Ignite Accelerator is to provide HHS employees with the opportunity to submit untested or unproven ideas that, although potentially risky, could also simultaneously serve as a source of new solutions to existing organizational challenges and problems. The program was launched with the intention of harnessing the best ideas from HHS employees and providing a safe, yet structured space in which to test and validate them. This safe space occurs in a supportive, mentored, start-up type of environment with ideal objectives modified from lean startup models (Ries, 2011). The semi-structured 3-month framework mitigates the risk of hefty investments in un-validated problems or untested solutions while simultaneously providing a means by which to test the feasibility of ideas. An emphasis of the iterative sprints conducted in each session is the creating of a minimal viable product to be user tested by the end of the development period. In partnership with the University of Maryland Academy for Innovation and Entrepreneurship, the Ignite Accelerator provides participant-teams with training in entrepreneurial methods (e.g., lean startup and design thinking), mentorship while they test new ideas, and the opportunity to present their findings to HHS senior executives and the general public. The program accepts applications from HHS employees who can successfully communicate the potential significance of their proposed idea and project. As of January 2017, there have 5 cohorts of the Ignite Accelerator representing 71 teams, 386 participants, and 388 applications.

The HHS Entrepreneur-In-Residence (EIR) Program

Like the Ignite Accelerator, the EIR program constitutes a part of the HHS innovation agenda managed by the HHS IDEA Lab but its projects are much more developmental and delivery (as opposed to experimental and testing) oriented. The EIR program's objectives are: 1) to encourage HHS career staff to tackle projects that could also have a potential major impact to

the government if successful despite their risk, 2) to support the development and dissemination of better internal workflows and processes, as measured by such factors as reductions in time to completion, cost of production, and/or improvements in quality or outcome, and 3) to change government culture by allowing federal employees the opportunity to work directly with non-government entrepreneurs who can bring new perspectives and abilities to traditional problem-solving methods within the government. Since 2012, 70 teams from across HHS have expressed an interest in participating in the EIR program and 55 have submitted applications. These applications are evaluated by technical reviewers for feasibility and innovation potential before undergoing final selection by program leadership. As of November 2016, the EIR program has hired 21 external entrepreneurs to work with 56 federal career staff on 15 high-priority projects across HHS. The federal career staff personnel members teamed with the EIRs are referred to as intrapreneurs in this report.

To assess the impact of these programs on HHS' organizational objectives and workforce culture, longitudinal data on the workplace performance of participants in either the HHS Ignite Accelerator or EIR programs were curated and collectively analyzed. The analytic framework employed herein examines the perspectives and attitudes of employees who participated in these programs and attempts to compare them to those of the larger HHS workforce, with the understanding that such participants represent a subset of this workforce. The methods applied here therefore have the potential of serving as an avenue for assessing the impact of innovation programs within a federal organization, as measured by and through the perspectives of its own employees. Such data may thus be particularly useful for senior executives, leaders and managers within a federal agency.

Benchmark: The Federal Employee Viewpoint Survey (FEVS)

A basic assessment of HHS employee attitudes toward innovation opportunities in their workplace and organizational culture has been derived from an annual government-wide survey of employees that evaluates 98 variables in various domains of employee satisfaction. The Federal Employee Viewpoint Survey (FEVS) has been conducted by the Office of Personnel Management since 2002 and includes multiple survey questions on innovation and individual empowerment that are tracked at the level of agency programs (Office of Personnel Management, 2016). FEVS queries were assessed in two categories relevant to innovation: perceptions about organizational incentives and rewards for innovation (referred to in this analysis as "innovation"); and feelings of personal empowerment by employees to challenge or change existing organizational status quo (referred to in this analysis as "empowerment"). The 2016 FEVS was conducted for over 900,000 federal employees, approximately 45,000 of whom constitute employees of HHS. The FEVS data are used here only for comparative benchmarking purposes to determine the effect(s) of HHS innovation programs (e.g., the Ignite Accelerator and EIR), if any or if observable, on employee perceptions regarding innovation and empowerment.

Materials and Methods

To support the analysis of the two innovation programs, an existing federal workplace data resource was used in addition to survey instruments, and interview tools created by IDEA Lab program managers. This section describes these resources and the methods used in the

analysis. Database development, statistical an evaluation team collaborating with IDEA Lab program performed analyses.

Federal Employee Viewpoint Survey Data

Data from two questions in the Federal Employee Viewpoint Survey (FEVS) were collected for offices participating in either the Ignite Accelerator or EIR program during 2013 - 2016: question 30 ('Employees have a feeling of personal empowerment with respect to work processes') and question 32 ('Creativity and innovation are rewarded'). Respondents to the FEVS selected from 'positive', 'negative', 'neutral', or 'I don't know' as possible answers to these two questions. The analysis focused on: a) the trends in responses to these two questions among all HHS employees, and b) the trends in responses from HHS offices having employees that participated in either the Ignite or EIR programs as opposed to a matched set of offices that did not. Whenever possible, these latter 'matched' set of offices were selected from within the same operational or staff division within HHS, from the same position within the organizational hierarchy and having the same employee size. Offices participating in the IDEA Lab were included beginning in the first year of their IDEA Lab activity, as were their corresponding non-participant offices. A complete list of HHS offices included in the analysis in each year is provided in appendix 1.

HHS IDEA Lab Ignite Accelerator

Data were collected via surveys from 71 teams over five cohort rounds of the Ignite Accelerator program between 2013 and 2016. A three-question email survey was sent to each team's project lead within 90 days after completion of their participation in the program. The objective of the survey was to capture the project's status from a list of five possible statements (outlined as options A through E in Table 1). Question 2 requested a justification of this response in free form text and question 3 asked if there was any additional supplemental information regarding the project's status that should be shared.

HHS IDEA Lab Entrepreneur-in-Residence Program

Surveys were sent to 35 participants in the HHS EIR program between 2012 and 2016. The survey primarily used individual responses to specific program objectives and was evaluated using a Likert Scale psychometric analysis ranging from 0 (negative) to 7 (positive). Surveys were sent to two specific groups: entrepreneurs and intrapreneurs. The survey for each group included slight language distinctions but addressed the same four parts of inquiry. Both surveys are provided in appendices 2 -5. Part one of the survey, "declaration of project type," sought to identify the project type from four options provided (Process Improvement, IT System Modernization, Data Science, and User Centered Design). If the project did not fall into one of these four categories an "other" option was provided to fill in the most appropriate project type. Part two of the survey, "success of project," assessed the project across three categories (impact, risk, and sustainability). Part three of the survey, "impact on people," assed the program's ability to enhance the entrepreneur/intrapreneurs career through networking and mentorship. Part four of the survey, "attributes," included six questions on the effectiveness of the program, time committed to the project, application of skills learned from the program, and ways to improve the program. The survey was modified based on the role of the person on the team: EIR questions are listed in appendix 2, and intrapreneur questions are found in appendix 3.
In addition to the surveys, structured interviews were conducted with each EIR and one intrapreneur from each project. The interview tools for each are provided as appendices 4 and 5,

respectively. Information from the interviews was used to enhance and clarify responses to survey questions. Based on curated interview transcripts, notable quotes expressing positive, negative, or neutral views on the impact of the project, the risk associated with the project, the mentorship component of the program, and the role of program administration were identified and quantified. Differences between intrapreneurs and entrepreneurs in the attitudes expressed in these quotes were assessed using Fisher's exact test on these counts, while differences in their impressions reflected in the Likert scale survey responses were assessed with Student's T-test.

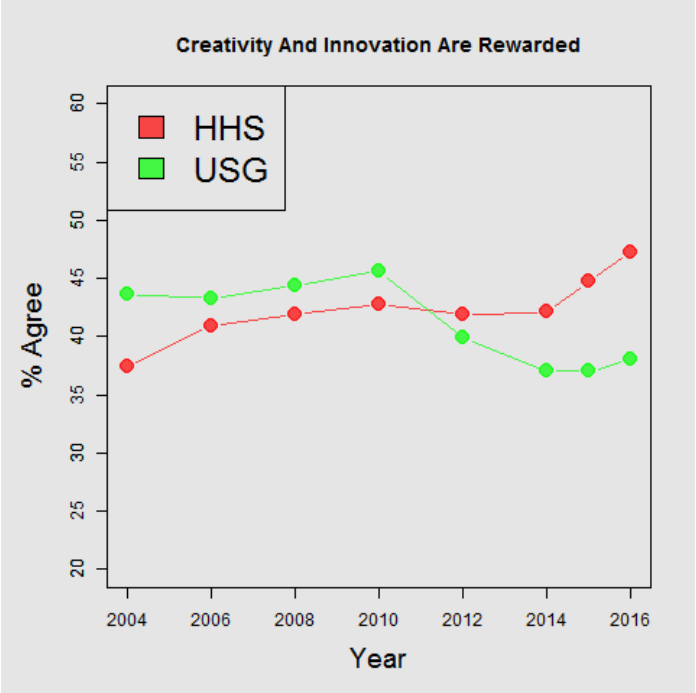
Results and Analysis

For the purposes of seeking an understanding of how employees valued innovation programs and their contribution toward innovation culture, analyses were conducted using data from the participants of two programs taken from interviews and overall organizational attitudes determined through the use of standards government surveys and detailed interviews.

General Employee Viewpoints Regarding Innovation and Empowerment

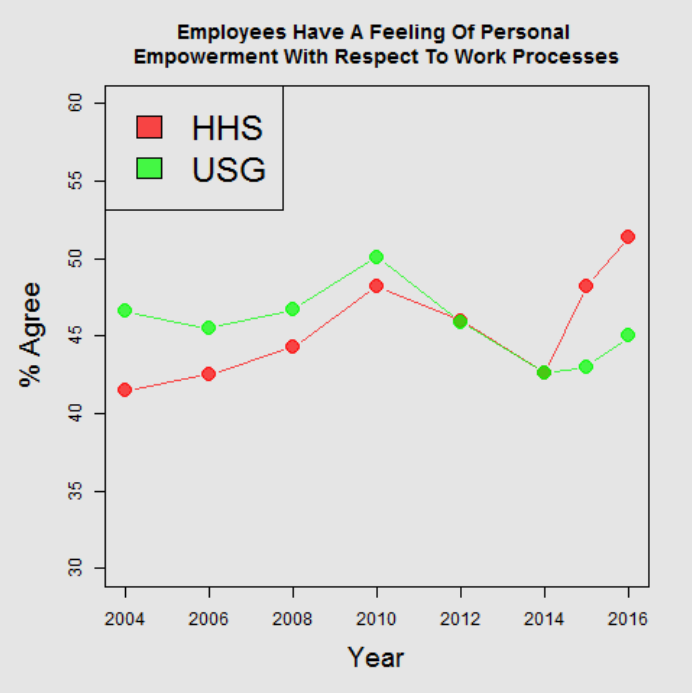
As described above, a subset of the FEVS results were utilized as a general proxy of employee perceptions regarding innovation and empowerment. Over the 12-year period spanning 2004 through 2016, there is an observable decreasing trend in FEVS innovation scores across the US federal government (USG) (See Figure 1). In 2004, 43.6% of respondents across the USG agreed that creativity and innovation are sufficiently incentivized and rewarded. This rate of agreement, however, began dropping in 2010, falling to 38% by 2016. In contrast, scores for innovation within HHS have risen from 37.4% in 2004 to 47.3% in 2016 and, since 2012, have consistently exceeded average USG scores.

Figure 1: FEVS Question - Innovation Incentivized and Rewarded.



FEVS scores associated with personal empowerment – defined in the FEVS as the ability to challenge or change organizational status quo - over the same 12-year timeframe indicated above display a somewhat similar trend (Figure 2). HHS lagged behind the USG as a whole in 2004 (41.5% vs. 46.6%), but by 2016 had surpassed the USG empowerment scores (51.4% vs. 45.0%).

