EVALUATION OF THE JOBS AND INNOVATION ACCELERATOR CHALLENGE GRANTS: INTERIM FINDINGS ON MULTIAGENCY COLLABORATION AND CLUSTER PROGRESS

Interim Report

August 25, 2015

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EXECUTIVE SUMMARY

From December 2007 to June 2009, the U.S. economy experienced job losses totaling more than 7.3 million, with some regions of the country and demographic groups suffering disproportionately. Despite the large number of workers unemployed and underemployed during the recovery, employers in many high-wage industries with the potential to further spur growth appear to be having difficulty finding American workers with the skills necessary to fill job vacancies.[1]

Starting in May 2011, the Obama administration launched four innovative, multiagency initiatives to accelerate job creation and economic growth through both public and private partnerships**.** The initiatives include the Jobs and Innovation Accelerator Challenge (JIAC) Grants, the Advanced Manufacturing JIAC grants (AM-JIAC), Rural JIAC Grants and Make-It-In-America Grants. Eight funding partners provided both financial and technical resources for these initiatives and another 15 Federal agencies offered technical assistance to support the grant awardees. Collectively across the four initiatives, 53 projects in 30 states received a total of $86.5 million. Grants were awarded to self-identified industry clusters—defined as geographically concentrated groups of related businesses, suppliers, service providers and educational institutions in a particular industry—that have the potential to transform their respective regions into high-growth economies with burgeoning employment opportunities in high-wage occupations.

The U.S. Department of Labor (DOL), Employment and Training Administration (ETA), contracted with Mathematica Policy Research and the W.E. Upjohn Institute for Employment Research to conduct a process evaluation of the first two grant initiatives: the JIAC grants and the AM-JIAC grants.

Evaluation overview

The ETA-funded evaluation focuses on the first two rounds of grant awards made to 20 JIAC clusters in 2011 and 10 AM-JIAC clusters in 2012. Both initiatives are anticipated to be completed by the end of 2015. The two grants share similar objectives; both grants seek foster job creation through the acceleration and formation of high growth businesses in an effort to create high wage jobs.[2] The AM-JIAC grant objectives are focused on the advanced manufacturing sector. Among the varied objectives of both grants, development of a skilled workforce and ensuring diversity in workforce participation align most closely with the ETA mission. (While they also share similar objectives, the Rural JIAC and Make-It-In-America grants covering another 23 projects were not included in the evaluation design.)

This process evaluation focuses on answering five key research questions about the two initiatives:

[1] Cappelli (2014) reports that a Google search for the phrase "skill gap" received over 330,000 references in 2013. (footnote 2, p.1). See also Business Roundtable (2014).

[2] Federal Funding Opportunities for JIAC and AM-JIAC grants (U.S. Department of Commerce 2011), (U.S. Department of Commerce 2012a).

1. What is the role of multiagency collaboration both at the Federal level and within the clusters in the planning and implementation of cluster activities?
2. How and in what ways do regional clusters, programs, and partnerships develop under the grant?
3. What workforce-related outcomes did the clusters report achieving through this initiative?
4. How is the initiative managed within each cluster? What practices are being implemented to promote sustainability of grant resources, partnerships, and activities?
5. What are key lessons learned through implementation? How and under what circumstances might these lessons be replicated?

This interim report examines the extent and nature of multiagency collaboration among the Federal partners (question 1), provides an overview of the clusters and their proposed activities (early findings on question 2), discusses the Federal perspective on cluster progress (early findings on questions 4 and 5), and describes the number and types of participants who have been served through the ETA grants through June 2014 (early findings on question 3). The report also describes the criteria used to select the clusters for evaluation site visits in 2015. Data sources include two rounds of interviews with Federal staff representatives from four of the Federal funding agencies, one round of interviews with ETA Federal project officers (FPOs) who provide direct oversight of the ETA JIAC and AM-JIAC grants, grant applications (statements of work) submitted by each cluster in response to the Federal Funding Opportunity (FFO), and quarterly performance reports (QPRs) that each grant program submitted to ETA through June 2014.

What role did multiagency collaboration play in JIAC and AM-JIAC?

Multiagency collaboration at the Federal level played an important role in the development and implementation of the JIAC and AM-JIAC initiatives. Interviewed Federal staff reported on several important aspects of that Federal collaboration.

- **The JIAC and AM-JIAC initiatives were distinctive due to the number of Federal partners that offered financial and technical support to the grants awarded.** Spurred by the White House Taskforce for the Advancement of Regional Innovation Clusters (TARIC), five Federal funding agencies—ETA, the U.S. Department of Commerce's Economic Development Administration (EDA), the U.S. Small Business Administration (SBA), the National Institute of Standards and Technology's Manufacturing Extension Program (NIST MEP), and the U.S. Department of Energy (DOE)—with a history of supporting these types of clusters joined forces to develop the Federal Funding Opportunities (FFOs).
- **The development of such a complex FFO was unique and challenging.** Different funding streams were authorized by different legislation, each with its own regulations and restrictions. As a result, it was difficult to identify a strategy that would accommodate all agency requirements. Interviewed respondents noted that, although there was a collaborative effort, the process was more onerous than any of the agencies expected or hoped.

- **Despite the challenges, respondents believed that development of the FFO was a successful collaborative effort.** As a solution to dealing with the various legal restrictions, a single FFO was issued for each initiative but separate grants were awarded by each funding agency. Each agency was able to maintain its own grant requirements, but to encourage regional collaboration and communication, clusters were required to submit an integrated work plan (IWP) that described the integration of activities across funding streams. In the JIAC FFO, all three grants began simultaneously but the ETA grant had a longer period of performance. In the AM-JIAC FFO, all five grants had the same length of performance.
- **A multiagency working group born out of the TARIC continues to meet routinely and work together to support the clusters.** Respondents reported that collaborative effort fostered by these initiatives has energized the funding agencies; created a common vision; and fostered communication, idea sharing, and interaction across agencies, within clusters, and across clusters.
- **The development of the Federal support teams (FSTs) did not materialize.** The FSTs were described in the FFOs as regional teams of staff from funding and non-funding partner agencies that would provide TA and link clusters to the resources available across agencies. These groups did not form or function as intended. Respondents suggested several reasons, including confusion about the intent of the FSTs, lack of capacity among partner agencies, and challenges related to the logistics of implementation.

What types of clusters received grants?

The 20 JIAC and 10 AM-JIAC grants span the country and are located or partially located in 22 states. Two-thirds of clusters involve multiple counties with a mix of urban, suburban, and rural areas. Four clusters target urban areas and the remaining six targeted rural areas. Five of the ten AM-JIAC grants are co-located in areas with JIAC grants.

The clusters cover a wide range of sectors, with the AM-JIAC grants focused exclusively on advanced manufacturing. The 10 AM-JIAC clusters were most often in durable manufacturing or equipment areas, such as transportation equipment and advanced materials such as carbon fiber composites. The 20 JIAC clusters did not generally focus on manufacturing, and some had more than one focus. Common sectors included renewable energy and information technology, which were the primary or one of the primary sectors in eight and four clusters, respectively.

Educational institutions and economic development organizations most often play the lead role as cluster administrator, defined as the organization serving to coordinate efforts across grants. A single organization received all JIAC or AM-JIAC grant awards in about a third of the clusters; the remaining clusters have more than one organization that received grant funds. Cluster administrators and non-administrative partners were typically mature organizations with existing partnerships. However, only one-third of cluster applications indicated a mature partnership, strictly defined as one in which the ETA, EDA, and SBA grantees had all worked together before the JIAC or AM-JIAC grant application.

How do Federal agencies perceive cluster progress through summer 2014?

Respondents from the Federal funding agencies, as well as the ETA FPOs, reported that many clusters were making progress toward their ETA and non-ETA goals. Some clusters were

focused on forming new partnerships and assessing sector needs. According to perceptions shared by ETA FPOs, other clusters with established partnerships seemed to be making significant progress in specific grant activities.

By design, the Federal funding partners intended for the clusters to engage in economic and business development activities and identify industry needs before developing and conducting workforce training activities. As a result, many EDA, SBA, NIST MEP and DOE activities were already completed or in their final phases by summer 2014. ETA-funded workforce development activities, in contrast, began later in the grant period and will continue through fall 2015. Just over 30 percent of JIAC participants are minorities, with nearly half that share in the AM-JIAC clusters. The ETA FPOs based their perceptions and assessments on their interactions with the clusters as well as grantee progress reports submitted to ETA.

ETA FPOs reported mixed success among the grantees in the goal of increasing collaboration among partners within their clusters. ETA FPOs reported that 11 of the 30 clusters were pursuing complementary activities across funding streams. Another 9 of the 30 clusters fell short of FPO expectations for collaboration and were pursuing parallel activities across funding streams. FPOs for the remaining one-third of clusters had limited knowledge about whether activities across funding streams were complementary or parallel efforts.

Who has enrolled in ETA activities and what services did they receive?

Across the 30 grantees, a total of slightly more than 3,500 participants had enrolled in the JIAC and AM-JIAC workforce programs as of June 30, 2014. This amounts to about 50 percent of projected JIAC participants and 35 percent of projected AM-JIAC participants. The majority of participants in both grant programs are males. Just over 30 percent of JIAC participants are minorities, with about half that that share in the AM-JIAC clusters. JIAC participants are also more likely than AM-JIAC participants to be unemployed at the time of enrollment, at 45 percent and 17 percent respectively.

Of those participants enrolled in grant activities, more than 99 percent in JIAC clusters and more than 93 percent in AM-JIAC clusters participated in education and training activities. Classroom occupational training comprised the largest share of training design by far.[3] Over three-fourths of education and training participants in AM-JIAC and more than half of JIAC participants received some sort of classroom-based training. Incumbent worker training and contextualized training were the next most common types of training design. Future data collection will explore the nature and content of these training activities as well as the workforce-related outcomes that clusters capture for participants.

[3] From Handbook, U.S. Department of Labor 2014: "Classroom occupational training is conducted in an institutional setting or worksite setting and is designed to provide or upgrade individuals with technical skills and information required to perform a specific job, and participants should be able to achieve employment for a specific occupation upon completion."

Next steps for the evaluation

The evaluation team will collect more data in 2015 on JIAC and AM-JIAC implementation and plans for sustainability through an online survey of partners across all 30 clusters as well as in-depth site visits to a subset of 9 clusters. We will also provide updated data on ETA participants and the services they receive as well as the workforce-related outcomes they achieve through summer 2015. The evaluation's final report is due to be released in 2016.

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I. CONTEXT OF THE GRANTS AND EVALUATION GOALS

A. Introduction

From December 2007 to June 2009, the U.S. economy experienced job losses totaling more than 7.3 million, with some regions of the country and demographic groups suffering disproportionately. Since the height of this Great Recession, job growth has rebounded but is still not keeping up with population growth. Additionally, despite the large number of workers unemployed and underemployed during the recovery, employers in many high-wage industries with the potential to further spur growth appear to be having difficulty finding American workers with the skills necessary to fill job vacancies.[4]

Starting in May 2011, the Obama administration launched four innovative, multiagency initiatives to accelerate job creation and economic growth through both public and private partnerships. They include the Jobs and Innovation Accelerator Challenge (JIAC) Grants, the Advanced Manufacturing JIAC (AM-JIAC) grants, Rural JIAC Grants and Make-It-In-America (MIIA) Grants. Table I.1 provides the names of funding partners that supported each round of grant awards, as well as the number and date of grant awards. Eight funding partners provided both financial and technical resources to support the grant awards, and another 15 agencies

Table I.1. Funding partners and grant awards for four multiagency cluster initiatives

Grant initiative	Number of funding partners	Funding partners	Number of grants awarded	Total amount awarded	Date of awards
Jobs and Innovation Accelerator Challenge (JIAC) Grants	3	ETA, EDA, SBA	20	$37 million[a]	2011
Advanced Manufacturing JIAC (AM-JIAC) Grants	5	EDA, ETA, SBA, NIST MEP, DOE	10	$20 million[b]	2012
Rural JIAC Grants	4	EDA, DOA, DRA, ARC	13	$9 million[c]	2012
Make-It-In-America Grants (MIIA)	5	EDA, NIST MEP, ETA, DRA	10	$20.5 million[d]	2013
Total	8	ETA; EDA; SBA; NIST MEP; DOE; DOA; DRC, ARC	53	$86.5 million	--

Notes: The Federal funding agencies and their abbreviations are as follows: U.S. Department of Labor, Employment and Training Administration (ETA), U.S. Department of Commerce, Economic Development Administration (EDA); U.S. Small Business Administration (SBA); U.S. Department of Commerce, National Institute of Standards and Technology, Hollings Manufacturing Extension Partnership (NIST MEP); U.S. Department of Energy (DOE), U.S. Department of Agriculture (DOA), Delta Regional Authority (DRA), Appalachian Regional Commission (ARC).

The Rural JIAC Grants and the MIIA Grants are not included in the ETA-funded evaluation.

[a] Source: http://www.commerce.gov/blog/2011/09/22/jobs-and-innovation-accelerator-challenge-winners-announced

[b] Source: http://www.commerce.gov/news/press-releases/2012/10/09/obama-administration-announces-20-million-10-public-private-partnersh

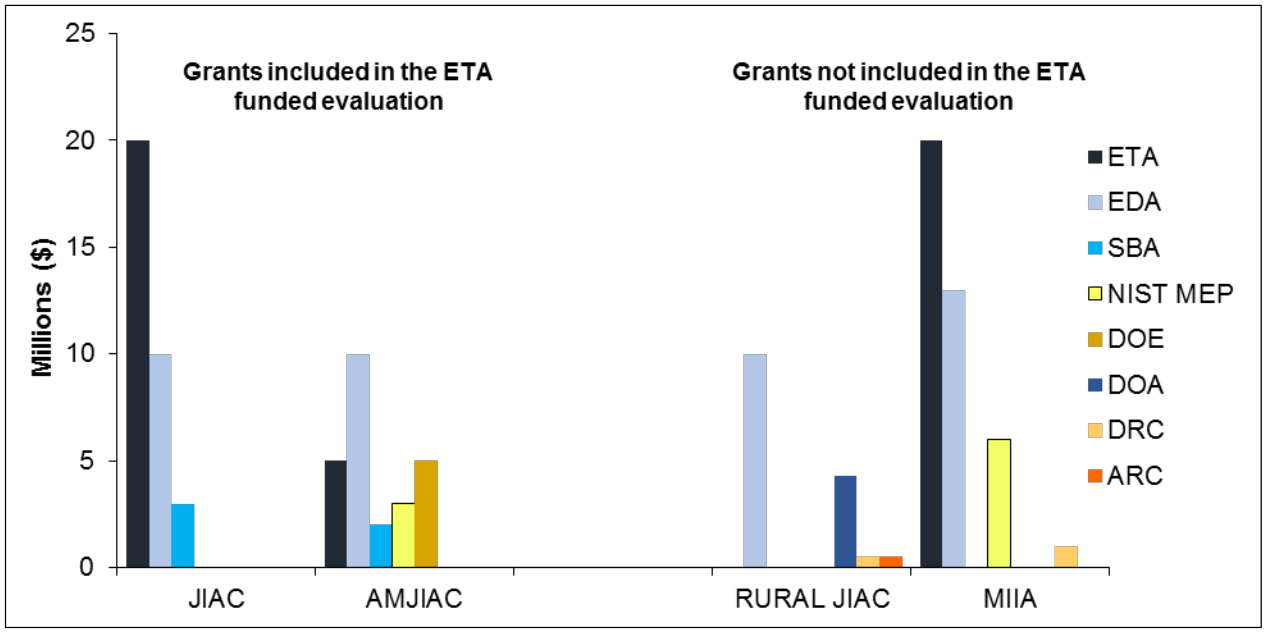
[c] Source: http://www.commerce.gov/blog/2012/08/01/rural-jobs-and-innovation-accelerator-challenge-awards-9-million-13-projects-boost-r

[d] Source: http://www.commerce.gov/news/press-releases/2013/10/22/obama-administration-awards-205-million-make-it-america-challenge-gra

[4] Cappelli (2014) reports that a Google search for the phrase "skill gap" received over 330,000 references in 2013. (footnote 2, p.1). See also Business Roundtable (2014).

offered technical assistance (TA) to support these clusters. (See Appendix A for a list of the partner agencies.[5]) Figure I.1 demonstrates the varying levels of financial support provided by the eight funding agencies for the four efforts.[6] Collectively across these four grant initiatives, 53 cluster projects in 30 states received a total of $86.5 million. While the four initiatives share similar objectives, the ETA-funded evaluation focuses on the first two rounds of grant awards; the JIAC and AM-JIAC grants. (The Rural JIAC and MIIA grants were not included in the evaluation design.)

Figure I.1. Level of funding allocation, by initiative



Source: JIAC, AM-JIAC, Rural JIAC, and MIIA Federal Funding Opportunities.

Note: This evaluation will examine the implementation and outcomes of the JIAC and AM-JIAC grants only.

JIAC = Jobs and Innovation Accelerator Challenge; *AM-JIAC* = Advanced Manufacturing JIAC; *ARC* = Appalachian Regional Commission; *DOA* = U.S. Department of Agriculture; *DOE* = U.S. Department of Energy; *DRA* = Delta Regional Authority; *EDA* = U.S. Department of Commerce, Economic Development Administration; *ETA* = U.S. Department of Labor, Employment and Training Administration; *MIIA* = Make It In America; *NIST MEP* = U.S. Department of Commerce, National Institute of Standards and Technology, Hollings Manufacturing Extension Partnership; *SBA* = U.S. Small Business Administration.

These grants are targeted to self-identified industry clusters that have the potential to transform their respective regions into high-growth economies with burgeoning employment opportunities in high-wage occupations. Clusters are networks of interconnected firms, suppliers,

[5] Partner agencies, according to the JIAC FFO were to "offer assistance from existing programs and initiatives, provided the clusters meet agency-specific eligibility requirements." The FFO describes the resources from each partner agency in the following way. "These resources include technical assistance or Federally-funded assets that can be leveraged in the cluster or integrated as a collaborative partnership to strengthen the cluster." In their applications, clusters were encouraged to describe how they would take advantage of these resources.

[6] Not all agencies funded all four efforts.

service providers, and supporting institutions (such as educational institutions and incubators) that are all linked to a particular industry or business field in a specific geographic region. Clusters are formed to increase productivity and economic growth by accelerating product or process development and commercialization in key sectors and regions, supporting innovation and regional collaboration, training workers to enter high-wage industries, and supporting entrepreneurship and small business growth. [7]

The U.S. Department of Labor (DOL), Employment and Training Administration (ETA), contracted with Mathematica Policy Research and the W.E. Upjohn Institute for Employment Research to conduct an evaluation of the 20 Jobs and Innovation Accelerator Challenge (JIAC) grants and 10 Advanced Manufacturing JIAC (AM-JIAC) grants.[8] These first two rounds of grants are funded by a total of five Federal agencies: ETA; U.S. Department of Commerce, Economic Development Administration (EDA); U.S. Small Business Administration (SBA); U.S. Department of Commerce, National Institute of Standards and Technology, Hollings Manufacturing Extension Partnership (NIST MEP); and U.S. Department of Energy (DOE). Given the involvement of multiple Federal agencies in these initiatives, ETA is funding the evaluation to explore how the agencies worked together to develop and implement the initiatives. The agency also aimed to build a better understanding of how ETA-funded activities unfolded over time, the associated workforce-related outcomes that the clusters reported achieving, lessons learned through implementation, and plans for sustainability beyond Federal funding.

B. Evaluation overview

The evaluation of the JIAC and AM-JIAC grants aims to provide an in-depth understanding of how the initiatives unfold at the national level and within the regions over time. To address ETA's goals, the process evaluation focuses on answering five key research questions:

1. What is the role of multiagency collaboration both at the Federal level and within the clusters in the planning and implementation of cluster activities?
2. How and in what ways do regional clusters, programs, and partnerships develop under the grant?
3. What workforce-related outcomes did the clusters report achieving through this initiative?

[7] This definition for clusters aligns with those developed by economic development theorists such as Porter (1990, 1998, 2000). The term regional innovation cluster derived from the notion that focused effort in key sectors could be used to bring about regional economic development (Council on Competitiveness, 2001; 2005; 2010; Mills, Reynolds, and Reamer 2008). A closely aligned concept is sectoral initiatives, which in the literature, has taken on a meaning of achieving workforce development by focusing on key sectors (see Conway and Giloth, 2014 and references therein.) Not all of the JIAC and AM-JIAC grantees are as geographically or sectorally concentrated as might be suggested by the term cluster. Nonetheless, this report and our study follows the lead of the FFO for these grants and uses the word *cluster* in a generic manner to refer to the intermediary organization(s) that received the grants and their collaborating partners.

