# Building a Strategic Workforce Planning Capability at the U.S. Census Bureau[1]

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**Abstract:** Strategic workforce planning is an ongoing capability embedded in business and management processes to better align work requirements with workforce abilities. Strategic Workforce Planning processes include: identifying mission-critical competencies; assessing current workforce competency distributions; analyzing gaps between current and desired states; and, working to close the gaps between current and desired states. For the past two years, the Census Bureau has had a strategic workforce planning initiative underway to build this new capability. This paper describes the challenges, the process steps, lessons learned, and the results of assessing Census Bureau Headquarters employees in professional job series. It also includes how the new capability has affected human capital related processes and has helped to prepare management for changing work and a changing workforce.

**Key Words:** Strategic Workforce Planning, competencies, assessment

## 1 Background

The Census Bureau's mission is to serve as the leading source of quality data about the United States' people and economy. The Census Bureau is facing daunting data collection, reporting, and financial challenges that threaten its ability to continue to deliver high quality statistics that the taxpayers can afford. The past methods and supporting systems for conducting surveys and censuses, estimating and accounting for program and project costs, implementing IT-based services, and managing investments are no longer sustainable.

The **Census Bureau Business Plan for Change** lays out a vision for transforming our organization in response to those challenges. Eight strategic, transformational initiatives in varying stages of implementation are changing how we plan and execute surveys and censuses, and disseminate data products.[2] These changes are proxies for how workforce competencies must adapt for the 2020 Census, 2017 Economic Census, American Community Survey, and other programs to be successful. To implement these initiatives, Census Bureau employees must use advanced research and technical skills to change the way we work. Then, the entire organization must have competencies to implement that change.

Building a strategic workforce planning capability is critical to ensure that we will have the right workforce to accomplish these changes. We initiated our strategic workforce planning project in 2010 to address our concerns about employee skillsets needed to support the emerging 2020 Census design. To effectively respond to such organizational changes, human capital programs and activities must be able to balance mission requirements with effects on the workforce.

## 2 Purpose and Scope

The purpose of strategic workforce planning is to obtain and analyze the current versus the desired state of the workforce to identify trends, challenges, and potential impacts on the overall Census Bureau human capital management programs. The initial scope of strategic workforce planning included:

- Headquarters employees in all professional job series;
- Work associated with the **Enterprise Competency Dictionary;**
- Relationship of the eight strategic initiatives to the changing work of the organization; and,
- Implications of the changing work on the workforce competencies.

[1] This report is released to inform interested parties of ongoing work and to encourage discussion of work in progress. The views expressed are those of the author and not necessarily those of the U.S. Census Bureau

[2] The strategic initiatives included Portfolio Investment Management, Strategic Workforce Planning, Adaptive Design, Census Enterprise Data Collection and Processing System, Big Data, IT Shared Services, and Data Dissemination Services and Customer Innovation.

# 3 The Strategic Workforce Planning Process

For the past two years, we have had a strategic workforce planning initiative underway to build this new capability. Figure 1 provides the conceptual process model. The process includes: assessing the workforce impact of the Census Bureau's business strategy; building and validating the enterprise competency dictionary; conducting an assessment of the current workforce; providing divisions the results; conducting the supply versus demand assessment; identifying gaps and strategies to fill the gaps; developing and implementing plans; and then monitoring progress so that adjustments can be made if needed. As noted with the red circle below, we are currently in the monitoring and reporting phase. We have included a comprehensive discussion of the methodology in Appendix A. The sections below provide process highlights.

