Deloitte.

Travis County HHS

Business Process Assessment Services – Data Mapping & Reporting Requirements Report

October 30, 2020

Table of Contents

Introduction

The Data Mapping & Requirements Report provides Travis County stakeholders with an overview of the data elements and reports collected across all client-facing HHS programs, as well as insights into how this analysis enables critical features of ECMS. In concert with the accompanying ECMS Requirements deliverable, this report will serve as a launching point for the procurement and development of ECMS.

Purpose of This Report

- Offers a **summary guide** to the accompanying catalogue of mapped data elements and reporting requirements for all client-facing HHS programs

- Provides Travis County stakeholders with **helpful business benefits of the ECMS database and key functionality**

- Provides Travis County ITS, HHS, and the future system vendor with an **exhaustive list of data elements and reporting requirements** in support of ECMS rollout

- Informs ECMS development by acting, along with the ECMS Requirements deliverable, as a **functional roadmap for ECMS regarding data collection and reports**

Decide Phase analysis and outputs...

Discovery Sessions

Data Mapping & Reporting Document and Report

ECMS Requirements Spreadsheet

ECMS Requirements Report

...inform planning for the ECMS rollout.

ECMS Database Structure

Prioritized ECMS Functional Requirements

ECMS Integration Services

ECMS Implementation Strategy

Executive Summary

Based on our understanding of HHS programs and the service delivery objectives identified during the Sense and Aspire Phases, as well as future needs captured during the Decide Phase, the Deloitte team assembled a complete mapping of the data elements collected by client-facing HHS programs throughout the delivery of services. We also identified the critical reporting requirements used to manage these programs.

As a result of **13** sessions with program staff across the FSS, CSD, OCS, and Finance divisions, our team identified **18** data elements that are commonly collected across HHS programs and **49** reports that should be considered for the ECMS implementation.

Common HHS Data Elements

Individual Info

- First Name
- Middle Name
- Last Name
- SSN
- Date of Birth
- Relation to Primary Applicant

Demographic Info

- Gender
- Relation
- Ethnicity
- Race
- First Language

Address Info

- Address
- City
- Zip
- County of Residence

Socio-Economic Info

- Education
- Marital Status

Contact Info

- Phone
- Email

UNDERSTANDING DATA & REPORTING NEEDS ENABLES CRITICAL ECMS FUNCTIONALITY

Unified Client Record
Organizing and compiling an individual's data from across HHS programs supports the development of a centralized client database.

Search & Inquiry
With more full insight into data across programs, HHS staff can perform thorough investigations of client records from a single location that consolidates client data.

Reporting
Through cross-program reporting, HHS decision-makers can more effectively monitor and analyze aggregated client and household data, program enrollment, and even client performance.

Dashboards
Operational and executive dashboards provide real-time insight into HHS-wide demographic trends, program demand across location, and operational effectiveness through intuitive graphs and visualizations.

Project Approach & Activities

	SENSE Months 1-3	ASPIRE Months 3-7	DECIDE Months 7-11
Project Management	✓ Discuss Project Governance Approach ✓ Develop Project Management Plan	✓ Continue Project Management ✓ Design Project Governance ✓ Deliver Ambitions Lab	✓ Continue Project Management and Governance Design • Capture Lessons Learned and Conduct Project Closeout
Business Process Assessment	✓ Perform Stakeholder Interviews ✓ Review Procedural & Operational Documentation ✓ Develop As-Is Business Process Maps	✓ Assess Improvement Opportunities & Identify Future-State Recommendations ✓ Hold Future-State Sessions	• Finalize Future-State Recommendations & Next Steps
System Discovery	✓ Explore CABA System Functionality & Understand Technical Components ✓ Hold Discovery Sessions to Map CABA Functionality	✓ Begin Documenting Program Data Mapping & Reporting Requirements ✓ Capture High-Level ECMS Functionality	✓ Confirm ECMS Data Elements and Reporting Requirements • Hold Discovery Sessions to Document ECMS Functional Requirements
Service Design	✓ Perform User Research & Center Observations ✓ Develop Modes/Mindsets & Journeys	✓ Service Design Planning ✓ Draft Service Blueprints	• Offer Insights Into ECMS Design