[8] This ETA-funded study covers only the first two rounds of grant awards; the Rural JIAC and Make It In America grants were not included in the evaluation design. Other funding agencies, including EDA and SBA, have also awarded separate evaluation contracts to study different aspects of the grant initiatives.

4. How is the initiative managed within each cluster? What practices are being implemented to promote sustainability of grant resources, partnerships, and activities?
5. What are key lessons learned through implementation? How and under what circumstances might these lessons be replicated?

To answer these questions, the evaluation draws on data from four sources.

1. **Grant document review.** The evaluation includes the review of grant materials, including grant applications and ETA grant agreements, quarterly ETA performance reports, and quarterly integrated work plan (IWP) progress reports.[9] We analyzed data from the grant applications and ETA grant documents to understand their proposed organizational structures, goals, and activities. We received and reviewed IWPs submitted through June 30, 2014, from 28 of the 30 clusters; the most recent IWP progress reports that we received for one cluster was from March 31, 2014, and from September 30, 2013, for the final cluster. We also analyzed quarterly performance reports (QPRs) through June 30, 2014, for 28 clusters and through March 31, 2014, for the remaining two clusters. We were able to supplement our data analyses with a national QPR containing summary data from all clusters through September 30, 2014. See Appendix B for samples of the quarterly progress reports that are submitted to ETA and quarterly IWP reports that are submitted to all of the relevant funding agencies.
2. **Phone interviews with Federal agency representatives.** The study collected qualitative data through two rounds of interviews conducted with federal staff members from the program offices overseeing the grants. The first round of interviews conducted in fall 2013 included nine staff members from four of the five Federal agencies that funded the JIAC and AM-JIAC clusters.[10] Those interviews focused on the history of the grant initiative to help inform the study design. The second round of interviews, conducted in summer 2014, included seven respondents from four of the five Federal funding agencies and 19 ETA Federal project officers (FPOs), located in DOL regional offices, responsible for the direct oversight, in consultation with the national program office, of all 30 JIAC and AM-JIAC grants. Those interviews gathered the Federal perspective on program implementation through summer 2014 and recommendations for clusters to visit in 2015. See Appendix C for the interview protocols.
3. **Site visits to a subset of grantee clusters.** The evaluation team will conduct site visits to 9 of the 30 clusters in 2015. The site visits will provide context and information on cluster goals, implementation and monitoring activities, outcomes, partnerships, and successes and challenges. The site visits will also provide the evaluation team with an opportunity to ask

[9] IWP progress reports are templates that clusters use to provide a consolidated report on activities, outputs, and outcomes for all funding streams. Chapter II discusses their purpose and content in more detail.

[10] The evaluation team was unable to secure interviews with representatives from the Department of Energy. Therefore, that agency's perspective on the AM-JIAC initiative is not represented in this report. Federal staff from the following agencies were included in the data collection and subsequent analysis: ETA; U.S. Department of Commerce, Economic Development Administration (EDA); U.S. Small Business Administration (SBA); U.S. Department of Commerce, National Institute of Standards and Technology, Hollings Manufacturing Extension Partnership (NIST MEP).

questions about DOL's key activities of interest and efforts to sustain partnerships and activities following the grants' conclusion.

4. **A survey of partner organizations.** In 2015, the evaluation team will conduct a survey of cluster managers, ETA grant administrators, and representatives from up to 10 partner agencies in each of the 30 clusters. The survey will focus on cluster environment, partner participation, grant activities, funding sources, support received from Federal partners, data use, and outcomes.

The study will produce two reports. This interim report provides early findings on the implementation of the JIAC and AM-JIAC grants through summer 2014 drawing on two of the study's four data sources: two rounds of phone interviews with Federal staff and the review of grant documents. Data collected from both rounds of Federal interviews provide an understanding of the Federal perspective on multiagency collaboration as well as clusters' progress through summer 2014. To ensure confidentiality, the report does not identity the name or position of any of the respondents. The study's final report will be delivered in 2016 and will include analysis of data from all four sources, including evaluation site visits and the grantee survey, and will provide answers to the full range of study research questions.

Our analysis approach for this report, and the study as a whole, integrates both qualitative and quantitative data sources. The analysis of quantitative data from QPRs and IWPs is purely descriptive and involves simple tabulations and cross-tabulations. The analysis of grant applications and narrative reports includes the systematic extraction and tabulation of key information on cluster characteristics, goals, and proposed activities. Finally, analysis of the qualitative data from Federal interviews involved a multi-step process. Interviewers used a standard template to develop detailed internal notes to feed into the analysis. We then developed and applied a coding scheme using ATLAS.ti, qualitative data coding software, to organize notes by key topics. Using queries from the coded data, the evaluation team used an iterative process of distilling themes, drawing not only on respondent's perspectives about their own experiences but also the study team's insights based on their understanding of experiences across multiple agencies. The analysis highlights common perceptions as well as unique or interesting perceptions. To the extent possible, the team documented the number of respondents that reported different types of experiences and the types of respondents that contributed their perspectives on the topic. Notably, this study is descriptive and does not contain baseline measures upon which to assess growth or change. While the data sources intend to capture the extent to which outcomes may be influenced by the grants, the study does not have a counterfactual and cannot assess the impacts of the program. Despite these limitations, integrating the results of the qualitative and quantitative analyses, the analysis presents systematic and integrated findings on early implementation of the JIAC and AM-JIAC initiatives.

C. Structure of this interim report

This interim report organizes early implementation findings in six chapters. Chapter II addresses the role that multiple Federal agency collaboration played in planning and implementing the cluster activities (research question 1). Chapter III provides details about the clusters, the partnerships that developed under the grant, the populations the clusters are serving, and the sectors the clusters are working in from the time of the grant application (early findings on research question 2). Chapter IV then shares the Federal perspective on clusters' progress

toward goals as of summer 2014, the strengths and weaknesses of the clusters, and factors that might influence sustainability (early findings on research questions 4 and 5). Chapter V provides findings on cluster reports of the number of participants enrolled, services provided, and workforce outcomes achieved through September 2014 (early findings on research question 3). Finally, in Chapter VI, the interim report identifies the selected clusters for upcoming site visits.

II. BACKGROUND ON MULTIAGENCY COLLABORATION AND EARLY FINDINGS ON FEDERAL SUPPORT TO CLUSTERS

The JIAC and AM-JIAC initiatives were distinctive due to the number of federal partners that offered financial and technical support to the awarded clusters. This chapter aims to answer the portion of the study's first research question related to Federal collaboration: What is the role of multiagency collaboration both at the Federal level and within the clusters in the planning and implementation of cluster activities? Findings on collaboration within the clusters will be presented in the study's final report. This chapter first examines the prior experiences of Federal agencies supporting regional clusters and the formation of the White House taskforce that initiated these cluster-based grant opportunities. It then describes the objectives and funding structure of the JIAC and AM-JIAC initiatives, discusses the motivation and goals of the funding agencies regarding their involvement in the initiatives, and provides insights into the successes and challenges the agencies faced in developing the Federal Funding Opportunities (FFOs). Next, the chapter describes the Federal perspective regarding progress toward the initiative's goals of increasing collaboration across Federal agencies and within clusters and reducing silos. Finally, the chapter concludes by discussing the TA the Federal agencies have provided to the clusters.

A. Prior Federal cluster initiatives and formation of the Taskforce for the Advancement of Regional Innovation Clusters

The concept of a cluster as a network of interconnected organizations and supporting institutions that aim to accelerate innovation, business formation, and job creation is one that has gained momentum over the past decade. Recognizing regional innovation clusters as a valuable tool to stimulate the economy, the JIAC and AM-JIAC grants capitalized on previous work funded under other federal efforts.[11] Led by the creation of a White House task force, the Federal partners worked collaboratively to support these innovative, multiagency cluster initiatives.

1. History of federal initiatives to support regional innovation clusters

The five Federal funding agencies that supported the JIAC/AM-JIAC initiatives have a history of supporting regional innovation clusters.[12] Each agency had experience funding similar initiatives to stimulate regional economic development before 2011.

Starting in 2006, ETA funded a series of Workforce Investment Regional Economic Development (WIRED) grants. These grants sought to integrate economic and workforce

[11] The term regional innovation cluster is derived from the notion that focused effort in key sectors could be used to bring about regional economic development (Council on Competitiveness, 2001; 2005; 2010; Mills, Reynolds, and Reamer 2008).

[12] As described in Chapter I, these two grant initiatives are funded by a total of five Federal agencies: U.S. Department of Labor, Employment and Training Administration (ETA); U.S. Department of Commerce, Economic Development Administration (EDA); U.S. Small Business Administration (SBA); U.S. Department of Commerce, National Institute of Standards and Technology, Hollings Manufacturing Extension Partnership (NIST MEP); and U.S. Department of Energy (DOE).

development efforts by creating a workforce training system in which workforce, training, and education institutions and employers work together. The 39 WIRED regions that were awarded through three generations of grants aimed to create and sustain partnerships to transform regional economies (U.S. Department of Labor 2007).

Approximately one year later in 2007, the National Institute of Standards and Technology (NIST) launched its Rapid Innovation and Competitiveness initiatives whose goals were to increase the nation's return on its scientific investment, accelerate technological innovation, stimulate the economy, and enhance U.S. competitiveness.[13] The Hollings Manufacturing Extension Partnership (MEP), a division of NIST created in 1988, focuses on strengthening and developing U.S. manufacturing. NIST MEP funded the Technology Innovation Program. This program, created to support innovative, high-risk, high-reward research, funded nine awards for new research projects (National Institute of Standards and Technology 2009).

In addition to the clusters funded by ETA and NIST MEP, in 2010, the SBA funded 10 initial clusters under SBA's Innovative Economies Initiative. These clusters were intended to increase opportunities for small business participation within the cluster, promote innovation in the focused industries, and enhance regional economic growth and development (U.S. Small Business Administration, n.d.).

In the same year, 2010, the U.S. Department of Commerce (2012b) launched and funded the i6 Challenge grants, which seek to support innovative initiatives to "spur innovation commercialization, entrepreneurship and jobs creation at the local level." The i6 Challenge is a multiagency competition led by the Department of Commerce's Office of Innovation and Entrepreneurship. The i6 Challenge works with other partners such as the National Science Foundation, the U.S. Department of Energy (DOE), and the U.S. Department of Agriculture (DOA) and the Environmental Protection Agency (EPA). The i6 Challenge grants received technical support from NIST MEP, the U.S. Patent and Trademark Office, and SBA (U.S. Department of Commerce 2012b).

The DOE's Energy Regional Innovation Cluster (E-RIC) initiative began around the same time and is devoted to developing technology, designs, and systems for energy-efficient buildings. E-RIC attempts to align the resources of several Federal agencies around regional initiatives. It also aims to foster collaboration between state and local governments, universities, and industry. This multiagency initiative was funded by seven Federal agencies, including DOE, NIST, EDA, SBA, the National Science Foundation, DOL, and the Department of Education (U.S. Department of Energy 2010).

2. Formation of the Taskforce for the Advancement of Regional Innovation Clusters

Amid these various Federal initiatives and the growing recognition of the perceived value of regional innovation clusters, the Obama administration brought together six Federal agencies in 2010 to create a multiagency task force known as the Taskforce for the Advancement of

[13] http://sites.nationalacademies.org/cs/groups/pgasite/documents/webpage/pga_056070.pdf. Accessed November 13, 2014.

Regional Innovation Clusters (TARIC). Although several Federal agencies had programs that aimed to stimulate and contribute to regional economic development, TARIC was created to improve coordination across regional innovation cluster initiatives. In support of this mission, a 2008 Brookings Institution report had called on the Federal agencies to "link, leverage, and align" their resources with regional innovation cluster initiatives (Mills et al. 2008).

TARIC's priorities include coordinating and leveraging Federal resources to support the growth of existing regional innovation clusters and the creation of new clusters. According to testimony provided by John Fernandez, Assistant Secretary of Commerce for Economic Development before the Committee on Energy and Commerce Subcommittee on Commerce, Manufacturing and Trade, "TARIC's primary objectives include monitoring trends in regional innovation clusters, coordinating with Federal staff in regional offices, and facilitating a unified Federal response to requests for assistance from regions related to economic development, education, workforce, and entrepreneurship" (Fernandez 2011). The TARIC and its affiliated agencies offer resources and substantive expertise to advance the economic development of regions throughout the United States.

B. Objectives and funding structure of the JIAC and AM-JIAC initiatives

One of the first projects of the newly formed TARIC was the development of the JIAC initiative in 2010 and the AM-JIAC initiative in 2011. Table II.1 identifies the main objectives of the JIAC and AM-JIAC grants, as described in the FFOs. The two grants share similar objectives, but the AM-JIAC grant objectives are focused on the advanced manufacturing sector. Among these objectives, development of a skilled workforce and ensuring diversity in workforce participation align most closely with the ETA mission.

Table II.I. Objectives of Federal funding opportunities

JIAC Federal funding opportunity	AM-JIAC Federal funding opportunity
• Accelerate the formation and growth of high-growth businesses • Accelerate the creation of high-wage jobs • Advance the commercialization of research by converting innovations into viable products that can be brought to market • Support the deployment of new processes, technologies, and products • Enhance the capacity of small businesses, including small and disadvantaged businesses • Increase exports and business interaction with international buyers and suppliers • Develop the skilled workforce needed to support growing clusters • Ensure diverse workforce participation in clusters through outreach, training, and the creation of career pathways for workers	• Strengthen and expand existing cluster-based partnerships to foster advanced manufacturing, related company growth and accelerate high quality job creation • Develop a skilled and diverse advanced manufacturing workforce through targeted training and employment activities • Accelerate investment in and deployment of advanced manufacturing technologies through public-private partnerships • Expand advanced manufacturing capabilities, networks, supply chains, and assets • Leverage and expand collaborative research and development between universities, Federal labs, and industry • Accelerate commercialization of technologies for advanced manufacturing needs • Support testing of new products and processes using advanced modeling and simulation tools • Spur new entrepreneurial companies that harness advanced manufacturing • Increase exports, repatriate jobs back to the U.S., and attract increased domestic and foreign direct investment

Source: Federal Funding Opportunities for JIAC and AM-JIAC grants (U.S. Department of Commerce 2011), (U.S. Department of Commerce 2012a)

As shown in Chapter I, ETA allotted the majority of funding for the JIAC grants—providing $20 million of the total $33 million—and served as a minority funder for the AM-JIAC grants—providing $5 million of the total $25 million.[14] The ETA funds were authorized through the American Competitiveness and Workforce Improvement Act of 1998, as amended, with the intent to reduce the need for foreign workers under the H-1B visa program. Thus, activities conducted using the ETA grant funds must be directly related to the education, training, and other related services that support high-growth industries or occupations for which employers are relying on workers with H-1B visas.

The JIAC and AM-JIAC grants were offered as two separate funding opportunities, which implementing Federal partners refer to as Round 1 and Round 2 grants, respectively. For the purposes of this report, the Round 1 and Round 2 grants will be referred to as the JIAC and AM-JIAC grants, respectively.

For each funding opportunity, a single FFO was issued, but separate grants were awarded by each funding agency. Each cluster was required to submit a single application that requested grants from and proposed discrete activities for each Federal funding partner. This proposal needed to include an integrated work plan (IWP) that indicated the collaboration between activities funded by each grant. A single entity within a cluster could apply as the formal grantee for all of the Federal funds. Alternatively, multiple agencies within a cluster could work together to submit a single grant document with different entities serving as the grantee for separate Federal funds. For example, a JIAC cluster might have the Local Workforce Investment Board (LWIB) serving as the lead ETA grantee, a local economic development agency serving as the EDA grantee, and the Small Business Development Center at a local university serving as the SBA grantee.

The FFOs did have some requirements concerning local partners. If the grant applicant was not an entity involved in administering the workforce investment system, the organization was required to partner with such an entity.[15] Also, regardless of the type of organization submitting the application, the grantee was required to partner with at least one employer or a consortium of employers.

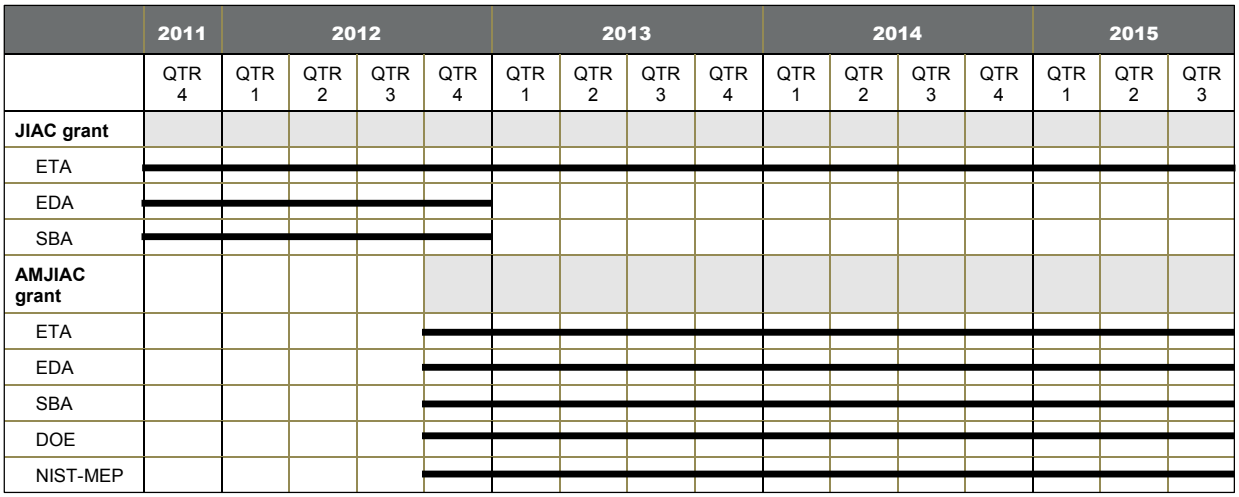
JIAC and AM-JIAC also had slightly different periods of performance (Figure II.1). The length of the three funding streams grants awarded to JIAC clusters varied. The SBA and EDA grants only lasted for two years with a possible no-cost one-year extension, while the ETA grants period of performance is four years with the possibility of a one-year no-cost extension. The funding agencies designed each initiative with this intentional staggering to allow the economic development and small business support activities to occur first and also inform the need, types, and design of workforce activities to help develop a skilled workforce to meet the growing needs

[14] These numbers refer to the anticipated level of funding allocated across departments and do not reflect the actual funded contributions of the agencies.

[15] Generally, the role of the workforce investment system entities in the application was to administer or support the ETA-funded education or training activities. None of the grant applications indicated that the local workforce investment area would be a source of labor market information. The occupation or industrial employment projections in the applications came from statewide or federal sources of information.

of the cluster. In contrast, the five funding stream grants awarded to each AM-JIAC cluster occurred simultaneously and are for three years each.

Figure II.1. Period of performance



Source: Federal Funding Opportunities for JIAC and AM-JIAC grants (U.S. Department of Commerce 2011), (U.S. Department of Commerce 2012a).

JIAC = Jobs and Innovation Accelerator Challenge; *AM-JIAC* = Advanced Manufacturing JIAC; *DOE* = U.S. Department of Energy; *EDA* = U.S. Department of Commerce, Economic Development Administration; *ETA* = U.S. Department of Labor, Employment and Training Administration; *NIST MEP* = U.S. Department of Commerce, National Institute of Standards and Technology, Hollings Manufacturing Extension Partnership; *SBA* = U.S. Small Business Administration.

C. Federal perspective on goals for JIAC and AM-JIAC

Beyond the stated objectives and allowable activities outlined in the FFO, interviews with respondents from four of the five Federal funding agencies shed additional light on the motivation and goals of their respective agencies as TARIC developed the multiagency initiative.[16] First, based on their experiences with and knowledge of prior initiatives, respondents from the four funding agencies perceived that building on the region's existing economic strengths was an effective strategy for economic development and advanced their agencies' missions. All four agencies that were interviewed indicated that the JIAC and AM-JIAC grants were a natural extension of their earlier efforts to support regional innovation clusters. When asked broadly about their agency's goals for the JIAC and AM-JIAC initiatives, respondents from three of the four Federal agencies that were interviewed also noted that their agencies were interested in further exploring and promoting the concept of clusters as an economic development strategy.

