



2020 Census Systems Readiness

Presentation to the Census Scientific Advisory Committee

September 14, 2017

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2020 Census Systems Readiness

Agenda

2018 End-to-End Census Test Systems Readiness

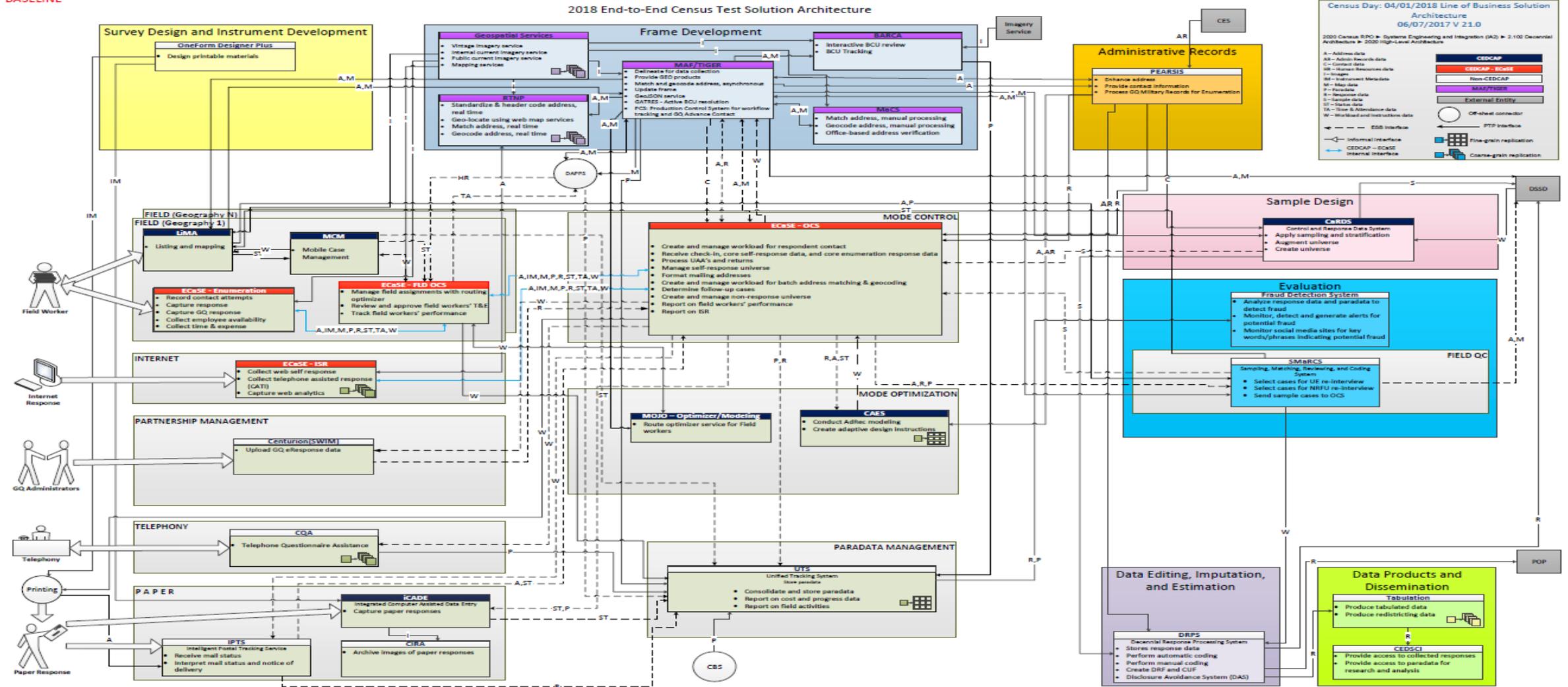
CEDCaP Systems Readiness

Systems Provisioning

2020 Census Systems Readiness

2018 End-to-End Census Test Solution Architecture

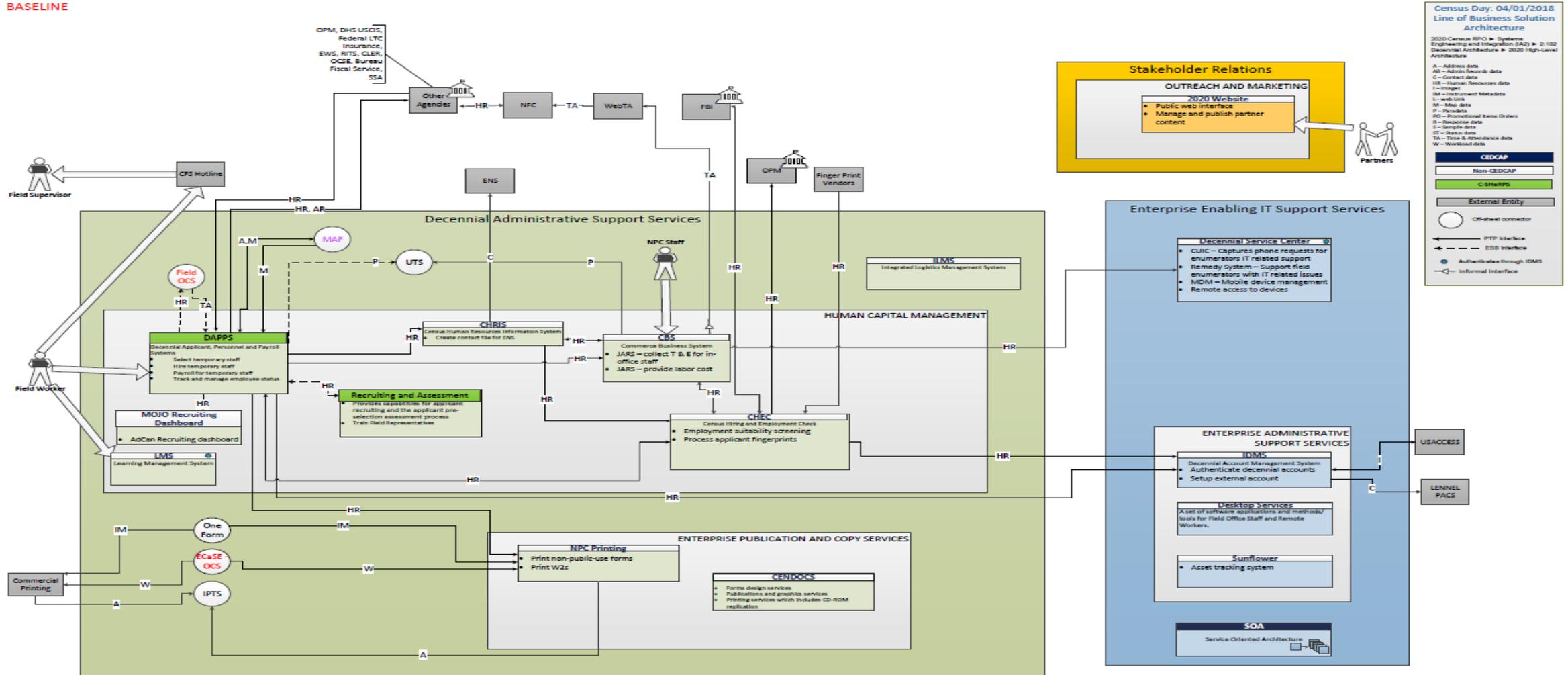
BASELINE



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2018 End-to-End Census Test Solution Architecture (continued)

BASELINE



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2018 End-to-End Census Test Systems

System	Key Efforts/Updates required for 2018/2020
CEDSCI (Center for Enterprise Dissemination Services and Consumer Innovation)	Establish interfaces with 2018 End-to-End Census Test systems. Continue development and test of functionality.
CQA (Census Questionnaire Assistance)	Establish interfaces with 2018 End-to-End Census Test systems. Develop, deploy and align schedule in support of the 2018 End-to-End Census Test Self-Response operation. Scalability updates are required to support 2020 Census.
DRPS (Decennial Response Processing System)	Develop enhancements and deploy in support of response processing operation. Scalability updates are required to support 2020 Census.
IPTS (Intelligent Postal Tracking System)	Design and develop enhanced solution to support 2018 End-to-End Census Test.
MAF/TIGER (Master Address File/Topologically Integrated Geographic Encoding and Referencing Database)	Develop and deploy collection geographies. Provide address and geospatial services for all relevant operations. Initial geography for the 2018 End-to-End Census Test is deployed.
Fraud Detection System	Develop, test, and deploy in support of the 2018 End-to-End Census Test.

