

# 2020 Census: Program Overview, Testing, and Technological Innovations



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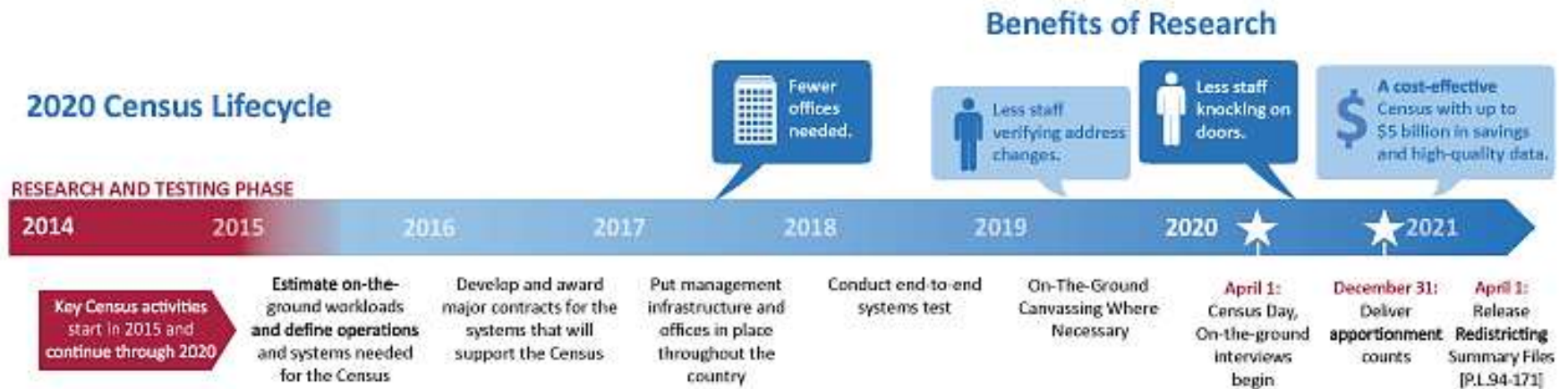
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National Conference of State Legislatures  
2015 Legislative Summit  
August 4, 2015

# 2020 Census: Where Are We Today?

In the next census, we will be trying to reach an increasingly diverse and growing population of around 330 million people in more than 140 million housing units.

The Census Bureau is conducting research in order to inform key design decisions by the end of FY 2015.



# Where Are We Today: Research and Testing

**Up to  
\$5 Billion  
in Savings  
Through:**

**Reengineering Address Canvassing**

[\$1 Billion]

**Optimizing Self-Response**

[\$548 Million]

**Utilizing Administrative Records**

[\$1.2 Billion]

**Reengineering Field Operations**

[\$2.3 Billion]

# Where Are We Today: 2015 a Critical Year

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In 2015, we will:

- Conduct Five Tests
  - Human in the Loop Simulation (SIMEX)
  - Address Validation Test
  - 2015 Optimizing Self-Response Test
  - 2015 Census Test
  - 2015 National Content Test
- Release the 2020 Census Operational Plan
- Begin Core Programmatic Work such as Local Update of Census Addresses
- Continue Defining Testing Activities for 2016 and beyond

# Reengineering Address Canvassing: Address Validation Test

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- December 2014-February 2015
- Master Address File Model Validation Test
  - Assessed our ability to use statistical modeling to measure error in the MAF, and to define the address canvassing workloads.
  - Preliminary Findings
- Partial Block Canvassing Test
  - Reviewed how aerial imagery and other sources can work with statistical modeling
  - Preliminary Findings



# Reengineering Address Canvassing: Partial Block Canvassing

Partial Block Canvassing example: Imagery review identifies discrepancy between MAF and imagery; updates are clustered in a portion of the block



# Optimizing Self-Response:

## 2015 Optimizing Self-Response Test

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- April 1, 2015 Census Day
- A site test conducted in the Savannah, Georgia media market area
- Continue testing “Notify Me” and “Non-ID” response to determine if we can optimize self and Internet response rates
- Research how advertising, outreach, and promotion can engage and motivate respondents for action
- Key Findings:
  - Partnerships and advertising continue to be successful mechanisms for motivating self-response.
  - While pre-registration was not an effective means for motivating self-response, mailing invitation letters and postcards were effective.
  - We achieved high match rates for non-ID cases, and our real-time non-ID processing approach worked well.

