

# 2020 Systems Readiness

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# 2020 Census Systems Readiness

## Agenda

- System Releases Supporting Ongoing Key Operations
- Key Systems Supporting Ongoing Operations
- Releases and Operations Look Ahead
- Key Systems Supporting Future Releases
- Key Systems to be Deployed
- Key Functions Supported by Systems
- Performance and Scalability Test Plan
- 2020 Census Systems Releases
- Systems Readiness for 2020 Census-Remaining Key Work

# 2020 Census Systems Readiness

## 2018 End-to-End Census Test

### System Releases Supporting Ongoing Key Operations

Release (Operation)	Conduct Operation Date
Self-Response	February 12, 2018
Field Enumeration	March 14, 2018
Residual Coding	May 1, 2018
Group Quarters	June 11, 2018

# 2020 Census Systems Readiness

## 2018 End-to-End Census Test

### Key Systems Supporting Ongoing Key Operations

Operation (Release)	Key Systems Supporting Operation
Self-Response	CaRDS, CDL, CQA, DRPS, ECaSE-ISR, ECaSE-OCS, Geospatial Services, iCADE, IDMS, IPTS, MAF/TIGER, PEARSIS, RTNP, SOA, UTS
Field Enumeration	CAES, CaRDS, CDL, CQA, DAPPS, DRPS, DSC, ECaSE-ENUM, ECaSE-FOCS, ECaSE-OCS, iCADE, IDMS, ILMS, IPTS, LiMA, MAF/TIGER, MCM, MOJO Optimizer, PEARSIS, R&A, SMarCS, SOA, UTS
Residual Coding	DRPS
Group Quarters	CDL, Centurion, ECaSE-ENUM, ECaSE-FOCS, ECaSE-OCS, iCADE, IDMS, MAF/TIGER, MOJO Recruiting Dashboard, R&A, SOA, UTS

# 2020 Census Systems Readiness

## 2018 End-to-End Census Test

### Releases and Operations Look Ahead

Release (Operation)	Conduct Operation Date
Response Processing	October 1, 2018
Tabulation, Product Creation, and Dissemination	January 7, 2019

# 2020 Census Systems Readiness

## 2018 End-to-End Census Test

### Key Systems Supporting Future Releases

Operation (Release)	Key Systems Supporting Operation
Response Processing	CDL, DRPS, FDS (SRQA), PEARSIS
Tabulation, Product Creation, and Dissemination	CaRDS, CDL, CEDSCI, DRPS, MAF/TIGER, PEARSIS, Tabulation, SOA