Second, national office staff from all four Federal funding agencies asserted that the initiative complemented their agencies' belief in collaborative efforts to create change. The grants provided the agencies with an opportunity to work with diverse partners toward a common goal. Two Federal funding agencies were also motivated by the opportunity to leverage funds to promote more significant outcomes than could be achieved by individual agencies with their own resources.

[16] As shown in Appendix C, the interview protocols covered all of the dimensions noted in the theory of collective impact (Kania and Kramer, 2011; Turner et al., 2012). These dimensions are common agenda, shared measurement system, mutually reinforcing activities, continuous communication, and effective backbone organization.

Lastly, at least one representative from each of the four Federal funding agencies also noted that their agencies had specific, mission-driven motivations for participating in the initiative**.** Tasked with leading the national economic development agenda, EDA representatives reported that the JIAC and AM-JIAC initiative offered an innovative way to further explore their mission, especially in communities that face economic challenges. ETA wanted to create opportunities for workers to climb career ladders and encourage low-wage workers to acquire stackable credentials. Motivated to help small businesses thrive and grow, SBA participated with the explicit hope of supporting small businesses in underserved and low-income communities. Finally, representatives from NIST MEP asserted that the initiative provided another opportunity for their national centers to focus on particular advanced manufacturing clusters and specific technologies.

D. Federal perspective on the development of the JIAC and AM-JIAC Federal Funding Opportunities

Given the combination of funds and varying grant requirements across agencies, the development of such a complex FFO was unique. Each agency had to develop the specific requirements for its agency's grant award but also had to work together to develop an overall vision for the initiative that reduced silos, encouraged collaboration, and provided integrated supports to the clusters. Interviews with representatives from the Federal agencies described the dynamic and collaborative process by which they developed the FFOs.

When the JIAC initiative was first conceived, representatives from the funding agencies quickly discovered that it was not straightforward to pool resources across agencies into a single solicitation for grants applications. Each of the Federal funding agencies dedicated varying amounts of funds depending on its agency's budgets and had technical requirements as to how the funding could be spent. Different funding streams were authorized by different legislation, and the associated statutory requirements as well as agency regulations and restrictions that accompanied each type of funding made the development of the FFO challenging. Legal representatives from all of the agencies needed to collaborate to discern a process that met all agencies' legal requirements. A representative from one agency noted that the rigidity of the funding restrictions was frustrating to all of the partner agencies. For example, DOL requires metrics based on the experiences of individual training participants whereas other agencies are focused on job creation and business-based performance metrics. Although respondents reported that the agencies closely collaborated to develop solutions, they noted that the process was more onerous than any of the agencies expected or hoped.

As a solution to dealing with the various legal restrictions, each funding agency awarded its own grants and maintained its own grant requirements within the FFO, but the agencies used an IWP template and instructions for applicants to provide information about the integration of activities across funding streams. Clusters were required to submit an IWP in their grant application, as well as provide an IWP progress report each quarter during the life of the grant. The IWP served as a work plan as well as a progress report. The tool was developed collaboratively by the Federal agencies to ensure that regional partners were integrating their efforts, increasing collaboration across the cluster, leveraging resources appropriately, and streamlining reporting.

Despite some challenges, interviewed respondents reported in response to questions about the development of the FFOs and the IWP that they felt it was a successful collaborative process. Interviewed representatives from three Federal agencies said that the unified application and reporting process was a successful outcome in and of itself. Specifically, EDA representatives noted that the idea of one grant application, in lieu of several individual ones, aimed to respond to the many needs of regions facing economic challenges. SBA respondents noted that the joint application process and indeed the cluster model itself would hopefully lend itself to increased collaboration. Respondents from ETA noted that the structure of the FFO would be used to encourage clusters to establish partnerships early in the process.

E. Progress toward increasing collaboration and reducing silos among federal agencies

One of the JIAC and AM-JIAC initiatives' main objectives was to meet the goals of effectively using "existing government resources through [the] reduction of siloed Federal programs and [the] promotion of more coordinated Federal funding opportunities that offer more efficient access to Federal resources" (U.S. Department of Commerce 2011, p. 3). Interviewed representatives from the Federal funding agencies spoke of the progress made so far toward those respective goals.

1. Federal cross-agency collaboration

When asked about the initiative's progress towards increasing collaboration across agencies, all Federal agency interview respondents reported successes. National staff from the Federal funding agencies described frequent, collaborative meetings with representatives across agencies at the federal level. Although the official TARIC no longer meets, a multiagency working group born out of the TARIC continues to hold biweekly calls. ETA representatives noted that the working group meets to discuss emerging cluster issues, the various agency evaluations, and performance measurement metrics, among other topics. Representatives from NIST MEP also noted that the funding agencies hold bimonthly webinars on a variety of topics and invite all clusters across the four initiatives to participate. Different Federal funding partners lead the webinar discussions depending on the topic. The participating agencies view this multiagency commitment to discuss regional collaboration toward economic development on a regular basis as a success.

Interviewed respondents also reported that working in partnership with each other has energized the funding agencies and fostered interaction. Representatives from SBA and EDA both noted that the initiative has generated excitement and fostered communication, idea sharing, and interaction across agencies, within clusters and across clusters. A representative from NIST MEP noted that the initiative has increased collaboration across agencies, provided a model for purposeful and active collaboration, and created a common vision across agencies to build on.

2. Challenges in fostering collaboration and reducing silos

Representatives from the Federal agencies noted that although the initiative has fostered collaboration among the national staff of the Federal funding agencies, the goal of reducing silos had not been completely realized. Representatives from two funding agencies described frustration regarding the grant structure and reporting requirements. In particular, representatives

from both agencies noted that they received complaints from the clusters about the separate reporting requirements, performance metrics, and financial requirements for each Federal grant. A respondent from one Federal agency noted the following with respect to the JIAC grants: "If it had been feasible, it would have been better to have one funding stream instead of three. We should have gone to the Hill to ask for special permission or just transferred the money to one agency. It just wasn't doable. It would have been a better way [to approach the grants]. [We could have] avoided the stove pipe [approach] required for reporting back to three different agencies on three different funding streams."

To further foster collaboration, federal support teams (FSTs) consisting of staff from funding and non-funding partner agencies were to be developed in each region. The FFOs for both the JIAC and AM-JIAC grants described the various support roles the partner agencies could play in providing not only TA but to ensure that Federally-funded assets could be leveraged in the cluster. Specifically, the FFOs discussed the anticipated involvement in FSTs of 11 non-funding partner agencies for JIAC and 7 non-funding partner agencies for AM-JIAC.[17] (See Appendix A for a list of the agencies.) The FSTs were designed "to ensure that successful applicants and partners are aware of and can access available Federal resources…An important function of the Federal support teams will be to provide coordinated federal support to clusters and to identify where processes and requirements can be improved" (U.S. Department of Commerce 2011, p. 10). Cluster applicants were encouraged to describe how they would utilize these services in their applications and associated technical proposals (U.S. Department of Commerce 2012a, p. 6).

Based on respondents' responses during federal interviews, the FSTs did not form or function as originally intended. Interview respondents from the Federal agencies expressed confusion about the FSTs' intended role and how the agencies were to support the FSTs' work. One agency respondent noted during a 2013 interview that the FST was a great idea and concept; having Federal agencies at the regional level to assist grantees would encourage positive partnerships. However, while staff at the Federal agencies held a few calls and meetings around the creation of the FST at the start of the JIAC grants, the respondent indicated that the FSTs did not materialize. In fact, in the AM-JIAC grants, the FFO dropped the concept of FSTs as an organizing structure. Respondents from one agency speculated that the lack of actualization around the FSTs was due to under resourced agencies that do not necessarily have staff to play this coordinating role. The representative cited that Federal staff often supports more than one cluster that received an ETA grant. A representative from another Federal funding agency independently articulated the concern that Federal agencies are under resourced but also speculated that, although there was support for the model, the logistics of implementation were challenging due to the how differently each agency operationalizes each grant program.

[17] There are a total of 11 agencies that support the JIAC grants and 7 agencies that support the AM-JIAC grants. However, within several agencies, there are divisions or administrations that are supporting the grants.

Interviews with ETA FPOs responsible for monitoring the agency's JIAC and AM-JIAC grantees out of ETA's regional offices further reinforced the finding that coordination at the regional level was limited across agencies. As noted previously, the length of each grant awarded to the cluster varied across agencies. ETA FPOs acknowledged that the ETA-funded activities built on the work performed under the other funding sources and therefore, by design, were often the last activities to begin. With that caveat, most ETA FPO respondents located in regional offices were unaware of the roles that other agencies played to support the specific clusters that they oversaw and more broadly in the overall initiative. Of the 19 ETA FPOs, only 5 could identify other active partners and their role in supporting the clusters.

F. Technical assistance efforts to support clusters

Staff from the Federal funding agencies provided TA and support to the JIAC and AM-JIAC clusters. Each of the funding agencies has a different staffing structure. Both ETA and EDA have regional offices throughout the country and dedicated FPOs who oversee the grants. For instance, ETA has 19 FPOs who oversaw the 30 clusters. Other funding partners, such as SBA and NIST MEP, do not have the equivalent regional office structure. Rather, NIST MEP, for example, had six managers at the national level who each oversaw clusters. Within these existing staff structures, national office respondents and ETA FPOs provided information about the TA they offered to support the clusters in their efforts.

1. Technical assistance provided by national offices of the Federal funding agencies

Interview respondents from each of the Federal funding agencies described several formal opportunities to provide TA to the clusters through regular webinars, TA contractors, and national conferences. First, all of the interviewed representatives from the federal funding agencies discussed the use of quarterly webinars to provide TA to grantees. During these webinars, the Federal agencies could address emerging issues and provide an opportunity for clusters to share best practices with the other clusters. SBA representatives mentioned topics such as integrating funding streams and establishing connections with partners in an existing supply chain. NIST MEP representatives mentioned topics including identifying and working with "angel investors"[18] and encouraging the clusters to work with the nationwide centers. ETA representatives mentioned these webinars as an effort to establish learning communities to foster cluster networking and information sharing.

Beyond quarterly webinars, the Federal agencies also offer other TA supports. ETA contracted with a TA contractor—Coffey Consulting—that began identifying the needs of the ETA grantees in spring 2014 and continues to provide targeted TA to clusters that need assistance and support. Representatives from EDA noted that they developed tools for clusters to use for project planning and goal setting as well as resources and templates, which they encourage clusters to use. For instance, NIST MEP developed an online tool called CONNECT

[18] Angel investors are often private, affluent individuals or group of individuals who provide capital for a business' start-up in exchange for a portion of the company's ownership.

to enable AM-JIAC partners to track company contact information, summarize company interactions, and create a database of partner groups (Sheppard and Center for Regional Economic Competitiveness 2014).

In July 2014, the Federal funding agencies across all four initiatives worked together to host a national grantee conference. JIAC, AM-JIAC, Rural JIAC, and MIIA clusters were able to participate in best practice sessions that covered topics such as serving underserved and underrepresented small businesses, sustaining cluster collaboration, using evaluation and tracking tools, and assessing the strength of cluster partnerships. Each cluster developed a poster to share its work and was encouraged to network with representatives from other clusters. During the conference, each funding agency held discussions to address questions and concerns unique to their specific grants. Additional in-person meetings, like the AM-JIAC kick-off event held by NIST in January 2013, provided the clusters with the opportunity to meet each other and learn about the grants' expectations.

Representatives from the national office of funding agencies asserted that they have been successful in providing support to the clusters. They have provided hands-on assistance to individual clusters as needed and worked across agencies to provider overarching support to all clusters. Much of the collaboration the respondents alluded to early in the chapter was attributed to the role the Federal agencies provide in supporting the clusters.

The agencies were also able to connect clusters with Federal non-funding partners in specific instances where support was needed. For example, interview respondents mentioned that the Departments of Education and Transportation had offered assistance to specific clusters based on specific TA needs.

Interview respondents acknowledged, however, that the extent of TA that they can provide is constrained by limited resources. As one respondent offered, "It is a huge country with huge number of players, lots of unknowns, and individualized cases. Each cluster has its own network, issues, entities, problems, et cetera. It makes providing support hard." This sentiment was echoed by representatives from another agency, who suggested that additional staff would be necessary to provide more support: "Each agency has only so much bandwidth and you get to a point of diminishing returns. [The clusters] are much too diverse unless you're really able to increase staffing." The tension that arises from being pulled in many directions was noted by a representative from a third agency: "Federal agencies have limited capacity…to provide TA. As with any project management, we had to prioritize how we are using our resources. FPOs provide capacity and day to day support…At some times, that is enough. At other times, it isn't. We have done a great job of supporting this work and our staff is exception[al] but we don't have all of the resources [we need] to do this."

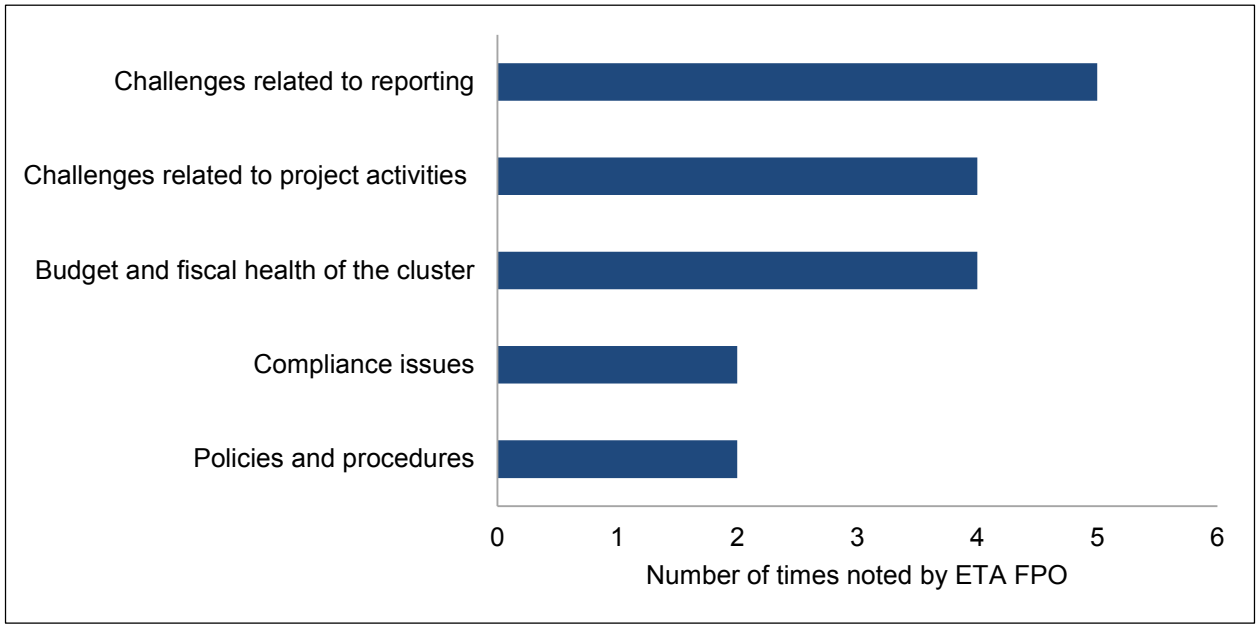
2. Technical assistance provided by ETA at the regional level

Whereas the ETA national office provides program specific technical assistance, ETA FPOs provide TA in the form of grant and fiscal management assistance to the ETA grants that they oversee. The FPOs mentioned providing TA through several different formats, including site visits as well as telephone and email correspondences. Of the 30 clusters, ETA FPOs reported

conducting in-person visits with 20 of the clusters.[19] During these visits, the FPOs met with grant staff and cluster partners to discuss grant progress, successes, and challenges. The site visits also included *desk audits*, the term used for the process by which a Federal officer reviews a cluster's progress through documents and reports. The majority of the FPOs also described answering questions or concerns from the clusters using email or phone conversations. One FPO who oversaw multiple grants held a monthly call across the clusters as a forum for brainstorming; during the call, grantees could provide an update and discuss the challenges they were facing.

Although the ETA FPOs noted that communication went to and from grantees and Federal staff, the majority described the TA as being FPO driven. ETA FPOs reported reaching out to the clusters to ensure that they had the information and support they needed. Given this, TA was often related to budgets, reporting requirements, Federal policies, and compliance (Figure II.2). The extent and nature of TA varied considerably, with some FPOs providing substantial support to grantees as they implemented their initiatives. For instance, one FPO described the work necessary to modify a contract. The FPO helped the cluster restructure its training and retarget its efforts based on the emerging employer demand, job availability, or worker needs in the region. Another FPO provided expertise and resources to help the cluster address the challenges of working with long-term unemployed participants. FPOs who oversaw 17 of the 30 clusters reported initiating the majority of the TA themselves.

Figure II.2. Technical assistance topics reported by ETA FPOs



Source: Interviews with 19 ETA FPOs in summer 2014; note that 2 FPOs did not provide responses to this question.

[19] In-person site visits by FPOs are required under the grant. Of the 10 remaining clusters, 7 had not yet had a scheduled monitoring visit, and it was not clear from the interview whether FPOs had visited the remaining 3 clusters.

In contrast to concerns voiced by representatives at the national office level, most ETA FPO respondents asserted that the Federal government had enough resources to adequately provide TA to the clusters. Fifteen of the 19 interviewed ETA FPOs noted that the Federal government had the capacity and resources to meet cluster needs.

III. OVERVIEW, GOALS, AND PROPOSED ACTIVITIES OF THE JIAC AND AM-JIAC CLUSTERS

Having provided the context for the national multiagency collaboration in Chapter II, this chapter turns to describing the 20 JIAC and 10 AM-JIAC clusters. It aims to provide early findings on the second research question: How and in what ways do regional clusters, programs, and partnerships develop under the grant? The initial section presents the clusters' geographic locations and sectoral focus. The chapter then discusses the types of entities that administer the grants, involvement of employers in the governance structure, and maturity of partnerships before JIAC/AM-JIAC. The chapter ends with a description of the goals and proposed activities outlined by the clusters in their applications. Notably, the specific goals of and activities conducted by each cluster could have changed since the initial grant applications. Federal interviews indicated that some clusters had to adapt their plans due to circumstances or opportunities that had arisen over the course of implementation. Data that will be collected in 2015 during evaluation site visits and the survey of cluster partners will update data from the grant applications and enhance the picture of cluster characteristics and activities.

A. Geographic location and sectoral focus of the JIAC and AM-JIAC clusters

JIAC and AM-JIAC grants were awarded to self-identified clusters that cover diverse geographic regions of the country and focus on a range of industry sectors. Table III.1 provides the name of each cluster, the list of grantee organizations (with the type of grant they received noted in parentheses), the region covered by the grant, the industry or sector focus, and the total funding level for the cluster. As discussed in Chapter I, this report and the initiative use the term *cluster* to designate the team of collaborative partners that was awarded funding under these initiatives. The intention and motivation behind these funded clusters is that by working together, the interconnected firms and supporting institutions that are located near each other will benefit from formal or informal networking. The objective of the collaboration is ultimately regional economic development. Thus, it is relevant to assess the location and geographic footprint of the clusters as well as the types and specificity of their sectoral focuses.

1. Location and urbanicity

The geographic footprint of the clusters is an important characteristic to examine because it is likely to correlate with the ease with which the grantees can develop and implement effective networks. For instance, if the geographic area of the cluster is large, then transportation and communication costs might inhibit collaboration (Porter 2000).

The clusters span the country, but there is limited geographic dispersion (Figure III.1). The 30 grants are located or partially located in 22 states,[20] and nine of those states have more than one cluster (Table III.2). New York houses four of the grants; Pennsylvania and Missouri have three; Tennessee, Michigan, California, Kansas, Washington, and Oregon have two.

[20] An IWP report for the Philadelphia AM-JIAC grant indicates that personnel from the University of Delaware are delivering some training, but it does not identify whether the activities occur in Delaware or whether any parties involved in the activities reside there. If, indeed, some of the cluster's activity is occurring in Delaware, then the count of states is 23.