# Reengineering Field Operations and Utilizing Administrative Records: 2015 Census Test

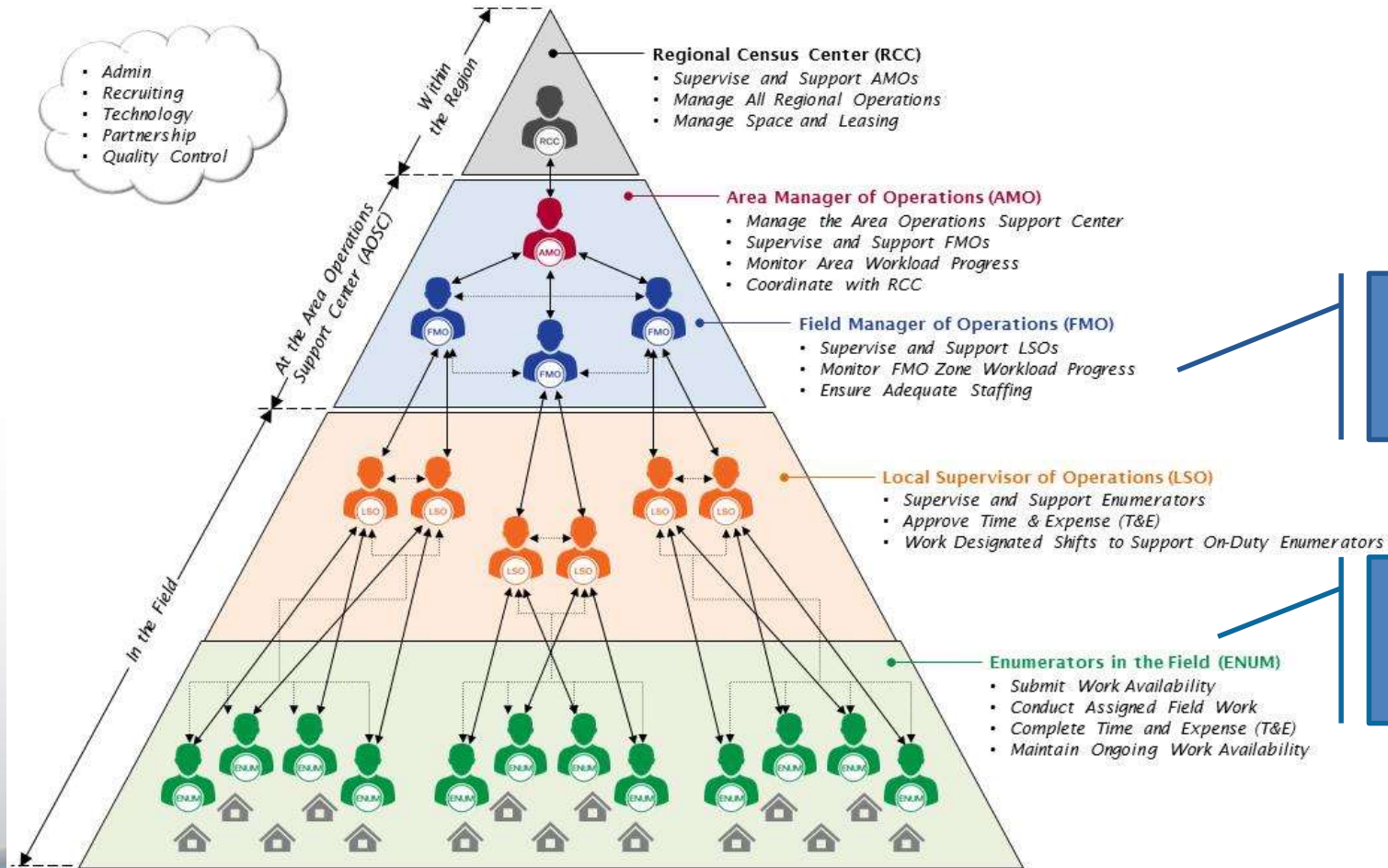
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- April 1, 2015 Census Day
- A site test in Maricopa County, Arizona
- 165,000 housing units in sample
- Reengineer the roles, responsibilities, and infrastructure for the field
- Automate tasks traditionally performed by humans
- Test and implement routing and navigation
- Test a Bring Your Own Device component
- Determine how administrative records and adaptive design can reduce the NRFU workload and determine contact strategies



