2020 Systems Integration

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2020 Systems Integration

• Build/Buy Decision
• Platform Implementation
• 2020 Census Solution Architecture
• Systems Readiness for Upcoming Tests
2020 Census Systems Integration
Census Enterprise Data Collection and Processing (CEDCaP)

Capabilities shown in green were part of the COTS Capability Assessment and Analysis (CCAA) and will be provided by the Enterprise Censuses and Surveys Enabling Platform (ECaSE)
### 2020 Census Systems Integration

**CEDCaP COTS Capability Assessment and Analysis Approach (CCAA)**

<table>
<thead>
<tr>
<th>Process Milestones</th>
<th>Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify core and key business capabilities</td>
<td>✔️</td>
</tr>
<tr>
<td>Conduct extensive market research on which capabilities may be commercially available</td>
<td>✔️</td>
</tr>
<tr>
<td>Prepare a Request for Information (RFI) for industry response</td>
<td>✔️</td>
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<tr>
<td>Conduct vendor demonstrations</td>
<td>✔️</td>
</tr>
<tr>
<td>Prepare a Request for Quotation (RFQ) based on requirements</td>
<td>✔️</td>
</tr>
<tr>
<td>Complete vendor demonstrations and select qualified vendor solutions</td>
<td>✔️</td>
</tr>
<tr>
<td>Leverage Carnegie Mellon University’s Software Engineering Institute to assist with COTS Capability Assessment and Analysis (CCAA)</td>
<td>✔️</td>
</tr>
<tr>
<td>Develop the CCAA process</td>
<td>✔️</td>
</tr>
<tr>
<td>Complete the CCAA process (including three subcomponents)</td>
<td>✔️</td>
</tr>
<tr>
<td>Complete analysis, including documentation and findings</td>
<td>✔️</td>
</tr>
<tr>
<td>Prepare overall recommendations and next steps</td>
<td>✔️</td>
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</tbody>
</table>
2020 Census Systems Integration
CEDCaP CCAA Proof of Concept Phase

90-day period, made up of 6 sprints
2020 Census Systems Integration
CEDCaP CCAA Criteria and Weights for Build/Buy Decision

- **Business Functional Need**
  - 35% - The degree to which the alternative satisfies a set of defined business requirement and related quality attributes.

- **System Design**
  - 25% - The degree in which the alternative satisfies an identified set of important architectural quality attributes (e.g., illities).

- **Schedule**
  - 20% - The ability of the alternative to be confidently deployed to meet the required timelines.

- **Cost**
  - 10% - The relative comparison of estimated five-year total cost of ownership for a given alternative.

- **Vendor/Dev Team Viability**
  - 10% - Indicator of vendor/development team and tool’s stability and ability to meet the Bureau’s long term needs.
2020 Census Systems Integration
CEDCaP CCAA Decision

• Complete review of the process and findings is available: http://www2.census.gov/about/policies/cedcap/cedcap-report-final.pdf
• The hybrid approach combines the selected COTS platform with select in-house custom solutions
• This approach will address the short-term goal of successfully deploying the 2017 Census Test, in preparation for the 2018 End-to-End Census Test and ultimately the 2020 Census
2020 Systems Integration
Platform Implementation

• **Enterprise Censuses and Surveys Enabling (ECaSE) Platform**
• A new project in Decennial IT Division under the CEDCaP Program
• Five key areas of application development on the ECaSE platform:
  • Content Metadata
  • Control Systems
  • Internet Self Response
  • Enumeration
  • Listing and Mapping
• Agile/Scrum Methodology
2020 Systems Integration
Decennial Administrative Support Services Section
2020 Systems Integration
Survey Design and Instrument Development

Survey Design and Instrument Development

CAFE
Census Automated Forms Engine
Automated interface to enable development of paper instruments, letters, and postcards

IM

ECaSE – IDev
- Design digital forms and materials
- Register forms with OMB
- Provide business rules for forms processing

CEDCAP
CEDCAP - ECaSE
Non-CEDCAP

MAF/TIGER

ESB Interface
Informal interface
CEDCAP – ECaSE internal interface
2020 Systems Integration
Address Canvassing and Self-Response Videos

ADCAN - BLOCK 2006 (A: 503)

<table>
<thead>
<tr>
<th>Block Name</th>
<th>Unworked</th>
<th>Worked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block 2006</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

Block GEOID: 24033802012006
Total Units: 2
Distance (m): 40,467.396

Warning: You are too far from the Block

Operation Name: Survey ID
AdCan: 3333
Tract: Tract GEOID: 802001 24033802001
County: Prince George's (033) MD (24)

OPEN BLOCK MAP
CANCEL SAVE NEXT >>

Internet Self-Response

Welcome to the 2016 Census.
YOU WILL NEED THE MATERIALS WE MAILED TO YOU IN ORDER TO START. ALL THE INFORMATION THAT YOU PROVIDE WILL REMAIN CONFIDENTIAL.

Example User ID

Please enter the 14-digit User ID found below the barcode on the materials we mailed to you.

User ID: [enter]
If you do not have a User ID, click here.

The U.S. Census Bureau estimates that, for the average household, this survey will take about 10 minutes to complete, including the time for reviewing the instructions and answers. Send comments regarding this burden estimate or any other aspect of this burden to: Paperwork Reduction Project 0607-****, U.S. Census Bureau, DCMD-R174, 4600 Silver Hill Road, Washington, DC 20233. You may e-mail comments to 2020.census.paperwork@census.gov, using "Paperwork Project 0607-****" as the subject. You are not required to respond to this collection of information if it does not display a valid approval number from the Office of Management and Budget (OMB). The eight-digit OMB number is 0607-****.

This slide contains test data.
2020 Systems Integration
Operational Control
2020 Systems Integration
Operational Control System and Enumeration Videos

Operational Control System

Enumeration

This slide contains test data.
2020 Systems Integration
Systems Readiness for Upcoming Tests

2020 Census Lifecycle

Key Census activities start in 2015 and continue through 2021:
- Estimate on-the-ground workloads and define operations and systems needed for the Census
- Develop and award major contracts for the systems that will support the Census
- Put field infrastructure and offices in place throughout the country
- 2018 Census End-to-End Test
- On-the-ground address canvassing where necessary
- April 1: Census Day
- December 31: Deliver apportionment counts
- March 31: Complete delivering Redistricting Summary Files to all states (PL 94-171)

More cost-effective Census with up to $5.2 billion in cost avoidance and high-quality data


RESEARCH AND TESTING PHASE
- 2013 Census Test (Complete)
- 2014 Census Test (Complete)
- 2015 Census Test (Complete)
- 2016 Census Test (Data Collection Complete)
- 2017 Census Test (Data Collection Complete)
- 2018 Census Operational Plan
- Address canvassing

OPERATION AND IMPLEMENTATION PHASE
- Fewer offices needed
- Fewer staff verifying address changes
- Fewer staff knocking on doors
- $