Table III.I. Overview of JIAC and AM-JIAC clusters

Project name	Grantee organizations	Region	Cluster focus	Funding
	JIAC grantees			
Advanced Composites Employment Accelerator	Roane State Community College	Knoxville and Oak Ridge, TN, and surrounding	Advanced composites (low-cost carbon fiber technology)	$1,627,185
Atlanta Health Information Technology Cluster	Georgia Tech Research Corporation	GA	Health IT	$1,650,000
Center for Innovation and Enterprise Engagement	Wichita State University	South Central KS	Advanced materials	$1,993,420
Clean Energy Jobs Accelerator	Space Florida	East Central FL	Clean energy	$2,148,198
Clean Tech Advance Initiative	City of Portland (EDA); Worksystems, Inc. (ETA); Oregon Microenterprise Network (SBA)	Portland, OR, and Vancouver, WA	Clean technology	$2,150,000
Finger Lakes Food Processing Cluster Initiative	Rochester Institute of Technology, Center for Integrated Manufacturing Studies	Finger Lakes region, NY	Food processing	$1,547,470
GreenME	Northern Maine Development Commission	Northeastern ME	Renewable energy	$1,928,225
KC Regional Jobs Accelerator	Mid-America Regional Council Community Services Corporation (EDA); Full Employment Council, Inc. (ETA); University of Missouri Curators, on behalf of the University of Missouri–Kansas City Innovations Center KCSourceLink (SBA)	Greater Kansas City (MO and KS)	Advanced manufacturing and IT	$1,891,338
Milwaukee Regional Water Accelerator Project	University of Wisconsin–Milwaukee (EDA, SBA); Milwaukee Area Workforce Investment Board (ETA)	Milwaukee, WI, and surrounding	Water	$1,650,000
Minnesota's Mining Cluster—The Next Generation of Innovation and Diversification to Grow America	University of Minnesota Natural Resources Research Institute (EDA); Minnesota Department of Employment and Economic Development (ETA); University of Minnesota Center for Economic Development (SBA)	Northeastern MN	Energy	$1,948,985
New York Renewable Energy Cluster	The Solar Energy Consortium (EDA); Orange County Community College (ETA); Gateway to Entrepreneurial Tomorrows, Inc. (SBA)	Hudson Valley, NY	Renewable solar energy	$1,950,000
Northeast Ohio Speed-to-Market Accelerator	Northeast Ohio Technology Coalition (EDA); Lorain County Community College (ETA); JumpStart, Inc. (SBA)	Cleveland and Akron, OH, and surrounding	Energy, flexible electronics	$2,062,945
Renewable Energy Generation Training and Demonstration Center	San Diego State University Research Foundation	San Diego, CA, and surrounding	Renewable energy	$1,671,600
Rockford Area Aerospace Cluster Jobs and Innovation Accelerator	Northern Illinois University (EDA; ETA); Rockford Area Strategic Initiatives (SBA)	Rockford, IL, and surrounding	Aerospace	$1,769,987
Southeast Michigan Advanced Energy Storage Systems Initiative	NextEnergy Center (EDA); Macomb/St. Clair Workforce Development Board (ETA); Michigan Minority Supplier Development Council (SBA)	Detroit, MI, and surrounding	Advanced energy storage systems	$2,125,745
Southwestern Pennsylvania Urban Revitalization	Pittsburgh Central Keystone Innovation Zone (EDA); Hill House Association (ETA); University of Pittsburgh (SBA)	Southwestern PA	Energy, health care	$1,959,395
St. Louis Bioscience Jobs and Innovation Accelerator Project	Economic Council of St. Louis (EDA); St. Louis Agency on Training and Employment (ETA); St. Louis Minority Supplier Development Council (SBA)	St. Louis City and County	Bioscience	$1,825,779
The ARK: Acceleration, Resources, Knowledge	Winrock International (EDA, SBA); Northwest Arkansas Community College (ETA)	Northwestern AR and bordering counties in OK and MO	IT	$2,150,000
Upper Missouri Tribal Environmental Risk Mitigation Project	United Tribes Technical College	MT, ND, and SD reservations	Environmental risk mitigation	$1,716,475
Washington Interactive Media Accelerator	EnterpriseSeattle	Seattle, WA, and surrounding	Interactive media	$1,229,000

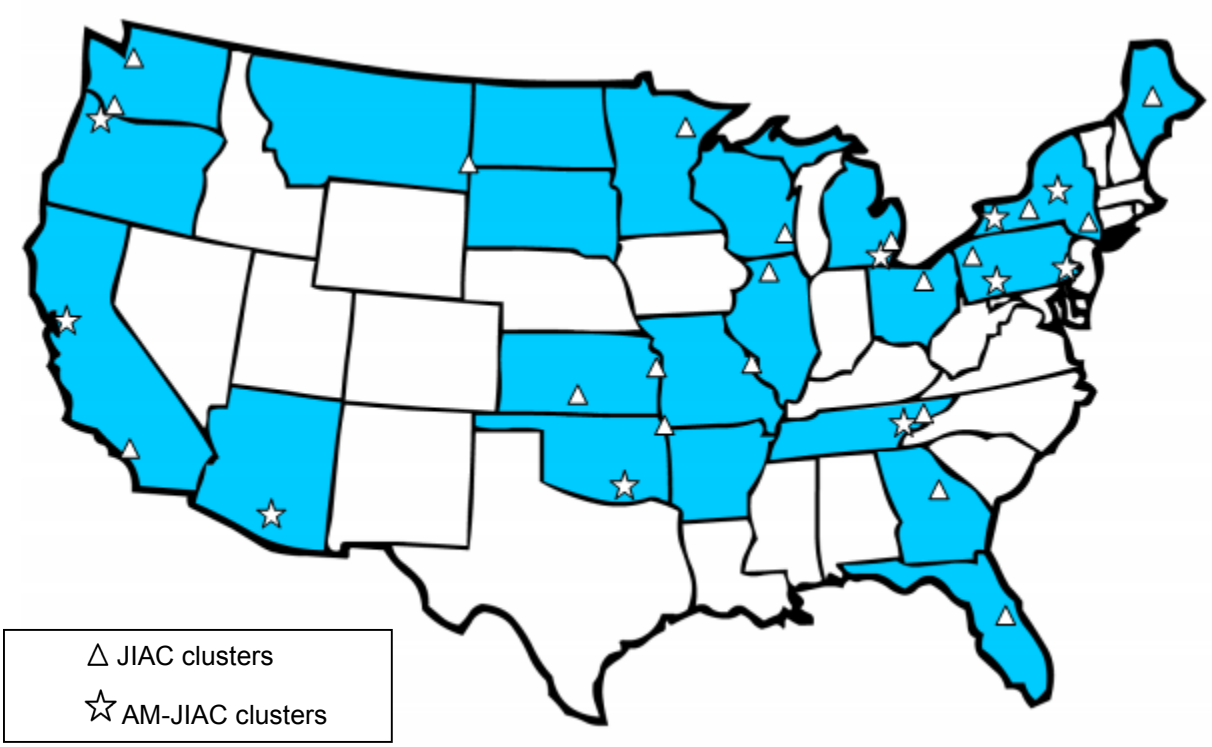
Project name	Grantee organizations	Region	Cluster focus	Funding
	AM-JIAC grantees			
AMP! Advanced Manufacturing and Prototyping Center of East Tennessee	Technology 2020 (EDA, SBA, DOE); Pellissippi State Community College (ETA); University of Tennessee (NIST MEP)	Eastern TN	Additive manufacturing, lightweight metal processing, roll-to-roll processing, low-temperature material synthesis, complementary external field processing	$2,391,778
Growing the Southern Arizona Aerospace and Defense Region	Arizona Commerce Authority	Southern AZ (Phoenix area)	Aerospace, defense	$1,817,000
Advanced Manufacturing Medical/Biosciences Pipeline for Economic Development	East Bay Economic Development Alliance (EDA); Corporation for Manufacturing Excellence (NIST MEP); the University of California–Berkeley (DOE); Laney College (ETA); Alameda and Contra Costa SBDCs (SBA)	San Francisco area	Medical and biosciences manufacturing	$2,190,779
Innovation Realization: Building and Supporting an Advanced Contract Manufacturing Cluster in Southeast Michigan	Southeast Michigan Community Alliance (EDA, ETA); Michigan Manufacturing Technology Center (NIST MEP); National Center for Manufacturing Sciences (DOE); Detroit Regional Chamber Connection Point (SBA)	Southeastern MI	Lightweight automotive materials	$2,191,962
Proposal to Accelerate Innovations in Advanced Manufacturing of Thermal and Environmental Control Systems	Syracuse University (EDA, DOE); NYSTAR (NIST MEP); The State University of New York's College of Environmental Science and Forestry (ETA); Onondaga Community College (SBA)	Syracuse, NY	Thermal and environmental control systems	$1,889,890
Rochester Regional Optics, Photonics, and Imaging Accelerator	University of Rochester (EDA, DOE, ETA); NYSTAR (NIST MEP); High Tech Rochester Inc. (SBA)	Rochester, NY	Optics, photonics, and imaging	$1,889,936
Manufacturing Improvement Program for the Oil and Gas Industry Supply Chain and Marketing Cluster	Oklahoma Manufacturing Alliance (NIST MEP); New Product Development Center at Oklahoma State University (EDA, ETA, SBA); Oklahoma Department of Commerce, Center for International Trade and Development at Oklahoma State University, and Oklahoma Application Engineer Program (DOE)	OK	Oil and gas	$1,941,999
Agile Electro-Mechanical Product Accelerator	Innovation Works (EDA, SBA); Catalyst Connection (NIST MEP); National Center for Defense Manufacturing and Machining (DOE); Westmoreland/ Fayette Workforce Investment Board (ETA)	Western PA	Metal manufacturing, electrical equipment	$1,862,150
Greater Philadelphia Advanced Manufacturing Innovation and Skills Accelerator	Delaware Valley Industrial Resource Center	Philadelphia, PA	Additive manufacturing and composites technology	$1,892,000
Innovations in Advanced Materials and Metals	Columbia River Economic Development Council (EDA, DOE); Impact Washington (NIST MEP); Southwest Washington Workforce Development Council (ETA); Oregon Microenterprise Network (SBA)	Vancouver, WA, and Portland, OR	Metals and advances materials	$2,192,000

Source: JIAC and AM-JIAC grant applications.

Note: The text in parentheses following the name of each grantee organization indicates the type of Federal JIAC or AM-JIAC grant the organization received. In cases where one organization is listed without parentheses, that single organization received all Federal grants for the cluster.

DOE = U.S. Department of Energy; EDA = U.S. Department of Commerce, Economic Development Administration; ETA = U.S. Department of Labor, Employment and Training Administration; IT = information technology; NIST MEP = U.S. Department of Commerce, National Institute of Standards and Technology's Hollings Manufacturing Extension Partnership; SBA = U.S. Small Business Administration; SBDC= Small Business Development Center.

Figure III.1. JIAC and AM-JIAC cluster locations



Source: JIAC and AM-JIAC grant applications.

Five of the clusters involve more than one state. In three of these cases, the cluster is located in an urban area. In particular, Portland, Oregon, and Vancouver, Washington, have two clusters and Kansas City, Missouri/Kansas has one. In the other two cases, the cluster comprises broad sweeps of more than one state. The United Tribes Technical College grant involves activities in Montana, North, and South Dakota, and the Northwest Arkansas Community College Acceleration, Resources, and Knowledge (ARK) grant involves Arkansas, Missouri, and Kansas.

Table III.2. Number of JIAC and AM-JIAC clusters per state

States with one cluster	AR, FL, GA, IL, ME, ND, OH, OK, SD, MT, WI
States with two clusters	CA, KS, MI, OR, TN, WA
States with three clusters	MO, PA
States with four clusters	NY
Total number of states	22

Source: JIAC and AM-JIAC grant applications.

Five of the AM-JIAC grants are co-located in areas with JIAC grants. In some cases, applications indicate that the grantees were aware of each other and intended to work together to some extent. In these cases, the sectoral focus of the JIAC and AM-JIAC grants were closely related, and it appeared from a review of the applications that the cluster partnerships were well developed. In other cases, the colocation is not mentioned in the applications and might be coincidental.

Two-thirds of the clusters involve multiple counties with a mix of urban, suburban, and rural areas. Four of the clusters are targeted toward or have activities solely in an urban area, and the remaining six clusters are targeted toward rural areas.

2. Industry and sector focus

The FFOs required the clusters to identify a sector in which the jobs and/or innovation acceleration was to occur. The 10 AM-JIAC grants were constrained to an advanced manufacturing focus. The sectors these clusters identified were most often in durable manufacturing/equipment areas (Table III.1). Three clusters focus on transportation equipment including aerospace, and three clusters focus on advanced materials such as carbon fiber composites. The other four clusters involve unique sectors that are not duplicative of any of the other AM-JIAC clusters. These include optics/photonics/imaging, thermal control systems, oil and gas, and electronic equipment used in biosciences.

The sectors in the 20 JIAC clusters differ from, and perhaps might be considered as complementary to, the AM-JIAC clusters because their sectoral focuses are not in manufacturing. Several JIAC clusters actually focus on multiple sectors. Six of the clusters identify their clusters as renewable energy or related industries. Two other clusters identify their sector as a renewable energy-related industry along with another industry, and one other cluster identifies a closely related sector—environmental risk mitigation. The next most popular sector was information technology (IT), which is the sectoral focus in three clusters and one of two sectors in a fourth cluster. In one of the IT clusters, the focus is health systems, and in another, the focus is interactive media. Advanced materials/manufacturing is the sector in two of the clusters and is one of two industries in another. The remaining JIAC clusters are unique. They include food processing, water, aerospace, nonferrous mining, and flexible electronics.

Theorists suggest that the type and specificity of a cluster's sectoral focus might have implications for its effectiveness. For example, if the sectoral focus is "broad," then training and supply chain management needs might be quite broad and difficult to target efficiently; in contrast, a "narrow" sectoral focus might make it harder to take advantage of information and economic efficiencies (Porter 2000). In reviewing the identification of sectors in cluster applications, the evaluation team characterized each cluster focus as being broad in scope or narrow/specific (niche-like) in scope. These classifications will be used in future analyses when examining patterns of data from site visits and surveys. However, as discussed in the SBA study of the agencies' regional innovation cluster initiative, it is extremely difficult to define the range of sectors represented by these clusters, especially due to the limitations of the North American Industry Classification System (NAICS), which is typically used to define industries (Monnard et al. 2014). Efforts such as the Harvard Cluster Mapping Project are attempting to address those identification issues and develop a nationwide picture of regional clusters using mapping data (Harvard Business School US Cluster Mapping).

Based on the JIAC grant applications, about half of the clusters have identified quite broad sectors, and the other half are narrow. Examples of broad sectors would include advanced manufacturing and IT in the Kansas City Regional Jobs Accelerator; food processing in the Finger Lakes (NY) Food Processing Cluster Initiative; and aerospace in the Rockford (IL) Area Aerospace Cluster. Examples of more narrow, or specific, sectors include interactive media in

the Washington (State) Interactive Media Cluster; nonferrous mining in the Minnesota Mining Cluster; and advanced energy storage systems in the Southeast Michigan Advanced Energy Storage Systems Initiative.

A larger share of AM-JIAC clusters applications can be characterized as broad in nature compared to the JIAC clusters. In particular, 7 of the 10 clusters have a broad focus, such as the transportation equipment sector in the Greater Philadelphia Advanced Manufacturing Innovation and Skills Accelerator or advanced manufacturing prototyping in AMP! Advanced Manufacturing and Prototyping Center of East Tennessee. Examples of narrower sectoral focusing among the other three clusters is optics, photonics, and imaging in the Rochester (NY) Regional Optics, Photonics, and Imaging Accelerator.

3. Target populations for ETA activities

All of the clusters proposed to serve more than one target population. For their primary targeted groups, 16 clusters planned to serve unemployed workers, 13 planned to serve incumbent workers, and 7 planned to serve underemployed workers. Some of the clusters also anticipated making special effort to target subpopulations, including veterans, women, older youth, and minorities. Notably, several FPOs indicated that the clusters refocused their efforts as implementation unfolded. Therefore, the populations who are actually served might differ from these target populations. Quarterly performance data and site visit interviews will explore this issue and document how and why target populations might have changed over time.

B. Cluster organizational structures and partnership maturity

As discussed in Chapter II, 20 JIAC clusters in total were each awarded grants from three funding streams, and 10 AM-JIAC clusters in total were each awarded grants from five funding streams. The term *cluster administrator* in this report refers to the organization serving in the coordinating role across grant recipients within a cluster; often the cluster administrator is the organization that aggregates and submits the clusters' IWP reports. The term *funding stream administrators* refers to the organizations receiving specific grants within the cluster. Given this definition, the JIAC clusters have up to three funding stream administrators, and the AM-JIAC clusters have up to five funding stream administrators.

Among the 30 clusters, there are three organizational structures (Table III.3). Eleven of the 30 clusters—including 9 JIAC and 2 AM-JIAC clusters—have a single organization that received all of the related grants and serves in the role of cluster and funding stream administrators. Nine of the 30 clusters—including 8 JIAC and 1 AM-JIAC cluster—have separate awardees for each funding stream. The remaining 10 clusters—including 3 JIAC and 7 AM-JIAC clusters—have more than one funding stream administrator but one or more organizations received multiple grant types.

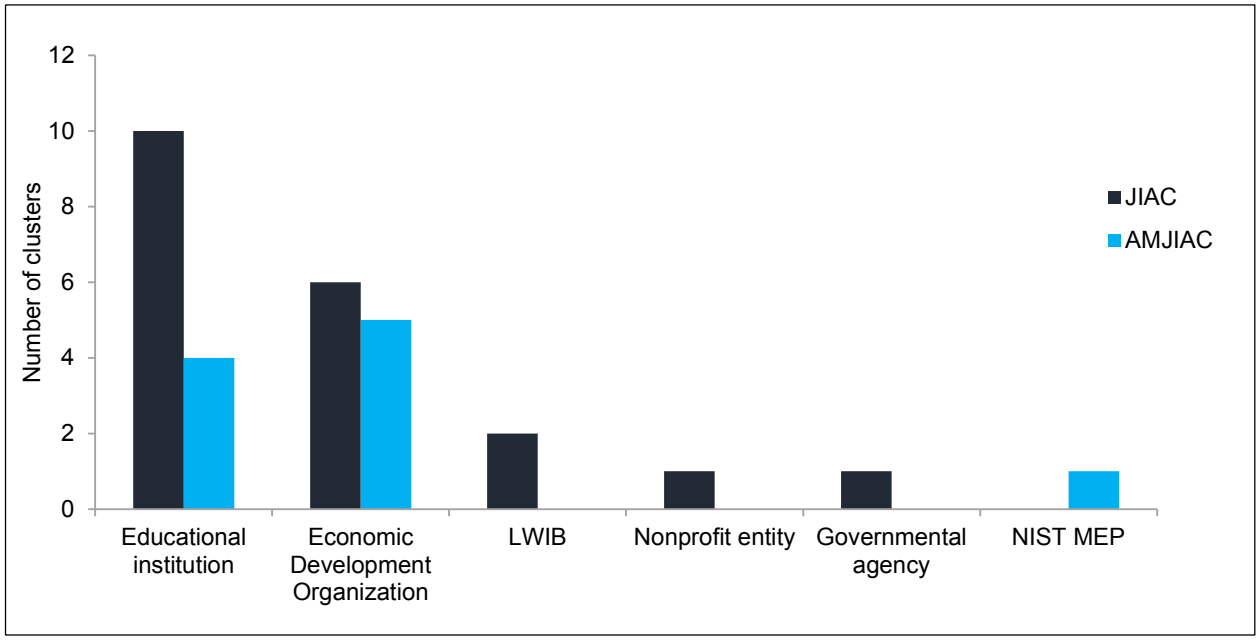
Table III.3. Cluster organizational structure

	Number of JIAC Clusters	Number of AM-JIAC Clusters
Single Organization Received All Grants	9	2
Different Organizations Received Each Grant	8	1
Some Organizations Received Multiple Grants	3	7
Total	**20**	**10**

Source: JIAC and AM-JIAC grant applications.

Nearly half of the clusters (14 of 30) have educational institutions in the lead role as cluster administrator (Figure III.2). Among the 20 JIAC clusters, 6 cluster administrators are four-year universities or colleges and 4 are community colleges. Among the 10 AM-JIAC grants, 3 cluster administrators are four-year institutions and one is a community college. Economic development organizations serve as the next most common type of cluster administrator.

Figure III.2. Types of organizations serving as cluster administrators



Source: JIAC and AM-JIAC grant applications.

Less than one-third of cluster applications suggested that private sector employers would explicitly have a role in the JIAC or AM-JIAC governance structure. Three of the 10 AM-JIAC clusters and 6 of the 20 JIAC clusters mentioned at least one private sector employer in the cluster governance structure. However, a report released by SBA from its evaluation of the JIAC initiatives suggested that nearly all clusters developed governance structures that included a significant number of small businesses. Their involvement provided a forum to discuss concerns and make constructive suggestions on cluster development strategy and improvements to cluster services (Monnard et al. 2014). This discrepancy might have resulted from the JIAC and AM-JIAC clusters not explicitly identifying the members of their governance boards at the time of application. Future data collection through this study's site visits and surveys will further explore the extent and nature of employer partnerships in the initiative.