Deliverables	✓ Project Kick-off
	✓ PM Plan
	✓ Task 1: Business Process Review and Documentation:
	    ✓ Current-State Insights Report
	    ✓ Business Process Flows
		✓ Task 3: Efficiency Assessment
		    ✓ Efficiency Assessment & Recommendations Report
			✓ **Task 2: Data Mapping & Reporting Requirements**
			• Task 4: ECMS Requirements Report & Spreadsheet
			• Project Closeout

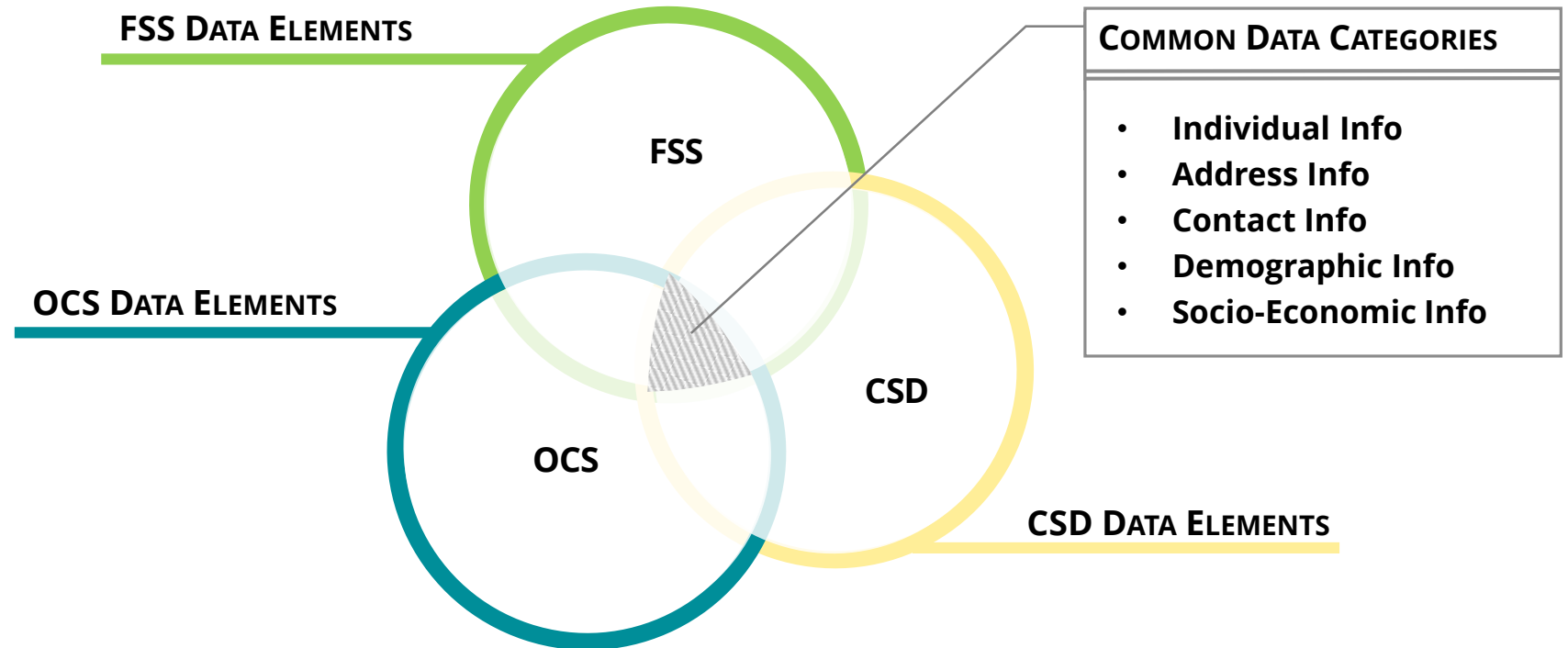# Overview of Approach, Inputs, & Activities

The activities conducted during the Decide Phase were built upon the insights and challenges identified during the Sense Phase and the recommendations established during the Aspire Phase. These inputs, paired with an understanding of HHS goals, resulted in investigative and exploratory activities to capture data elements and reporting requirements across all HHS programs that directly inform ECMS functionality.

Approach

A Comprehensive Collection Process...

The primary focus of this report is to share the common data elements and reports identified across all HHS programs. To accomplish this, our team engaged in an exhaustive data mapping exercise driven by our interactions with HHS program staff and executive partners.