Figure 2: FEVS Question - Empowerment to Challenge or Change Status Quo



While both FEVS innovation and empowerment scores display HHS erasing a deficit relative to the USG over time, there is also a difference in the trends of these two parameters. Note in the Figures above that FEVS empowerment scores for HHS and USG tend to track each other (i.e., they exhibit the same general trend and shape), moving in the same direction in 6 out of the 7 time periods. By contrast, innovation scores move in the same direction in only 4 out of the 7 time periods and generally exhibit a less similarly 'shaped' trend. This difference in trend is particularly noticeable between 2010 and 2014, during which innovation scores at HHS remained relatively constant while those associated with empowerment display a downward trend. These results suggest that, for the timeframe specified in the analysis, innovation and personal empowerment should be examined and treated as two related but nonetheless distinct parameters. HHS employees, for instance, might feel that while innovation and creativity are sufficiently incentivized and rewarded at HHS, their perceived ability – either individually or collectively – to challenge or change the status quo may not differ substantially from those of employees at any other federal agency. That is to say that perhaps a certain "threshold" associated with empowerment might need to be met before actions can be taken and subsequently observed. This result could therefore be both a limiting factor in terms of impact (i.e., succeeding at developing an innovative environment does not necessarily equate to creating the ability to instantly cause change) and an opportunity for targeted improvement (i.e., design

programs to better bridge the gap between these two parameters, between initiating a new idea or action and measuring its organizational effects such that employees feel empowered). As illustrated in this example, developing a means of assessing and measuring employee perceptions about innovation and empowerment, positive or negative, can serve as a benchmark for further focused analyses as well as a means to positively impact both programmatic design and implementation.

Impact of HHS Ignite Accelerator and EIR Programs on HHS FEVS Scores

While the results described above can be used to aid programmatic design and implementation, an examination of FEVS scores at a more granular level can aid in assessing the specific impact of existing (i.e., already designed and implemented) innovation programs. Utilizing the innovation and empowerment components of the FEVS as referenced above, the specific innovation and empowerment scores of program offices that participated in either the Ignite Accelerator or EIR program were compared over the same time period to the scores of matched offices that did not participate in either one of these programs (Figures 3 and 4, respectively). Scores were compared along two dimensions: first across offices (participant versus non-participant; appendix 1) and then against the general HHS FEVS scores and trends for innovation and empowerment. The results of these analyses suggest that employees of both participating and non-participating offices have experienced a modest increase in both innovation and empowerment scores over the timeframe examined, with the difference between the two groups of offices being observable but not necessarily statistically significant. Plausible explanations for this lack of statistical significance are the differential size of each office relative to the number of participants, the abbreviated timeframe in which data was examined, and/or the extended timeframes usually required to witness the full impact of innovation efforts within a large, multifaceted organization such as HHS. Note, however, that the trends exhibited by these office-level data appear to mirror the trends exhibited within the larger organization of HHS (Figures 1 and 2), and that participant offices appear to have exhibited a *larger cumulative increase* in the overall percentage of positive responses (y-axis) for both innovation and empowerment within the examined timeframe.

Figure 3: FEVS Innovation Scores of HHS Offices Having Participants In Either the HHS Ignite or HHS EIR Programs and Matched Controls. Offices Were Matched For Size and Location within HHS.

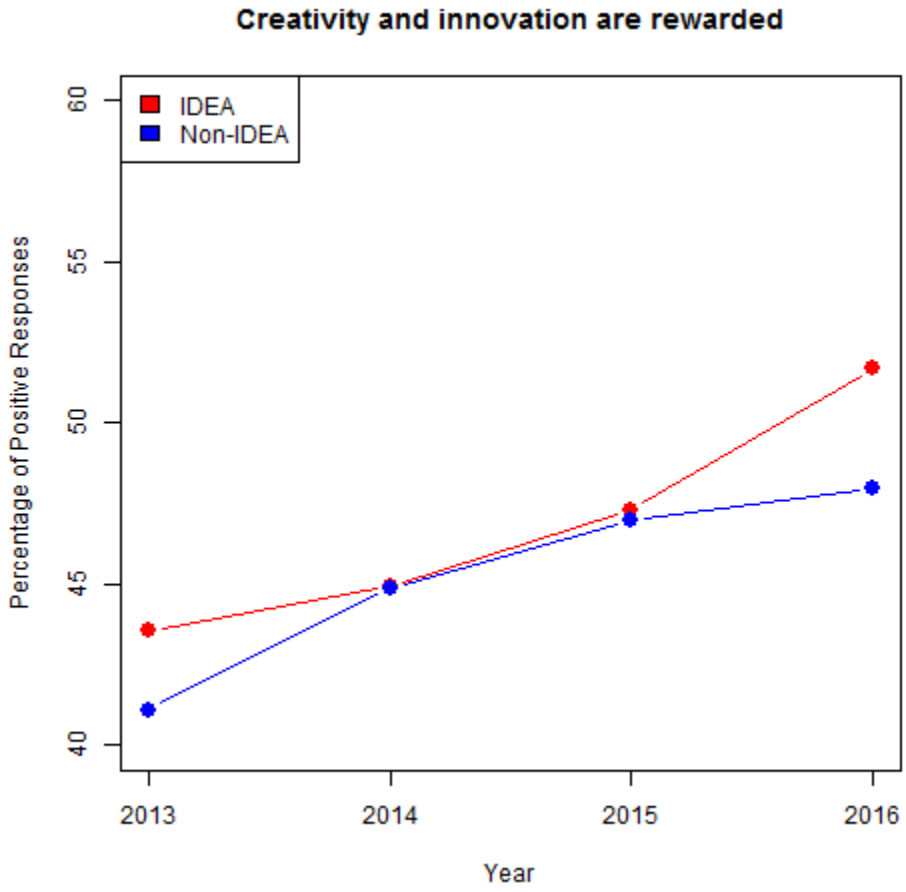
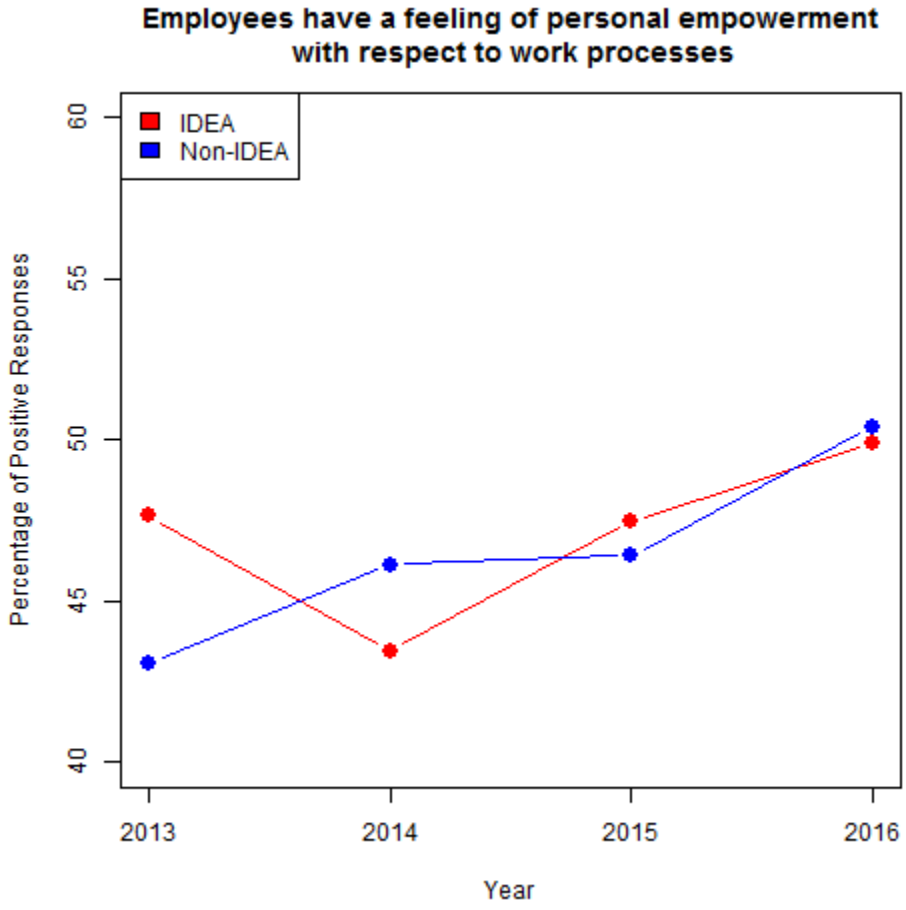


Figure 4: FEVS Empowerment Scores of HHS Offices Having Participants in Either the HHS Ignite or HHS EIR Programs and Matched Controls. Offices were Matched for Size and Location within HHS.



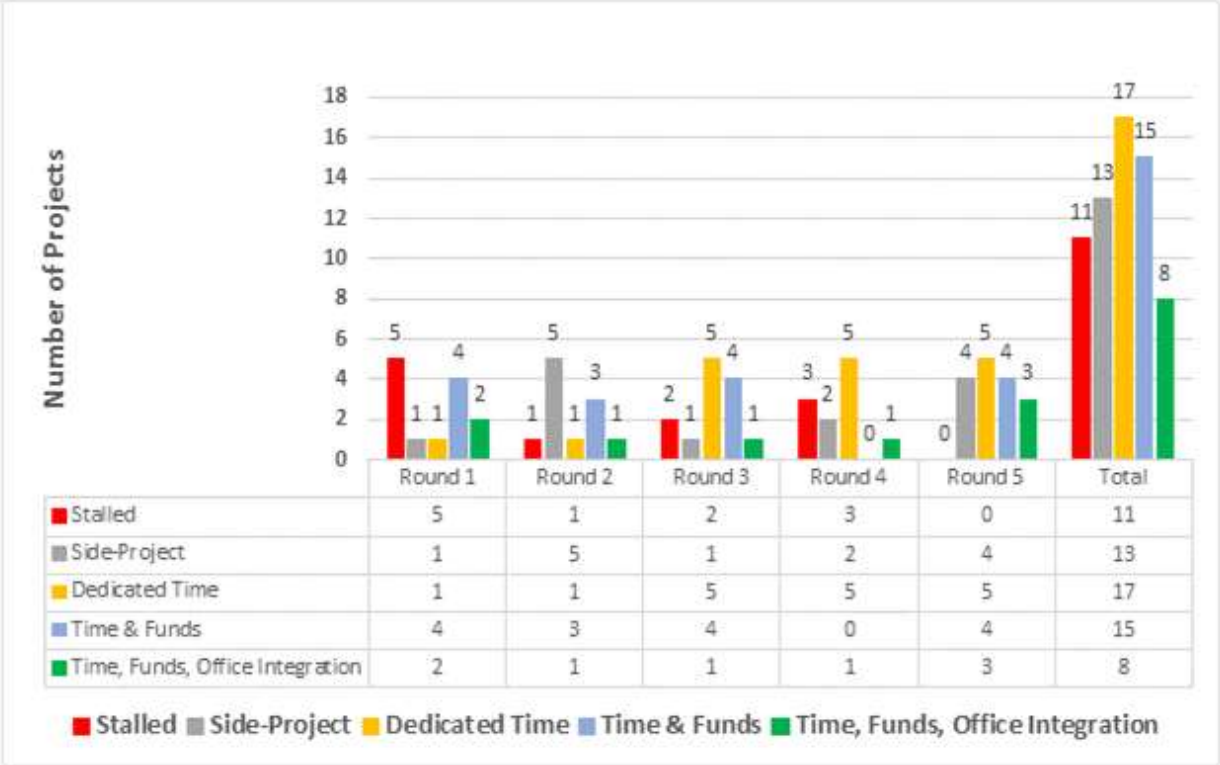
Post-program Assessment of the Effect of the Ignite Accelerator Program on Employee Attitudes

Project status information was obtained from HHS Ignite participants in all 5 cohorts from 2013 through 2016. Surveys were sent to project team leads 90 days after the completion of the HHS Ignite program. Participants were asked to identify their project's status from a list of five possible statements (outlined as options A through E in Table 1) and to provide a written justification to support their selection. Results are depicted in Figure 5 for 64 HHS Ignite project teams. Of these, 11 projects reported that their projects fell into category A, "not going anywhere"; 13 projects reported that their projects fell into category B, "considered a side project"; 17 projects reported as being in category C, "dedicated time"; 15 projects reported as being in category D, "dedicated time and funds"; and 8 projects reported as being in category E, "time, funds, and office integration".