As part of the application, the FFOs required each cluster to discuss existing partnerships that supported the targeted cluster. Virtually all of the JIAC and AM-JIAC clusters included such a discussion. In almost all of the cases, the cluster administrative and its partners are mature organizations that have been located in their respective regions for many years and had existing partnerships. However, it is not clear whether the particular constellation of partners in each cluster had prior relationships with each other. This challenge exists for both single entity clusters as well as multiple entity clusters.

Prior research on cluster initiatives suggests that a history of collaboration serves as a key factor in determining effectiveness of the region's activities (Almandsmith et al. 2009). Mature partnerships do not need to invest the time and resources that are necessary to form an effective organization; the organizations simply build on the established relationships (Kania and Kramer 2011). A report published by NIST MEP on early progress with the AM-JIAC initiative suggested that some clusters faced implementation hurdles during project start-up when they did not have a long history of collaboration and needed time to develop new relationships (Conway and Giloth 2014; Sheppard and Center for Regional Economic Competitiveness 2014).

Building on this idea, the evaluation team categorized the prior collaboration among key JIAC and AM-JIAC partners. In particular, a cluster is considered as having a prior collaborative history if the application indicates that the economic development, workforce development, and small business development partners had worked together before the JIAC or AM-JIAC grant application. Using this stringent definition, approximately one-third of applications (12 of the 30 clusters—3 AM-JIAC and 9 JIAC) indicated prior collaboration. The other 19 applications were ambiguous or silent about whether they were a mature partnership, or explicitly stated that they did ***not*** have prior collaboration. Survey data collected in 2015 through this ETA evaluation will capture more information on the number of partners in each cluster as well as the extent of prior collaboration.

C. Cluster application goals

As Chapter II notes, the FFOs were relatively proscriptive about the goals and activities that were expected in grant applications. Furthermore, the FFOs required clear statements about the expectations for measurable outcomes of cluster activities. As a result, all applications were to propose one integrated project with distinct scopes of work that are all consistent with the evaluation criteria. However, clusters' applications could place emphasis or focus on different aspects of the JIAC and AM-JIAC grants. For the JIAC grants, applicants were to present a coherent project that responded to the following agency goals:

- Activities that foster regional competitiveness (EDA)
- Training and related employment activities to develop a skilled workforce (ETA)
- Identification of and support to small businesses that are owned and controlled by economically and socially disadvantaged individuals, located in areas of high unemployment, or are owned by low-income adults (SBA)

For the AM-JIAC grants, clusters needed to include each of the following scopes of work:

- Activities to enhance cluster networks and regional assets (EDA)

- Services to assist small and medium enterprises (SMEs) (NIST MEP)
- Research and development activities to reduce technical risk (DOE)
- Training to build a high-skilled and diverse workforce (ETA)
- Assistance for entrepreneurial development in disadvantaged communities (SBA)

A review of cluster applications reveals that goals are generally in line with the expectations of the FFOs. Several grantees, however, offer additional goals beyond those stated by the funding agencies. For example, 6 of the 30 clusters refer to a goal of overcoming a significant downsizing or business closure. For example, the Rochester Regional Optics, Photonics, and Imaging Accelerator intends to revitalize the talent, educational resources, and supply chain that existed before Kodak significantly downsized. The Advanced Manufacturing of Thermal and Environmental Control Systems cluster in central New York intends to build on the legacy and regional assets of the Carrier Corporation. Other clusters present an overarching goal of transitioning the workforce from a downsized sector to another related sector. The Space Coast Clean Energy Jobs Accelerator is working toward facilitating the movement of engineers and other technical workforce from the downsized aerospace industry into the clean energy sector.

Three of the clusters specifically target small or medium-sized enterprises (SMEs) in their overarching goals. For example, the application for the Oklahoma Manufacturing Improvement Program for the Oil and Gas Industry Supply Chain and Marketing Cluster states that "creating a progressive, innovative, efficient set of small and medium-sized manufacturers (SMMs) …within the supply chain and marketing cluster will contribute to the ability of the oil and gas industry to efficiently supply the energy needs of the U.S.".

Five of the clusters' applications have an overarching goal that might be characterized as unique because the goal is very specific and no other cluster seems to have a similar goal. For example, Green Maine has a goal of converting a substantial number of residences and commercial buildings from conventional to renewable energy sources. Another example is the Northeast Ohio Speed to Market Accelerator, which focuses on commercializing technological innovations as quickly as possible. Of course, as noted below, many of the clusters include commercialization activities, but what makes the Ohio cluster unique is the branding of "Speed to Market" and its singular focus on accelerating the speed of commercialization.

D. Proposed activities

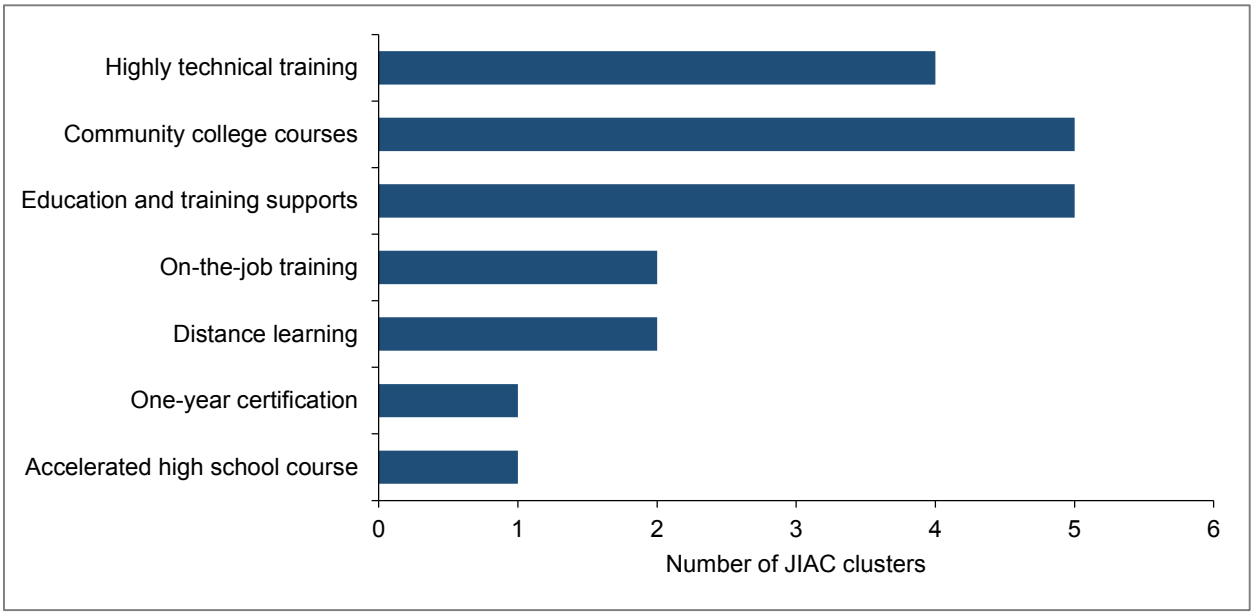
1. ETA workforce development proposed activities

A significant portion of the resources awarded through JIAC grants were funded by ETA and were intended for workforce development activities. As noted in Chapter II, the ETA grant period was up to four years, and the budget was up to approximately $1 million grant award for each cluster. These funds could be used for education or training (including internships or scholarships) but also for curriculum development or outreach and recruitment of students.

JIAC clusters indicated that they were going to undertake a number of ETA-funded activities. The study's review of the applications classified the primary focus. In general, the JIAC clusters most commonly focused their workforce development activities on specific, highly

technical training; unspecified courses at community colleges; and education and training supports to the sectoral focus of the cluster (Figure III.3). The main focus in four of the JIAC applications was very specific technical training in engineering, IT, advanced manufacturing, or bioscience. Five of the 20 cluster applications indicated that the ETA-funded activities would comprise a wide variety of courses at a community college (presumably a number of these courses would be technical in nature as well.) Five of the 20 clusters indicated that the ETA-funded activities would mainly focus on education and training support for the sectoral focus. These activities were described as training needs assessment, curriculum development, student recruitment, training, and placement to support the cluster. The primary emphasis of the other six JIAC clusters was spread among the categories of on-the-job training, distance learning, one-year certification programs, or accelerated high school courses.

Figure III.3. Primary proposed workforce development activities among JIAC clusters



Source: JIAC grant applications.

The ETA-funded portions of the AM-JIAC grants were smaller in magnitude than the JIAC grants. In this case, the ETA funding was around $400,000 per cluster. Not surprisingly, given the focus on advanced manufacturing, several of the grant applications indicated that the content of the education and training was technical in nature.

Whereas 6 of the 20 JIAC grant applications proposed highly technical training, all 10 AM-JIAC clusters proposed technical content. Three clusters indicated the intended use of internships, externships, or scholarships. Just one of the AM-JIAC clusters proposed offering on-the-job training (OJT) contracts.[21]

[21] The FFO did not factor the provision of different types of training to participants in the award decision process.

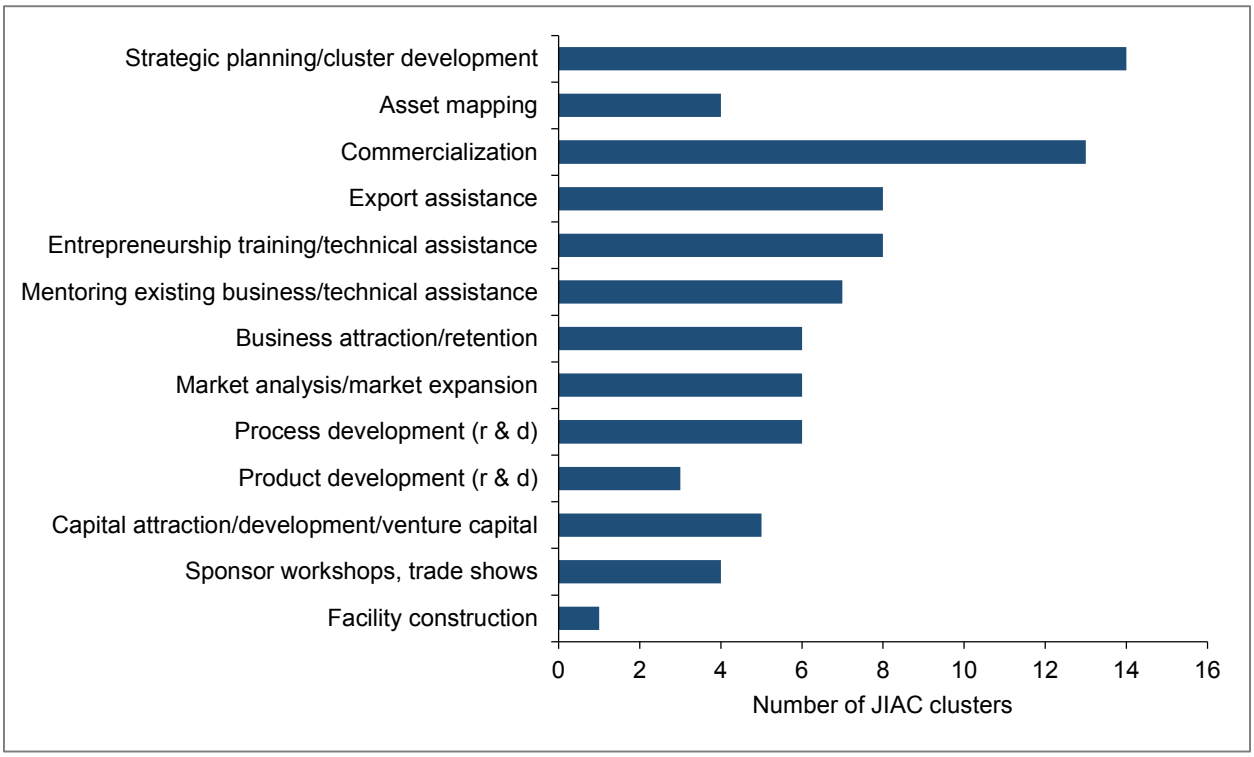
2. Business development and assistance funded by other funding partners

Funding from other Federal agencies, including EDA, SBA, DOE, and NIST MEP, was targeted toward business assistance. In both rounds of funding, the EDA funding is intended to spur regional competitiveness and innovation through business assistance that could take many forms. The EDA invested approximately $10 million in each round ($500,000 per cluster for the JIAC grants and $1 million per cluster in AM-JIAC grants). SBA funding was intended to support the development of small business ownership by members of disadvantaged populations. The SBA investment totaled about $5 million ($3 million in the JIAC grants and $2 million in AM-JIAC grants). In the AM-JIAC, these three funders were supplemented with funding from NIST MEP and DOE. The NIST MEP funding was earmarked for MEP centers to add capabilities to the MEP program, including projects that solve new or emerging manufacturing problems. The DOE funding was targeted at enabling the adoption of new, energy-efficient processing and materials in advanced manufacturing.

Proposed activities in both JIAC and AM-JIAC grant applications correlate strongly with the goals of each funding stream. EDA activities included working to spur regional competitiveness and innovation through business assistance. SBA-funded activities included entrepreneurial training and support for businesses that were started by members of underrepresented populations. The NIST MEP activities were intended to expand the work of existing MEP centers. The DOE activities either called for reducing energy use or substituting renewable energy sources for conventional nonrenewable sources, or called for better control of material recycling.

Although the proposed activities were specific to the goals of the funding streams, all of the clusters proposed to offer most or all of the following types of TA to businesses in their applications: one-on-one mentoring, support for research and development, product commercialization, supply chain management, assistance with finding sources of capital (oftentimes venture or angel investors), export assistance, or market analysis. Some clusters also proposed formally expanding or organizing the cluster through activities such as asset mapping and developing lists of suppliers or potential firms. In particular, Figure III.4 shows the frequency of activities funded by EDA as listed in the JIAC applications.

Figure III.4. Primary proposed EDA-funded activities among JIAC clusters



Source: JIAC grant applications.
Note: r & d = research and development

The focus of the grants was to support integrated activities. In reviewing the cluster grant applications, four of the JIAC applications appeared to propose ETA-funded activities that were totally directed toward and integrated with the EDA and SBA-funded activities. In another nine applications, some or most of the proposed ETA-funded activities appear to be integrated with the EDA and SBA-funded activities while others do not appear to be integrated. These are referred to as partially integrated grant activities. Finally, in seven of the JIAC applications, the ETA-funded activities did not appear to be integrated at all with the activities supported by the other funding agencies. These are referred to as parallel grant activities. The extent to which activities were integrated, partially integrated or parallel as the grants unfolded will be further explored during evaluation site visits in 2015.

IV. FEDERAL PERSPECTIVE ON CLUSTERS' PROGRESS THROUGH SUMMER 2014

In summer 2014, JIAC and AM-JIAC clusters had been operating for two to three years. AM-JIAC activities across all funding streams were still being implemented. JIAC activities funded by non-ETA agencies, however, were already either completed or in their final phases. By design, ETA-funded workforce development activities began later in the grant period and will continue through fall 2015. Interviews with national office staff from the Federal funding agencies, interviews with ETA FPOs, and cluster self-reports through IWP progress reports and ETA QPRs provide an early glimpse into clusters' progress, the extent to which the clusters are increasing collaboration, and the types of activities they had undertaken through summer 2014. Subsequent data collection—including site visits to a subset of clusters, a survey to be fielded to all clusters, and collection of future IWP progress reports and QPRs—will enable the evaluation to update and expand on this report's findings.

This chapter provides a qualitative assessment of cluster progress, based upon interviews with Federal respondents. It aims to present early findings on the remaining research questions: How is the initiative managed within each cluster? What practices are being implemented to promote sustainability of grant resources, partnerships, and activities? What are key lessons learned through implementation? How and under what circumstances might these lessons be replicated?

The chapter begins with a qualitative assessment of clusters' progress toward each funding agency's goals, progress toward reducing silos, and clusters' ability to meet multiple reporting requirements. It then examines the factors that Federal respondents associated with strong clusters. Finally, the chapter ends with a discussion of Federal perspectives on factors likely to influence sustainability.

A. Federal perspective on key aspects of clusters' progress

National office staff from the Federal funding agencies and ETA FPOs provided their perceptions of clusters' progress toward each funding agency's goals. They also commented on the extent to which clusters were making progress toward reducing silos and increasing collaboration within their regions and among their partners. As Chapter 3 highlights, ETA goals focused on training and related employment activities to develop a skilled workforce. The goals of the other funding agencies (i.e. non-ETA goals) varied more widely and include goals associated with the mission of the funding agencies. For example, SBA's goal of identify and support small businesses that are owned by economically and socially disadvantaged individuals. Notably, although national office respondents were generally aware of clusters' progress toward the goals of other funding agencies, ETA FPOs could generally speak only to clusters' progress toward ETA goals.

1. Progress towards ETA goals

The JIAC and AM-JIAC grants, as discussed in previous chapters, were designed to include a sequenced approach to activities. Through this sequencing, the Federal funding partners intended for the clusters to first engage in economic and business development activities. Then, after industry needs were identified, the cluster would proceed with developing and conducting

training activities to support the need for a workforce with relevant skills. Consequently, by summer 2014, some clusters had concluded or were winding down activities supported by EDA, SBA, DOE, and NIST MEP but continued to provide workforce development services in earnest using ETA funds.

During phone interviews, ETA FPOs were asked to provide their perceptions of cluster progress towards achieving ETA goals, as well as the goals of other funding partners. ETA FPOs relied on their own knowledge of the clusters through telephone and email correspondences, site visits to the extent that they had been conducted, and grantee's quarterly reports. Respondents from all four national offices of the Federal funding agencies noted that clusters were making progress toward the grants' ETA goals. ETA respondents indicated that goal attainment cannot truly be assessed until the end of the grants in late 2015 and emphasized the importance of partnership building within the clusters at this stage of the project. They reported that all clusters were succeeding in building partnerships and were working toward the clusters' goals of developing a skilled workforce. The extent of progress, however, varied across clusters. Some clusters that established partnerships were making significant progress in identifying industry workforce needs and training skilled workers. Others were forming new partnerships, had experienced delays due to staff turnover or other unforeseen circumstances, or required a shift in their focus as cluster needs emerged. National office staff from the other funding agencies indicated that they were less aware of progress toward ETA goals because most ETA work was occurring or will occur following the EDA and SBA grant periods of performance. However, their impressions about workforce development activities that had already begun were positive.

The ETA FPOs tasked with overseeing specific clusters offered additional perspective on clusters' progress toward the goals that clusters had established for ETA-funded activities. The FPOs categorized each individual cluster's progress in three ways: on track, mixed, or behind (Table IV.1). Across the grantees, FPOs reported that 12 clusters were on track to meet their ETA-funded activity outcomes, as specified in their proposals. Another eight clusters were making mixed progress. In two of these clusters, progress varied from year to year, meaning that the FPO reported that the cluster was behind but was working to catch up from previous delays. Another six clusters with reportedly mixed progress experienced obstacles during start-up, mainly staff turnover, delaying their ability to begin ETA-funded activities on time. Finally, FPOs reported that the remaining 10 clusters were behind schedule and not making adequate progress toward their outcomes. Progress was delayed due to start-up issues, a need to refocus their goals due to emerging circumstances, or other challenges related to economic conditions in their region. Additional information on factors that facilitated or impeded implementation is discussed later in the chapter.

Table IV.1. ETA FPOs perceptions of cluster progress toward goals

Extent of progress	ETA Goals	Non-ETA Goals
On track	12	6
Mixed	8	1
Behind on Goals	10	2
Unknown	0	21
Total	**30**	**30**

Source: Interviews with 19 ETA FPOs in summer 2014.

2. Progress toward the goals of other funding agencies

At least one respondent from each of the interviewed Federal funding agencies agreed that the majority of the clusters are making solid progress toward the goals for activities funded by EDA, SBA, NIST MEP, and DOE. Interviews did not probe deeply into the extent of that progress.[22] However, one Federal respondent did note that AM-JIAC clusters seemed to be making better progress toward goals because the FFO more clearly defined agency-specific grant requirements than did the JIAC FFO. Respondents from another agency also suggested that clusters' progress toward agency-specific goals was related to the level of involvement by the funding agency in the national multiagency collaboration. These individuals indicated that conversations with their counterparts from other funding agencies led them to believe that clusters were progressing more steadily toward the goals of heavily involved Federal partners.

