

2020 CENSUS SYSTEMS READINESS COMMENTS

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MAIN TOPICS

What Should Be Addressed

User Experience

Unit Testing

Integration Testing

Cyber Security

SOA vs Microservices & DevOps

Improved Communication of Readiness

USER EXPERIENCE

Mobile First Requires Testing

- Sunshine Hillygus in her response at the Spring 2017 CSAC meeting stated: “CSAC had raised concerns about user experience –we would like to be more involved and informed.”
- Census Bureau Response to prior CSAC recommendations: “The Census Bureau agrees that Internet self-response is critical and is working to further improve the user experience and increase the likelihood of accurate responses.”
- UX/UI testing and design feedback is a critical part of readiness. There should be more effort put into this, and results should be communicated for rapid feedback.

UNIT TESTING

Which Part Is Most Likely To Fail?

- Several parts of the 2020 Census will be used from prior systems, but will they integrate well with online responses?
- “The new COTS platform, ECaSE, was successfully used during the 2017 Census Test.” (slide notes from 2020 Census Readiness powerpoint)
 - How was success measured?
 - What applications were integrated with ECaSE and tested?
 - “Complete the configuration of Internet Self-Response and Operational Control functionality to support the 2017 Census Test” was an action item for ECaSE from the last CSAC meeting.

INTEGRATION TESTING

Bringing It All Together

- Census Response to prior CSAC Recommendations: “Performance testing of ECaSE Internet Self-Response capability with 2020 census workloads will be conducted by Technical Integrator in July/August 2017 to confirm system scalability.”
 - What were the results of these tests?
 - What protocols or methods will be in place to avoid fraud, over counting, etc...?
 - What are the field test results of having mixed methods of reporting?

CYBER SECURITY

Both Active & Defensive

- Penetration Testing?
- Active network/data monitoring systems during testing and deployment?
- Have consultants or technical integrators considered latest approaches such as bug bounties?
- This isn't mentioned in any of the architectural diagrams. This should be an integral part of development, and not something that comes after development is nearly complete.
- There's a long response from the Census on cyber concerns, and I would recommend this be included in system readiness in the future.

SOA WITH MOBILE

Microservices & DevOps

- Has microservices and devops been considered?
- It may be too late to pivot, but this would allow:
 - More agile and rapid development
 - Improved modularity which would improve unit testing
 - Allows each subcomponent to be managed more independently of the whole
- More clarity around how ECaSE will be integrated will be useful.
 - 2018 End-to-End Census Test Solution Architecture doesn't mention SOA but ESB.

IMPROVED TRANSPARENCY

How Can We Help You

- Testing milestones
- Summaries reports of milestone, test, and reviews
- Balance of transparency given public communication
- Better consolidation of information for active feedback
- Dedicated Working Group for system readiness and cyber security