# Reengineering Field Operations: Field Organizational Structure

- Admin
- Recruiting
- Technology
- Partnership
- Quality Control

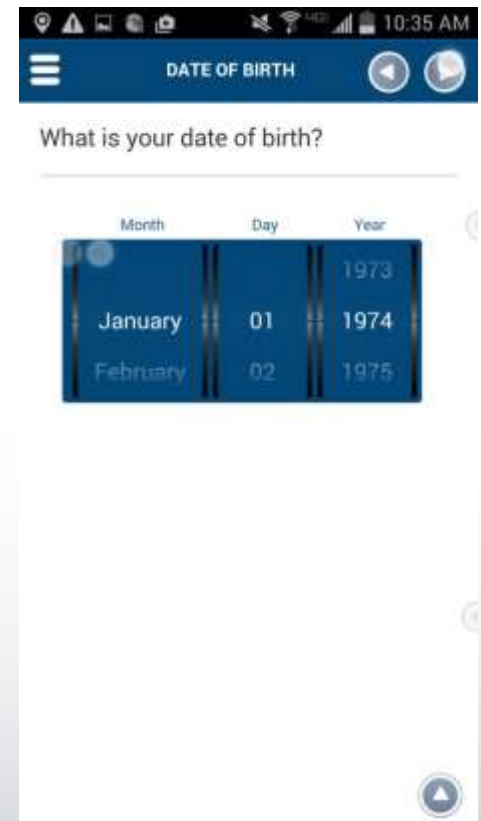
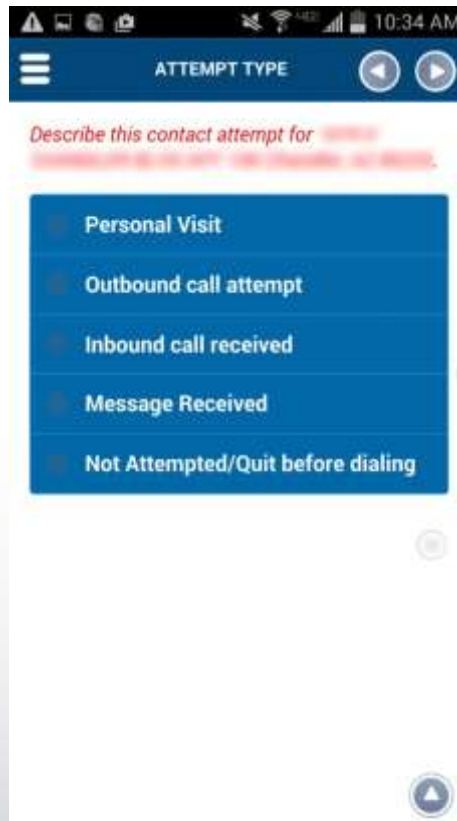
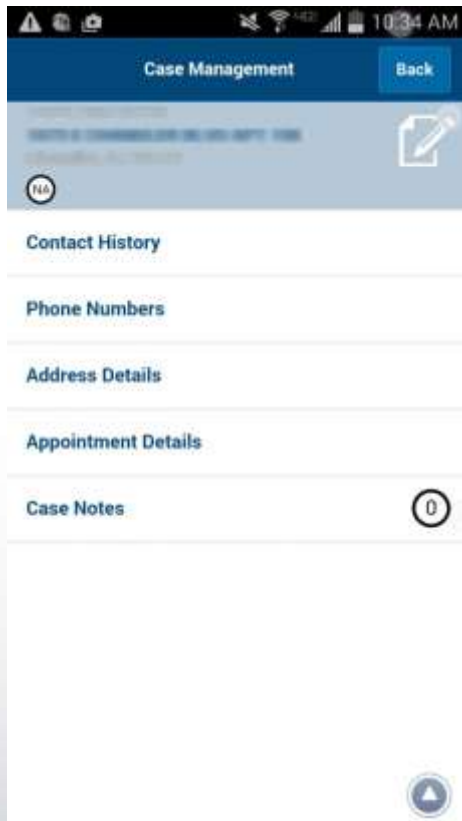