Table 1: 90-Day Post HHS Ignite Survey: Project Status Options

A. Not going anywhere: The project has experienced significant delays or challenges and has not made sufficient progress. It has functionally stalled.
B. A little time: The project occupies a small percentage of staff time, but is still considered a secondary rather than primary project, to be completed as time permits.
C. Dedicated Time: The project has received dedicated time and attention from staff who are moving the idea and project forward with management's approval. However, the project has not (yet) received any funding.
D. Dedicated Time + Funds: The project has received both dedicated time and attention from staff who are moving the idea and project forward with management's approval. In addition, it also has received funding of some kind.
E. Dedicated Time + Funds + Office Integration: The project has received both dedicated time and attention from staff who are moving the idea and project forward, specifically at management's request. In addition, the project has received funding of some kind. Further, the project has become a recognized effort and is now integrated into office / Agency operations with clear support from multiple layers of leadership and/or management.

Figure 5: Status of HHS Ignite Projects by Round.



Post-program Assessment of the EIR program

Information was obtained from EIR program participants from 2012 through 2016. Surveys were sent to 35 individuals, from which responses from 13 individual EIRs and 11 intrapreneurs were received. A one-hour follow up interview with 7 entrepreneurs and 4 intrapreneurs was also completed. Survey and interview instruments, included in Appendices 2 through 5, focused on assessing participants' experience with the EIR program, including its impact on project success, on participating intrapreneurs and entrepreneurs, and on HHS innovation culture. Individual responses to specific program objectives were evaluated using a Likert Scale psychometric analysis ranging from 0 (negative) to 7 (positive).

Ninety percent of respondents indicated that they would participate in the EIR program again. Based on interview analysis, a similar number of positive and negative quotations from intrapreneurs and entrepreneurs was identified when describing their experience with the EIR program.

Both intrapreneurs and entrepreneurs believed that the project had an important impact on the organization (Figure 6). In addition, intrapreneurs believed that entrepreneurs made an important contribution to project impact (Figure 7).

Figure 6: The overall impact of the project on the organization.

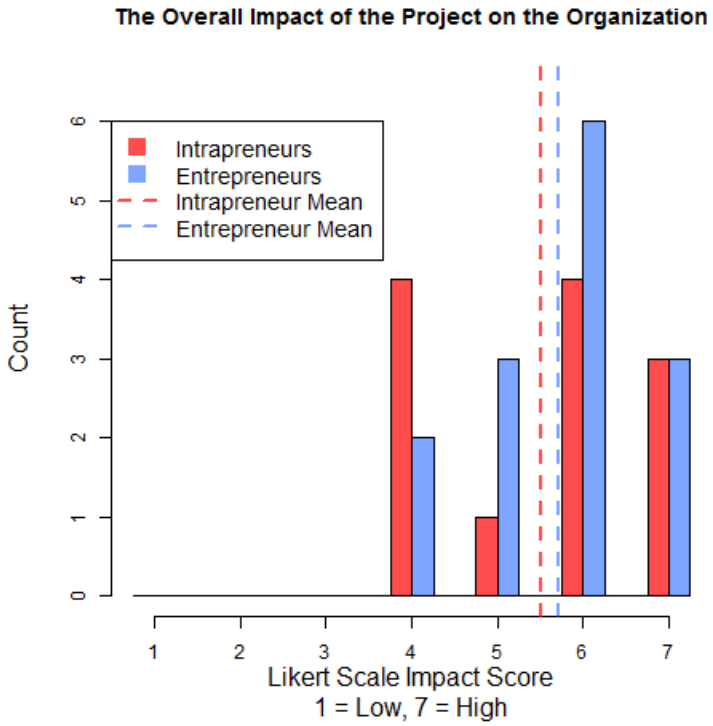
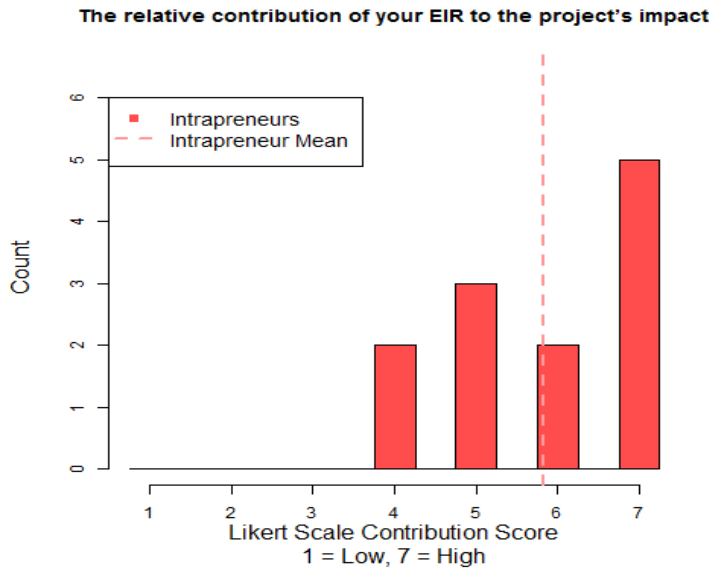
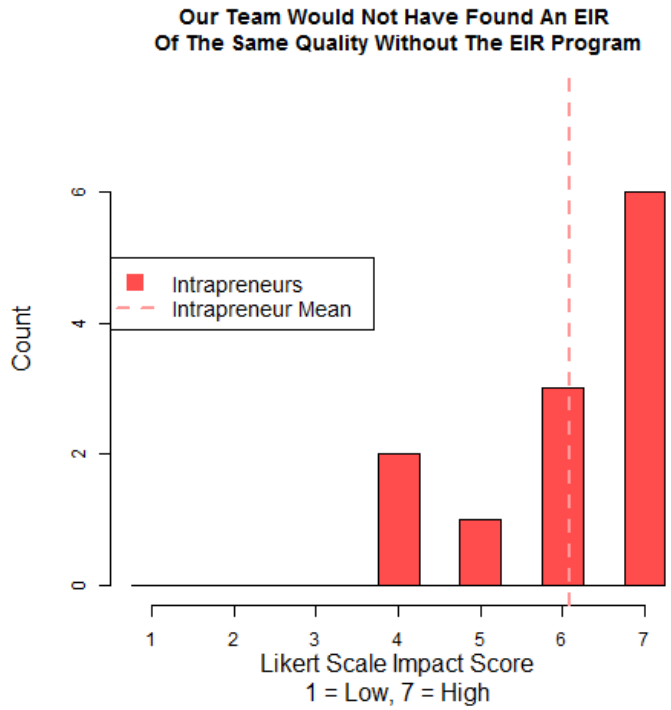


Figure 7: The Relative Contribution of your EIR to the Project's Impact



They also indicated that they could not have found entrepreneurial talent without assistance from the EIR program (Figure 8).

Figure 8: The Relative Contribution of your EIR to the Project's Impact



Entrepreneurs believed that EIR program administration had a greater influence on the project including impact (Figure 9, statistically significant at $p < 0.05$), project risk (Figure 10, not statistically significant at $p = 0.77$), and promoting connections among project team members (Figure 11, statistically significant at $p < 0.05$). Such results are not surprising given that the HHS IDEA Lab focuses on orienting entrepreneurs to government culture following their onboarding, including organizing individual and group calls and meetings to help build a networked community among the EIR program participants and alumni.

Figure 9: The Relative Contribution of the EIR Program Administration and Community to the Project's Impact

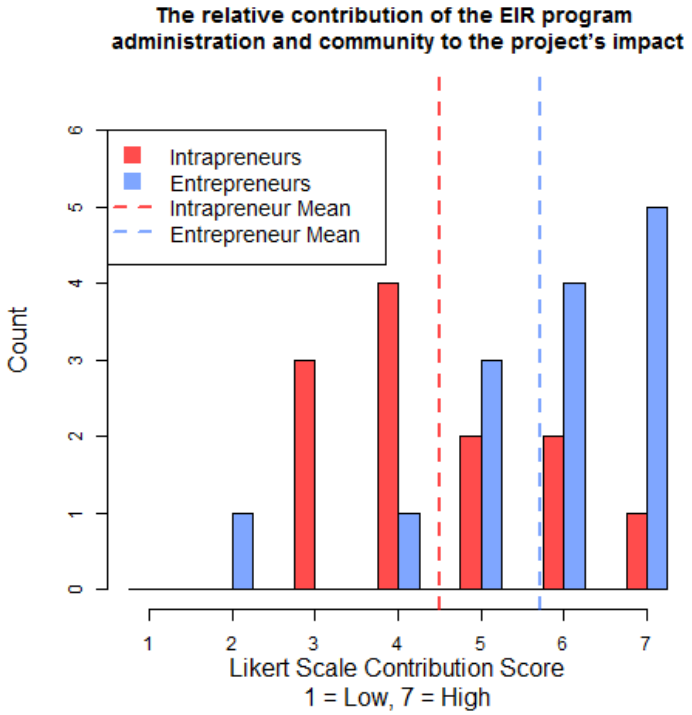


Figure 10: The Relative Contribution of the EIR Program Administration and Community to Mitigating Risks in the Project's Approach/ proposed Solution

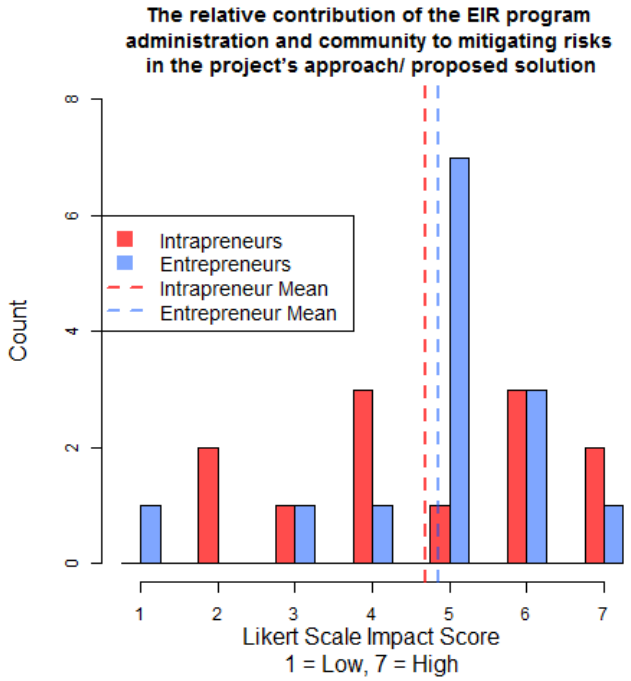
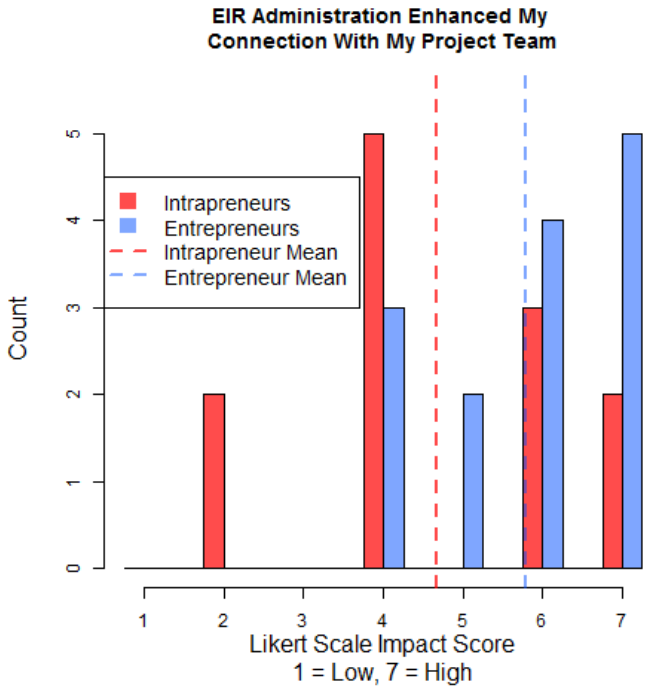


Figure 11: The EIR Program Administration Enhanced My Connection with My Project Team



The most interesting findings from the interview and survey analysis focused on risk perception. In these interviews, entrepreneurs spoke more positively about project risk, indicating an enhanced sense of familiarity and comfort with such risk ($p < 0.01$). In addition, *intrapreneurs* rated the solutions that these projects were meant to represent as being of higher risk relative to the ratings given to the same projects by *entrepreneurs* (Figure 12). Importantly, both intrapreneurs and entrepreneurs indicated that the presence and knowledge of the entrepreneur played an important role in mitigating project risk (Figure 13, mean response = 5.2). These findings are consistent with the expected contrast between a risk-averse government culture and the more entrepreneurial environments external to the federal government.