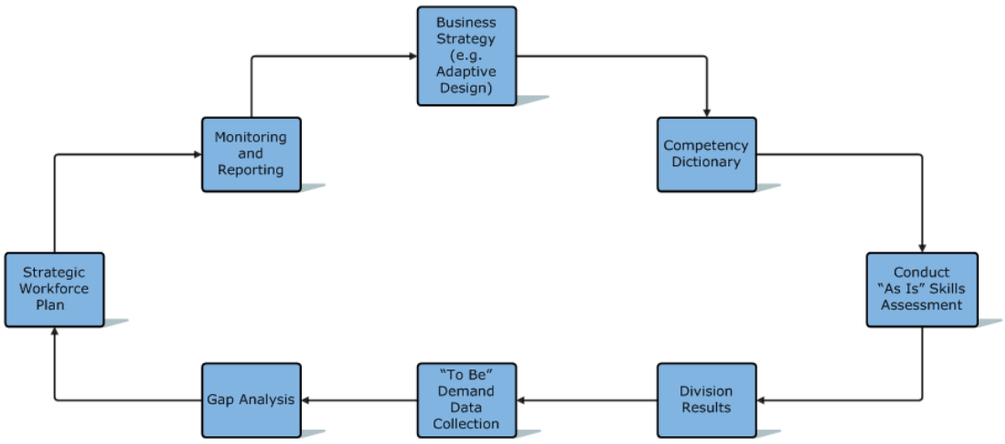


**Figure 1: Strategic Workforce Planning Process Model**

## 3.1 Assessing the Business Strategy Workforce Impact

Our **Business Plan for Change** lays out a vision for transforming our organization. It provides strategic priorities, thus serving as a tool for making investment decisions. Emerging from the transformation are major program reengineering initiatives for the 2020 Census and the 2017 Economic Census as well as the eight Strategic Initiatives cited previously. These strategic changes will have profound effects on the workforce. As expected, new skill sets will be needed to successfully develop and implement the new capabilities. Therefore, we must determine the readiness of the current workforce and where we have gaps so that strategies to close the gaps can be applied.

## 3.2 Building and Validating the Competency Dictionary

The foundation for building the strategic workforce planning capability is to define the work through competencies. Competencies are the knowledge, ability, or behavior that defines successful work performance. These include technical knowledge and skills as well as the softer interpersonal skills. The Census Bureau competency dictionary is based on the work of the organization instead of specific occupational series (most assessments focus on one or more Mission Critical Occupations such as Mathematical Statistician, Statistician, IT Specialist). Our research showed that competencies must align with the work across the organization, not just the mission-critical occupations, to develop an enterprise level competency picture with the key competency gaps identified. The competencies include technical, interpersonal and where appropriate, related products, systems and technology areas that support the competencies.

We assessed the work at Census Bureau Headquarters, using existing competency definitions, working with subject matter experts in program areas, and following the Census Bureau's organizing framework, which identifies 16 work functions and related sub-functions that encapsulate the work that we do. These technical competencies were compiled into the **Census Bureau Enterprise Functional Competency Dictionary** along with the interpersonal competencies and were validated by Census Bureau senior management. We also cross-walked and validated the competencies associated with the Strategic Initiatives because of their use as a proxy for the changing workforce. Figure 2 provides an extract of our dictionary.

## SLC 70: Data Review, Analysis, and Correction-Related Competencies

Work in this area includes review and analysis conducted prior to developing data products, including both micro and macro data review and analysis.

| Sub-Component/Competency Area | Core | Con-Acq | Emerge | Decline |
|---|---|---|---|---|
| **SLC 7001 Microdata Review and Analysis** | | | | |
| **SLC 7001.1 Microdata Review** – preparing and following review procedures to identify problems and to take corrective actions with the survey or census or other statistical data micro data using estimates and tools; resolving edit failures or errors, as well as resolving referrals. | | | x | |
| **SLC 7001.2 Edit Review** – validating edits were applied according to specifications and ensuring that programming resulted in accurate output. | x | | | |
| **SLC 7001.3 Peer Reviews** – providing micro data to other subject matter experts to check for face validity using other sources for the microdata estimates or values. | | | x | |
| **SLC 7002 Macrodata Review and Analysis** | | | | |
| **SLC 7002.1 Macrodata Review** – preparing and following review procedures to identify problems and to take corrective actions with the survey or census or other statistical program macrodata using data mining and review tools. | | | x | |
| **SLC 7002.2 Peer Reviews** – providing survey, census, or other statistical program macrodata to other subject matter experts to check for face validity using other sources for the tabulated estimates or values. | | | x | |
| **SLC 7002.3 Applied Program Accounting** – applying accounting methods and terminology (assets, liabilities, depreciation, capital expenditures, leasing, etc.), accounting ratios (sales/stock rations, income ratios, etc.) and detecting suspect ratios; investigating problems, troubleshooting, and taking corrective actions. | | | x | |