# 2020 Census Systems Readiness

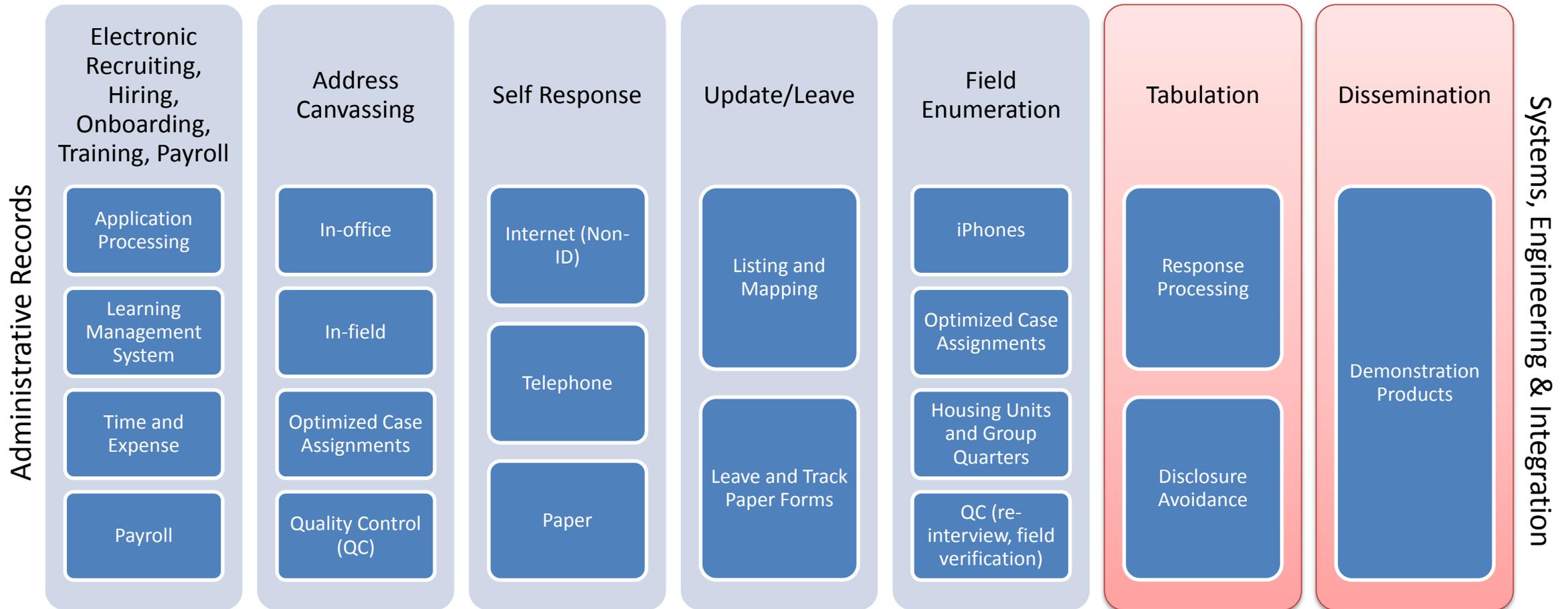
## 2018 End-to-End Census Test

### Key Systems to be Deployed

System	Functionality	Timeline for Deployment
Fraud Detection System (Self Response Quality Assurance)	FDS will use a suite of custom-built statistical models and algorithms to identify potentially fraudulent returns in relation to self-response.	October 2018
Tabulation	Tabulation is the system that creates data products which are used to share the information collected during the 2020 Census regarding the number of people in the United States and where they are located.	January 2019
CEDSCI	CEDSCI is an enterprise-level dissemination system that provides access to prepackaged data products via an interactive web site. Data users will have access to the prepackaged data products, application programming interfaces (API), and metadata documentation.	January 2019

# 2018 End-to-End Census Test

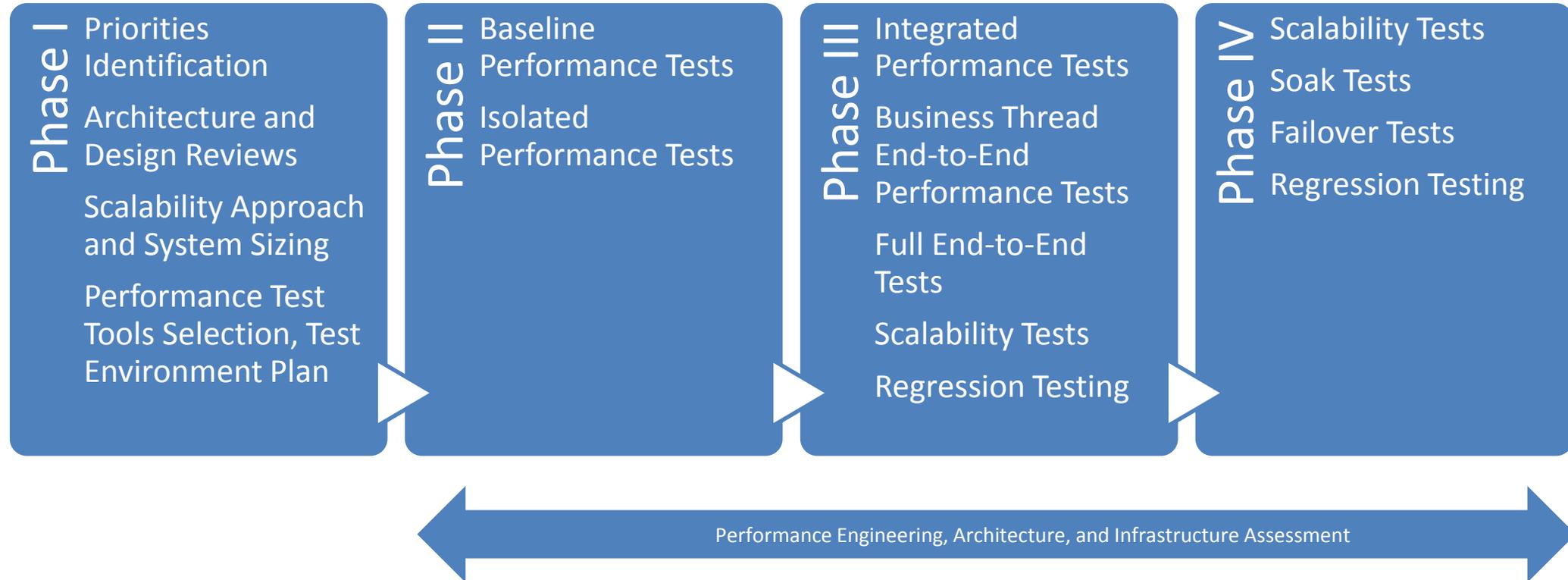
## Key Functions Supported by Systems



Cloud, Data Center, Cyber-security, Field Deployment, Operations Center(s)