Figure 12: Risk of the Project's Approach/ Proposed Solution to Solving the Problem.

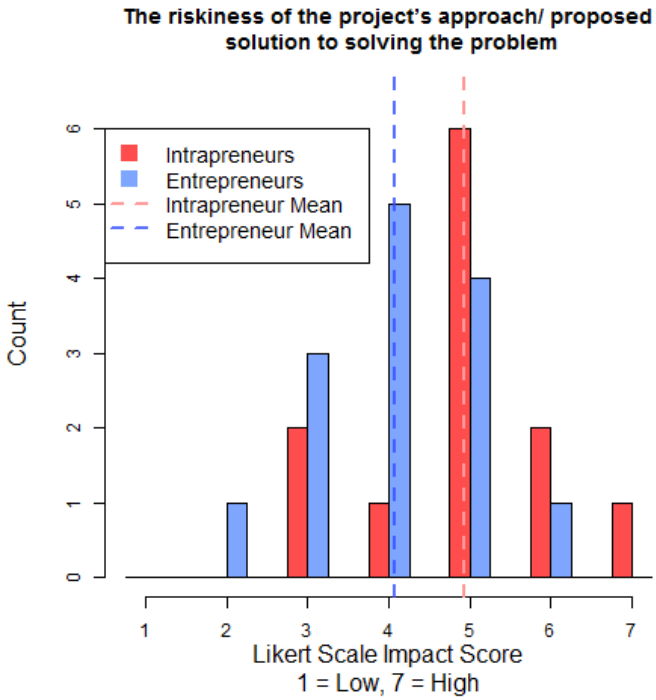
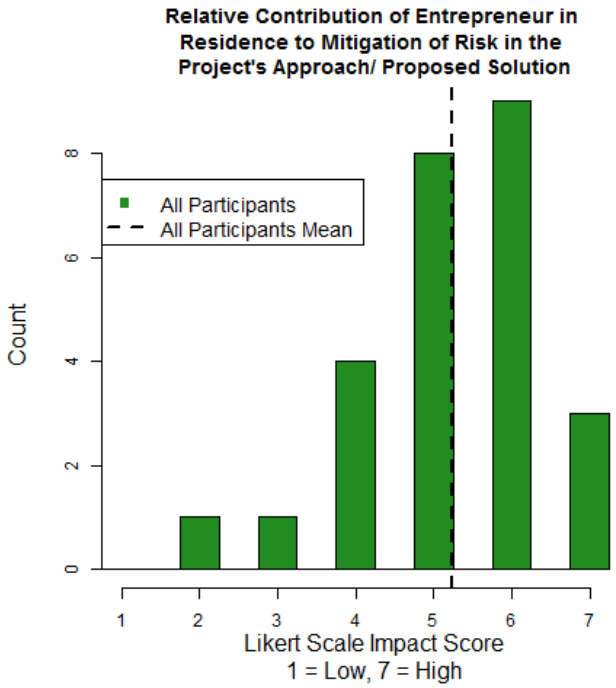


Figure 13: Relative Contribution of the Entrepreneur-in-Residence in Mitigating Project Risk



Conclusion

The United States federal government has invested a significant amount of effort and resources to apply innovation-related methods toward improving the efficiency and effectiveness of its various programs. However, a parallel ability to evaluate and measure both the impact and outcomes of such efforts within the federal sector has not evolved. Without appropriate tools, methodologies, and capacities for data collection, analysis, visualization and communication, decisions on testing and scaling innovation may be insufficiently informed.

The tools and methodologies described in the course of this report can serve as a useful first step in measuring the effect(s) of innovation-related programs in the federal sector and, through the objectives and outputs of those programs, allow individuals – particularly those within government – to identify when a potential idea could be highly innovative and therefore potentially transformative. Further, when measurement and evaluation are performed in a supportive capacity throughout the various phases or stages of innovation, they can inform the iteration of new ideas, reduce the risk of failure in testing and scaling, and can become a means of maximizing the returns on federal investments in innovation, as ultimately determined by factors such as program effectiveness or impact.

The findings reported here to develop innovation-related program and personnel measures have been both instructive and useful to HHS in several ways. First, the annual Federal Employee Viewpoint Survey (FEVS) has allowed stratification of HHS (federal agency-level) employee perceptions regarding innovation and empowerment and its use as a comparative benchmark to explore changes in these perceptions over time. Understanding these changes in employee perceptions allows for targeted program design and benchmarking (i.e., are the programs having an effect on the HHS workforce over time?). Positive perceptions about the innovation "culture" of an organization and the opportunity for employees to contribute new ideas in the workplace are known to lead to successful employee recruitment, worker retention, and increased job satisfaction ratings. (Miejer, Frings-Dresen, & Sluiter, 2009; 51:1027-1038) (Pot, 2012) (Uddin, Luva, & Hussain, 2013; 8:63-77). Conversely, many studies about workplace experiences have demonstrated that soliciting ideas from employees about their work *without* a framework to attend to, implement, or test them can result in greater dissatisfaction. (Scott & Bruce, 1994; 37:580-607) (Unsworth & Parker, 2003; pp. 175-196) (Bjork, Boccardelli, & Magnusson, 2010; 19:385-396)

Second, the collection of longitudinal data on innovation and engagement factors is useful for human resources and program recruitment purposes as well as workforce development, talent identification, and employee skills and training strategies. In the case of HHS programs, strong leadership commitment and personal engagement in project reviews, announcements, and communications were determined to be key elements to enhancing the profile, visibility, and effectiveness of innovation programs. Leveraging such elements, HHS was able to sustain or increase agency-wide innovation values reflected in the FEVS even when government-wide evaluation scores were diminished.

In addition to the FEVS, results from the more targeted, program-level (e.g., Ignite Accelerator and EIR) survey instruments described and illustrated in the course of this report also provided important information. In terms of participant versus non-participant perceptions on innovation, for instance, employees and offices that participated in either or both Ignite and EIR programs tended to exhibit a higher cumulative innovation score than employees and offices

who did not. Although this trend currently lacks statistical significance, it is nonetheless promising and could be indicative of a positive impact. Surveys and individual interviews also demonstrated strong differences in attitudes between federal career employees and non-employees (external entrepreneurs) in the areas of risk, success, and failure. Such differences are not inherently surprising given the potentially risk-averse climate within federal agencies as opposed to the private sector. They also highlight the challenges inherent in bringing innovative and entrepreneurial thinking into the federal environment. Nonetheless, these insights are worth exploring and potentially exploiting to help seed positive and supportive attitudes toward risk across HHS and other federal organizations. Without a certain acceptance and embrace of calculated risk taking, innovation within the federal sector will likely be limited. As these examples illustrate, the creation and use of survey instruments and structured interviews can provide leaders and management with useful information regarding organizational barriers to innovation and untapped opportunity for improvement.

Information from program-level surveys and interviews such as that described above can also be used to enhance program-specific design. Among the findings of the HHS Ignite Accelerator's post participant surveys, for instance, was the sense by participants that problem definition and prototype solution testing may be an important area of focus. A commonly expressed view at the end of the Ignite Accelerator training program was that the existing curriculum challenged preconceptions about the proposed solution to a given problem. The curriculum made participants focus on fully evaluating the proposed solution to their problem through iterative testing, development, and interviews with people regularly encountering the problem in question. These program areas constituted strengths that should be retained, expanded, and potentially propagated across the organization, as should the skills that they represent. For individuals with organizational positions that might not (or do not) regularly impact the strategic priorities of an organization, the opportunity to have such an impact through participation in a program like the Ignite Accelerator was both motivating and led to high levels of morale and excitement about how the skills acquired through the Ignite Accelerator could be applied to their work.

Further, the information gained from the use of program-level survey instruments has contributed to discussion topics at regularly scheduled meetings among the Ignite Accelerator program participants as well as networking opportunities among and between program participants and different groups having innovation needs within HHS. Survey instrument refinement now includes an assessment completed by the individual employee's supervisor (data not presented here) as a means of validating the benefit gained by the employee(s) from participation in innovation programs, particularly as such skills relate to ideation, design thinking, and problem solving. Further work is needed to better understand whether participation in innovation programs such as Ignite and EIR generate or sustain long-term favorable attitudes towards organizational culture on innovation as reflected through survey results at both the program and agency levels. The survey results described herein, however, constitute a first step in the assessment process.

We conclude that the use of quantitative and qualitative assessments of participant experience in organizational innovation programs such as those described here provide useful measures to gauge the impact of these programs. Efforts are underway to conduct prospective attitudinal surveys about project and organizational culture and provide mentoring and training to meet certain entrepreneurial traits necessary in specific new workplace endeavors. Ultimately,

the linkage of project outcomes to employee perspectives will provide useful information on how dedicated employee programs can help strengthen organizational performance.

The HHS IDEA Lab model provides a framework for addressing new ideas and catalyzing employee engagement through structured teaching and mentoring programs. Both the Ignite Accelerator and EIR programs provide HHS employees an experience that is focused on testing a potential solution to a practical problem (Ignite) or opportunity to develop and deliver a better products, workflows, or processes (EIR) within their work activities, thus providing a relevant experience likely to be retained at the completion of the program. To continue to improve the activities within the HHS innovation portfolio, survey instruments and interviews can be applied to evaluate participant perceptions and attitudes toward their work. These tools and the results from these two programs can serve as important reference points for other federal and public-sector organizations interested in assessing their own culture and informing the iterative process of testing and scaling of innovation in federal programs.

Acknowledgements:

The authors recognize the contributions of James Egbert for assistance with the FEVS data files; and, Blake Carlton, Cassandra Duarte, Hannah Levy, and Lynne Tanner Stapleton for their assistance with the EIR data collection. The advice from Dean Chang and Edmund Pendleton of the University of Maryland Academy for Innovation and Entrepreneurship is greatly appreciated.

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References:

Aragon, R. 2011. Thinking Outside the Box: Fostering Innovation and Non-Hypothesis-Driven Research at NIH. *Science Translational Medicine*, 3(70) 1 - 5.

Barber, M. 2015. *How to Run a Government So that Citizens Benefit and Taxpayers Don't Go Crazy*. London: Allen Lane.

Barsh, J., M. M. Capozzi, & J. Davidson. 2008. Leadership and Innovation. *McKinsey Quarterly*, January.

Bjork, J., P. Boccardelli, & M. Magnusson. 2010. Ideation Capabilities for Continuous Innovation. *Creativity and Innovation Management*, 19:385-396. DOI: 10.1111/j.1467-8691.2010.00581.x

Bruneel, J., T. Ratinho, B. Clarysse & A. Groen. 2012. The evolution of business incubators: comparing demand and supply of business incubation services across different incubator generations. *Technovation,* 110-121.