**Figure 2: Census Bureau Functional Competency Dictionary Extract Example**

The importance of the competency dictionary cannot be overstated. If an organization wants to assess its full workforce on the actual work that is being conducted, it must define the competencies that underlie that work. Then, organizational consensus among management must be reached to ensure there is confidence in the competency assessment results. You will also notice in the example that we asked managers to identify whether each competency would be categorized as core (should be performed by employees even if performed by contractors now), contractor-acquired (may be performed by contractors), emerging (new skills needed for future work), or declining (supporting work that may be going away). These categories were important in our later analyses.

### 3.3 Conducting the "As Is" Skills Assessment

A competency assessment obtains data from employees and supervisors on the current set of workforce competencies and includes both the federal and contractor workforce. During the summer of 2013, we conducted a supervisor assessment of their employees and an employee self-assessment. These assessments covered:

- About 1,000 supervisors assessed over 3,500 (97% response rate) of Headquarters employees in professional job series so the enterprise results represent a big picture strategic view of technical and interpersonal competencies; and,
- About 2,600 employees (75% response rate) provided voluntary self-assessments in addition to the supervisor assessments.

Additionally, supervisors documented their contractors' competencies to identify the work they were supporting. The assessment consisted of 342 technical and 22 interpersonal competencies. Using a 3-point proficiency scale with 1 being entry/basic and 5 being advanced/expert, supervisors assessed employees on their proficiency in the work they were currently performing and employees assessed themselves on any competencies used in the previous five years. For the contractors, federal managers documented (with a yes or a no) the competencies for the work the contractor was supporting.

Figure 3 provides a screen shot of the supervisor assessment. The high supervisor response rate was essential to control response bias in the results. To get the response rate that high, we made completing the assessment mandatory for supervisors/managers.

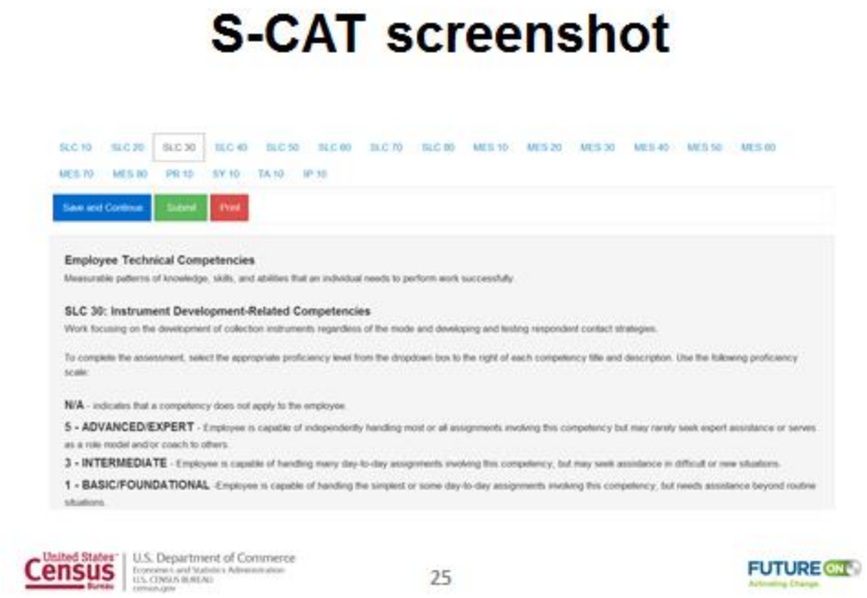


**Figure 3: The Supervisor Competency Assessment Screenshot**

## 3.4 Providing Results and Conducting the "To Be" Demand Assessment

For the demand data assessment, we used divisions as the data collection unit to support multiple organizational and programmatic results analyses. We asked each division to review their competency results with an eye toward their needs over the next 3 to 5 years. They compared the number of employees and their current proficiency levels to determine whether each competency was under-represented by current federal employees, adequately-represented, or over-represented by having too many proficient employees for the current or anticipated workload. This experience led us to the recommendation to use a qualitative approach to demand data collection. The results revealed a quantitative picture. This reduces the problem of managers focusing on numbers of FTEs rather than just reacting to whether the work associated with the competency is adequately represented by the federal workforce. This approach was a good initiation for managers into the concept of looking at needs based on the availability of skills to do the work.