We conducted 13 discovery sessions with all programs across the FSS, CSD, OCS, and Finance divisions of Travis County HHS. Through these sessions, and by reviewing existing software applications, report documents, and program forms, we identified the client data each division collects and the reports each division is required to produce in order to deliver services to their clients. From there, we were able to identify the common data elements captured by all programs across HHS.

FSS Data Elements

OCS Data Elements

CSD Data Elements

FSS

OCS

CSD

Common Data Categories

- **Individual Info**
- **Address Info**
- **Contact Info**
- **Demographic Info**
- **Socio-Economic Info**

OUR ACTIVITIES

INPUTS

SYSTEM ANALYSIS
- Performed firsthand analysis of existing program systems that manage client data
- Identified how client data was captured and entered in systems

CLIENT DATA COLLECTED
- Conducted discovery sessions with HHS program staff and administrators to identify the specific data elements collected for program service delivery

PROGRAM & OPERATIONAL REPORTS
- Identified existing reports and desired future reports
- Captured requirements and attributes for all critical reports

CLIENT FORMS
- Identified and collected client-facing forms required for service delivery
- Analyzed and confirmed which data is collected from forms and entered in systems

SUBJECT MATTER EXPERT INTERVIEWS
- Met with industry SMEs to understanding cross-program data integration
- Gathered best practices for data analytics and reporting

10	**71**	**13**	**1100+**	→	**18**	**49**
SYSTEMS ANALYZED	FORMS IDENTIFIED	SESSIONS WITH HHS	TOTAL DATA ELEMENTS CAPTURED		COMMON DATA ELEMENTS ACROSS HHS	TOTAL REPORTS IDENTIFIED

OUTPUTS

COMMON DATA ELEMENTS

Identified the common data elements collected across all HHS programs. These data elements inform the design of an ECMS database that offers insight into client information across HHS programs through reporting, search, and dashboard functions.

DATA MAPPING AND REPORTING REQUIREMENTS REPORT

Summarizes the contents of the Data Mapping and Reporting Spreadsheets and provides operational context for these activities and analysis. This report offers insights into the benefits and considerations of key ECMS functionality.

DATA MAPPING AND REPORTING REQUIREMENTS SPREADSHEETS

Complete list of all data elements and reports identified across each client-facing HHS program. This exhaustive spreadsheet also informs ECMS requirements by specifying page- and field-level information for data collection.

INPUTS/OUTPUTS ACROSS DIVISIONS

Divisions	Inputs and Activities					Deliverable	
	System Analysis	Reporting	Client Forms	Client Data Collected	Subject Matter Expert Interviews	Mapped Data Elements	Reporting Requirements
Family Support Services	✓	✓	✓	✓	✓	✓	✓
Community Services Division	✓	✓	✓	✓	✓	✓	✓
Office of Children Services	✓	✓	✓	✓	✓	✓	✓
Finance[1]	✓	✓					✓

[1]The Finance division does not collect client data, but this group was included in Decide sessions and relevant reporting activities were captured

Common Data Elements & Critical Reports

Through multiple discovery sessions, document gathering, and systems analysis, 18 data elements were found to be common across all HHS programs, as well as 49 critical reports across each division. This report aims to help Travis County stakeholders understand the business benefits of an ECMS database that captures client data from across all of HHS and the key functionality this database enables.

COMMON DATA ELEMENTS IDENTIFIED ACROSS HHS

By analyzing all data collected across HHS programs, we identified **18 common data elements**. By relating this information with known case and program information, the ECMS database has the potential to establish a unified client record across HHS. Associating additional elements (like the seven recommended here) with the common data elements illustrates what this complete client record could look like in ECMS.

Common HHS Data Elements	Additional Data Elements to Consider for a Complete Client Record

Individual Info
- First Name
- Middle Name
- Last Name
- SSN
- Date of Birth
- Relation to Primary Applicant

Demographic Info
- Gender
- Relation
- Ethnicity
- Race
- First Language

Address Info
- Address
- City
- Zip
- County of Residence

Socio-Economic Info
- Education
- Marital Status

Contact Info
- Phone
- Email

Additional Identifiers
- Client ID
- Program
- Program Status
- Intake Date
- Case ID
- Case Status
- Eligibility Status

UNDERSTANDING COMMON DATA ELEMENTS

Common Data Elements Support ECMS Function and Design

While every division of HHS collects unique client data, the overlapping data elements across the department support the creation of a unified database of key client information. An ECMS database that can integrate disparate data across HHS platforms into a single location enables critical functionality for the new system. More details on this functionality is provided in the next section.