Chesbrough, H., & A. Di Mini. 2014. Open Social Innovation. Pp. 169 - 188 in H. Chesbrough, *New Frontiers in Open Innovation*. New York, NY: Oxford University Press.

Crespi, G., A. Maffioli, P. Mohnen & G. Vasquez. 2011. Evaluating the Impact of Science, Technology and Innovation Programs: a Methodological Toolkit. *Inter-American Development Bank Technical Notes*, 333.

Government Accountability Office. 2014. *Office of Personnel Management: Agency Needs to Improve Outcome Measures to Demonstrate Value of Its Innovation Lab.* Washington, D.C. : Government Accountability Office.

Katsaros, K. K., A. N. Tsirikas & s. Bani, S. 2014. Exploring Employees' Eerceptions, Job-related Attitudes and Characteristics during a Planned Organizational Change. *International Journal of Business Science and Applied*, 9(1): 36 - 50.

Mergel, I. & K. C. Desouza. 2013. Implementing Open Innovation in the Public Sector: The Case of Challenge.gov. *Public Administration Review*, 73(6): 882-890. DOI: 10:1111/puar:12141

Miejer, E. M., M. H. Frings-Dresen & J. K. Sluiter. 2009. Effects of office innovation on office workers' health and performance. *Ergonomics*, 51:1027-38.

Office of Personnel Management. 2016. *Federal Employee Viewpoint Survey: Technical Report.* Washington, D.C.: Office of Personnel Management.

Partnership for Public Service. 2016. *Making Government Work for the American People: A Management Roadmap for the New Administration.* Washington, D.C. Accessed February 17, 2017. http://ourpublicservice.org/publications/viewcontentdetailsphp?/id=1291

Patton, D. 2014. Realising potential: the impact of business innovation on the absorbtive capacity of new technology-based firms. *International Small Business Journal,* 32:897-917.

Pauwels, C., B. Clarysse, M. Wright & J. van Hove. 2016. Understanding a new generation incubation model: the accelerator. *Technovation*, 50-51:13-24.

Pot, F. D. 2012. Workplace innovation and its relations with organisational performance and employee commitment. *European Lifelong Learning Magazine*, 1.

Ries, E. 2011. *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses.* New York, NY: Crown Publishers.

Schrage, M. 2016. Companies are Now Making Innovation Everyone's Job. *Harvard Business Review*, January.

Scott, S. & R. A. Bruce. 1994. Determinants of Innovative Behavior: A path model of individual innovation in the workplace. *Academy of Management Journal,* 37: 580-607.

Sullivan, T. 2016, April. Blitzscaling. *Harvard Business Review.*

Tavoletti, E. 2013. Business incubators: effective infrastructures or a waste of public money? Looking for a theoretical framework, guidelines, and criteria. *Journal of the Knowledge Economy,* 423-443.

Uddin, M. J., R. H. Luva, & S. M. Hussain. 2013. Impact of Organizational Culture on Employee Performance and Productivity: A case study of the telecommunication sector in Bangladesh. *International Journal of Business and Management*, 8:63-77.

United States Department of Health and Human Services. 2017. " IDEA Lab." Accessed February 20, 2017. http://www.hhs.gov/idealab.

Unsworth, K., & S. K. Parker. 2003. Promoting a Proactive and Innovative Workforce for the New Workplace. Pp. 175-196 in D. Holman, T. D. Wall , C. W. Clegg, P. Sparrow, & A. Howard, *The New Workplace: A Guide to the Human Impact of Modern Working Practices.* Chichester, UK: John Wiley & Sons.

van Weele, M., F. J. van Rijnsoever & F. Nauta. 2017. You can't always get what you want: How entrepreneur's perceived resource needs affect the incubator's assertiveness. *Technovation*, 59:18-33.

Weeks, M. 2015. Is Disruptive Theory Wearing New Clothes or Just Naked? Analyzing Recent Critiques of Disruptive Innovation Theory. *Innovation: Management, Policy & Practice*, 17:417-428.

Appendices

Appendix 1: HHS Offices Included in FEVS Analysis

Legend:
Year = Year of participation in an IDEA Lab program (if applicable; if not, office used as a control)

Division. = HHS Operating or Staff Division[1]

Participated = Participated in an IDEA Lab Program (Yes/No)

[1] HHS Division Abbreviations: Administration for Children and Families (ACF), Administration for Community Living (ACL); Agency for Healthcare Research and Quality (AHRQ), Office of the Assistant Secretary for Administration (ASA), Office of the Assistant Secretary for Public Affairs (ASPA), Office of the Assistant Secretary for Planning and Evaluation (ASPE), Office of the Assistant Secretary for Preparedness and Response (ASPR), Centers for Disease Control and Prevention (CDC), Centers for Medicare and Medicaid Services (CMS), Food and Drug Administration (FDA), Health Services Research Administration (HRSA), Indian Health Service (HIS), National Institutes of Health (NIH), Office of the Assistant Secretary for Health (OASH), Office of the General Counsel (OGC), Office of Medicare Hearings and Appeals (OMHA), Office of the National Coordinator for Health Information Technology (ONC), and Substance Abuse and Mental Health Services Administration (SAMHSA).

Year	Division	Participated	Office/Sub-Office
2013	ACF	YES	Office of Family Assistance
2013	ACF	YES	Administration on Children, Youth, and Families
2013	ACF	NO	Office of Family Assistance/Child Care Bureau
2013	ACF	NO	Office of Child Support Enforcement
2013	ACL	YES	Administration on Aging
2013	ACL	NO	Center for Disability and Aging Policy
2013	ASPA	YES	
2013	ASPR	YES	Immediate Office-Chief Operating Officer
2013	ASPR	NO	Office of Policy and Planning
2013	CDC	YES	Office of the Chief Operating Officer/Human Resources Office
2013	CDC	YES	Office of Infectious Diseases/National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
2013	CDC	YES	Office of Public Health Preparedness and Response
2013	CDC	YES	Office of Noncommunicable Diseases, Injury and Environmental Health/National Center for Chronic Disease Prevention and Health Promotion
2013	CDC	NO	Office of Public Health Scientific Services/Center for Surveillance, Epidemiology, and Laboratory Services/Division of Laboratory Systems
2013	CDC	NO	National Institute for Occupational Safety and Health/Division of Surveillance, Hazard Evaluations, and Field Studies
2013	CDC	NO	Center for Global Health/Division of Global HIV/AIDS
2013	CDC	NO	National Institute for Occupational Safety and Health
2013	CMS	YES	Center for Program Integrity/Provider Enrollment Operations
2013	CMS	YES	Office of Strategic Operations and Regulatory Affairs
2013	CMS	YES	Chief Operations Office/Office of Enterprise Information
2013	CMS	YES	Office of Communications
2013	CMS	YES	Center for Clinical Standards and Quality
2013	CMS	YES	Chief Operations Office/Consortium for Medicare Health Plans Operations
2013	CMS	NO	Center for Program Integrity/Data Analytics and Control Group
2013	CMS	NO	Office of Equal Opportunity and Civil Rights
2013	CMS	NO	Office of Legislation
2013	CMS	NO	Office of the Actuary
2013	CMS	NO	Center for Medicaid and CHIP Services
2013	FDA	YES	Office of Global Regulatory Operations and Policy/Office of Regulatory Affairs
2013	FDA	NO	Office of Operations
2013	HRSA	YES	Healthcare Systems Bureau/Division of Transplantation
2013	HRSA	YES	Office of Operations/Office of Information Technology
2013	HRSA	NO	Healthcare Systems Bureau/Division of (Vaccine) Injury Compensation Programs
2013	HRSA	NO	Office of Operations/Office of Acquisition Management Policy
2013	HIS	YES	Nashville Area Office

2013	HIS	NO	Bemidji Area Office
2013	NIH	YES	NIA/Division of Extramural Research Programs
2013	NIH	YES	NLM/Lister Hill National Center
2013	NIH	YES	NIA
2013	NIH	YES	NICHD
2013	NIH	YES	NLM
2013	NIH	YES	Office of the Director/Office of Management/Office of Research Facilities Development and Operations
2013	NIH	YES	NIAID
2013	NIH	NO	NLM/National Center for Biotechnology Information
2013	NIH	NO	NIDCR
2013	NIH	NO	NIA/Intramural Research Program
2013	NIH	NO	NIGMS
2013	NIH	NO	NIDA
2013	NIH	NO	NIMH
2013	NIH	NO	Office of the Director/Office of Management/Office of Research Services
2013	OIG	NO	
2013	OMHA	NO	
2013	ONC	YES	
2013	ONC	NO	Office of Deputy National Coordinator of Programs and Policy
2013	SAMHSA	YES	Office of Policy, Planning, and Innovation
2013	SAMHSA	NO	Office of Financial Resources
2014	ACF	YES	Office of Family Assistance
2014	ACF	YES	Administration on Children, Youth, and Families
2014	ACF	NO	Office of Child Care
2014	ACF	NO	Office of Child Support Enforcement
2014	ACL	NO	Center for Disability and Aging Policy
2014	AHRQ	YES	Center for Quality Improvement and Patient Safety
2014	AHRQ	NO	Center for Evidence and Practice Improvement
2014	ASA	YES	Office of the Chief Information Officer
2014	ASA	NO	Office of Security and Strategic Information
2014	ASA	NO	
2014	ASPA	YES	
2014	ASPR	YES	Immediate Office-Chief Operating Officer
2014	ASPR	NO	Office of Policy and Planning
2014	CDC	YES	Office of Public Health Preparedness and Response/Division of State and Local Readiness
2014	CDC	YES	Office of Noncommunicable Diseases, Injury and Environmental Health/National Center on Birth Defects and Developmental Disabilities
2014	CDC	YES	Office of the Chief Operating Officer/Human Resources Office
2014	CDC	YES	Office of Public Health Scientific Services/Center for Surveillance, Epidemiology, and Laboratory Services
2014	CDC	YES	Office of Public Health Scientific Services/National Center for

			Health Statistics
2014	CDC	YES	Office of Public Health Preparedness and Response
2014	CDC	YES	Office of Noncommunicable Diseases, Injury and Environmental Health/National Center for Chronic Disease Prevention and Health Promotion
2014	CDC	YES	Office of Infectious Diseases/National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
2014	CDC	NO	Office of Public Health Preparedness and Response/Division of Select Agents and Toxins
2014	CDC	NO	Office of Public Health Scientific Services/Center for Surveillance, Epidemiology, and Laboratory Services/Division of Laboratory Systems
2014	CDC	NO	National Institute for Occupational Safety and Health/National Personal Protective Technology Laboratory
2014	CDC	NO	National Center for Environmental Health/Division of Environmental Hazards and Health Effects
2014	CDC	NO	National Institute for Occupational Safety and Health/Division of Surveillance, Hazard Evaluations, and Field Studies
2014	CDC	NO	National Center for Environmental Health/Division of Laboratory Sciences
2014	CDC	NO	Center for Global Health/Division of Global AIDS and TB
2014	CDC	NO	National Institute for Occupational Safety and Health
2014	CMS	YES	Chief Operations Office/Consortium for Financial Management and Fee for Service Operations/San Francisco
2014	CMS	YES	Center for Program Integrity/Provider Enrollment Operations
2014	CMS	YES	Chief Operations Office/Consortium for Medicaid and Children's Health Operations/Seattle
2014	CMS	YES	Office of Strategic Operations and Regulatory Affairs
2014	CMS	YES	Chief Operations Office/Office of Enterprise Information
2014	CMS	YES	Office of Communications
2014	CMS	YES	Chief Operations Office/Consortium for Financial Management and Fee for Service Operations
2014	CMS	YES	Center for Clinical Standards and Quality
2014	CMS	YES	Chief Operations Office/Consortium for Medicaid and Children's Health Operations
2014	CMS	NO	Chief Operations Office/Consortium for Financial Management and Fee for Service Operations/Office of the Denver RA for Kansas City & Denver
2014	CMS	NO	Center for Program Integrity/Data Analytics and Systems
2014	CMS	NO	Office of Equal Opportunity and Civil Rights
2014	CMS	NO	Office of Legislation
2014	CMS	NO	Chief Operations Office/Consortium for Medicaid and Children's Health Operations/Chicago
2014	CMS	NO	Office of the Actuary
2014	CMS	NO	Center for Medicare and Medicaid Innovation
2014	CMS	NO	Center for Consumer Information and Insurance Oversight
2014	CMS	NO	Center for Medicaid and CHIP Services
2014	FDA	YES	(Office of the Commissioner/Office of Global Regulatory Operations and Policy/)Office of Regulatory Affairs
2014	FDA	NO	Office of Operations