Staffing Ratios  
Appropriate?

LSO to FMO  
10:1

Enumerator to  
LSO  
23:1

# Reengineering Field Operations: Introducing Technology—COMPASS



# Reengineering Field Operations: Introducing Technology—Operational Control System

MOJO OCS

https://mojo.stage.it.census.gov/MOJO\_OCS/staff/staff\_detail?i=101

Dashboard Performance Work Avail. Payroll Utilities

FAQ search...

Enumerator Detail for taaa008403(E)

Details Today's Route Case History Performance Reports Notes

Past Work Assignments

| Work Day   | Dist. | Time     |
|------------|-------|----------|
| 2015/03/04 | 4 mi  | 7 h 47 m |
| 2015/03/05 | 2 mi  | 3 h 44 m |
| 2015/03/06 | 2 mi  | 4 h      |
| 2015/03/09 | 3 mi  | 6 h      |
| 2015/03/10 | 4 mi  | 6 h      |
| 2015/03/11 | 5 mi  | 6 h      |
| 2015/03/12 | 6 mi  | 6 h      |

Cases

| Seq  | Case ID        | Address | State | Attempt # | Status | Outcome | Attempt Outcome | Must Assigned | Type of Assigned | Expire Date |
|------|----------------|---------|-------|-----------|--------|---------|-----------------|---------------|------------------|-------------|
| 2(1) | 12025950672315 |         | R     | 1         | NA     | 100     | 00              |               |                  |             |
| 3(1) | 12025957814728 |         | R     | 1         | NA     | 100     | 00              |               |                  |             |
| 4(1) | 12025776204723 |         | R     | 1         | NA     | 100     | 00              |               |                  |             |
| 5(1) | 12025800287095 |         | R     | 1         | NA     | 100     | 00              |               |                  |             |
| 6(1) | 12025949098799 |         | R     | 1         | NA     | 100     | 00              |               |                  |             |
| 7(1) | 12025836699695 |         | R     | 1         | NA     | 100     | 00              |               |                  |             |
| 8(1) | 12025797890430 |         | R     | 1         | NA     | 100     | 00              |               |                  |             |
| 9(1) | 12025940932607 |         | R     | 1         | NA     | 100     | 00              |               |                  |             |

Route

- Completed
- Field Resolved
- Not Attempted

Greenfield Estates

Dreamland Villa

esri

Note: Screenshot contains test data.