# 2020 Census Systems Readiness

## Performance and Scalability Test Plan



# 2020 Census Systems Readiness

## 2020 Census Systems Releases

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35 Operations, 52 Systems

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4 Releases Originally Created

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Input from System Teams, Field, OIS, SE&I, Contractors, etc.

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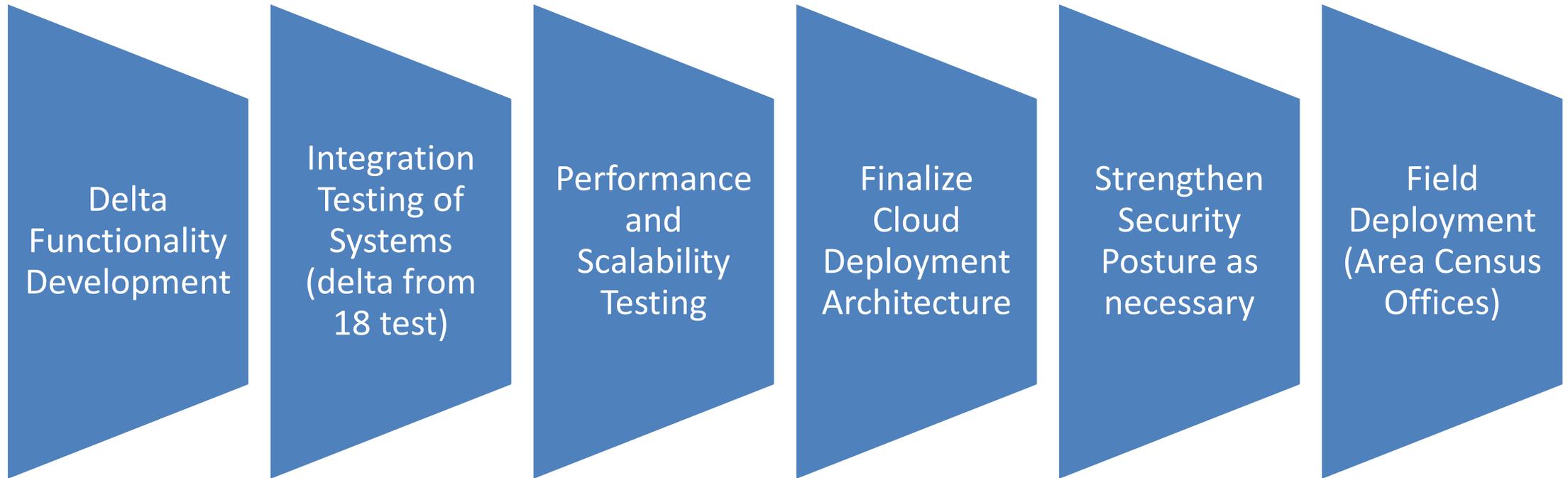
Converted 4 Releases into 16 Operational Deliveries

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Includes an operational delivery each for Island Areas and Post Enumeration Survey