2014	HRSA	YES	Healthcare Systems Bureau/Division of Transplantation
2014	HRSA	YES	Office of Operations/Office of Information Technology
2014	HRSA	NO	Healthcare Systems Bureau/Division of Injury Compensation Programs
2014	HRSA	NO	Office of Operations/Office of Acquisition Management Policy
2014	HRSA	NO	Maternal and Child Health Bureau
2014	HIS	YES	Nashville Area Office
2014	HIS	YES	Phoenix Area Office
2014	HIS	NO	Portland Area Office
2014	NIH	YES	Clinical Center/Office of the Chief Financial Officer/Department of Clinical Research Informatics
2014	NIH	YES	NLM/Lister Hill National Center
2014	NIH	YES	NCATS
2014	NIH	YES	NIA
2014	NIH	YES	NICHD
2014	NIH	YES	Office of the Director/Office of Management/Office of Research Facilities Development and Operations
2014	NIH	YES	NLM
2014	NIH	YES	NIAID
2014	NIH	YES	NCI
2014	NIH	NO	NIA/Intramural Research Program
2014	NIH	NO	Clinical Center/Office of the Chief Financial Officer
2014	NIH	NO	NLM/National Center for Biotechnology Information
2014	NIH	NO	NIDCR
2014	NIH	NO	NIGMS
2014	NIH	NO	NIDA
2014	NIH	NO	Office of the Director/Office of Management/Office of Research Services
2014	NIH	NO	NIMH
2014	NIH	NO	NIEHS
2014	NIH	NO	NHLBI
2014	OASH	YES	
2014	OCR	YES	
2014	OIG	NO	
2014	OMHA	NO	
2014	ONC	YES	Office of Science and Technology
2014	ONC	YES	
2014	ONC	NO	Office of Deputy National Coordinator of Programs and Policy
2014	SAMHSA	YES	Office of Policy, Planning, and Innovation
2014	SAMHSA	NO	Office of Financial Resources
2015	ACF	YES	Office of Regional Operations
2015	ACF	YES	Office of Family Assistance
2015	ACF	YES	Administration on Children, Youth, and Families
2015	ACF	NO	Office of Child Care

2015	ACF	NO	Office of Community Services
2015	ACF	NO	Office of Refugee Resettlement
2015	ACF	NO	Office of Child Support Enforcement
2015	ACL	YES	Administration on Aging
2015	ACL	NO	Administration on Intellectual and Developmental Disabilities
2015	ACL	NO	Center for Disability and Aging Policy
2015	AHRQ	YES	Center for Quality Improvement and Patient Safety
2015	AHRQ	NO	Center for Evidence and Practice Improvement
2015	ASA	YES	Office of the Chief Information Officer
2015	ASA	NO	Office of Security and Strategic Information
2015	ASA	NO	
2015	ASFR	NO	
2015	ASPA	YES	
2015	ASPE	YES	
2015	ASPR	YES	Immediate Office-Chief Operating Officer
2015	ASPR	NO	Office of Policy and Planning
2015	CDC	YES	Office of Public Health Preparedness and Response/Division of State and Local Readiness
2015	CDC	YES	Office of Noncommunicable Diseases, Injury and Environmental Health/National Center on Birth Defects and Developmental Disabilities
2015	CDC	YES	Office of the Chief Operating Officer/Human Resources Office
2015	CDC	YES	Office of Noncommunicable Diseases, Injury and Environmental Health/National Center for Injury Prevention and Control
2015	CDC	YES	Office of State, Tribal, Local, and Territorial Support
2015	CDC	YES	Office of Public Health Scientific Services/National Center for Health Statistics
2015	CDC	YES	Office of Public Health Scientific Services/Center for Surveillance, Epidemiology, and Laboratory Services
2015	CDC	YES	Office of Infectious Diseases/National Center for Immunization and Respiratory Diseases
2015	CDC	YES	Office of Public Health Preparedness and Response
2015	CDC	YES	Office of Noncommunicable Diseases, Injury and Environmental Health/National Center for Chronic Disease Prevention and Health Promotion
2015	CDC	YES	Office of Infectious Diseases/National Center for Emerging and Zoonotic Infectious Diseases
2015	CDC	YES	Office of Infectious Diseases/National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
2015	CDC	YES	Office of Noncommunicable Diseases, Injury and Environmental Health
2015	CDC	NO	Office of the Associate Director for Science/Office of Science Integrity
2015	CDC	NO	Office of Equal Employment Opportunity
2015	CDC	NO	National Institute for Occupational Safety and Health/Division of Compensation Analysis and Support
2015	CDC	NO	Office of Public Health Scientific Services/Center for Surveillance, Epidemiology, and Laboratory Services/Division of Laboratory Systems

2015	CDC	NO	Office of Public Health Preparedness and Response/Division of Select Agents and Toxins
2015	CDC	NO	Center for Global Health/Global Immunization Division
2015	CDC	NO	National Institute for Occupational Safety and Health/National Personal Protective Technology Laboratory
2015	CDC	NO	National Center for Environmental Health/Division of Environmental Hazards and Health Effects
2015	CDC	NO	Center for Global Health/Division of Parasitic Diseases and Malaria
2015	CDC	NO	National Institute for Occupational Safety and Health/Division of Surveillance, Hazard Evaluations, and Field Studies
2015	CDC	NO	National Center for Environmental Health/Division of Laboratory Sciences
2015	CDC	NO	Center for Global Health/Division of Global AIDS and TB
2015	CDC	NO	Center for Global Health
2015	CDC	NO	National Institute for Occupational Safety and Health
2015	CMS	YES	Chief Operations Office/Consortium for Financial Management and Fee for Service Operations/San Francisco
2015	CMS	YES	Chief Operations Office/Consortium for Medicaid and Children's Health Operations/Seattle
2015	CMS	YES	Center for Program Integrity/Provider Enrollment Operations
2015	CMS	YES	Chief Operations Office/Office of Hearings and Inquiries
2015	CMS	YES	Office of Strategic Operations and Regulatory Affairs
2015	CMS	YES	Chief Operations Office/Office of Enterprise Information
2015	CMS	YES	Office of Communications
2015	CMS	YES	Chief Operations Office/Consortium for Financial Management and Fee for Service Operations
2015	CMS	YES	Chief Operations Office/Consortium for Quality Improvement and Survey & Certification Operations
2015	CMS	YES	Center for Clinical Standards and Quality
2015	CMS	YES	Chief Operations Office/Consortium for Medicaid and Children's Health Operations
2015	CMS	YES	Chief Operations Office/Consortium for Medicare Health Plans Operations
2015	CMS	NO	Chief Operations Office/Consortium for Financial Management and Fee for Service Operations/Office of the Denver RA for Kansas City & Denver
2015	CMS	NO	Office of Minority Health
2015	CMS	NO	Office of Equal Opportunity and Civil Rights
2015	CMS	NO	Center for Program Integrity/Data Analytics and Systems
2015	CMS	NO	Chief Operations Office/Consortium for Medicaid and Children's Health Operations/Chicago
2015	CMS	NO	Office of Legislation
2015	CMS	NO	Office of the Actuary
2015	CMS	NO	Chief Operations Office/Office of Acquisitions and Grants Management
2015	CMS	NO	Center for Consumer Information and Insurance Oversight
2015	CMS	NO	Center for Medicaid and CHIP Services
2015	CMS	NO	Center for Medicare and Medicaid Innovation
2015	CMS	NO	Center for Medicare

2015	FDA	YES	Office of Foods and Veterinary Medicine/Center for Veterinary Medicine
2015	FDA	YES	Office of Foods and Veterinary Medicine/Center for Food Safety and Applied Nutrition
2015	FDA	YES	Office of Medical Products and Tobacco/Center for Devices and Radiological Health
2015	FDA	YES	Office of Medical Products and Tobacco/Center for Drug Evaluation and Research
2015	FDA	YES	(Office of the Comissioner/Office of Global Regulatory Operations and Policy/)Office of Regulatory Affairs
2015	FDA	NO	Office of the Chief Scientist/National Center for Toxicological Research
2015	FDA	NO	Office of Medical Products and Tobacco/Center for Tobacco Products
2015	FDA	NO	Office of Medical Prodcuts and Tobacco/Center for Biologics Evaluation and Research
2015	FDA	NO	Office of the Comissioner/Office of Operations
2015	HRSA	YES	Healthcare Systems Bureau/Division of Transplantation
2015	HRSA	YES	Office of Operations/Office of Information Technology
2015	HRSA	YES	Office of Operations/Office of Management
2015	HRSA	YES	Bureau of Primary Health Care
2015	HRSA	YES	Bureau of Health Workforce
2015	HRSA	NO	Office of Operations/Office of Budget
2015	HRSA	NO	Healthcare Systems Bureau/Division of Injury Compensation Programs
2015	HRSA	NO	Office of Operations/Office of Acquisition Management Policy
2015	HRSA	NO	Healthcare Systems Bureau
2015	HRSA	NO	Maternal and Child Health Bureau
2015	HIS	YES	Nashville Area Office
2015	HIS	YES	Phoenix Area Office
2015	HIS	NO	Portland Area Office
2015	HIS	NO	Bemidji Area Office
2015	NIH	YES	Office of the Director/Office of Intramural Research/Office of Technology Transfer
2015	NIH	YES	NIA/Division of Extramural Research Programs
2015	NIH	YES	NLM/Lister Hill National Center
2015	NIH	YES	Clinical Center/Office of the Chief Financial Officer/Department of Clinical Research Informatics
2015	NIH	YES	NIBIB
2015	NIH	YES	NCATS
2015	NIH	YES	NIAMS
2015	NIH	YES	NIA
2015	NIH	YES	Office of the Director/Office of Management/Office of Research Facilities Development and Operations
2015	NIH	YES	NHGRI
2015	NIH	YES	NICHD
2015	NIH	YES	NLM
2015	NIH	YES	NIAID

2015	NIH	YES	NCI
2015	NIH	NO	Clinical Center/Office of the Chief Financial Officer
2015	NIH	NO	NIMHD
2015	NIH	NO	NIDCD
2015	NIH	NO	NLM/National Center for Biotechnology Information
2015	NIH	NO	NIA/Intramural Research Program
2015	NIH	NO	NIDCR
2015	NIH	NO	NIGMS
2015	NIH	NO	NIAAA
2015	NIH	NO	NIDA
2015	NIH	NO	NIMH
2015	NIH	NO	Office of the Director/Office of Management/Office of Research Services
2015	NIH	NO	NIEHS
2015	NIH	NO	NHLBI
2015	OASH	YES	Office of Adolescent Health
2015	OASH	YES	Regional Health Administrators
2015	OASH	YES	
2015	OASH	NO	Office on Women's Health
2015	OASH	NO	Office of the Surgeon General
2015	OCR	YES	
2015	OGA	YES	
2015	OGC	NO	
2015	OIG	NO	
2015	OMHA	NO	
2015	ONC	YES	Office of Standards and Technology
2015	ONC	YES	
2015	ONC	NO	Office of Programs and Engagement
2015	SAMHSA	YES	Office of Policy, Planning, and Innovation
2015	SAMHSA	YES	Office of Management, Technology, and Operations
2015	SAMHSA	YES	Office of Financial Resources
2015	SAMHSA	YES	Center for Mental Health Services
2015	SAMHSA	NO	Office of Financial Resources
2015	SAMHSA	NO	Office of Behavioral Health Statistics
2015	SAMHSA	NO	Center for Substance Abuse Treatment
2015	SAMHSA	NO	Center for Substance Abuse Prevention
2016	ACF	YES	Office of Regional Operations
2016	ACF	YES	Office of Family Assistance
2016	ACF	YES	Administration on Children, Youth, and Families
2016	ACF	NO	Office of Child Care
2016	ACF	NO	Office of Community Services
2016	ACF	NO	Office of Refugee Resettlement
2016	ACF	NO	Office of Child Support Enforcement