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2018 End-to-End Census Test Systems (continued)

System	Key Efforts/Updates required for 2018/2020
MOJO (Recruiting Dashboard)	As-Is system. Deployed for 2018 End-to-End Census Test recruiting effort.
PEARSIS (Production Environment for Administrative Records Staging, Integration and Storage)	Continue development, test and deploy in support of 2018 End-to-End Census Test.
RTNP (Real Time Non-ID Processing)	Verify cloud deployment in the production environment in support of the self-response operation. Scalability updates are required to support 2020 Census.
SMaRCS (Sampling, Matching, Reviewing, and Coding System)	Develop enhancements and deploy in support of the 2018 End-to-End Census Test. Deployed in support of Address Canvassing.
Tabulation (Decennial Tabulation System)	Establish interface with 2018 End-to-End Census Test systems, develop and deploy enhancements required to support the 2018 End-to-End Census Test.
UTS (Unified Tracking System)	Develop scalability enhancements and deploy in support of 2018 End-to-End Census Test. Develop and deploy new reports. Shift UTS interfaces to Census Data Lake (CDL). Deployed in support of Address Canvassing.

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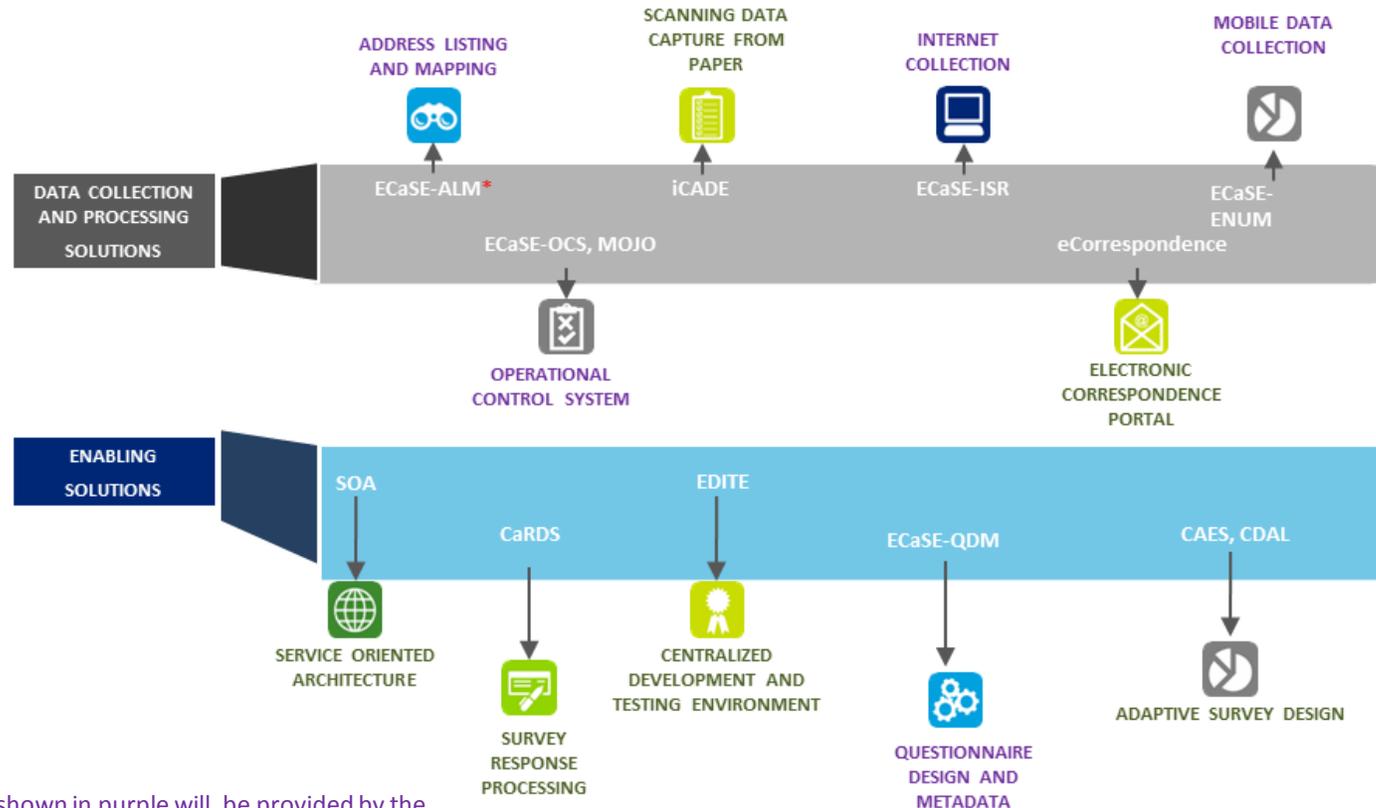
2018 End-to-End Census Test Support Systems