However, we also want to share an unexpected glitch in conducting the demand data collection. As we reviewed the results of the assessment, we found competencies in some divisions that we knew did not reflect the work of the division. We met with managers of two divisions to try to understand the extent of the errors. We found that there were misinterpretations of what competencies were in scope for the assessment. Some supervisors assessed employees on competencies the employee used in previous jobs but is not using for the current work. It was essential for us to ensure the supervisors were identifying the proficiency of the employees currently performing the work of the unit. Therefore, we requested that each division review their competencies and remove any competencies that did not support the work of the division. Initial communication and testing had not discovered this potential error. Once the competency data were reviewed and corrected, division management conducted their "To Be" demand assessment.

## 3.5 Conducting the Gap Analysis

Based on expert advice, to conduct the enterprise gap analysis, we used the number of divisions that identified a technical or interpersonal competency as being underrepresented as the indicator of demand strength. However, we realized that we had no bureau or other external standard to use to define "high" demand. How would we identify gaps if we had no standard for "demand"? After reviewing the results, we agreed that "high" demand for our purposes meant having at least two divisions identify a competency as being under-represented by federal employees. To analyze the data, we simply ranked each competency by the number of divisions identifying the competency as high demand and the number of Strategic Initiatives with which the competency was associated. We provided the proficiency and demand data results to senior management and

asked for their top priorities for immediate closure. Based on this input, the Deputy Director identified the following enterprise priority gaps:

- Cost Estimation
- Budget Formulation
- Schedule Management
- Project Management
- Corporate Research

It is important to note that for our first strategic workforce planning initiative, we are focusing on the competency gaps for closure at the Enterprise level. Each lower level organizational unit also identified their specific key gaps to close; however, our first action plan addresses the Enterprise level gaps and the resources needed to build those competencies.

## 3.6 Developing the Enterprise Strategic Workforce Plan (SWP)

The heart of the Strategic Workforce Plan is the action plan that defines how the priority gaps will be closed. Therefore, we first developed an action plan template that included generic strategies to close gaps, specific actions that need to be taken, measures, targets, costs, and a reporting mechanism on progress. Strategies for closing gaps derive from four sources for workforce competencies: internal staff resources, external sources including new hires at all career stages, workforce development, and contract acquisitions. These strategies apply to short-, mid-, and long-term timeframes and multiple human resources and acquisitions policies and processes as seen in the table below.

| Time-Frame | Strategy | Policies and Processes |
|---|---|---|
| Short-term | Use internal resources to close competency gaps and develop current employees | Job rotations and merit hiring based on competencies |
| | Use external sourcing to close competency gaps through recruitment and hiring to fill vacancies | Identify vacancies related to competency gaps<br>Job analysis/position descriptions for cost estimation, systems engineering, and project management |
| | Build key competency capability through training and professional development | Identify target audiences for training<br>Linking competencies to training<br>Certifying employees in products or systems<br>Embed federal employees with contractors |
| | Acquire competencies through contracting/service level agreements | Use existing contract vehicles |
| Mid-term | Use internal resources to close competency gaps and develop current employees | Develop career paths for competency priority-based positions such as program/project manager and systems engineer |
| | Use external sourcing to close competency gaps through recruitment and hiring to fill vacancies | Strategic recruitment based on competencies<br>Incorporate competencies into position descriptions, vacancy announcements, and applicant evaluation criteria |
| | Acquire competencies through contracting/service level agreements | Modify existing contracts when possible |
| Long-term | Use internal resources to close competency gaps and develop current employees | Resource balancing, reorganizations, and change management |
| | Build key competency capability through training and professional development | Technical competency models and multi-tiered development plans leading to certifications |
| | Acquire competencies through contracting/service level agreements | Develop long-term acquisition strategy |