ETA FPOs reported challenges in assessing the extent to which clusters were making progress toward the goals of the other funding agencies (i.e. non-ETA goals). Clusters are required to submit IWP progress reports on all funded activities; however, they are only required to report on workforce measures to their FPO. Despite the initial intent of the IWP document, FPOs indicated that most IWP reports only include ETA-specific information. As a result, among the 19 FPO respondents, 14 respondents who oversee 21 clusters were unaware of clusters' progress toward the goals of the other funding agencies.

The other five respondents who oversee the remaining nine clusters had some sense of clusters' progress toward the goals of other funding agencies through their review of narrative detail or information provided in the IWP progress reports. Based on FPO perceptions, two clusters were behind schedule on non-ETA goals; one cluster struggled to engage employers and entrepreneurs, and the other experienced a lack of community engagement coupled with challenges associated with a geographically dispersed catchment area. The FPO reported that another cluster had delays in the beginning but at the time of the interview was making good progress toward goals. FPOs indicated that the remaining six clusters were making progress in line with expectations for the other funding agencies.

[22] To further examine progress toward agency goals, EDA and SBA have each contracted with an independent research organization to conduct evaluations focused on grant-specific activities.

3. Progress toward reducing silos and increasing collaboration within clusters

During phone interviews, ETA FPOs reported perceptions that more than one-third of clusters were succeeding in reducing silos and increasing collaboration across organizations within each cluster (Table IV.2). Respondents were asked to categorize the activities that are funded by the other federal agencies as complementing the ETA-funded activities or running parallel to the ETA-funded activities. Eleven of the 30 clusters were reported as pursuing complementary activities across funding streams. One FPO noted, "What the ETA grant does can have an impact on what the EDA grant does and vice versa. There's a connectivity." The interviews did not capture the specific types of complementary activities, but upcoming site visits will explore this issue.

Table IV.2. ETA FPO reports on integration of activities within clusters

Extent of integration	Number of clusters
Activities across funding streams complement each other	11
Activities across funding streams run parallel	9
Not aware of how activities across funding streams relate	10
Total	**30**

Source: Interviews with 19 ETA FPOs in summer 2014.

In contrast, ETA FPOs indicated that many regional efforts fell short of the initiative's goal of reducing silos and increasing collaboration. Nine clusters were described as pursuing parallel activities across funding streams. Although there was potential for collaboration, one FPO noted that the activities remained siloed, due in part to the funding requirements. This FPO suggested that each agency had its own requirements that simply reinforce the silos across types of activities. Another FPO offered that there were no meetings across Federal funding partners at the regional level, but some regular communication of that type could have facilitated and encouraged collaboration across grantees within the clusters.

For the remaining one-third of clusters, the FPOs had limited knowledge of whether cluster activities across funding streams were complementary or parallel efforts. These FPOs were relying on information extracted from progress reports, as onsite monitoring had not yet been conducted or was limited. Upon examining whether these FPO reports on the extent of integration appear to be related to the maturity of partnerships, no clear pattern emerged. Additional data collection efforts through site visits and the grantee survey will further examine this possible relationship.

4. Response to and compliance with multiple reporting requirements

Federal interview respondents indicated that the majority of clusters experienced challenges with the complex reporting requirements of the JIAC and AM-JIAC grants. Although the Federal agencies made an effort to streamline reporting requirements as much as possible, legal restrictions forced the agencies to require clusters to submit grant-specific reports to each funding agency, as well as IWP reports across cluster activities. ETA FPOs overseeing 19 of the 30 clusters indicated that the majority of IWP progress reports were incomplete and contained minimal information related to non-ETA activities. The study of the JIAC initiative funded by EDA also found that IWPs were not designed to allow grantees to report on well-established and

meaningful metrics, thereby making them less useful than intended (SRI International 2014). FPOs also reported that agency-specific reporting requirements were a reported source of frustration and confusion among clusters because each funding agency required its own reporting format and submissions at different times and frequencies.

FPOs reported that the vast majority (27 of the 30 clusters) were largely compliant with their ETA-specific reporting requirements. The FPO reported that the remaining three clusters that were noncompliant with ETA reporting requirements were confused by the multiple reporting requirements or inexperienced with ETA-funded work. In these cases, ETA FPOs were providing TA on reporting.

Beyond compliance issues, ETA national office staff noted that the structure of the grants, the various reporting requirements, and the staggered periods of performance across funding agencies might have generated unintentional consequences for some clusters. Respondents explained that clusters were required to report on ETA outcomes from the start of the grant, despite the intentional sequencing of activities embedded in the grants that indicated implementation of ETA activities later in the project cycle. As a result, some clusters reportedly focused on reporting training activities and workforce-related outcomes very early in the grant period, rather than focusing on planning ETA-funded activities first. National office respondents believed that grantees should have focused first on achieving the goals associated with EDA- and SBA-funded activities before undertaking ETA-funded training. Additional planning time around workforce training would have enabled ETA-funded partners within the cluster to better understand employer needs and to strengthen the cluster before enrolling individuals in training.

Site visits and surveys conducted in 2015 will enable the evaluation team to gather direct feedback from the clusters regarding the initiatives' reporting requirements. These data will facilitate a comparison between Federal and cluster perceptions and better understanding of any unintended consequences of the reporting structure.

B. Federal perspectives on characteristics of effective clusters

National office respondents from the Federal funding agencies discussed several characteristics that they believe are associated with effective clusters. To identify strengths, respondents were asked what cluster activities stood out in their minds and what factors facilitated grant implementation. Respondents did not indicate whether these characteristics existed among the clusters before their receipt of grant funding or were developed as a result of the grant experience. However, they perceived these to be factors that were important for clusters' success. Interviews with ETA FPOs focusing on each cluster they oversaw also provided insights on strengths and weaknesses. For 26 of the 30 clusters, FPOs described multiple cluster strengths. For the remaining four clusters, the assigned FPOs were unable to identify any cluster strengths or did not have enough information to make an assessment. The strengths and weaknesses are based purely on the perceptions of interviewed respondents; some respondents had conducted site visits to clusters, whereas others were relying on telephone discussions and information clusters submitted in performance reports. The counts provided are not mutually exclusive. Additional data collection efforts will explore the extent to which these characteristics exist in the clusters.

Strong partnerships. National office staff from all of the Federal funding agencies pointed to the strength of partnerships as a critical factor in cluster success. In particular, strong partnerships require clearly defined partner roles and responsibilities. Poorly developed partnerships, in contrast, served as an impeding factor. Respondents from NIST stressed that struggling clusters often had "problems [in] getting off the ground" due to insufficient community and cluster partner engagement. Among the 26 clusters for which FPOs identified strengths, FPOs reported that 20 clusters possessed what the FPOs described as strong partnerships. These partnerships included both formal and informal partnerships. In particular, these strong partnerships were characterized by close coordination with employers, universities, and the workforce development community.

Effective leadership and communication. All national office respondents noted that effective leadership is essential in the formation of strong partnerships. SBA, in particular, suggested that effective communication between partners and frequent meetings among partners helped facilitate success. Clusters with strong central leadership and frequent communication across leads/entities were perceived to be more successful than those without. FPOs also indicated that leadership was a critical factor for success. They reported that two clusters had insufficient leadership and therefore were experiencing implementation challenges. In addition, nine clusters were reported by FPOs as experiencing obstacles due to turnover among key staff. In some cases, clusters had a slow start-up to grant activities. In other cases, turnover created a lack of organization or focus within the cluster.

Data-driven decision making. National office respondents from ETA indicated that examining labor market information (LMI) facilitated strong clusters. Clusters that were able to identify growing industries with enough regional presence at the outset were more successful. Although all clusters were proactive in facilitating cluster formation and developing their training plans, national office representatives from ETA noted that success depended in part on the use of LMI and data-driven decision making to gauge the industry employment needs. Interestingly, ETA FPOs independently noted that 6 of the 26 clusters did not spend sufficient time examining available resources and prevailing economic conditions in the region. Respondents pointing to this weakness suggested that clusters could have spent more time examining LMI to ensure that proposed training programs were intended to fill an existing training need in the region and that the selected industry was sufficiently mature to employ individuals receiving training. For these six clusters, FPOs reported that jobs were not readily available for those participants who complete training.

Detailed plans and cluster-level goals. Clusters that presented a detailed, well-developed plan were more likely to be making strong progress than those who did not. Representatives from both SBA and NIST noted that the weaker clusters were those that had poorly defined initiatives from the start. Specifically, their partners were not well identified, the cluster had multiple foci, or the partners were not fully invested. The stronger clusters were those that were more intentional about all aspects of the cluster. FPOs' responses echoed this finding. FPOs described five clusters that possessed a strong planning process and overarching goal, in addition to agency-specific goals. For example, FPOs reported that partners in two clusters were united working toward the overall goal of increasing innovation in their regions.

Strong training programs. Lastly, 6 of the 26 clusters were identified by FPOs as having strong training programs. These training programs were typically characterized by high levels of participant enrollment, innovative approaches to training, or both. Further emphasizing the importance of strong training programs, FPOs reported that three clusters struggled to enroll enough training participants due to weak or low intensity training programs and/or weak relationships with local training providers. Evaluation site visits and surveys will capture information about the characteristics of training programs implemented across the clusters.

C. Federal perspective on key factors for program sustainability

Based on their experiences with the clusters through summer 2014, national office staff and ETA FPOs described their thoughts on the conditions under which clusters might be able to replicate or sustain their grant-funded activities after the contract end date of 2015.[23] They reported that successfully replicating and sustaining the services and activities funded by the grants, as well as sustaining the relationships developed under them, will likely depend on access to additional funding, local investment and engagement, the strength of cluster organization and leadership, and clusters' past experience with collaborative efforts. To stress the importance of proactive planning for sustainability, the Federal funding partners organized a session during a grantee conference held in July 2014 dedicated to helping clusters plan for sustainability and develop strategies to maintain momentum when the grant period ends. Subsequent data collection scheduled for early 2015 will enable the evaluation team to further explore cluster perspectives on sustainability and their efforts to plan for future work after the JIAC and AM-JIAC grants end.

Access to funding. According to regional ETA FPOs, the majority of the ETA-funded cluster activities could be easily replicated, as the outcome of the funded activities typically involved developing a training program or training curricula. However, additional funding would be required to replicate activities and to sustain training activities initiated through the grants. Although respondents did not say what level of funding would be needed to sustain activities, they noted that clusters should be thinking proactively about ways to access additional funding through other sources such as local funding or other grant opportunities. National office staff also stressed the importance of additional funding sources for sustainability.

Community buy-in and engagement. Both national office staff from the Federal funding agencies and ETA FPOs reported that sustaining the cluster partnership, as well as the clusters' activities, depends on partner commitment coupled with commitment from the organizations that are not official partners in the grant but believe in the initiative's goals. These respondents suggested that successful clusters build invested constituencies consisting of employers and community organizations. In doing so, clusters can remain a presence in the community and can mobilize to seek additional funding.

Cluster organization and leadership. National office staff from each of the Federal funding agencies pointed to strong cluster organization and leadership as key factors for sustaining grant activities. According to these respondents, cluster success is often a function of strong leadership. Clusters with strong leaders are often characterized by individuals with a clear

[23] The federal funding agencies may grant no cost extensions on a cluster-by-cluster basis.

and compelling vision for the work or who can serve as the champion for the initiative and the program's goals. Therefore, sustaining the cluster and its activities depends on building leadership capacity within the cluster. SBA respondents recommended that future efforts should more clearly emphasize the need for strong and clear leadership within the clusters. These respondents suggested that future solicitations might require clusters to designate and clearly define the role of a leader for the entire cluster rather than for each funding stream. Site visits will provide additional information on the characteristics of cluster leaders and the extent to which administrators appear to be encouraging regional cluster initiatives.

Prior collaboration. National office respondents from NIST MEP and ETA noted that some of these clusters are the products of prior cluster-based efforts. Consequently, for these established clusters, structures are in place to sustain both the clusters and their activities. Respondents offered that prior collaboration might facilitate sustainability following the conclusion of the grant.

V. CLUSTER REPORTS ON ETA PARTICIPANTS, SERVICES, AND WORKFORCE OUTCOMES THROUGH JUNE 2014

To complement the Federal perspective on clusters' progress, data from QPRs that each ETA-funded cluster submits to ETA provide detailed information on the participants served, services provided, and workforce outcomes achieved using ETA grant funds.[24] The clusters' grant applications provided goals for several of the measures reported by each grantee on its QPRs. These performance goals were established in their applications. The QPRs available for this report cover the period through June 30, 2014, for 28 of the 30 grantees. For the other two clusters, the data come from the most recent QPRs covering the period through March 31, 2014 and IWPs covering the period of March 31, 2014, for one cluster and September 30, 2013, for the other. ETA also provided national summary data through September 30, 2014 across all clusters as a supplement to the individual cluster reports. Importantly, clusters submitted these reports only halfway through their grant period and therefore do not represent the ultimate successes they will be able to achieve. In addition, some measures have particularly small samples and should be interpreted with caution. ETA noted that the intent of the agencies was to keep the reporting burden on clusters as small as possible and, as a result, clusters have limited resources to invest in reporting.

Using these data, this chapter aims to provide early findings on the third research question: What workforce-related outcomes did the clusters report achieving through this initiative? It begins by describing the number and characteristics of ETA grant participants. It then turns to the services that participants received and concludes with a discussion of workforce-related outcomes reported through September 2014.

A. Number and characteristics of ETA grant participants

A total of slightly more than 3,500 participants had enrolled in the JIAC and AM-JIAC workforce programs as of June 2014 (Table V.1).The total number of JIAC participants was slightly more than 3,000 and the number of AM-JIAC participants was slightly more than 500. This implies that, on average, the JIAC grants had about 150 participants and the AM-JIAC grants had about 50 participants. The total enrollment goal established in the grant applications was 5,991 participants across JIAC grantees and 1,465 participants across the AM-JIAC grantees over the life of the initiative. Therefore, through the second quarter of calendar year 2014, as a whole, the JIAC clusters had enrolled about 50 percent of their projected participants and AM-JIAC clusters had enrolled slightly more than one-third of projected participants. Clusters, however, were at various stages of program implementation, with the percentage enrolled relative to cluster-specific projections ranging from 0 to 53 for JIAC clusters and 0 to 89 for AM-JIAC clusters.[25]

[24] The QPR data focus solely on ETA grant participants. Analysis of participant, services, and outcomes for other funding streams is not included in the scope of this evaluation.

[25] The supplemental QPR data showed that participation totaled 3,433 for the JIAC grantees and 752 for the AM-JIAC grantees through September 2014. This raises the percentages of participants relative to the goals in the applications to about 57 percent for the JIAC clusters and 51 percent for the AM-JIAC clusters.

Table V.1. Number of participants enrolled in an education or training program

	JIAC	AM-JIAC
Number of participants through June 2014	3,007	516
Enrollment goal for the full grant period	5,991	1,465
Percent of clusters' goal	50.2%	35.2%

Source: Data are from cluster-submitted QPRs through the second quarter of calendar year 2014, with the exception of two of the JIAC clusters, for whom the most recent QPR was through March 2014. The latter two clusters' data were aggregated with the other clusters.

With regard to the demographics of the participants, the vast majority of participants (72 and 83 percent for JIAC and AM-JIAC, respectively) are males (Table V.2). Site visits will explore the reasons why men are disproportionately represented among participants. About 30 percent of participants in the JIAC clusters and 15 percent in the AM-JIAC clusters are members of a minority racial or ethnic group. About 10 percent of the participants are veterans, and about 3 percent are reported to have a disability.

Table V.2. Participant characteristics

	JIAC	AM-JIAC
Gender (percentage)		
Male	72.5	83.2
Female	27.5	16.8
Minority[a] (percentage)	31.0	14.8
Veterans (percentage)	9.0	10.3
Disabled (percentage)	3.0	2.1
Employment Status (percentage)		
Employed	55.3	83.2
Unemployed	44.7	16.8
Long term unemployed[b]	37.7	51.5
Education (percentage)		
High School	29.5	35.5
1-4 years of college	31.4	19.4
Associates degree	13.7	12.6
Bachelor's degree	20.2	21.7
Advanced degree	5.2	10.8
Sample Size	**3,007**	**516**

Source: Data are from cluster-submitted QPRs through the second quarter of calendar year 2014, with the exception of two of the JIAC clusters, for whom the most recent QPR was through March 2014. The latter two clusters' data were aggregated with the other clusters.

[a] Minority is defined as that participants identified as Hispanic/Latino; America Indian or Alaskan Native; Asian; Black or African American; Native Hawaiian or Other Pacific Islander or multiple ethnicities.

[b] Long term unemployed is defined as an individual without a job for 27 weeks or more and wants and is able to work. (U.S. Department of Labor 2014)

The JIAC and AM-JIAC clusters differ in the share of participants who were employed at enrollment. About 55 percent of participants in the JIAC clusters were employed at enrollment, whereas more than 80 percent in the AM-JIAC clusters were employed.[26] As a subset of the unemployed, clusters reported the share of long-term unemployed—defined as "without a job for 27 weeks or more and wants and is available to work" (U.S. Department of Labor 2014)—at about 40 percent for JIAC and more than 50 percent for AM-JIAC.

The FFOs required clusters to offer ETA-funded activities to participants with substantial educational backgrounds. For example, the JIAC FFO notes, "Candidates for education and training funded through these grants should not be at the beginning of a career pathway and should have at least a high school diploma or a GED, as well as some post-secondary education and/or work experience that would allow them to enter the defined career pathway at a later point." The educational attainment of participants as reported by the clusters varied substantially, with 30 to 35 percent of participants having at most a high school education and about 5 to 10 percent with advanced degrees beyond a bachelor's degree. Both JIAC and AM-JIAC clusters, however, served participants with similar education backgrounds. A slightly larger share of the JIAC participants had some college or a bachelor's degree as their highest level of education.

B. Services provided to ETA grant participants

As intended, given the nature of the grants, the clusters reported very high percentages of participants who began an education or training activity—more than 99 percent for the JIAC clusters and more than 93 percent for AM-JIAC clusters (Table V.3).[27] These percentages are high relative in comparison to the overall goal established by the JIAC clusters—which was that 68 percent of participants would begin employment and training activities. The clusters' overall goal for AM-JIAC clusters was much higher, however, at 96 percent of participants anticipated to begin education/training.

For both the JIAC and AM-JIAC clusters, approximately 60 percent of the participants in an education/job training activity were reported to have completed the activity as of the end date of the quarters covered by the QPRs that were analyzed (i.e, June 2014 for most of the clusters, and March 2014 for two of them). Completion is defined as "having earned all of the credit hours (formal award units) needed for the award of a degree or certificate as applicable" (U.S. Department of Labor 2014). While these completion rates are low compared to the final goal of 82 percent JIAC and 95 percent completion rate for AM-JIAC, it is possible that some participants were still enrolled in training. Completion rates will likely change as time progresses.

All clusters were asked to report the following information about individuals who had completed their education or training activities: (1) the number of participants who had completed training and obtained a credential and (2) the total number of credentials participants received. A very high percentage of the individuals who completed their education or training activities obtained at least one credential. All of the AM-JIAC cluster participants and nearly 90

[26] These statistics are consistent with the supplemental data on participants through September 2014.

[27] Through September 2014, these percentages were 98.8 percent for the JIAC clusters and 100 percent for the AM-JIAC clusters.

percent of the JIAC completers reported to have obtained at least one credential. For this measure, the clusters' performance goals were 84 percent for JIAC and 89 percent for AM-JIAC; thus clusters were achieving these goals for the education and training participants as of June 2014. Among those who earned at least one credential, 10 to 15 percent earned more than one.

The QPRs report participation data for on-the-job training contracts (OJTs)[28] and five other types of education and training activities: classroom occupational training, contextualized training, distance learning, customized training, and incumbent worker training. Some of the five categories are duplicative by design—for example, some classroom training might have a work-based learning component, and thus a participant would be in both classroom and contextualized training.

By far, the largest share of the training reported on the QPRs was in the form of classroom occupational training.[29] More than three-fourths of the education/training participants in the AM-JIAC clusters and more than half of the participants in the JIAC clusters received classroom training. The formal definition of this type of training is "training provided in an institutional setting or worksite setting designed to provide or upgrade individuals with technical skills and information required to perform a specific job, and participants should be able to achieve employment for a specific occupation upon completion" (U.S. Department of Labor 2014).