System	Key Efforts/Updates required for 2018/2020
CBS (Commerce Business System)	As-Is system, no functionality updates are required for its 2018/2020 baseline scope. Some updates may be required when interfacing systems (such as DAPPS) migrate to the cloud.
CENDOCS (Census Document System)	As-Is system, no functionality updates are required for its 2018/2020 baseline scope.
CHEC (Census Hiring and Employment Check System)	Third party vendor interface needs to be implemented once the fingerprinting contract is awarded. Scalability updates are required to support 2020 Census.
CHRIS (Census Human Resources Information System)	As-Is system, no functionality updates are required for 2018/2020 baseline scope. Some updates may be required when interfacing systems (such as DAPPS) migrate to the cloud.
CIRA (Census Image Retrieval Application)	As-Is system, no functionality updates are required for its 2018/2020 baseline scope. Scalability updates are required to support 2020 Census.
Commercial Printing	Award to vendor. Develop interface with 2018 End-to-End Census Test systems.
IDMS (Identity Management System)	As-Is system, minor functionality updates are required for its 2018/2020 baseline scope. Scalability updates are required to support 2020 Census. Integrate with TI environment.
ILMS (Integrated Logistics Management System)	Complete development contract award. Develop interface with 2018 End-to-End Census Test systems. Possible scalability updates are required to support 2020.
NPC Printing (Printing at the National Processing Center)	As-Is system, no functionality updates are required for its 2018/2020 baseline scope.
Sunflower	As-Is system, no functionality updates are required for its 2018/2020 baseline scope.

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Census Enterprise Data Collection and Processing (CEDCaP) Capabilities and Solutions

CEDCaP is comprised of delivery of enterprise capabilities and the solutions to provide those capabilities.



Capabilities shown in purple will be provided by the Enterprise Censuses and Surveys Enabling (ECaSE) Platform

* The long term enterprise solution for Address Listing and Mapping is expected to be ECaSE; however, for the 2020 product releases the current enterprise solution (LiMA) will be used.

Census Enterprise Data Collection & Processing (CEDCaP)

CEDCaP Data Collection & Processing Capabilities and Solutions	
Delivered:	
CEDCaP Capability	CEDCaP Solution
1) Centralized Development and Testing Environment to CEDCaP projects	Enterprise Development, Integration, & Test Environment (EDITE)
2) Service Oriented Architecture for CEDCaP projects (Enterprise Service Bus (ESB), Manage File Transfer (MFT), Message Oriented Middleware (MOM), API Gateway)	Application Programming Interface (API) Infrastructure (API-I)
3 Adaptive Survey Design	ECaSE Operational Control System Census-Data Access Layer (C-DAL) Concurrent Analysis and Estimation System (CAES)
4) Operational Control System	ECaSE Operational Control System MOJO Optimizer/Modeling
5) Address Listing and Mapping	ECaSE Address Listing Mapping
6) Internet Data Collection	ECaSE Internet Self Response
7) Questionnaire Design and Metadata	ECaSE- Questionnaire Design Metadata
8) Mobile Data Collection	ECaSE – Enumeration
9) Electronic Correspondence Portal	eCorrespondence
10) Scanning Data Capture from Paper	Integrated Computer Assisted Data Entry (iCADE)
11) Survey Response Processing	CARDS (Pre-data collection, TBD (Post-data collection processing))