**Table: Strategies for Closing Competency Gaps**

To create a manageable and achievable action plan, we asked the Deputy Director to identify the top 5 competency gaps to close for the Enterprise as noted earlier. We set a timeframe for the initial SWP to ensure that the strategies would be resourced and completed within a specific timeframe. The initial Enterprise action plan covers approximately 18 months and documents strategies specific to each competency gap, giving program managers a tool to plan, implement, and measure competency gap closure. Program managers chose from the applicable policies and processes to determine specific actions, measures, and targets. For the initial action plan for the Enterprise workforce, the policies and processes the targeted actions are expected to be completed by December 2015. Here is an example of an action item for closing the cost estimation competency gap. There may be others that focus on hiring and/or training. The number of strategies used would be based on the specific competency and what is needed to

close the specific gap in a specific timeframe. The following is an example from our enterprise action plan for cost estimation gap closure:

> **Competency Gap:** Cost Estimation
>
> **Strategy:** Use existing contract vehicles to close immediate gaps
>
> **Action:** Use current cost estimation and modeling professional services contractors to assist in 2020 Census and other large program/system cost estimation and modeling. Additionally, ensure that contractor deliverables meet project objectives, schedule, and budget for the defined period.
>
> **Measure:** Number of current contractors
>
> **Target:** Maintain current number of contractors (5) for cost estimation

### 3.7 Monitoring and Reporting

The final phase of the strategic workforce planning model is Monitoring and Reporting. As we entered this phase, we realized that to successfully implement the new capability, we had to first identify a clear governance process, including roles and responsibilities for implementing action items and Human Capital-related processes. To fully integrate the strategic workforce planning capability into current management policies and processes, we must align those policies and processes with the competencies. We documented these implementation steps, which includes a training plan and a communications strategy, and are in the process now of integrating these structural and process changes.

The action plan identifies the lead and supporting organizational units for each gap strategy. Based on the requirement of the signed Enterprise Action Plan, program managers will report on the status of implementing action items and closing competency gaps against the established measures on a quarterly basis. The first report is due in November 2014. Once the capability is inculcated into our policies and processes, we will conduct an environmental scan to determine if additional competency assessments are warranted, which would begin the second iteration of Census Bureau strategic workforce planning.

## 4 Conclusions

Strategic workforce planning is crucial for aligning Census Bureau workforce competencies with changing business needs and emerging gaps. The underlying processes and data provide the first baseline of the workforce's proficiencies, counts, and strategies to close gaps. Further, this baseline provides a common framework for managers to make informed Human Capital Management decisions with respect to recruiting, hiring, training, and professional development. However, strategic workforce planning is a new capability. We are still in the process of implementing the action plan and inculcating the new processes into the Human Resources Division and into our directorates. Although we have made significant progress, we still have a lot of work to do in order to institutionalize this new capability within the organization. To date, our success can be attributed to the following factors:

**Management Support**

- An executive champion with invested commitment from senior leadership; and,
- Direct support from all levels of management including mandatory supervisory assessments.

**Alignment to the Business Strategy**

- Strategic Workforce Planning is about the future state. The resulting strategic workforce plan should reflect the Human Capital response to the business strategy; and,
- Rather than just looking at an incremental increase in the "as is," use transformative initiatives as the proxy for the "to be" work.

**Multi-Disciplined Team with Visibility**

- Building such a capability requires a team that includes members with HR subject matter knowledge, data analytic proficiency, database and application developers, strategic knowledge; and,
- Having the strategic workforce planning program/project manager work for the Director/Deputy Director provides visibility and access.

Building a new capability is difficult and time consuming, requiring an iterative approach – build a little, test, adjust. Our initial competency assessment provided data that are fundamental to strategic workforce planning. However, strategic workforce planning is a new capability and these data serve as a baseline since there are no previously existing measures for workforce demand at the Census Bureau. Additionally, the measures of competency gaps are at the division level, not the employee level, leading to a crude granularity of analysis. Future assessments that focus on specific organizations or subsets of competencies can provide targeted updates to the baseline and additional detail. As our first effort at enterprise workforce planning, we are very pleased with the results. Our first Enterprise Strategic Workforce Plan is solid, focused, and measureable. What we have learned will improve future and ongoing efforts.