2016	ACL	YES	Administration on Aging
2016	ACL	NO	Administration on Disabilities
2016	AHRQ	YES	Center for Quality Improvement and Patient Safety
2016	AHRQ	NO	Center for Evidence and Practice Improvement
2016	ASA	YES	Office of the Chief Information Officer
2016	ASA	NO	Office of Security and Strategic Information
2016	ASA	NO	
2016	ASFR	NO	
2016	ASPA	YES	
2016	ASPE	YES	
2016	ASPR	YES	Immediate Office-Chief Operating Officer
2016	ASPR	NO	Office of Policy and Planning
2016	CDC	YES	Office of Public Health Scientific Services/Center for Surveillance, Epidemiology, and Laboratory Services/Division of Health Informatics and Surveillance
2016	CDC	YES	Office of Public Health Scientific Services /Center for Surveillance, Epidemiology, and Laboratory Services/Division of Public Health Information and Dissemination
2016	CDC	YES	Office of Public Health Preparedness and Response/Division of State and Local Readiness
2016	CDC	YES	Office of the Chief Operating Officer/Human Resources Office
2016	CDC	YES	Office of Noncommunicable Diseases, Injury and Environmental Health/National Center on Birth Defects and Developmental Disabilities
2016	CDC	YES	Office of Noncommunicable Diseases, Injury and Environmental Health/National Center for Injury Prevention and Control
2016	CDC	YES	Office of Public Health Scientific Services/Center for Surveillance, Epidemiology, and Laboratory Services
2016	CDC	YES	Office of Public Health Scientific Services/National Center for Health Statistics
2016	CDC	YES	Office of State, Tribal, Local, and Territorial Support
2016	CDC	YES	Office of Infectious Diseases/National Center for Immunization and Respiratory Diseases
2016	CDC	YES	Office of Public Health Preparedness and Response
2016	CDC	YES	Office of Noncommunicable Diseases, Injury and Environmental Health/National Center for Chronic Disease Prevention and Health Promotion
2016	CDC	YES	Office of Infectious Diseases/National Center for Emerging and Zoonotic Infectious Diseases
2016	CDC	YES	Office of Infectious Diseases/National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
2016	CDC	NO	Office of the Associate Director for Science/Office of Science Integrity
2016	CDC	NO	Office of Equal Employment Opportunity
2016	CDC	NO	Office of Public Health Scientific Services/Center for Surveillance, Epidemiology, and Laboratory Services/Division of Laboratory Systems
2016	CDC	NO	National Institute for Occupational Safety and Health/Division of Compensation Analysis and Support
2016	CDC	NO	Office of Public Health Preparedness and Response/Division of Select Agents and Toxins

2016	CDC	NO	Center for Global Health/Global Immunization Division
2016	CDC	NO	National Institute for Occupational Safety and Health/National Personal Protective Technology Laboratory
2016	CDC	NO	Center for Global Health/Division of Parasitic Diseases and Malaria
2016	CDC	NO	National Center for Environmental Health/Division of Environmental Hazards and Health Effects
2016	CDC	NO	National Institute for Occupational Safety and Health/Division of Surveillance, Hazard Evaluations, and Field Studies
2016	CDC	NO	Office of Public Health Scientific Services/Center for Surveillance, Epidemiology, and Laboratory Services/Division of Scientific Education and Professional Development
2016	CDC	NO	National Center for Environmental Health/Division of Laboratory Sciences
2016	CDC	NO	Center for Global Health/Division of Global AIDS and TB
2016	CDC	NO	Office of the Chief Operating Officer/Office of Financial Resources
2016	CDC	NO	Center for Global Health
2016	CDC	NO	National Institute for Occupational Safety and Health
2016	CMS	YES	Chief Operations Office/Consortium for Medicaid and Children's Health Operations/Seattle
2016	CMS	YES	Chief Operations Office/Consortium for Financial Management and Fee for Service Operations/San Francisco
2016	CMS	YES	Center for Program Integrity/Provider Enrollment Operations
2016	CMS	YES	Center for Medicaid and CHIP Services/Data and Systems Group
2016	CMS	YES	Office of Enterprise Data and Analytics
2016	CMS	YES	Chief Operations Office/Office of Hearings and Inquiries
2016	CMS	YES	Office of Strategic Operations and Regulatory Affairs
2016	CMS	YES	Chief Operations Office/Office of Enterprise Information
2016	CMS	YES	Office of Communications
2016	CMS	YES	Chief Operations Office/Consortium for Financial Management and Fee for Service Operations
2016	CMS	YES	Chief Operations Office/Consortium for Quality Improvement and Survey & Certification Operations
2016	CMS	YES	Chief Operations Office/Consortium for Medicaid and Children's Health Operations
2016	CMS	YES	Center for Clinical Standards and Quality
2016	CMS	YES	Chief Operations Office/Consortium for Medicare Health Plans Operations
2016	CMS	NO	Office of Minority Health
2016	CMS	NO	Chief Operations Office/Consortium for Financial Management and Fee for Service Operations/Office of the Denver RA for Kansas City & Denver
2016	CMS	NO	Office of Equal Opportunity and Civil Rights
2016	CMS	NO	Chief Operations Office/Consortium for Medicaid and Children's Health Operations/Chicago
2016	CMS	NO	Center for Medicaid and CHIP Services/Financial Management
2016	CMS	NO	Center for Program Integrity/Data Analytics and Systems
2016	CMS	NO	Office of Legislation
2016	CMS	NO	Office of the Actuary

2016	CMS	NO	Chief Operations Office/Office of Acquisitions and Grants Management
2016	CMS	NO	Center for Medicaid and CHIP Services
2016	CMS	NO	Center for Medicare and Medicaid Innovation
2016	CMS	NO	Center for Consumer Information and Insurance Oversight
2016	CMS	NO	Chief Operations Office/Office of Technology Solutions
2016	CMS	NO	Center for Medicare
2016	FDA	YES	Office of Medical Products and Tobacco/Center for Drug Evaluation and Research/Office of New Drugs/Office of Hematology and Oncology Products
2016	FDA	YES	Office of Foods and Veterinary Medicine/Center for Veterinary Medicine
2016	FDA	YES	Office of Foods and Veterinary Medicine/Center for Food Safety and Applied Nutrition
2016	FDA	YES	Office of Medical Products and Tobacco/Center for Devices and Radiological Health
2016	FDA	YES	Office of Medical Products and Tobacco/Center for Drug Evaluation and Research
2016	FDA	YES	Office of Regulatory Affairs
2016	FDA	NO	Office of Foods and Veterinary Medicine/Office of Resource Planning and Strategic Management
2016	FDA	NO	Office of Medical Products and Tobacco/Center for Drug Evaluation and Research/Office of New Drugs/Office of Antimicrobial Products
2016	FDA	NO	Office of the Chief Scientist/National Center for Toxicological Research
2016	FDA	NO	Office of Medical Products and Tobacco/Center for Tobacco Products
2016	FDA	NO	Office of Medical Prodcuts and Tobacco/Center for Biologics Evaluation and Research
2016	FDA	NO	Office of Operations
2016	HRSA	YES	Healthcare Systems Bureau/Division of Transplantation
2016	HRSA	YES	Office of Operations/Office of Acquisition Management and Policy
2016	HRSA	YES	Office of Operations/Office of (adminstrative?) Management
2016	HRSA	YES	Bureau of Primary Health Care
2016	HRSA	YES	Bureau of Health Workforce
2016	HRSA	NO	Office of Operations/Office of Budget
2016	HRSA	NO	Healthcare Systems Bureau/Division of Injury Compensation Programs
2016	HRSA	NO	Office of Operations/Office of Acquisition Management and Policy
2016	HRSA	NO	Healthcare Systems Bureau
2016	HRSA	NO	Maternal and Child Health Bureau
2016	HIS	YES	Nashville Area Office
2016	HIS	YES	Phoenix Area Office
2016	HIS	NO	Portland Area Office
2016	HIS	NO	Bemidji Area Office
2016	NIH	YES	NIA/Division of Extramural Research Programs

2016	NIH	YES	NLM/Lister Hill National Center
2016	NIH	YES	Clinical Center/Office of the Chief Financial Officer/Department of Clinical Research Informatics
2016	NIH	YES	NIBIB
2016	NIH	YES	NCATS
2016	NIH	YES	NIAMS
2016	NIH	YES	Office of the Director/Office of Management/Office of Research Facilities Development and Operations
2016	NIH	YES	NHGRI
2016	NIH	YES	NIA
2016	NIH	YES	NICHD
2016	NIH	YES	NLM
2016	NIH	YES	NIAID
2016	NIH	YES	NCI
2016	NIH	NO	Clinical Center/Office of the Chief Financial Officer
2016	NIH	NO	NIMHD
2016	NIH	NO	NIDCD
2016	NIH	NO	NLM/National Center for Biotechnology Information
2016	NIH	NO	NIDCR
2016	NIH	NO	NIA/Intramural Research Program
2016	NIH	NO	NIAAA
2016	NIH	NO	NIGMS
2016	NIH	NO	NIMH
2016	NIH	NO	Office of the Director/Office of Management/Office of Research Services
2016	NIH	NO	NIDA
2016	NIH	NO	NIEHS
2016	NIH	NO	NHLBI
2016	OASH	YES	Office of Adolescent Health
2016	OASH	YES	
2016	OASH	NO	Office on Women's Health
2016	OASH	NO	Office of the Surgeon General
2016	OCR	YES	
2016	OGA	YES	
2016	OGC	NO	
2016	OIG	NO	
2016	OMHA	NO	
2016	ONC	YES	Office of Standards and Technology
2016	ONC	YES	
2016	ONC	NO	Office of Programs and Engagement
2016	SAMHSA	YES	Office of Policy, Planning, and Innovation
2016	SAMHSA	YES	Office of Management, Technology, and Operations
2016	SAMHSA	YES	Office of Financial Resources
2016	SAMHSA	YES	Center for Mental Health Services

2016	SAMHSA	NO	Office of Behavioral Health Statistics
2016	SAMHSA	NO	Office of Financial Resources
2016	SAMHSA	NO	Center for Substance Abuse Treatment
2016	SAMHSA	NO	Center for Substance Abuse Prevention

Appendix 2: HHS Entrepreneurs-in-Residence (EIR) Program Survey Tool

QUESTIONS FOR HHS Entrepreneurs-in-Residence

Note: Interview questions should be answered retrospectively based on your experiences while participating in the EIR program (with the exception of the sustainability section see below).