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CEDCaP Systems

CEDCaP System	Key Efforts/Updates required for 2018/2020
CaRDS (Control and Response Data System)	System successfully supported the 2015, 2016, and 2017 Census Tests. Developing enhancements to support the 2018 End-to-End Census Test. Scalability updates are required to support 2020.
iCADE (Integrated Computer Assisted Data Entry System)	Legacy system that successfully supported the 2015, 2016 and the 2017 Census Tests. Developing enhancements needed for the 2018 End-to-End Census Test. Scalability updates are required to support 2020.
SOA (Service Oriented Architecture)	Used in production to successfully support the 2016 and 2017 Census Tests. For the 2017 Census Test, supported the interfaces between ECaSE in the Cloud and those systems not in the Cloud. Will be used in the Technical Integrator environments for the 2018 End-to-End Census Test and 2020 Census.
ECaSE (Enterprise Censuses and Surveys Enabling)	Internet Self-Response and Survey Operational Control functionality successfully used in production for the first time during the 2017 Census Test. Developing enhancements for the 2018 End-to-End Census Test. Scalability updates are required to support 2020. Work underway to address recommendation from May 2016 COTS Capability Assessment and Analysis decision to conduct performance testing. Testing will be done by Technical Integrator using 2020 workload models and solutions developed to 2018 End-to-End Census Test requirements.

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CEDCaP Systems

CEDCaP System	Key Efforts/Updates required for 2018/2020
CAES (Concurrent Analysis and Estimation)	First time use in the 2018 End-to-End Census Test. Work will continue to finalize 2020 Census models that will run on CAES.
MOJO Optimizer/Modeling (Route Optimizer)	Successfully supported the 2015 and 2016 Census Tests. Developing enhancements needed for the 2018 End-to-End Census Test to apply business rules needed to re-engineer field operations. Scalability updates are required to support 2020.
LiMA/MCM (Listing and Mapping/Mobile Case Management)	Legacy system in use on current surveys. Supported the 2016 Census Test. Developing enhancements needed for the 2018 End-to-End Census Test. Scalability updates are required to support 2020.

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Systems Deployment

CB-OnPrem	2020 OnPrem	2020 Cloud	CB-NPC	SaaS/Service
Data Center in Bowie for the enterprise managed by Computer Services Division (CSvD)	Data Center in Bowie (collocated with the previous one) for 2020 Census	Cloud for 2020 Census	National Processing Center in Jeffersonville, Indiana	Software As a Service or other services

2018 End-to-End Census Test

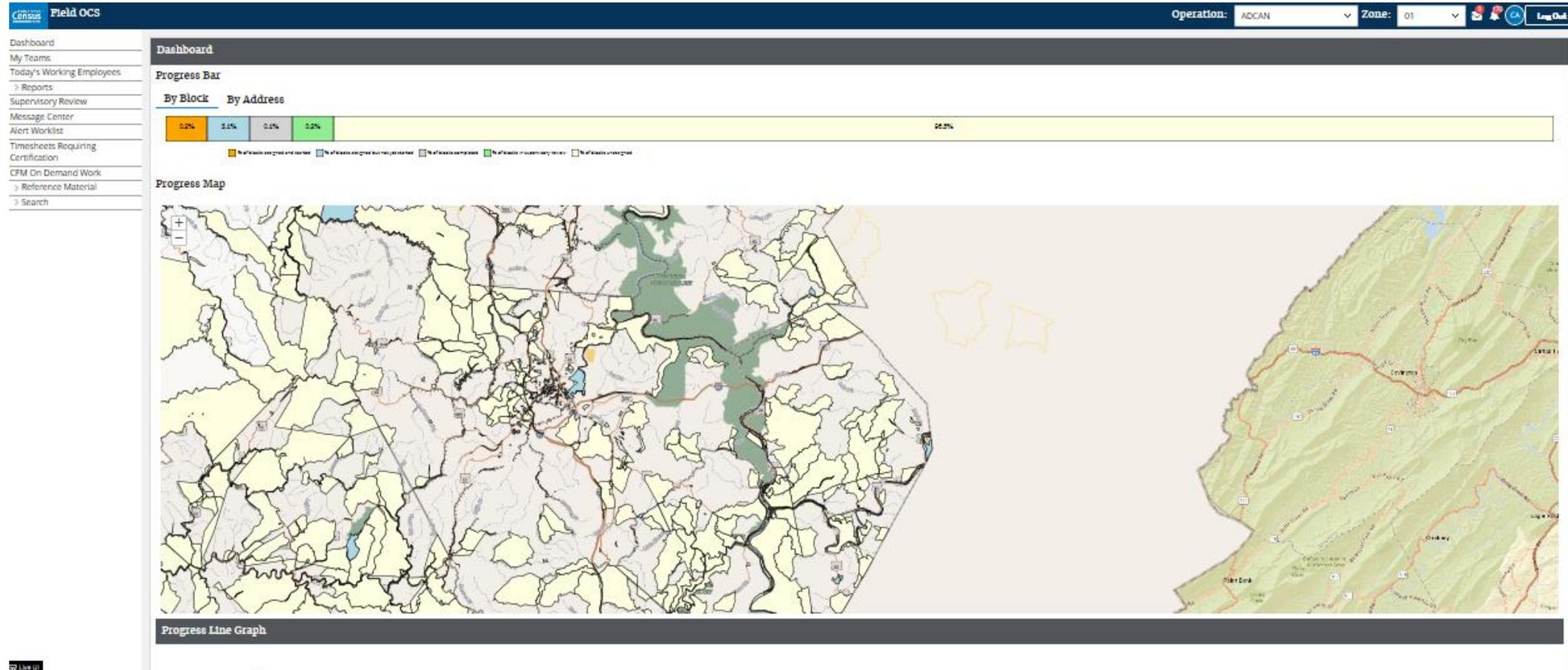
Address Canvassing: Listing and Mapping Application (LiMA)