# National Content Test

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- Census Day of September 1, 2015
- Use a large nationally representative sample, including Puerto Rico
- Evaluate and compare different census content, including race and Hispanic origin, relationship, and within-household coverage
- Refine estimates of national self response and Internet response rates and continue testing different contact strategies for optimizing self response
- Conduct content reinterview that includes a subsample of respondents, to measure accuracy of race/origin and coverage

# National Content Test

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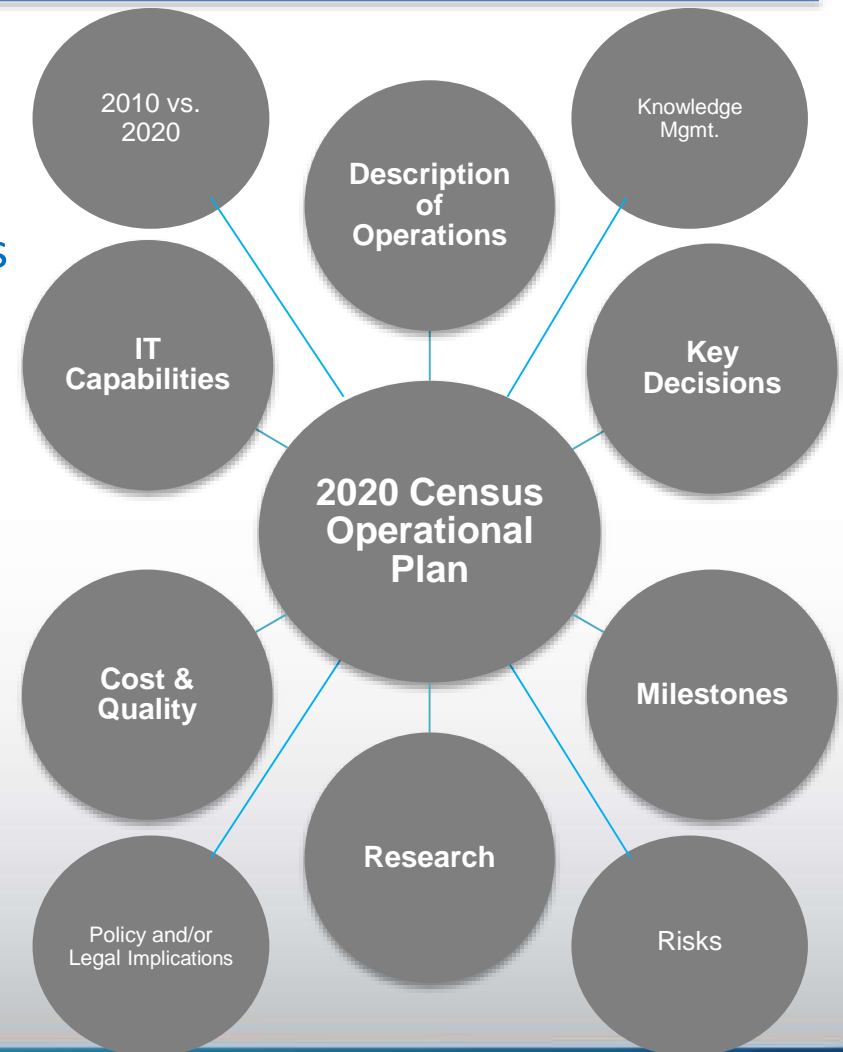
## Four Key Dimensions of Race Question Being Tested:

- Separate questions vs. combined question
- “Middle Eastern or North African” (MENA) category
- Instruction wording and terminology
- Web-based designs to improve question understanding and optimize reporting of detailed racial and ethnic groups

# 2020 Census Operational Plan

Documents the major design decisions for the 2020 Census, which includes:

- 2020 Census Concept of Operations
  - Four Key Innovation Areas
  - Thirty-four 2020 Census Operational Areas
- Supporting documentation, including:
  - Lifecycle Cost Estimates
  - IT Architecture
  - Acquisition Strategy
- Communication materials