Incumbent worker training and contextualized training were the next most common types. About 17 percent of the JIAC cluster trainees and 6 percent of the AM-JIAC training participants were reported to have received incumbent worker training, as defined by ETA. That definition is fairly restrictive: "An incumbent worker is an employed worker who needs training to secure full-time employment, advance in their careers, or retain their occupation. Incumbent worker training is provided to individuals whose skills have been outdated by the development of new technologies or processes, and skills training is provided to those individuals who require new skills set to obtain, retain, or advance in their careers." About 17 percent of JIAC and 20 percent of AM-JIAC participants received contextualized training, defined as work-based learning activities such as internships or paid work experience.[30]

[28] The FFO provided requirements for OJTs. In particular, incumbent workers are not eligible. OJT contracts are intended to provide occupational training to the participant in exchange for reimbursement to the public, private nonprofit, or private sector employer of up to 50 percent of the wage rate for no longer than 12 months to compensate the employer for training costs. The JIAC and AM-JIAC FFOs noted that in these solicitations the reimbursement rate may exceed 50 percent depending on employer size.

[29] From Handbook, U.S. Department of Labor 2014: "Classroom occupational training is conducted in an institutional setting or worksite setting and is designed to provide or upgrade individuals with technical skills and information required to perform a specific job, and participants should be able to achieve employment for a specific occupation upon completion."

[30] From Handbook, U.S. Department of Labor 2014: "Contextualized learning activities are defined as learning that builds meaningful relationships between abstract ideas and practical application in the context of the real world, and occurs when students process information or knowledge in such a way that it makes sense to them in their frame of reference. Contextual learning is usually a reality-based, outside of the classroom experience, within a specific context and may include paid internships, paid work experience, among others."

Other types of training were rarer. For both the JIAC and AM-JIAC clusters, distance learning was rarely undertaken—only about 5 percent of the participants had engaged in it. Customized training was also fairly rare, with very few AM-JIAC participants and only 8 percent of the JIAC participants engaged in it. [31]

Some of the JIAC clusters reported participants who began or completed OJTs.[32] About 7 percent of participants were reported to have begun OJT through the latest reporting period. The percentage of participants with OJT contracts is relatively small because as noted above, these contracts can only be offered to unemployed participants. As noted in Table V.3, about half of the participants with OJT contracts have completed their training.

Table V.3. Education or training services received, and credentials earned by participants in JIAC or AM-JIAC ETA-funded activities as of June 2014 (percentages unless otherwise indicated)

	JIAC	AM-JIAC
Start/complete status		
Began education or training	99.2	93.4
Completed education or training[a]	60.5	62.7
Obtained at least one credential[b]	87.8	100.0
Average number of credentials earned	1.15	1.11
Sample for credential attainment	1,585	304
OJT status		
Began OJT	7.1	0.0
Completed OJT[c]	48.1	NA
Type of training		
Classroom occupational training	56.2	77.0
Contextualized training[a]	16.6	20.5
Distance learning[a]	5.3	4.4
Customized training[a]	7.4	0.0
Incumbent worker training[a]	17.6	5.6
Sample Size	**3,007**	**516**

[31] The DOL reporting handbook indicates that "Customized training is defined as training that is designed to meet the special requirements of an employer (or group of employers): is conducted with a commitment by the employer to employ, or in the case of incumbent workers, continue to employ, the individual on successful completion of the training; and, for which the employer pays for not less than 50% of the cost of the training" (U.S. Department of Labor 2014).

[32] The DOL reporting handbook notes that "OJT or On the Job Training" is defined at WIA section 101(31) as training by an employer that is provided to a paid participant while engaged in productive work in a job that 1) provides knowledge or skills essential to the full adequate performance of the job; 2) provides reimbursement to the employer of up to 50 percent of the wage rate of the participant, for the extraordinary costs of providing the training and additional supervision related to the training; and 3) is limited in duration as appropriate to the occupation for which the participant is being trained, taking into account the content of the training, the prior work experience of the participant, and the service strategy of the participant, as appropriate." (U.S. Department of Labor 2014).

Source: Data are from QPRs submitted by the clusters through the second quarter of calendar 2014, with the exception of two of the JIAC clusters, for whom the latest QPR was through March 2014. The latter two clusters' data were aggregated with the other clusters.

[a] Entries in this row are percentages of participants who began an employment/training activity: 2,982 in JIAC clusters and 482 in AM-JIAC clusters. Completion rates may increase over time because some of the individuals enrolled in training are still involved in it. The final report will document the completion rate as reported by the clusters in their final QPRs.

[b] Data on credentials include only those who completed their education and training activities.

[C] Entries in this row are percentages of number of participants who began an OJT contract: 212 in JIAC clusters. None in AM-JIAC clusters.

C. Workforce-related outcomes of ETA grant participants

Using the QPRs, clusters reported to ETA the employment outcomes of the individuals who have completed their education or training activities (Table V.4). The QPR reports 1) employment outcomes for individuals who were not employed at the time of program enrollment and 2) retention and advancement outcomes for individual who were employed at enrollment. Data gathered through June 2014 gives a preliminary indication of grantee progress on these measures. It is important to note that there are two panels of information in the table, and that each of the panels refers to different samples of participants. The first panel refers to participants who *were not* employed at the time of the participation. The second panel refers to individuals who *were* employed at the time of participation. The study's final evaluation report will capture data on outcomes closer to the end of the ETA grant period and will update these statistics on ETA performance measures.

1. Employment outcomes for those not employed at enrollment

All clusters were required to report three different employment outcomes for those who were not employed at enrollment: (1) the percentage of participants who entered unsubsidized employment after training completion, (2) the percentage who entered unsubsidized training-related employment after training completion, and (3) the percentage who entered unsubsidized employment and remained employed for at least one day in both the second and third quarters after training completion.

Clusters reported modest progress on these outcomes. Slightly more than 50 percent of JIAC participants and 32 percent of AM-JIAC participants who completed education or training activities had entered unsubsidized employment in the first calendar quarter after completion. Notably, many participants had not yet completed their education or training activities, and it is feasible that data for those who completed training in the first half of 2014 were not yet available.

Among those who completed training and entered unsubsidized employment, about three-quarters of JIAC and 100 percent of AM-JIAC participants entered training-related employment, and about one-third had retained employment in the second and third quarters after training completion. However, it should be noted that the samples for this measure are very small. Therefore, these data should be considered very preliminary and interpreted with caution.

2. Retention and advancement outcomes for workers who were employed at enrollment

Clusters reported the total number of individuals who were employed at enrollment who (1) retained their current position with their current employer in the second and third quarters after training completion, and (2) advanced into a new position requiring a higher level of skills with their current employer within the first three quarters after training completion. The percentages reported as of June 2014 again are modest, at 16 percent or less. However, the relevant denominators are likely small given that many participants were still engaged in training or had completed less than three quarters before the June 2014 performance reporting period.

Even though one of the goals of the grants was to support high-wage employment, the QPRs do not report wage rate information. They do report the average earnings common performance measure; this shows, for participants employed in the first, second, and third quarters after exit, the total earnings in the second and third quarters after exit divided by the total number of exiters. These data were extremely sparsely reported in the QPRs, and thus are not reported in this interim report. The earnings data will be included in the final report.

Table V.4. Outcomes of education and training completers in JIAC and AM-JIAC clusters through June 2014

	JIAC	AM-JIAC
Not employed at enrollment and completed education or training (percentage)		
Entered unsubsidized employment	51.0	32.1
Training-related[a]	73.7	88.9
Retained unsubsidized employment[b]	37.5	33.3
Total sample	574	56
Employed at enrollment and completed education or training (percentage)		
Retained current position[c]	15.7	4.5
Advanced in job[d]	4.6	11.9
Total sample	1,226	244

Source: Data are from cluster-submitted QPRs through the second quarter of calendar year 2014, with the exception of two of the JIAC clusters, for whom the most recent QPR was through March 2014. The latter two clusters' data were aggregated with the other clusters.

[a] Entries in this row are percentages of number of participants who were not employed, completed their education or training activities, and entered unsubsidized employment in the first quarter after completion: 293 in JIAC clusters and 16 in AM-JIAC clusters.

[b] Retained unsubsidized employment is defined as those that entered employment in the first quarter after completion of education and training activities and remain employed for at least one day in the 2nd and 3rd quarter after completion. Entries in this row are percentages of number of participants who were not employed, completed their education or training activities, and entered unsubsidized employment in the first quarter after completion: 293 in JIAC clusters and 16 in AM-JIAC clusters. In this table, we used all completers (who were not employed at enrollment) as the denominator and so the statistic underestimates retained unsubsidized employment as defined.

[c] Retained current position is defined as retained in job for at least one day in the 2nd and 3rd quarter after completion. In this table, we have used all completers (who were employed at enrollment) as the denominator, and so this statistic underestimates retention as defined.

[d] Advanced in job is defined as entered a new position (requiring a higher level of skill) in the first, second, or third quarter after completion of education and training activities. In this table, we have used all completers (who were employed at enrollment) as the denominator, and so this statistic underestimates advancement as defined.

VI. CLUSTER SELECTION FOR IN-DEPTH SITE VISITS IN 2015

As discussed throughout this report, the evaluation will supplement early findings on multiagency collaboration and grantee progress with data from site visits in early 2015 to a subset of JIAC and AM-JIAC clusters. These visits will last approximately two days and include interviews with cluster managers, ETA funding stream administrators, activity leaders, frontline staff, workforce investment board representatives, employers, and other partners. Findings from these in-depth visits, combined with data from the partner survey also planned for early 2015, will provide a richer sense of how clusters are working to implement activities and achieve their intended goals. This chapter describes the selection process used to identify the nine clusters that will be asked to participate in the site visits. It describes the four selection criteria, followed by a description of the selected clusters. It ends with next steps for the evaluation and the time line for the final report.

A. Selection of clusters for in-depth site visits

The evaluation team used four site selection criteria to identify a diverse set of clusters for the visits. Recommendations provided by Federal agency respondents and ETA FPOs were weighted most heavily. To obtain a comprehensive set of findings and lessons from the cluster site visits, the site selection process ensured that selected clusters also varied on a range of characteristics, such as partnership maturity, geographic location, target population, and sector focus. The selected clusters also included both JIAC and AM-JIAC clusters. Table VI.1 presents the nine selected clusters as well as three alternate clusters in the event a cluster is not able or willing to participate.

1. Clusters highly recommended by Federal respondents

Each interview respondent at the Federal funding agencies as well as among the ETA FPOs provided recommendations on potential clusters to visit for the evaluation. In making their recommendations, some FPOs considered grantee-reported performance-based metrics from QPRs. However, they were not limited to these metrics and often made suggestions based on their qualitative assessment of grant progress. They often used information gleaned from grantee narrative reports, ongoing telephone and email communications with the clusters, and monitoring visits. Federal staff recommended clusters that were performing very well or had made significant improvement over the period of grant performance. Although some respondents recommended clusters that they perceived to be performing poorly, to provide examples of common challenges, those clusters were ultimately not selected, given DOL's interest in learning about clusters for which implementation appears to have gone well.

Of the 30 clusters, 22 received a positive recommendation for an in-depth site visit by at least one Federal interview respondent. Of those 22 clusters, 15 were recommended by more than one Federal respondent. The selected and alternate clusters include eight clusters that were recommended by two Federal respondents in separate interviews, three clusters that were recommended by three Federal respondents in separate interviews, and one cluster that received one recommendation.

2. Partnership maturity at the time of application

As discussed in Chapter III, prior research suggests that the process by which partners come together at the regional level will likely be a major factor in their implementation success. The site selection process ensured that selected sites were representative of different partnerships by including variation in both (1) the number of organizations receiving grant funds and (2) the maturity of grantee partnerships before the grant application.

Across all 30 clusters, 11 had a single organization that received all of the grants from the Federal funding partners and 19 had multiple organizations that received grants. This ratio is similar to that of our proposed clusters. Of the clusters proposed by the evaluation team for site visits, grants were awarded to a single organization in 3 clusters and multiple organizations in 6 clusters. All 3 of the alternate clusters had multiple grant awardees.

The selected clusters also include those with both prior and new relationships. Using a broad definition of prior relationship, a review of grant applications revealed that only 9 of the 30 clusters had relatively new partnerships; the remaining 21 had prior relationships among their partners. However, using the more limited definition detailed in Chapter III that examines whether EDA, ETA, and SBA administrative entities worked together formally in the past, only 12 of the 30 recommended clusters can be considered as having a prior relationship. Because lessons can be learned from clusters that established newly formed partnerships and clusters that had preexisting partnerships, the selected clusters are drawn from both types. Of the 9 selected clusters and 3 alternates, 10 had prior relationships among the partners based on the broad definition, although the length and maturity ranged from relatively recent partnerships to long-term partnerships; 2 clusters developed new partnerships for the purpose of this grant. Using a more limited definition, 2 of the selected and alternate clusters can be considered as having a prior relationship.

3. Geographic location, population, and sector diversity

The clusters selected for site visits are diverse on a range of other characteristics, such as geographic location, targeted population, and industry or occupational sector focus of the cluster. This third criterion was used to distinguish between clusters that were equally suitable for site visits based on the first and second criteria.

Although the site visits are not intended to be representative of all grantees nationally, the evaluation design seeks to capture the experiences of clusters from across the nation in various contexts. Of the 9 selected and 3 alternate clusters, their primary targets are the unemployed (10), incumbent workers (9), and/or the underemployed (5). Additionally, 4 of the 12 clusters are rural, 3 are urban, and 5 from mixed areas.

As discussed in Chapter IV, all of the clusters serve more than one target population. Of the nine selected and three alternate clusters, their primary targets are the unemployed (9), incumbent workers (5), and/or the underemployed (5). Some of the selected grantees also proposed to make special efforts to target veterans (2), women (2), minorities (2), older youth (1), disadvantaged populations (3), and other special populations (3). Table VI.1 notes the selected clusters' proposed target populations, using information from their grant applications.

Finally, the selected clusters focus on a range of sectors. As shown in Table VI.1, the nine selected and three alternate clusters represent an array of industry and occupational sectors, including water, food processing, aerospace, metal manufacturing, oil and gas, and more.

4. Diversity between JIAC and AM-JIAC grants

The evaluation was designed to study the clusters that received both types of grants. The grants, although similar in intent, were different in Federal funding partners, sector focus, and objectives. Gathering perspectives from clusters working on both types of grants is important. In consultation with DOL, the evaluation design aimed to include 7 JIAC and 2 AM-JIAC clusters. Of the 22 clusters recommended by the federal respondents, 15 are JIAC clusters and 7 are AM-JIAC clusters. Of the 9 selected clusters and 3 alternates, 9 are JIAC and 3 are AM-JIAC clusters.

B. Next steps

This report provided early findings on the successes and challenges of multiagency collaboration as well as an early look at cluster activities and progress toward goals. In doing so, it began to address several of the evaluation's key research questions. These findings, however, capture only the perspectives of Federal interview respondents and grantees' formal self-reports of progress through summer 2014. Using qualitative data from the site visits and partner survey data planned for early 2015, as well as updated grantee performance reports through summer 2015, the final evaluation report will capture a fuller picture of grant implementation and answer all of the evaluation's research questions. The final report is planned for release in late 2015.

Table VI.1. Clusters selected by the evaluation team for site visits in early 2015

Project name	Number of federal recommendations	Grant type	Partnership maturity	DOL region	Urban/ rural mixed	Targeted population	Targeted sector
Nine proposed clusters							
Agile Electro-Mechanical Product Accelerator	2	AM-JIAC	Prior	Region 2 (PA)	Mixed	Unemployed or underemployed individuals with interest and skills to become machinists	Metal manufacturing, electrical equipment
Manufacturing Improvement Program for the Oil and Gas Industry Supply Chain and Marketing Cluster	2	AM-JIAC	Prior	Region 4 (OK)	Rural	Incumbent workers, unemployed	Oil and gas
Clean Tech Advance Initiative	1	JIAC	New	Region 6 (OR and WA)	Mixed	Disadvantaged entrepreneurs; unemployed, women, minority groups, veterans, high- and middle-skilled professionals, and long-term unemployed	Clean technology
Finger Lakes Food Processing Cluster Initiative	2	JIAC	New	Region 1 (NY)	Mixed	Unemployed and underemployed professionals from declining non-food industries, incumbent workers. Local veterans will be targeted.	Food processing
Advanced Composites Employment Accelerator	3	JIAC	Prior	Region 3 (TN)	Mixed	Partially employed and unemployed workers	Advanced composites with a focus on low-cost carbon fiber technology
Milwaukee Regional Water Accelerator Project	3	JIAC	Prior	Region 5 (WI)	Mixed	Older youth (ages 18–21), disconnected and incumbent workers, and veterans	Water industry
Rockford Area Aerospace Cluster Jobs and Innovation Accelerator	3	JIAC	Prior	Region 5 (IL)	Mixed	Unemployed, underemployed, disadvantaged workers, women, minority groups	Aerospace industry
St. Louis Bioscience Jobs and Innovation Accelerator Project	2	JIAC	Prior	Region 5 (MO)	Urban	Unemployed workers with on-the-job training contracts; dislocated workers	Bioscience
Renewable Energy Generation Training and Demonstration Center	2	JIAC	Prior	Region 6 (CA)	Rural	Dislocated workers	Renewable energy

Project name	Number of federal recommendations	Grant type	Partnership maturity	DOL region	Urban/ rural mixed	Targeted population	Targeted sector
Three alternate clusters							
Rochester Regional Optics, Photonics, and Imaging Accelerator	2	AM-JIAC	Prior	Region 1 (NY)	Mixed	Incumbent workers	Optics, photonics, and imaging
Minnesota's Mining Cluster – The Next Generation of Innovation and Diversification to Grow America	2	JIAC	Prior	Region 5 (MN)	Rural	Unemployed workers;, incumbent workers, disadvantaged workers	Mining industry
The ARK: Acceleration, Resources, Knowledge	2	JIAC	Prior	Region 4 (AR)	Rural	Workers in rural areas, historically underserved workers, unemployed, students	Information technology

Sources: JIAC and AM-JIAC grant applications as well as interviews with Federal respondents in summer 2014.

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REFERENCES

Almandsmith, Sherry, Mary Walshok, Kay Magill, Linda Toms Barker, Pamela Surko, Mary Vencill, Tommy Smith, Hannah Betesh, David Drury, Tricia Cambron, Kristina Lara, and Thomas Goldring. "The Power of Partnership: American Regions Collaborating for Economic Competitiveness: 2009 Generation IWIRED Interim Evaluation Report." Report submitted to U.S. Department of Labor, ETA/OGCM, Washington, DC, November 9, 2009. Available at http://wdr.doleta.gov/research/FullText_Documents/The%20Power%20of%20Partnership%20-%20American%20Regions%20Collaborating%20for%20Economic%20Competitiveness%202009%20Generation%20I%20WIRED%20Interim%20Evaluation%20Report.pdf.

Business Roundtable. "Closing America's Skills Gap: A Business Roundtable Vision and Action Plan." Washington, DC: Business Roundtable, December 2014.

Cappelli, Peter. "Skill Gaps, Skill Shortages and Skill Mismatches: Evidence for the US." Working Paper 20382. Cambridge, MA: National Bureau of Economic Research, 2014.

Conway, Maureen, and Robert P. Giloth, editors. *Connecting People to Work: Workforce Intermediaries and Sector Strategies*. New York: The American Assembly, Columbia University, 2014.

Council on Competitiveness. "Clusters of Innovation: Regional Foundations of U.S. Competitiveness." Washington, DC: Council on Competitiveness, 2001.

Council on Competitiveness. "Regional Innovation/National Prosperity." Washington, DC: Council on Competitiveness, 2005.

Council on Competitiveness. "Collaborate: Leading Regional Innovation Clusters." Washington, DC: Council on Competitiveness, 2010.

Fernandez, John R. Testimony before the Subcommittee on Commerce, Manufacturing, and Trade, Committee on Energy and Commerce, U.S. House of Representatives, Washington, DC, March 3, 2011. Available at http://democrats.energycommerce.house.gov/sites/default/files/documents/Testimony-Fernandez-CMT-Made-in-America-Job-Creation-Economic-Growth-2011-3-3.pdf.

Harvard Business School, U.S. Cluster Mapping, Cambridge, MA: Harvard Business School, n.d. Available at: http://www.clustermapping.us/.

Kania, John, and Mark Kramer. "Collective Impact." *Stanford Social Innovation Review*, Winter 2011, pp. 36–41.

Mills, Karen G., Andrew Reamer, and Elisabeth B. Reynolds. "Clusters and Competitiveness: A New Federal Role for Stimulating Regional Economies." Washington, DC: Brookings Institution, 2008. Available at http://www.brookings.edu/research/reports/2008/04/competitiveness-mills.

Monnard, Alexandre, Laura Leete, and Jennifer Auer. "Evaluation of the U.S. Small Business Administration's Regional Innovation Cluster Initiative: Year Three Report." College Park, MD: Optimal Solutions Group, LLC, July 2014.