# 2020 Census Systems Readiness

## Systems Readiness for 2020 Census— Remaining Key Work



# QUESTIONS?

# Back Up Slides

# 2020 Census Systems Readiness

## 2020 Census Systems List

	System	Description
1	<b>2020 Website</b>	2020 website provides a public web interface and allows partners to publish content.
2	<b>ATAC (Automated Tracking and Control)</b>	ATAC provides customer, employee, and workflow management. It also provides outbound call tracking for Geographic Partnership Programs and material tracking and check-in.
3	<b>BARCA (Block Assessment, Research, and Classification Application)</b>	BARCA is an interactive review tool, which is designed to assist an analyst in assessing present, past, and future housing units for a set of geographic work units. It is used for in-office address canvassing.
4	<b>CAES (Concurrent Analysis and Estimation System)</b>	CAES is a high speed processing environment used to make fast decisions during the data collection phase of the Census.
5	<b>CaRDS (Control and Response Data System)</b>	CaRDS provides sample design and universe determination.
6	<b>CBS (Commerce Business System)</b>	CBS is an electronic financial tracking and approval system. CBS collects and reports labor hours and costs for activities that the National Processing Center (NPC) performs.
7	<b>CDL (Census Data Lake)</b>	CDL serves as the repository for paradata and response data. It is built on a distributed, scalable platform to support data ingest, storage, and access for reporting and analytics applications.
8	<b>CEDESCI (Center for Enterprise Dissemination Services and Consumer Innovation)</b>	CEDESCI is an enterprise dissemination platform with search capability and access to surveys and censuses data.
9	<b>CEM (Customer Experience Management)</b>	CEM is an enterprise platform, which is used to provide dashboards providing insight into customer-focused performance metrics.
10	<b>CENDOCS (Census Document System)</b>	CENDOCS is a web-based system for requesting forms design services, publications and graphics services, and printing services which includes CD-ROM replication.
11	<b>Centurion</b>	Centurion provides for the upload of GQ eResponse data, LUCA address updates, and FACO data.

# 2020 Census Systems Readiness

## 2020 Census Systems List

	System	Description
12	<b>CHEC (Census Hiring and Employment Check System)</b>	CHEC is an administrative system that automates clearance processing of all personnel at the Census Bureau Headquarters, the Bureau of Economic Analysis (BEA), the Regional Offices (ROs), the National Processing Center (NPC), and Computer Assisted Telephone Interview (CATI) sites. This system supports fingerprint processing with the Federal Bureau of Investigation (FBI), the Office of Personnel Management (OPM), the Department of Homeland Security (DHS), the Office of Management and Budget (OMB), and the Department of Commerce (DOC).
13	<b>CHRIS (Census Human Resources Information System)</b>	CHRIS is a web-based personal information tool which provides personnel and payroll information on desktops. It creates a contact file for the Emergency Notification System (ENS).
14	<b>CIRA (Census Image Retrieval Application)</b>	CIRA stores decennial census images as well as raw and edited data. It provides a user interface for reviewing the images and data and is used for age match research at NPC.
15	<b>CQA (Census Questionnaire Assistance)</b>	CQA is a system that collects response data through inbound respondent-initiated calls, assists respondents with completing their questionnaires, including capturing their responses over the phone, and answering questions. CQA also provides outbound calling and data capture for reconciliation of response inconsistencies and follow-up QC operations.
16	<b>CRM (Customer Relationship Management)</b>	CRM is a suite of applications that provide the management of partnership activities, and case management for customer service.
17	<b>DAPPS (Decennial Applicant, Personnel and Payroll Systems)</b>	DAPPS is the system of record for the C-SHaRPS system of systems. It supports selection, hiring, personnel actions, time and expense processing, and payroll administration for temporary Census Bureau employees.
18	<b>Desktop Services</b>	Desktop Services is a set of office automation applications and tools for field office staff and remote workers.
19	<b>DMP (Data Management Platform)</b>	DMP provides centralized data analytics service to support decision-making for the Census advertising campaign.
20	<b>DRPS (Decennial Response Processing System)</b>	DRPS provides autocoding, clerical coding, data editing, and imputation for the post-data-collection response processing.
21	<b>DPACS (Decennial Physical Access Control System )</b>	DPACS maintains information relating to physical access control to facilities.