# 2020 Census: What's Next?

## 2016 Census Test

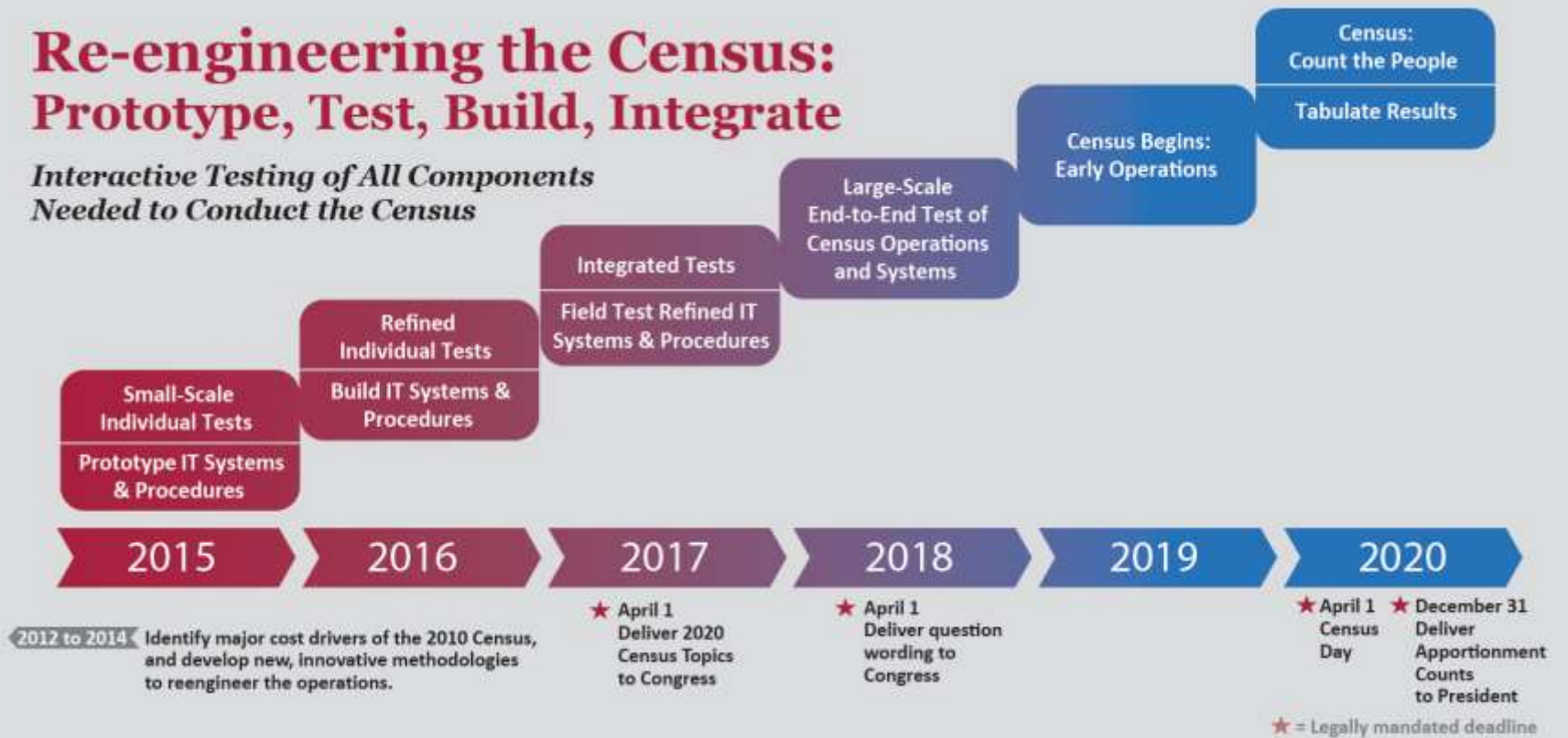
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- April 1, 2016 Census Day
- A site test in parts of Los Angeles County, CA and Harris County, TX
  - Language diversity
  - Demographic diversity
  - High vacancy rates
  - Varying levels of Internet usage
  - Multiple locations across different time zones
  - Approximately 225,000 housing units in each test area
- Objectives:
  - Refine technologies and methods for assigning cases to field staff conducting nonresponse follow-up
  - Explore self-response options
  - Provide non-English support for respondents with limited English proficiency – both in terms of our contact strategies and response options (Internet, paper, NRFU)
  - Study partnerships and outreach efforts to reach historically hard to count populations
  - Use of text messaging and Real Time Non-ID processing methods