# 5 References

Below are the linkages to the documents supporting the material in this report:

- Competencies Associated with Strategic Initiatives
- Competency Assessment Results for Employee Development
- Enterprise Competency Dictionary
- FY 2014 Strategic Workforce Plan
- Strategic Workforce Management Report
- U.S. Census Bureau Strategic Workforce Planning Process

## Appendix A: Strategic Initiative Workforce Impacts

As strategic initiatives transform our work, the distribution of work changes throughout the survey lifecycle and mission enabling support framework. Several initiatives have as goals to consolidate multiple processes into shared services (i.e., IT Shared Services, CEDCaP, and Data Dissemination). These initiatives build on substantial established technical competencies and require new competencies to be successful. For example, the Portfolio Investment Management initiative is a new capability that builds on competencies for program and project management, strategic planning, and cost estimation. This initiative affects employees in every division and is a mission enabling capability that the Census Bureau must build into core programs and functions. Another example is Data Dissemination. This initiative will consolidate standard data dissemination work that is part of the survey lifecycle into a much more dynamic and responsive systems engineering-type data dissemination function – transforming the competencies needed to do the work. The table below describes strategic initiatives' workforce impacts.

| Strategic Initiative | Workforce Impact |
|---|---|
| **IT Shared Services** | Increasing the workforce associated with shared services and changing service governance as services consolidate. Likewise, work previously associated with single-customer systems will change, affecting the associated workforce. |
| **Adaptive Design** | Ensuring that the workforce involved in survey direction has expertise in adaptive design. |
| **Census Enterprise Data Collection and Processing** | Ensuring that engineering staff have expertise in adaptive survey design as they build CEDCaP. |
| **Data Dissemination** | Ensuring that the data dissemination workforce has systems engineering competencies, and managing the impact on the workforce as data dissemination transitions to a shared service. |
| **Portfolio Investment Management** | Building bureau-wide expertise in portfolio investment and ensuring that workforce understands budget and cost estimation and scheduling management. |
| **Cost Estimation** | Building bureau-wide expertise in cost estimation and ensure that workforce has program and project management competencies. |
| **Big Data** | Building the workforce competency base for expertise in using Big Data sources to meet user needs. |
| **Strategic Workforce Planning** | Building bureau-wide expertise in strategic workforce planning, operational and strategic human resources knowledge, ability to collect, manage and use HR and employee data, and program and project management competencies. |

**Table: Strategic Initiatives and Workforce Impacts**

# Appendix B: Objectives, Scope, Methodology, Success Factors, and Limitations

**Objectives**

The overall objective of this project was to define and implement an initial Strategic Workforce Planning capability at the Census Bureau. Specific objectives included:

- Defining a strategic workforce planning process;
- Developing the underlying competencies supporting the work of the Census Bureau;
- Developing data collection applications in the Title 5 protected human resources information systems environment;
- Collecting employee self-assessment information, supervisor employee assessment information, and supervisor or contract manager documentation of contractors supporting the work;
- Collecting demand data from management to identify workforce gaps;
- Developing approach to determine strength of gaps for prioritization;
- Identifying strategies to close gaps;
- Analyzing competencies associated with transformative Strategic Initiatives; and,
- Specifically analyzing about 1,100 2210 and 1550 IT Workforce employees and about 430 employees in the 2020 Census program workforce based on the work in six divisions in the Decennial and 2020 Census Directorates.

**Scope**

The scope of this project included all Census Bureau Headquarters employees who are in professional job series. Specific information collected included:

- Employee Technical Competency/Skills Information;
- Employee Interpersonal Competency/Skills Information;
- Employee Support to selected products, systems, and technology areas (PRSYTA);
- Contractor Technical Competency Support;
- Contractor Support to selected PRSYTA; and,
- Competencies and PRSYTA associated with key transformative Strategic Initiatives.