OCS Data Elements

FSS Data Elements

CSD Data Elements

Common Data Elements

Unified Client Database

ECMS System Structure

ECMS Functional Capabilities

ECMS Fields

Data Collection Flow

Reporting

Dashboard Analytics

Search/Inquiry
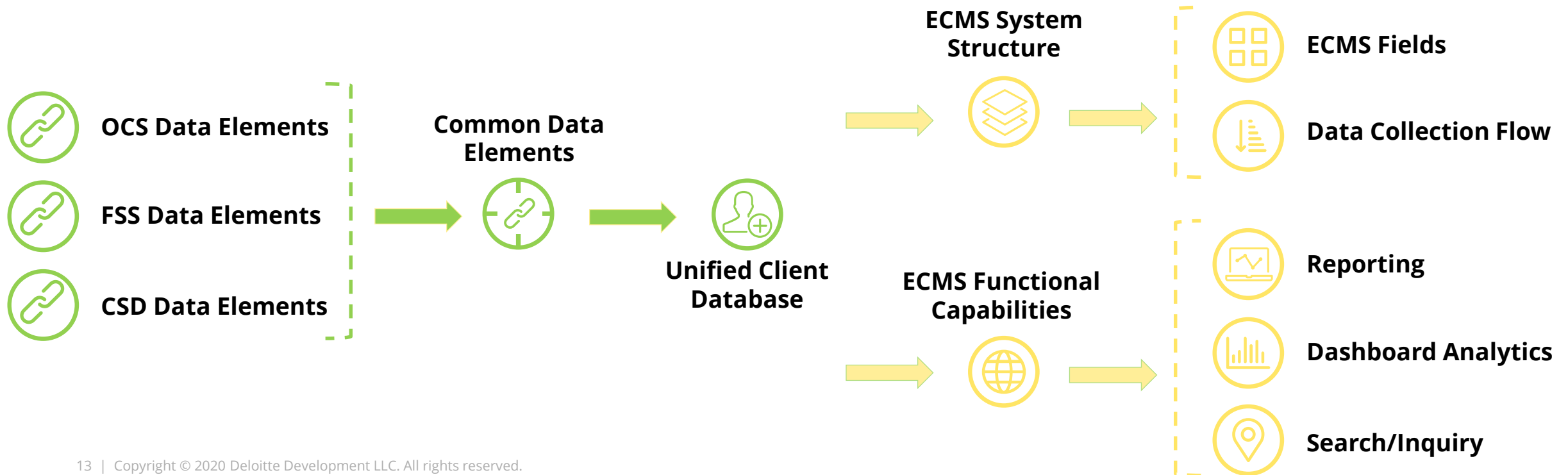
REPORTS: FSS

The following reports were identified as critical for FSS program service delivery or compliance. For more details on the descriptions, requirements, and measures captured for each report, please see the respective spreadsheet in the appendix.

ID	REPORT
Appeals	
F-10	Appeals Report*
F-11	Denials Report
Direct Services	
F-3	Assistance by Service/Fund
F-9	Caseload Report*
F-5	Incomplete Applications
F-2	Monthly Staff Performance Review
F-1	Paid Invoices
F-7	Payments Pending/Processing*
F-6	Return File From Auditor (upload)
F-8	Service Type Report*
F-4	Zip Code Report

ID	REPORT
Burial Services	
F-13	Activity Report
F-14	Assistance By Service/Fund (Burial)
F-12	Invoice Listing Report
CEAP	
F-17	CEAP Demographics Report
F-15	CEAP LIHEAP Performance Data Report
F-18	CEAP Program Performance Report
F-16	Texas Gas Service & TXU Report
F-19	TXU Energy Aid Monthly Report

ID	REPORT
Social Work/Support Case Management	
F-23	Client Assessment Scores*
F-22	Financial Assistance Report
F-20	Monthly SW Team Report
F-21	Yearly SW Team Report

*Designates a new report for ECMS

REPORTS: CSD

The following reports were identified as critical for CSD program service delivery or compliance. For more details on the descriptions, requirements, and measures captured for each report, please see the respective spreadsheet in the appendix.