# 2020 Census: What's Next?

## Re-engineering the Census: Prototype, Test, Build, Integrate

*Interactive Testing of All Components  
Needed to Conduct the Census*



# 2020 Redistricting Data Program

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- Phase 1 – The Block Boundary Suggestion Project (BBSP)
- Phase 2 – The Voting District Project (VTDP)
- Phase 3 – Data Delivery
  - P.L. 94-171 Redistricting Data Tabulations
  - Geographic Support products
- Phase 4 – Collection of the new plans
  - 118<sup>th</sup> Congressional Plans
  - New State Legislative District Plans
- Phase 5 – The View From the States
  - The evaluation of the 2020 Redistricting Data Program (RDP), the recommendations from the states, and the plan for the 2030 RDP

# 2020 Redistricting Data Program

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- **Phase 1 – The Block Boundary Suggestion Project (BBSP) - Starts December 2015**
  - States can influence the 2020 tabulation blocks
    - Must Hold/ Do Not Hold
    - Missing Features
    - Misaligned Features
  - Update Area Landmark (state parks, prisons, etc.) boundaries
  - Block size review
  - Suggest updates to legal boundaries – **NEW for 2020**
- **Phase 2 – The Voting District Project (VTDP)**
  - States provide their Election Districts/Precincts/Wards
  - Suggest updates to legal boundaries – **NEW for 2020**

# 2020 Redistricting Data Program

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- Phase 3 – Data Delivery
  - P.L. 94-171 Redistricting Data File
    - Race
    - Hispanic or Latino, and not Hispanic or Latino by Race
    - Race for the Population 18 Years and Over
    - Hispanic or Latino, and not Hispanic or Latino by Race for the Population 18 Years and Over
    - Occupancy Status (Housing)
    - Group Quarters – **NEW for 2020**
  - Geographic Support Products
    - Shapefiles
    - Maps (PDF only)
    - Block Assignment Files
    - Block to Block Relationship Files – **NEW (timing) for 2020**