The screenshot displays the LiMA application interface. On the left, a list of 12 addresses is shown, each with its street name, housing unit type, and structure type. The address 1400 ALBIN RD, 99995 (4) is highlighted. The map on the right shows the geographic area corresponding to the list, with a brown shaded region labeled '00006100'. The map includes street names like ALBIN RD, NEW ATLANTIC RD, and SURPRISE AVE, and a scale bar for 1 km and 1 mi. The bottom of the screen shows a Windows taskbar with various application icons and a system tray with the time 6:03 PM and date 6/27/2017.

Address	Housing Unit	Structure
1350 ALBIN RD	HOUSING UNIT	SINGLE FAMILY HOME
1400 ALBIN RD , 99995 (4)	HOUSING UNIT	MULTI UNIT STRUCTURE
810 CHAMBER RIVER	HOUSING UNIT	SINGLE FAMILY HOME
815 CHAMBER RIVER RD , 99995	HOUSING UNIT	SINGLE FAMILY HOME
820 CHAMBER RIVER RD , 99995	HOUSING UNIT	SINGLE FAMILY HOME
830 CHAMBER RIVER RD	HOUSING UNIT	SINGLE FAMILY HOME
835 CHAMBER RIVER RD	HOUSING UNIT	SINGLE FAMILY HOME
845 CHAMBER RIVER RD	HOUSING UNIT	SINGLE FAMILY HOME
840 CHAMBER RIVER ST , 99995	HOUSING UNIT	SINGLE FAMILY HOME
1120 OLD PRUDHOMME RD , 999...	HOUSING UNIT	SINGLE FAMILY HOME

2020 Census

Reengineering Field Operations: Operational Control System



Note: Screenshot contains test data.

2020 Census

Reengineering Field Operations

An official website of the United States government

United States Census Bureau Training Field OCS

Operation: ADCAN Zone: 99

Log Out

Dashboard

My Teams

Today's Working Employees

> Reports

Supervisory Review

Message Center

Alert Worklist

Timesheets Requiring Certification

CFM On Demand Work

> Reference Material

> Search

> Training Options

Options

Census Field Supervisor

Dashboard

Progress Bar

By Block By Address

28.6%	42.9%	19.0%
-------	-------	-------

% of blocks assigned and started % of blocks assigned but not yet started % of blocks completed % of blocks in supervisory review % of blocks unassigned

Progress Map

Section include - non-auto generated

Live UI

Note: Screenshot contains test data.

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Reengineering Field Operations

An official website of the United States government

United States Census Bureau Training Field OCS 1 16 BM Log Out

Dashboard
My Team
Reports

- CFS Look Ahead Report by Team
- CFS Look Ahead Report by Day
- CFS Team Performance
- Alert Report
- Weekly Cumulative Hours by Field Worker
- Team Details
- Alert Resolution Status
- Historical Time And Expense Report
- Message Center
- Alert Worklist
 - > Time and Expense
 - > Reference Material
 - > Search
- Training Options
- Options