ID	REPORT
Coming of Age	
C-3	Boards of Directors/Advisory Council Report
C-1	Program Performance Report (CNCS)
C-2	Travis County Report
Housing/Weatherization	
C-8	Building Weatherization Report
C-5	Budget Submission Department Program Information
C-7	LIHEAP Expenditure Report
C-6	LIHEAP Performance Report
C-4	Program Performance Report

ID	REPORT
NCC	
C-9	Active caseload report by user
SYEP	
C-12	Summer Youth Program (Tableau)
C-10	Year End Report (All Youth)
C-11	Year End Report (Disabled Youth)

ID	REPORT
Deaf Services	
C-13	Client Activity Report*
C-14	Precinct Demographics Report*

*Designates a new report for ECMS

REPORTS: OCS

The following reports were identified as critical for OCS program service delivery or compliance. For more details on the descriptions, requirements, and measures captured for each report, please see the respective spreadsheet in the appendix.

ID	REPORT
Family First	
O-2	Monthly Statistical Report for Parent Educator
O-3	Program Results
O-1	Quarterly Statistical Report
Healthy Families	
O-4	Healthy Families Annual Report
O-7	Performance Results Report
O-5	Quarterly Report
O-6	Report for MIECHV

ID	REPORT
The Children's Partnership (TCP)	
O-9	Report For TCP Board: Part I
O-8	Report For TCP Board: Part II
O-10	TCP Program Results Form
Parenting in Recovery (PIR)	
O-13	Annual Travis County Performance Reporting
O-11	Advisory Reporting: Financial
O-12	Advisory Reporting: Demographics & Performance

ID	REPORT
CPS Reintegration Project (CRP)	
O-14	Annual Travis County Performance Reporting

*Designates a new report for ECMS

ECMS Database & Key Functionality

These common data elements will inform the development of a unified ECMS database that draws in client data from existing program-specific systems across HHS. A well-designed ECMS database structure allows HHS to aggregate and analyze client information in a way that previously was not possible and enables key ECMS functionality, including reporting, search, and dashboard features.

ECMS DATABASE: BENEFITS

What is a unified database?

A unified ECMS database collects client data that is directly entered into ECMS itself, as well as from existing systems across HHS through integration services. This data is standardized and stored into a single location (database) to enable the below benefits for HHS:

The "Source of Truth" for Data

By accumulating information across multiple HHS platforms, ECMS can act as the **"one-stop shop" for comprehensive data management** for all HHS programming.

Unified Client Record

Aggregated client data empowers HHS staff with easily accessible and accurate client information that helps with the **understanding of the complete client story** and **ensuring clients receive tailored services.**

Systems Integration

The integration of existing systems with ECMS will allow HHS staff to **quickly and accurately access client information from a single location**, as well as coordinate and share information across divisions.

Cross-HHS Reporting

Program, division, and department-wide reporting will allow for more **complete analysis and greater oversight of HHS operations, client trends, and program performance** to help support improved service delivery.

18 |

ECMS DATABASE: CONSIDERATIONS

Below are a few important considerations that Travis County ITS and HHS stakeholders should account for when developing a unified database for ECMS that can acquire and store specific data elements across HHS programs.

Reformatting & Standardizing Data

Incorporating HHS-wide data into ECMS will likely require **standardizing and reformatting data collected across systems**. Standards and formats must be defined by HHS and development stakeholders.

Database Design

It will be necessary to **determine the desired database structure to organize and store ECMS data**, including design of database model and tables, as well as preference for on-premise or cloud storage.

Approach to Integration Services

Integration between ECMS and division- and program-specific systems will require considerations including the **method and frequency at which information is shared between systems.**