PART 1: DECLARATION OF PROJECT TYPE

On a scale of 1-7, low to high (see key), please rate the relevance/ importance of the following 4 categorizes (see key explanations) to the project's overall type

1. Process Improvement:

   Low 1 2 3 4 5 6 7 High

2. IT System Modernization:

   Low 1 2 3 4 5 6 7 High

3. Data Science:

   Low 1 2 3 4 5 6 7 High

4. User Centered Design:

   Low 1 2 3 4 5 6 7 High

5. Other: If another category better describes your project's type, fill in the category.

PART 2: SUCCESS OF PROJECT

On a scale of 1-7, low to high (see key), please rate…

1. Impact:
   The overall impact of the project on the organization

   Low 1 2 3 4 5 6 7 High

   The relative contribution of the EIR program administration to the project's impact

   Low 1 2 3 4 5 6 7 High

2. Risk:
   The inherent risk of the core problem being addressed

   Low 1 2 3 4 5 6 7 High

   The riskiness of the project's approach to solving the problem

   Low 1 2 3 4 5 6 7 High

   The relative contribution of the EIR program structure and administration to mitigating risks in the project's approach

   Low 1 2 3 4 5 6 7 High

   Your relative contribution as an EIR to mitigating risk in the project's approach

   Low 1 2 3 4 5 6 7 High

   Is there anything else you would like to share about the impact or risks of your project?

3. Sustainability:
   Note: Questions on sustainability should be answered based on the present state of the project not retrospectively.

   Y/N: Project is currently being continued.
   Y/N: Project is a side project done in extra time.
   Y/N: Project has dedicated time and staff attention.
   Y/N: Project is moving forward with management's blessing.
   Y/N: Project has received funding.
   Y/N: Project is integrated into a larger office/ agency with multiple levels of support.

PART 3: IMPACT ON PEOPLE

On a scale of 1-7, disagree to agree (see key), please rate…

Specific to your relationship with other EIRs

1. Program:
   The opportunities the EIR program provided to interact with other EIRs were sufficient and helpful.

   Disagree 1 2 3 4 5 6 7 Agree

   Connecting with other EIRs enhanced my overall experience in the EIR program.

Disagree 1 2 3 4 5 6 7 Agree

2. Career:
Interacting with other EIRs had an impact on developing my network and career.

Disagree 1 2 3 4 5 6 7 Agree

3. Mentorship:
Working with other EIRs provided me with new tools and resources that made my project more successful.

Disagree 1 2 3 4 5 6 7 Agree

Interacting with other EIRs increased my knowledge of other private sector fields and professions.

Disagree 1 2 3 4 5 6 7 Agree

Networking with other EIRs created lasting collaborations beyond the program.

Disagree 1 2 3 4 5 6 7 Agree

Is there anything else you would like to share about the career development or mentorship you received in the EIR program?

Specific your relationship with your project team

1. Program:
The EIR Program structure and administration enhanced my connection with my project team.

Disagree 1 2 3 4 5 6 7 Agree

I gained mentorship and career development that would not have been possible outside the EIR program.

Disagree 1 2 3 4 5 6 7 Agree

2. Career:
Working with my internal project team had an impact on developing my network and career.

Disagree 1 2 3 4 5 6 7 Agree

3. Mentorship:
Working with my internal project team increased my knowledge of government work.

Disagree 1 2 3 4 5 6 7 Agree

Working with my internal project team increased my likelihood to engage with the public sector or work with government in the future.

Disagree 1 2 3 4 5 6 7 Agree

I provided my project team with knowledge, skills, and resources that were unique to my background from outside government and invaluable to the success of my team.

Disagree 1 2 3 4 5 6 7 Agree

PART 4: ATTRIBUTES

1. Y/N: Given the opportunity, would you participate in the EIR program again?
2. How many hours did you spend talking with your project team members per week? _____
3. Are there any tools you wish the EIR program had provided you with to most effectively complete your project? _____
4. What is the most notable lesson/skill you learned from the EIR project that you are applying in your current job? _____
5. Is there anything else you would like to tell us? __

Appendix 3: HHS Entrepreneurs-in-Residence (EIR) Program Survey Tool for Intrapreneurs

QUESTIONS FOR INTRAPRENEURS PARTICIPATING IN THE HHS EIR PROGRAM

Note: Interview questions should be answered retrospectively based on your experiences while participating in the EIR program (with the exception of the sustainability section see below).

PART 1: DECLARATION OF PROJECT TYPE

On a scale of 1-7, low to high (see key), please rate the relevance/ importance of the following 4 categorizes (see key explanations) to the project's overall type

1. Process Improvement:

   Low 1 2 3 4 5 6 7 High

2. IT System Modernization:

   Low 1 2 3 4 5 6 7 High

3. Data Science:

   Low 1 2 3 4 5 6 7 High

4. User Centered Design:

   Low 1 2 3 4 5 6 7 High

5. Other: If another category better describes your project's type, fill in the category.

PART 2: SUCCESS OF PROJECT

On a scale of 1-7, low to high (see key), please rate…

1. Impact:
   The overall impact of the project on the organization

   Low 1 2 3 4 5 6 7 High

   The relative contribution of the EIR program administration to the project's impact

   Low 1 2 3 4 5 6 7 High

   The relative contribution of your EIR to the project's impact

   Low 1 2 3 4 5 6 7 High

2. Risk:
   The inherent risk of the core problem being addressed

   Low 1 2 3 4 5 6 7 High

   The riskiness of the project's approach to solving the problem

   Low 1 2 3 4 5 6 7 High

   The relative contribution of the EIR program structure and administration to mitigating risks in the project's approach

   Low 1 2 3 4 5 6 7 High

   The relative contribution of your EIR to mitigating risks in the project's approach

   Low 1 2 3 4 5 6 7 High

   Is there anything else you would like to share about the impact or risks of your project?

3. Sustainability:
   Note: Questions on sustainability should be answered based on the present state of the project not retrospectively.

   Y/N: Project is currently being continued.
   Y/N: Project is a side project done in extra time.
   Y/N: Project has dedicated time and staff attention.
   Y/N: Project is moving forward with management's blessing.
   Y/N: Project has received funding.
   Y/N: Project is integrated into a larger office/ agency with multiple levels of support.

PART 3: IMPACT ON PEOPLE

On a scale of 1-7, disagree to agree (see key), please rate…

Specific to the Project Team's relationship with their EIR

1. Program:

The EIR Program administration enhanced my project team's connection with our EIR.

Disagree 1 2 3 4 5 6 7 Agree

Our project team would not have been able to find an EIR (of the same quality and impact) without the EIR program

Disagree 1 2 3 4 5 6 7 Agree

2. Career:

Working with my EIR had an impact on developing my network and career.

Disagree 1 2 3 4 5 6 7 Agree

3. Mentorship:

Working with my EIR provided me with new tools and innovative approaches to apply to problem solving within government.

Disagree 1 2 3 4 5 6 7 Agree

Working with my EIR increased my likelihood to engage with the private sector and bring on external help in the future.

Disagree 1 2 3 4 5 6 7 Agree

Is there anything else you would like to share about the career development or mentorship you received in the EIR program?

PART 4: ATTRIBUTES

1. Y/N: Given the opportunity, would you participate in the EIR program again?
2. How many hours did you spend on the project per week? _____
3. How many hours did you spend talking with your EIR per week? _____
4. Are there any tools you wish the EIR program had provided you with to most effectively complete your project? _____
5. What is the most notable lesson/skill learned from the EIR project that you are applying in your current job? _____
6. Is there anything else you would like to tell us? _____

Appendix 4: HHS Entrepreneurs-in-Residence (EIR) Program Interview Guide

QUESTIONS FOR ENTREPRENEUR-IN-RESIDENCE

Note: Interview questions should be answered retrospectively based on your experiences while participating in the EIR program.

PART 1: SUCCESS OF PROJECT

Impact

1. Briefly describe the internal and/or external impacts your project had the organization (office and OpDiv).
    a. Is/are the impact(s) of the project quantifiable? If so, how did you quantify them?
    What was the most significant achievement (if any) of the project?
    How did the EIR program structure and administration increase your project's impact?
    a. How would the impact of your project have changed if it was not a part of the EIR program
    b. Which tools supplied by the administration were most crucial to your projects' impact? Which new tools should be supplied in the future?
        i. GitHub, AWS Sandbox, JIRA, Slack, etc.
    c. How did you increase your project's impact as an EIR?
    What impact or improvements did your project make to: IT system modernization, process improvement, user centered design, data science, and/or other (please specify)?
5. How did you measure these specific types of improvements?

Risk

1. Briefly describe the risks that your project carried. Please discuss the risks inherent to the core problem of your project and the risks associated with your approach to the project.
2. How did the EIR program structure and administration help mitigate risks in your approach to the project?
3. How did you, as an EIR, help mitigate risks in your approach to the project?
4. What was the most significant challenge encountered during the project?
5. What was the most significant lesson learned (if any) from the project?

PART 2: IMPACT ON PEOPLE

Specific to the EIR network

Program

1. How (if at all) did the EIR program structure and administration enhance your relationship with other EIRs? How could the EIR program administration improve the EIR network in the future?

Career and Mentorship

1. What (if any) were the benefits of connecting with other EIRs- toward the development of your network and future career?
2. Is there a time when working with other EIRs provided you new tools and/or resources that increased your project's success? Describe…

Specific to the EIR relationship with their project team

Career and Mentorship

1. How did your contribution as an EIR uniquely help or enable the success of your project team?
2. What have you learned and how have you grown from the partnership with your project team? What do you think your project team learned and how do you believe they grew (or changed their approach to governmental problem solving) from the partnership?
3. How did the EIR program change your opinion of the public sector? How do you believe the program changed your project team's view of the private sector?
4. How did the EIR program change your likelihood to engage with government in the future? How do you believe you changed your project team's likelihood to bring in external help in the future?

General

1. What was the most valuable part of the program for you and why? What would you change in the EIR program and why?
2. Is value of the EIR program more strongly related to the impact on the participants or the success of the project? Why?

Appendix 5: Entrepreneur-in-Residence Program Interview Guide

QUESTIONS FOR PROJECT LEADS

(INTRAPRENEURS FOR THE HHS EIR PROGRAM)

Note: Interview questions should be answered retrospectively based on your experiences while participating in the EIR program and an intrapreneur.

PART 1: SUCCESS OF PROJECT

Impact

1. Briefly describe the internal and/or external impacts your project had the organization (office and Operating Division).
    a. Is/are the impact(s) of the project quantifiable? If so, how did you quantify them? What was the most significant achievement (if any) of the project? How did the IIR program structure and administration increase your project's impact?
2. How would the impact of your project have changed if it was not a part of the IIR program
    a. Which tools supplied by the administration were most crucial to your projects' impact? Which new tools should be supplied in the future?
        i. GitHub, AWS Sandbox, JIRA, Slack, etc.
    b. How did your IIR increase your project's impact?
3. What impact or improvements did your project make to: IT system modernization, process improvement, user centered design, data science, and/or other (please specify)?
    a. How did you measure these specific types of improvements?

Risk

1. Briefly describe the risks that your project carried. Please discuss the risks inherent to the core problem of your project and the risks associated with your approach to the project.
2. How did the IIR program structure and administration help mitigate risks in your approach to the project?
3. How did your IIR help mitigate risks in your approach to the project?
4. What was the most significant challenge encountered during the project?
5. What was the most significant lesson learned (if any) from the project?

PART 2: IMPACT ON PEOPLE

Specific to the Project Lead's relationship with their EIR

Career and Mentorship

1. How did your EIR uniquely help or enable the success of your project team?
2. What have you learned and how have you grown from the partnership with your EIR? What do you think your EIR learned and how do you believe he/she grew from the partnership?
    a. How will you apply new tools and approaches, taught by your EIR, to future governmental problem solving?

3. How did the EIR program change your opinion of the private sector? How do you believe the program changed your project team's view of the public sector?
   a. How (if at all) did your EIR change your opinion of bringing in external help in the future?
   b. In what ways (if at all) do you believe your EIR is more likely to engage with government in the future?

General

1. What was the most valuable part of the program for you and why? What would you change in the EIR program and why?
   a. Would you have still worked on this project if you were not part of the EIR program? Explain why or why not...
2. Is value of the EIR program more strongly related to the impact on the participants or the success of the project? Why?