**Methodology**

To achieve the objectives, we divided the work into sections and applied the following methodology:

***Prototyping***

- Used a contractor data collection tool to pilot a technical and interpersonal competency/skills Employee Self-Assessment;
- Developed an information technology (IT) technical competency and interpersonal dictionary;
- Obtained a list of IT-related products, systems, and technology areas;
- Piloted the assessment approach with the IT 2210 workforce using a 5-point proficiency scale with 5 representing expert and 1 representing entry; and,
- To improve the utility of the pilot results, conducted a Supervisor Assessment of IT Employees to boost response rates, including documentation of contractor support for technical competencies and key PRSYTA.

***Market Research***

- Looked at what other organizations had done but found that most centered around specific job series, such as IT 2210s;
- Determined that none were based on program or enterprise capabilities;
- Realized that we were breaking new ground by focusing on the work of the enterprise in order to determine the proficiency levels of the current workforce versus management workforce demand; and,
- Applied a new capability development approach to project.

***Infrastructure Development***

- Developed the Strategic Workforce Planning process, including process model and flow;

- Developed a comprehensive technical competency dictionary aligned to the Survey Life Cycle and Mission Enabling and Support (SLC/MES) framework used as enterprise work breakdown structure;
- Based competencies on the work not on occupational series;
- Validated the competencies and characterization of each competency as core, emerging, contractor acquired, or declining with Subject Matter Experts;
- Integrated interpersonal competencies into dictionary;
- Expanded PRSYTA data collection to include all Census Bureau directorates; and,
- Developed data collection applications in human resources information systems.

***Competency and Demand Data Collection***

- Conducted an Employee Self-Assessment (75 percent response rate), including technical competencies, interpersonal competencies, and skills for PRSYTA. For the technical and interpersonal competencies, proficiency level is rated on a 3-point scale with 1 being entry/basic and 5 being advanced/expert. For expertise in PRSYTA , the rating is yes/no; and,
- Using the same approach as the self assessment for employees, conducted a Supervisor Assessment of Employees (97 percent response rate) and contractor's support (69 percent response rate as of April 21, 2014) to competencies and PRSYTA (using a yes/no scale only).

***Use of Self-Assessment, Supervisor Assessment, and Contractor Documentation Data Sets***

- Employee Self-Assessment and contractor documentation data sets will be used as potential strategies (resource pools) for closing gaps;
- For the purposes of collecting managers' demand data, we used the Supervisor Assessment of the Employees; and,
- Assessed each competency's demand (Demand Data Collection) compared to the distribution of employee proficiency counts using the Supervisor's Assessment of Employees to ensure complete employee coverage.

***Demand Data Collection***

- Used the "division" as the Demand Data collection unit to support multiple organizational and programmatic compilations;
- Conducted quality check divisions' supervisor assessments to remove any competencies and PRSYTA that do not directly support the work of the division; and,
- Collected Demand Data collection by having division management determine whether each in-scope competency and PRSYTA is under- (too few people with the right proficiency level to support the work), over- (too many proficient people for the amount of work), or adequately represented for current and near-term workforce needs.

***Determining Strength of Underrepresented Competencies and Products, Systems, and Technology Areas***

- Consulted with senior manager expert on how to proceed;
- Based on expert advice, used the number of divisions that identified a technical or interpersonal competency and PRSYTA as being underrepresented as an indicator of demand strength; and,
- Sorted all employees, the IT workforce, and the 2020 Census workforce results from greatest number of underrepresented divisions bureau-wide, within the in-scope 2020 Census program, and divisions containing 2210s and 1550s.

***Strategic Initiative Changing Workforce Analytic Approach***

- Used strategic initiatives and associated competencies as proxy for changing workforce needs;
- Identified and validated technical competencies and PRSYTA associated with each initiative;
- Identified 1-3 "key" competencies for each strategic initiative to identify an employee analysis pool (e.g., "*All employees associated with strategic workforce planning initiative must have competency MES 2000.2 Strategic Workforce Planning*.")

- For each strategic initiative, tabulated assessments of emerging and interpersonal competencies for identified employee pool (e.g., "*Do employees with MES 2000.2 Strategic Workforce Planning have competencies necessary to transform and implement this capability?*");
- Analyzed results for each strategic initiative's emerging technical and interpersonal competencies and list of PRSYTA;
- Compared strategic initiative results to identify c technical competencies common to the enterprise underrepresented competencies; and,
- Compared strategic initiatives results to identify PRSYTA common to enterprise underrepresented PRSYTA.