Information Access & Privacy

While the ECMS database will be able to aggregate information across multiple programs, HHS should consider **how sensitive client data is stored and who is authorized to access this data.**
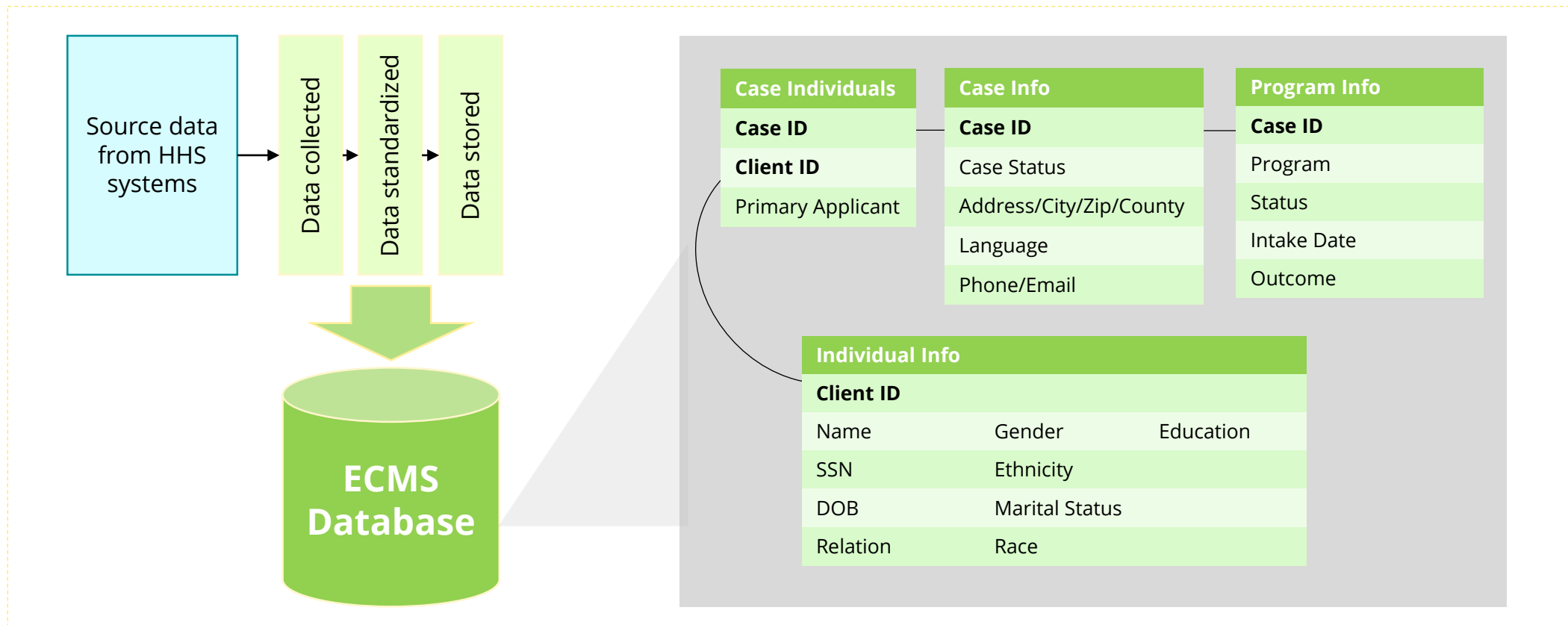
INTEGRATING HHS SYSTEMS WITH ECMS