Look Ahead Report by Team

Ben McCool

NAME	TUE 09/05/17	WED 09/06/17	THU 09/07/17	FRI 09/08/17	SAT 09/09/17
Bleau, Jane	No Availability	No Availability	No Availability	No Availability	9:00AM - 5:00PM (8 hrs)
Citizen, Emmie	10:00AM - 2:00PM (4 hrs)	No Availability	No Availability	No Availability	9:00AM - 5:00PM (8 hrs)
Coe, Elizabeth	No Availability	No Availability	No Availability	No Availability	9:00AM - 3:00PM (6 hrs)
Conte, Mary	11:00AM - 12:00PM (1 hrs)	No Availability	No Availability	No Availability	9:00AM - 5:00PM (8 hrs)
Del Pueblo, Juanita	No Availability	No Availability	No Availability	No Availability	9:00AM - 5:00PM (8 hrs)
Goe, Ivan	10:00AM - 4:00PM (6 hrs)	No Availability	No Availability	No Availability	9:00AM - 5:00PM (8 hrs)
Koe, Mike	No Availability	9:00AM - 5:00PM (8 hrs)	9:00AM - 5:00PM (8 hrs)	9:00AM - 5:00PM (8 hrs)	9:00AM - 5:00PM (8 hrs)
Loe, Lola	No Availability	9:00AM - 5:00PM (8 hrs)	9:00AM - 5:00PM (8 hrs)	9:00AM - 5:00PM (8 hrs)	9:00AM - 5:00PM (8 hrs)
Moe, Ellie	2:00PM - 4:00PM (2 hrs)	No Availability	No Availability	No Availability	9:00AM - 5:00PM (8 hrs)
Noe, Pepe	No Availability	9:00AM - 5:00PM (8 hrs)	9:00AM - 5:00PM (8 hrs)	10:00AM - 4:00PM (6 hrs)	9:00AM - 11:00AM (2 hrs)
Nom, Lucy	No Availability	9:00AM - 5:00PM (8 hrs)	9:00AM - 5:00PM (8 hrs)	9:00AM - 5:00PM (8 hrs)	9:00AM - 5:00PM (8 hrs)
NAME	TUE 09/05/17	WED 09/06/17	THU 09/07/17	FRI 09/08/17	SAT 09/09/17

Note: Screenshot contains test data.

2020 Census

Reengineering Field Operations

An official application of the United States government

MENU **Field Data Capture** HELP

My Work

Active Inactive

345 MAIN STREET
BOSTON MA 02135
EC_DEV_ENUM-159348
Proxy Eligible

Work

345 MAIN STREET
BOSTON MA 02135
EC_DEV_ENUM-159347
Proxy Eligible

Work

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MENU **Field Data Capture** HELP

Add Time And Expense

Date	Total Time Worked	Miles
6/3/17	8	34

Status
TRANSMITTED-PENDING

Date	Total Time Worked	Miles
6/6/17	8	33

Status
TRANSMITTED-PENDING

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MENU **Field Data Capture** HELP

- Tuesday, 06/13/2017**
9:00 AM - 5:00 PM (3 hours)
- Wednesday, 06/14/2017**
Not Available
- Thursday, 06/15/2017**
9:00 AM - 7:30 PM (4 hours)
- Friday, 06/16/2017**
Not Available
- Saturday, 06/17/2017**
Not Available

Submit Successful

Note: Screenshot contains test data.

2020 Census Survey Operations

Identify Operations SB Sam Barron

CSAC Demo Survey

Site*
Housing Unit

Operation*
Internet Self-Response

Recipient*
Internet Self-Response

Name*
ISR Workload

Recurring

Start Date
For example: 03 22 2005
Month* Day* Year*
04 01 2018

End Date
For example: 03 22 2005
Month* Day* Year*
06 01 2018

Cut Date
For example: 03 22 2005
Month* Day* Year*
03 25 2018

Here we are creating an ISR workload inside of the CSAC Survey. We provide:

- The Site: HU vs. GQ
- The Operation Name: a pre-populated drop-down of 2018 operations
- The Recipient: a pre-populated dropdown of who the workload is delivered to
- The Name: whatever the user would like
- The Start Date: for the entire operation
- The End Date: for the entire operation
- The Cut Date: the date on which the workload will be generated.
 - Can be on the Start Date, for operations that don't need lead time.
 - Can be before the Start Date, for operations such as mailout operations that require the workload to be cut in advance of the mailout date.

Questions?