National Institute of Standards and Technology. "NIST Technology Innovation Program Announces New R&D Projects to Develop Infrastructure Monitoring and Inspection Technologies." Gaithersburg, MD: National Institute of Standards and Technology, January 6, 2009. Available at http://www.nist.gov/public_affairs/releases/20090106_tip_award_announce.cfm.

Porter, Michael E. *The Competitive Advantage of Nations.* New York: The Free Press, 1990.

Porter, Michael E. "Clusters and the New Economics of Competition." *Harvard Business Review,* November–December 1998, pp. 77–90.

Porter, Michael E. "Location, Competition, and Economic Development: Local Clusters in a Global Economy." *Economic Development Quarterly,* vol. 14, no. 1, 2000, pp. 15–34.

Sheppard, Heidi, and the Center for Regional Economic Competitiveness. "Advanced Manufacturing Jobs and Innovation Accelerator Challenge (AM-JIAC): Mid-Project Review." Report prepared for the NIST Manufacturing Extension Partnership. Arlington, VA: Center for Regional Economic Competitiveness, May 2014.

SRI International. "EDA JIAC Program: Assessment & Metrics: Final Report." Menlo Park, CA: SRI International, October 30, 2014.

Turner, Shiloh, Kathy Merchant, John Kania, and Ellen Martin. "Understanding the Value of Backbone Organizations in Collective Impact: Part 1." Blog entry available at http://www.ssireview.org/blog/entry/understanding_the_value_of_backbone_organizations_in_collective_impact_1.

U.S. Department of Commerce. "Announcement of Federal Funding Opportunity for the Jobs and Innovation Accelerator Challenge: A Coordinated Initiative to Advance Regional Competitiveness." Washington, DC: Department of Commerce, Economic Development Administration; U.S. Department of Labor, Employment Training Administration; and the Small Business Administration, May 20, 2011.

U.S. Department of Commerce. "Announcement of Federal Funding Opportunity: Advanced Manufacturing Jobs and Innovation Accelerator Challenge." Washington, DC: Department of Commerce, Economic Development Administration and National Institute of Standards and Technology; U.S. Department of Energy, Advanced Manufacturing Office; U.S. Department of Labor, Employment and Training Administration; and the Small Business Administration, May 24, 2012a.

U.S. Department of Commerce. "The i6 Challenge: Proof of Concept Centers." Washington, DC: Department of Commerce, Economic Development Administration, 2012b. Available at http://www.eda.gov/challenges/i6/2012/factsheet.htm.

U.S. Department of Energy. "Obama Administration Launches $130 Million Building Energy Efficiency Effort." Washington, DC: U.S. Department of Energy, February 12, 2010. Available at http://www.energy.gov/articles/obama-administration-launches-130-million-building-energy-efficiency-effort.

U.S. Department of Labor. "About WIRED." Washington, DC: Department of Labor, Employment and Training Administration, July 27, 2007. Available at http://www.doleta.gov/wired/about/.

U.S. Department of Labor. *H-1B Technical Skills Training and Jobs and Innovation Accelerator Challenge Grants Program Reporting Handbook: Quarterly Performance Reporting and Instructions.* Washington, DC: Department of Labor, Employment and Training Administration, January 2014.

U.S. Small Business Administration. "SBA Invests in Over 40 Clusters Throughout the US." Washington, DC: Small Business Administration, n.d. Available at http://www.sba.gov/about-sba/sba_initiatives/clusters_initiative/sba_invests_in_over_40_clusters_throughout_the_us.

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APPENDIX A

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Partner Agencies Identified in the JIAC, AM-JIAC, Rural JIAC, and MIIA FFOs

Non-Funding Partner Agencies for the JIAC Grants (n=11)	Non-Funding Partner Agencies for the AM-JIAC Grants (n=7)
• Department of Agriculture (USDA) • Department of Commerce • International Trade Administration (ITA) • Minority Business Development Agency (MBDA) • National Institute of Standards and Technology Manufacturing Extension Partnership (NIST MEP) • Department of Defense (DoD) • Department of Education (ED) • Department of Energy (DOE) • Department of Health and Human Services (HHS) • Department of Housing and Urban Development (HUD) • Department of Transportation (DOT) • Department of Treasury (Treasury) • Environmental Protection Agency (EPA) • National Science Foundation (NSF)	• Denali Commission • U.S. Department of Agriculture (USDA) • U.S. Department of Commerce's • International Trade Administration (ITA) • Minority Business Development Agency (MBDA) • Patent and Trademark Office (USPTO) • U.S. Department of Education (ED) • U.S. Department of Housing and Urban Development (HUD) • Environmental Protection Agency (EPA) • National Science Foundation (NSF)
Non-Funding Partner Agencies for the Rural JIAC Grants (n=8)	**Non-Funding Partner Agencies for the Make it in America (MIIA) Grants (n=2)**
• National Institute of Standards and Technology Manufacturing Extension Partnership (NIST MEP) • Denali Commission • U.S. Department of Education (ED) • U.S. Department of Labor's Employment and Training Administration (ETA) • U.S. Department of Energy (DOE) • Environmental Protection Agency (EPA) • U.S. Department of Housing and Urban Development (HUD) • Small Business Administration (SBA)	• U.S. Department of Commerce's Select USA is a part of the International Trade Administration's U.S. & Foreign Commercial Service within DOC • Appalachian Regional Commission

Note: The term "partner agency" is being used to refer to all entities identified in the respective FFOs that are providing support to the initiative.

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APPENDIX B

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Jobs and Innovation Accelerator Challenge Quarterly Progress Report:		
Progress Report Quarter Ending:	Submission Date:	
EDA Grantee Name:	**ETA Grantee Name:**	**SBA Grantee Name and Number:**
EDA Point of Contact:	**ETA Point of Contact:**	**SBA Point of Contact:**

Project Objective	Funding Agency	Resources and Input	Activity	Program Outcome	Progress Report

Other Updates:			
Funding Agency/Project	**Barriers to Success**	**Project Achievements/Best Practices**	**Additional Information**

Integrated Work Plan Definitions

Integrated Work Plan: Demonstrates how the proposed project concept will produce substantial benefits and meet objectives.

Project Objective: The proposed solution to an identified need in order to support and/or grow the cluster.

Funding Agency: Name the agency funding the above objective.

Resources/Inputs: Other funds, partners, equipment, etc that will be invested in the project to meet the objective.

Activity: The specific proposed activities or programs the inputs will be used.

Activity Output: The immediate results of the investment in this activity, and what will be reported to show successful use of resources/funds.

Program Outcome: The medium and long-term changes that lead to achievement of the objective as a result of the activities.

Barriers to Success: Describe any barriers or challenges the project team incurs during the reporting period that impacts the overall success of the project.

This would also be a great space to identify technical assistance needs that would help overcome the barriers or challenges described from federal support teams.

Project Achievements/Best Practices: Describe any best or promising practices the project identifies during the reporting period that could potentially be shared with other projects as a peer sharing project.

Additional Information: This space can be utilized at the projects discretion to describe any other narrative style details that would support how the program is achieving or progressing towards each activity.

Employment and Training Administration
H-1B TECHNICAL SKILLS TRAINING GRANTS
And
H-1B JOBS AND INNOVATION ACCELERATOR CHALLENGE GRANTS
Quarterly Report Form

A. GRANTEE IDENTIFYING INFORMATION

1. Grantee Name:
2. Grantee Number:
3. Program/Project Name:
4. Grantee Address:
   City: _ _____ State: ___ _____ Zip Code: _____
5. Report Quarter End Date: mm/dd/yyyy
6. Report Due Date: mm/dd/yyyy

	Performance Items	Previous Quarter (A)	Current Quarter (B)	Cumulative Grant To-Date (C)
B.	**GRANT SUMMARY INFORMATION**			
	1. Total Exiters			
	2. Total Participants Served			
	3. New Participants Served			
C.				
Gender	1a. Male			
	1b. Female			
Ethnicity/ Race	2a. Hispanic/Latino			
	2b. American Indian or Alaskan Native			
	2c. Asian			
	2d. Black or African American			
	2e. Native Hawaiian or Other Pacific Islander			
	2f. White			
	2g. More than One Race			
Other Demographics	3a. Eligible Veterans			
	3b. Individuals with a Disability			
	3c. Employed Individuals			
	3d. Unemployed Individuals			
	3e. Dislocated Workers			
	3f. Long-term unemployed			
Education Level	4a. High School Graduate or Equivalent			
	4b. 1-4 Years or More of College, or Full-time Technical or Vocational School			
	4c. Associates Diploma or Degree			
	4d. Bachelor's Degree or Equivalent			
	4e. Advanced Degree Beyond Bachelor's			
D.				
Training Indicators	1.Number Began Receiving Education/Job Training Activities			
	2.Number Participated On-The-Job Activities			
	3a. Number Participated in Classroom Occupational Training Activities			
	3b. Number Participated in Contextualized Training Activities			
	3c. Number Participated in Distance Learning Activities			

	3d. Number Participated in Customized Training Activities			
	3di. Number Participated in Incumbent Worker Training Activities.			
	4. Number Completed Education/Job Training Activities			
	5. Number Completed On-The-Job Training Activities			
E.				
Education Outcomes	1.Number Completed Program Activities and Obtained a Credential			
	2. Total Number of Credentials Received			
Employment Outcomes	3.Number Entered Unsubsidized Employment			
	3a. Number Entered Unsubsidized Training-Related Employment			
	3b. Number Retained Employment			
Incumbent Worker Outcomes	4a. Total Number of Employed Retained Current Position with Current Employer			
	4b. Total Number of Employed that Advanced Into New Position with Current Employer			
F.				
	Entered Employment Rate			
	1. Employment Retention			
	2. Average Earnings			

G. REPORT CERTIFICATION/ADDITIONAL COMMENTS

1. Report Comments/Narrative:
Attach a separate document that provides a discussion of the grant narrative items outlined in the reporting instructions found in the accompanying DOL H-1B Quarterly Performance Handbook.

2. Name of Grantee Certifying Official/Title:	3. Telephone Number:
4. Email Address:	

Persons are not required to respond unless this form displays a currently valid OMB number. Obligation to respond is required to obtain or retain benefits (Workforce Investment Act {Section 1859a)(2)}. Public reporting burden for this collection of information, which is to assist with planning and program management and to meet Congressional and statutory requirements, averages 2.33 hours per record, including time to review instructions, search existing data sources, gather and maintain the data needed, and complete and review the collection of information. Send comments regarding this burden estimate to the U.S. Department of Labor, ETA, Room C-4518, 200 Constitution Avenue, NW, Washington DC 20210-0001

DOL, ETA Internal Use Only

Additional Comments:

Regional Federal Project Officer:

National Program Office:

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APPENDIX C

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EVALUATION OF THE JOBS AND INNOVATION ACCELERATOR CHALLENGE (JIAC) GRANTS PROTOCOL – INITIAL FEDERAL STAFF INTERVIEWS IN FALL 2013

Instructions for Interviewers

The purpose of these interviews is mainly to help form our evaluation design. The rationales for each question are provided for two purposes: (1) in case the respondent asks why we are asking that particular question or wants to make sure that s/he is providing the information we are looking for and (2) to help with probes if the respondent is not understanding or is answering incompletely. Note that these are intended to be semi-structured interviews, so time permitting, if the respondent goes off in an unexpected, but interesting, direction, we should pursue that information.

For the purposes of this study, Federal staff are defined as (1) staff supporting the grants at the national offices of the Federal funding agencies as well as (2) Federal Project Officers (FPOs) overseeing the grants from the regional offices of the Department of Labor's Employment and Training Administration.

Respondent Information

Respondent Name:

Agency/length of time with agency:

Job Title:

Date of Interview:

JIAC/AM-JIAC Context

1. We would like to know about the historical context of the JIAC and AM-JIAC grants. Is there a person or persons who are championing the concept? When was the TARIC formed, and by whose initiative? How did the idea of the JIAC and AM-JIAC grants come about? How do they fit strategically with the other similar grant programs – the rural initiatives, the H1-B training grants, and for Labor, the WIFs, TAACCCTs, etc.? What are each agency's goals for the JIAC and AM-JIAC grants?

(RATIONALE: The key question is the last one. We want to make sure that the evaluation addresses the key goals/objectives of the agencies.)

2. How were each of the FFOs developed? How did each agency's share of the funding get decided? How did the maximum funding from each agency per cluster get set?

(RATIONALE: Was there an ex ante perception of how many activities could get funded in each of the funding streams? If so, how did that perception get established?)

3. Is there precedent for the multi-agency collaborative grant funding? What advantages and disadvantages did the Federal agencies believe would occur with multi-agency collaborative funding? That is, was there an expectation of complementarity or synergy between funded activities? To your knowledge, are those synergies occurring?

(RATIONALE: We need to determine the extent to which it will be important to include non-ETA activities in our study. Also, we are going to want to have questions in our protocols and survey instrument to compare/contrast the clusters' response and the Federal staffs' response to this issue.)

4. How are the clusters reacting to having multiple grant monitors and objectives? Has this reaction varied based on the maturity of the cluster or other contextual characteristics of the cluster or of the individual cluster managers/directors?

(RATIONALE: If the Federal staff believe there are issues here, we want to include items in our protocols and instruments.)

A. Federal Partner Roles, etc.

1. What sorts of evaluation activities are EDA, SBA, and other funders doing?

(RATIONALE: We do not want to duplicate and we do want to be efficient in our evaluation (as well as interact with other evaluators to insure that we don't overwhelm clusters with data requests.)

2. To your knowledge, to what extent are clusters availing themselves of assistance from the non-funding federal partners? Are those federal partners maintaining their interest in the grants? Which of the non-funding federal partners have been the most active?

(RATIONALE: We want to know whether we should include questions about interactions with the non-funding federal partners in our protocols/surveys. If they are providing assistance, we are going to want to know what types of assistance and the intensity of that assistance.)

3. How were FSTs formed? Do all of the funding partners have regional monitors such as the FSTs?

(RATIONALE: We need to confirm/disconfirm our assumption that the FSTs are fairly active monitors of the clusters and good sources of information.)

4. To your knowledge, how often do the FSTs contact the clusters? How often do they visit on site? Are the contacts and/or visits structured with questions about staffing, activities, participation, etc.? What would a typical monitoring site visit schedule look like? Do the members of the FSTs think of themselves as monitors or as providers of technical assistance?

(RATIONALE: If monitoring is structured and thorough, and the results are accessible, then our protocols should complement them, not overlap.)

B. Federal Support for Grantees

1. The clusters' grants have been going on for a couple of years, for the most part. Are you aware of any instances where financial resources have been a constraint, or in other ways, an issue for clusters? Do you or do the FSTs monitor progress versus expenditures? If so, what happens if they seem to be out of line with each other?

(RATIONALE: We should determine whether financial resources are an issue for clusters, and whether we should investigate that issue.)

2. Are the grant periods sufficient to complete activities? Have clusters requested or are they going to request time extensions? If time extension requests have been made, have they been granted or will they be granted? Until when?

(RATIONALE: Grant periods are an issue for our design. We need to gauge whether there is some flexibility there, and whether clusters are going to take advantage of it, if there is.)

C. Taking Stock

1. All in all, are you happy/satisfied with the ways that the JIAC and AM-JIAC grants are proceeding? In particular, how happy/satisfied are you with the following:
    - the interaction/collaboration among federal agencies
    - the design of the grant program(s)/FFOs
    - the specific clusters that have been funded
    - the activities going on in the clusters
    - the outcomes that are occurring
    - other

2. Are there things that you would have done differently, if you could have.

(RATIONALE: The last two questions are "fishing" for what these knowledgeable staff persons think about the programs. We should hear some "hypotheses" that we will want to be able to address in our analyses.)

D. Evaluation Design Questions

1. One challenge that we are facing in our evaluation design is developing the list of grantee partners for the survey effort. We plan to select up to 10 partners in each cluster. Our current thinking is that we will [ADD DESCRIPTION OF APPROACH]. Do you think that will provide us with the most up-to-date information prior to the data collection effort? If not, what changes would you suggest to our approach?

2. We are going to interview Federal staff members (possibility re-interviewing you) and members of FSTs next Summer to help us select sites for our site visits. At this time, what variables or dimensions would you like to see us vary when we choose those sites (region, urban/rural, sector, etc.)?

PROTOCOL—FEDERAL STAFF (NATIONAL AND REGIONAL OFFICES) INTERVIEWS IN SUMMER 2014

Instructions for Interviewers

The purposes of these interviews are to get an assessment of the clusters' progress and accomplishments through summer 2014 and to inform the site selection process for in-depth visits. Note that these are intended to be semi-structured interviews, so time permitting, if the respondent goes off in an unexpected, but interesting, direction, we should pursue that information.

Respondent Information

Respondent name:

Respondent title and position:

Respondent affiliation:

Respondent contact information:

[FOR REGIONAL OFFICE STAFF WHO ARE FEDERAL PROJECT OFFICERS]:

What cluster(s) are you monitoring?

Overall Assessment JIAC/AM-JIAC Grant Program

1. **From your perspective, what progress are the clusters making toward funding agency goals for this grants program?**

Progress toward ETA goals. From your perspective, are the clusters achieving or working toward the goals that ETA established for the JIAC/AM-JIAC grants? How much variation is there across clusters in how well they are achieving the ETA goals?

Progress toward goals of other funding agencies. To your knowledge, are the clusters meeting the goals established by the other funding partners?

Progress toward increasing synergies and reducing silos. In general, are the activities that are funded by the other federal agencies, besides ETA, complementing the ETA-funded activities, or would it be fairer to characterize them as parallel to the ETA-funded activities? What might be the reason for this?

Role of agencies in providing support. What have the federal agency experiences been in supporting the clusters? Is the TARIC (or the Federal Support Teams) still active? Which partners (funding or non-funding) are providing support to the clusters? Have you had a role in

directly providing or coordinating this support? Are non-funding federal partners maintaining their interest in the grants? Which of those federal partners have been the most active?

Cluster needs. To your knowledge, to what extent are clusters availing themselves of assistance from the federal partners? [PROBE SPECIFICALLY FOR ETA, IF NOT MENTIONED]. Typically, who initiates this technical assistance (that is, do the clusters request assistance or do the federal partners reach out to offer it)? What kinds of assistance are they requesting?

Federal staff experiences providing technical assistance. Do federal agencies have the capacity and resources to meet cluster needs? What factors have helped federal partners provide support? What factors have made it challenging to provide support?

2. Do clusters have adequate funding and time to achieve grant objectives?

Adequacy of funding. Are you aware of any instances where financial resources have been a constraint or in other ways an issue for clusters? In your opinion, are the clusters making progress in line with expenditures?

Adequacy of grant duration. Have clusters requested or are they going to request time extensions? If time extension requests have been made, have they been granted or will they be granted? Until when?

3. What have cluster experiences been in meeting the monitoring requirements of multiple agencies?

Responses to varied monitoring requirements. How have the clusters reacted to having multiple grant monitors and objectives? To your knowledge, have they been compliant with all of their reporting commitments? Do you notice any variation based on the maturity of the cluster or other contextual characteristics of the cluster or of the individual cluster managers/directors?

Assessment of Specific Clusters

4. To what degree do the activities of the clusters you have worked with align with proposed activities?

Alignment. We're generally familiar with the proposed scopes of work of each of the clusters. With which clusters have you worked closely? For the specific cluster(s) with which you are familiar, would you say that the actual activities align with the proposed activities?

5. What is your assessment of the activities of these clusters?

Strengths. What cluster activity(ies) stand out in your mind (in a positive way)? How did you learn about these activities? Why do they stand out?

Weaknesses. What cluster activity(ies) stand out in a negative way? How did you learn about these activities? Why do they stand out?

Unexpected features. When you have visited clusters or talked to the cluster leadership, have there been any surprises for you (that is, unexpected activities/outcomes/other)?

6. Which clusters would you encourage us to select for our site visits?

Site selection. Which cluster(s) would you recommend that we visit, and why are you making that recommendation? Are there particular activities or persons that we should try to visit and/or interview at those cluster(s)?

Program Replicability and Lessons Learned

7. How replicable are grant activities, and what are the lessons learned?

Replicability. Can the activities conducted under the grant be replicated? If not, why not?

Facilitating factors. What factors facilitated grant implementation? What are the greatest strengths of the cluster? What do you believe are your three greatest successes?

Impeding factors. What factors impeded grant implementation? What are the limitations of the cluster? What have been your greatest challenges?

Lessons learned. What three things would you change about how the cluster implemented grant activities?

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