This representative diagram depicts how ECMS offers an opportunity to integrate HHS' various systems, provides visibility into commonly tracked client data, and aggregates this information to understand performance, demographics, and trends across divisions and programs.
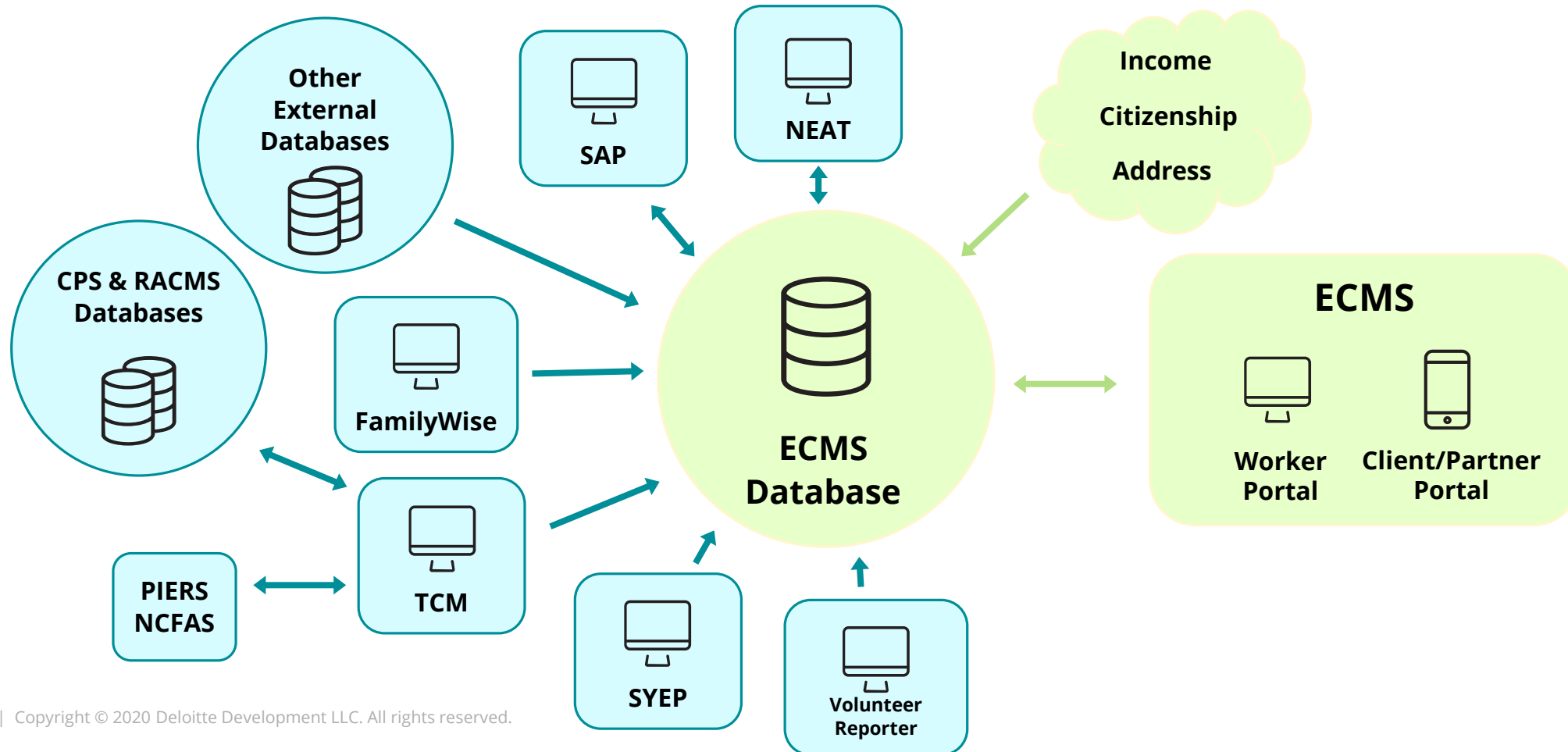
DATABASE STRUCTURE

This diagram depicts the concept of a relational ECMS database that gathers data from different programs across HHS to create both a unified client record, as well as aggregated information that supports enhanced monitoring and evaluation of HHS operations.

Source data from HHS systems → Data collected → Data standardized → Data stored → ECMS Database

Case Individuals
- **Case ID**
- **Client ID**
- Primary Applicant

Case Info
- **Case ID**
- Case Status
- Address/City/Zip/County
- Language
- Phone/Email

Program Info
- **Case ID**
- Program
- Status
- Intake Date
- Outcome

Individual Info
- **Client ID**

Name	Gender	Education
SSN	Ethnicity	
DOB	Marital Status	
Relation	Race	

SEARCH & INQUIRY

A unified ECMS database allows HHS staff to perform client search and inquiry across all of HHS programming.

Benefits

Unique Client Records
Limit the creation of confounding duplicate cases for individual clients by adequately searching for existing cases under exact and inexact criteria.

Streamline Client Search
A well-organized ECMS database supports enhanced search functionality that can reduce time spent searching for existing client records.

Snapshot of Services Received
This function allows case workers to quickly get an overview of a complete client history and relationship with HHS.

Configurable Search Criteria
Empower HHS staff to narrow searches using a range of variable criteria enabling faster, more thorough searches using specific client information.

Search & Inquiry

Potential Search Criteria

Program | Client ID | Name | Site | Case ID
Date Range | Address | DOB | App. ID | ...