***Demand Data Analytic Approach***

- For the enterprise view of the SLC/MES framework:
    - Identified the number of underrepresented divisions in each SLC and MES component and subcomponent;
    - Analyzed all interpersonal and technical competencies which had at least two divisions reporting under representation;
    - Organized similar competencies into groups to aid analysis; ;
    - For each group, averaged the number of underrepresented competencies;
    - Ranked underrepresented technical competencies by combining the average number of underrepresented divisions and the number of strategic initiatives containing the competency;
    - Analyzed all PRSYTA which had at least one division reporting underrepresentation;
    - Grouped underrepresented PRSYTA into same groups as technical competencies to aid analysis; and,
    - Ranked underrepresented PRSYTA by combining the number of underrepresented divisions and the number of strategic initiatives containing the PRSYTA.
- For the IT Workforce and 2020 Census Program:
    - Identified the number of underrepresented divisions in each IT and 2020 Census Program-related SLC and MES component and subcomponent;
    - Analyzed all interpersonal and technical competencies, which had at least two divisions reporting under representation;
    - Organized similar competencies into groups to aid analysis;
    - Provided results to Chief Information Officer and Decennial Census and 2020 Census Associate Director to identify their highest priority gaps to close; and,
    - Used the high priority gaps to develop action plans.

***Report Documentation and Review***

- Compiled results into report;
- Submitted draft report for review and comment;
- Incorporated/adjudicated changes;
- Released baseline report; and,
- Prepared and distributed results to directorates, which identified their top10 technical competency priorities to inform the development of an Enterprise Action Plan.

***Identifying Strategies to Close IT and 2020 Census Program Workforce Gaps***

- Identified generic strategies that can be tailored to address any competency gap;
- Developed action plan template that included challenges, strategies, technical competency gaps, interpersonal competency gaps, related PRSYTA, and links to strategic initiatives;
- Met with IT and 2020 Census managers to agree on scope of action plans; and,
- Developed action plans based on the priorities for the IT and 2020 Census workforce.

**Success Factors and Limitations**

For an undertaking such as developing and implementing a strategic workforce capability, it is critical to understand what contributed to success and also to understand how project limitations may have affected results. The sections below provide a summary of each.

***Critical Success Factors***

- Executive management sponsorship;
- Top management support;
- Engagement by Human Capital Management Council and division representatives;
- High supervisor participation in assessments;
- Competency linkage to SLC/MES ensured relevant results;
- Executive management motivates and promotes change;
- Management view of value of competency data;
- Multi-disciplined matrix team with expertise in project management, employee data, workforce competencies, strategic view of work and transformative initiatives;
- Consistent senior management guidance and support;
- Effort to cover all of the work performed by professional employees at headquarters which provided a baseline for future SWP; and
- Strong support from the labor union president.

***Limitations***

- There are no data to use as a standard for high versus low underrepresentation (i.e., high demand) so we are using a relative demand standard;
- We used qualitative measures of demand at the division level rather than predictive analytics based on employee characteristics;
- Competency demand based on counts of divisions and not counts of employees;
- Competency set is constrained by linkage to SLC/MES definitions of work; did not include all competencies associated with all Headquarters professional work while still including all work in the competency assessment;
- Even after robust unit and system testing, technical problems plagued much of the various data collections, causing restarts, delays, and adjustments; likely introduced unknown error into the data;
- Numerous reorganizations moving staff among work units complicated the assessments and potentially introduced error; lagged three months between proficiency assessment and demand data collection;
- Organizational code schemas and employee assignments to organizational codes are not consistent, which complicated the task of conducting quality checks and collecting demand data;
- Supervisors misinterpreted what they were supposed to be assessing their employees on, requiring a major quality check, which may or may not have fixed interpretation; and,
- By taking on the entire professional workforce at headquarters, we were unable to truly focus on specific work sectors; every single person was assessed against all competencies limiting the enterprise results to trends.