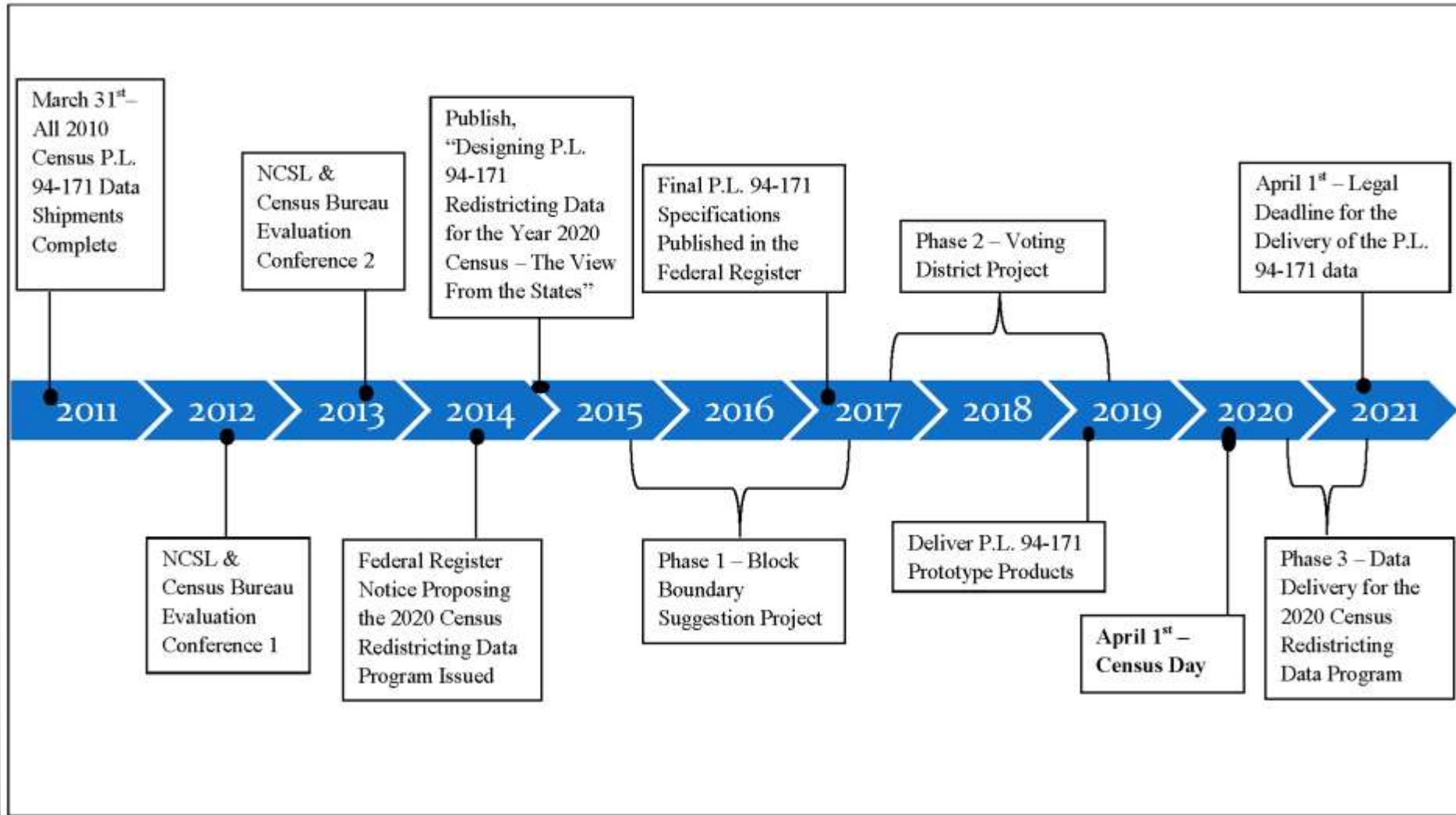
# 2020 Redistricting Data Program

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- Phase 4 – Collection of the New Plans
  - Collect Congressional plans on a 2-year cycle
  - Collect State Legislative District Plans on a 2-year cycle
  - Two versions collected - official and tabulation
- Phase 5 – The View From the States
  - Generate, from the States’ point of view, a report detailing:
    - Successes of the 2020 Program
    - Failings of the 2020 Program
    - Recommendations for the 2030 Program



# 2020 Redistricting Data Program



# 2020 Redistricting Data Program

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- The Census Redistricting and Voting Rights Data Office (CRVRDO) coordinates all communication between participants and the Census Bureau
- Liaisons have the option to parcel work
- Liaisons must certify all work
- The CRVRDO will facilitate legal boundary updates with the Boundary and Annexation Survey team and area's highest elected official

# 2020 Redistricting Data Program

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- Census Activities of Interest to the Redistricting Community
  - Federal Register Notice on Residence Rules
    - Comment Period Closed
    - Comments being logged and reviewed
  - 2015 National Content Test
    - Single Race and Ethnicity question
    - Additional of a Middle Eastern North African (MENA) category
- Other Activities of Interest to the Redistricting Community
  - Mid-decade redistricting
    - Florida, Virginia, etc.
  - Supreme Court
    - Evenwel v. Abbott

# Questions