# 2020 Census Systems Readiness

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	System	Description
22	<b>DSC (Decennial Service Center)</b>	DSC is the help desk service for field representatives.
23	<b>ECaSE ENUM (Enterprise Censuses and Surveys Enabling Platform – Enumeration)</b>	ECaSE Enum supports field enumeration, provides the employee availability, and time & expense capabilities.
24	<b>ECaSE FLD OCS (Enterprise Censuses and Surveys Enabling Platform – Field Operational Control System)</b>	ECaSE FLD OCS manages field assignments and leverages the Optimizer for routing field staff to and between assignments.
25	<b>ECaSE ISR (Enterprise Censuses and Surveys Enabling Platform – Internet Self-Response)</b>	ECaSE ISR supports self-response data collection via the Internet. It also supports data collection by call center agents.
26	<b>ECaSE OCS (Enterprise Censuses and Surveys Enabling Platform – Operational Control System)</b>	ECaSE OCS manages the data collection case history for all enumeration operations and maintains operational workloads as data collection proceeds.
27	<b>FDS (Fraud Detection System)</b>	FDS identifies fraudulent cases of self-response using analytical models.
28	<b>Geospatial Services</b>	Geospatial Services provide mapping and imagery services.
29	<b>GUPS (Geographic Update Partnership Software)</b>	GUPS allows partners to provide geographic data updates.
30	<b>iCADE (Integrated Computer Assisted Data Entry)</b>	iCADE captures and tracks respondent information from scanned paper questionnaires. The iCADE system processes digital images of respondent questionnaires through three functions. Optical Mark Recognition (OMR) automatically detects and captures checkmark responses. Optical Character Recognition (OCR) automatically captures the presence of pre-selected numeric answer fields. Key From Image (KFI) directs keyers to all pre-identified, non-OCR write-in answer zones for keying hand-written data.
31	<b>IDMS (Identity Management System)</b>	IDMS provides enterprise authentication, authorization, identity, and access management.

# 2020 Census Systems Readiness

## 2020 Census Systems List

	System	Description
32	<b>ILMS (Integrated Logistics Management System)</b>	ILMS is used to manage logistics and resource planning.
33	<b>IPTS (Intelligent Postal Tracking System)</b>	IPTS is a mail tracking system that traces individual mail pieces through the USPS mailstream.
34	<b>LiMA (Listing and Mapping Application)</b>	LiMA provides address and map feature collection in support of surveys and censuses.
35	<b>MaCS (Matching and Coding Software)</b>	MaCS provides interactive clerical matching and coding. This application supports Non-ID processing.
36	<b>MAF/TIGER (Master Address File/Topologically Integrated Geographic Encoding and Referencing Database)</b>	MAF/TIGER is a repository of spatial and address data and is used to provide spatial and address products and services in support of survey and census operations.
37	<b>MCM (Mobile Case Management)</b>	MCM provides mobile device-level survey case management.
38	<b>MOJO Optimizer/Modeling</b>	MOJO Optimizer/Modeling is a route optimizer for field case assignments.
39	<b>MOJO Recruiting Dashboard</b>	The MOJO Recruiting Dashboard provides a dashboard that supports recruiting activities.
40	<b>NPC Printing (Printing at the National Processing Center)</b>	NPC Printing provides printing services.
41	<b>OneForm Designer Plus</b>	OneForm Designer Plus is a tool used to create paper forms including decennial questionnaires, letters, envelopes, notice of visit, language guides, and other decennial field and public materials.
42	<b>PEARSIS (Production Environment for Administrative Records, Staging, Integration, and Storage)</b>	PEARSIS manages administrative records and services associated with these records.

# 2020 Census Systems Readiness

## 2020 Census Systems List

	System	Description
43	<b>PES Clerical Match and Map Update (Post-Enumeration Survey - Clerical Matching System and Map Update)</b>	PES Clerical Match and Map Update provides clerical address and person matching and residential unit location updates to support the Coverage Measurement operation.
44	<b>PES Imputation and Estimation (Post-Enumeration Survey - Imputation and Estimation System)</b>	PES Imputation and Estimation provides coding, imputation of responses, and estimation of coverage for the Coverage Measurement operation.
45	<b>PES PCS (Post-Enumeration Survey - Processing and Control System)</b>	PES PCS provides sampling, automated matching, and workload control for the Coverage Measurement operation.
46	<b>R&amp;A (Recruiting and Assessment)</b>	R&A provides online job application capability for temporary positions, online training, and applicant pre-selection assessments.
47	<b>RTNP (Real Time Non-ID Processing)</b>	RTNP standardizes, matches, and geocodes addresses in real-time.
48	<b>SMaRCS (Sampling, Matching, Reviewing, and Coding System)</b>	SMaRCS applies quality control algorithms to the field address canvassing and enumeration operations.
49	<b>SOA (Service Oriented Architecture)</b>	SOA, along with the enterprise service bus, is a web service infrastructure that facilitates data transport, communication, and integration of systems.
50	<b>Tabulation (Decennial Tabulation System)</b>	Tabulation produces tabulated response data for redistricting and other purposes.
51	<b>UTS (Unified Tracking System)</b>	UTS provides operational and cost & progress reports.
52	<b>WebTQA (Web Telephone Questionnaire Assistance)</b>	WebTQA provides telephone assistance for Geographic Partnership Programs.