Address
Name

Program
DOB
Address
Name

- Client Name
- Client ID
- Address
- Programs Enrolled
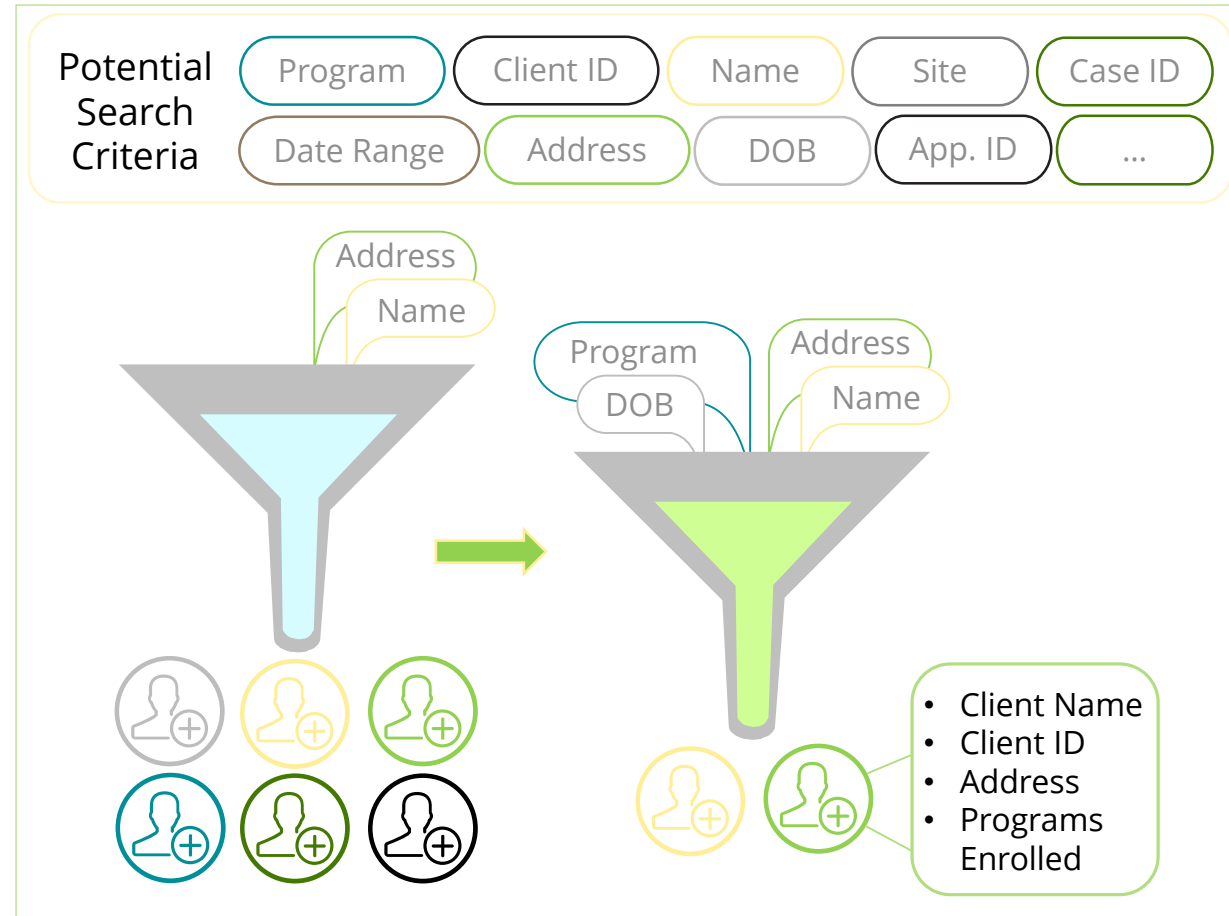
REPORTING

By aggregating data from across programs, HHS staff, managers, and executives will be able to run reports that are program-specific or across multiple programs and divisions through common client data elements.

Benefits

Staff Convenience
As mentioned, a consolidated ECMS database creates a "one-stop shop" and allows HHS staff to gather information and run reports from one location.

Cross-HHS Client Analysis
ECMS' reporting functionality will allow for fuller analysis and understanding of clients served across the entire department.

HHS Operations Analysis
Managers and executives will be able to access operational data that spans beyond siloed, disconnected databases and offers insight into the whole of HHS service delivery.

Configurable Reporting
ECMS allows HHS to configure reports to include new attributes or details based on changing program requirements or operational need.

Reporting

ECMS Database

ECMS Reporting

FSS Reports:

CSD Reports:

OCS Reports:

Cross-Program Reporting Function
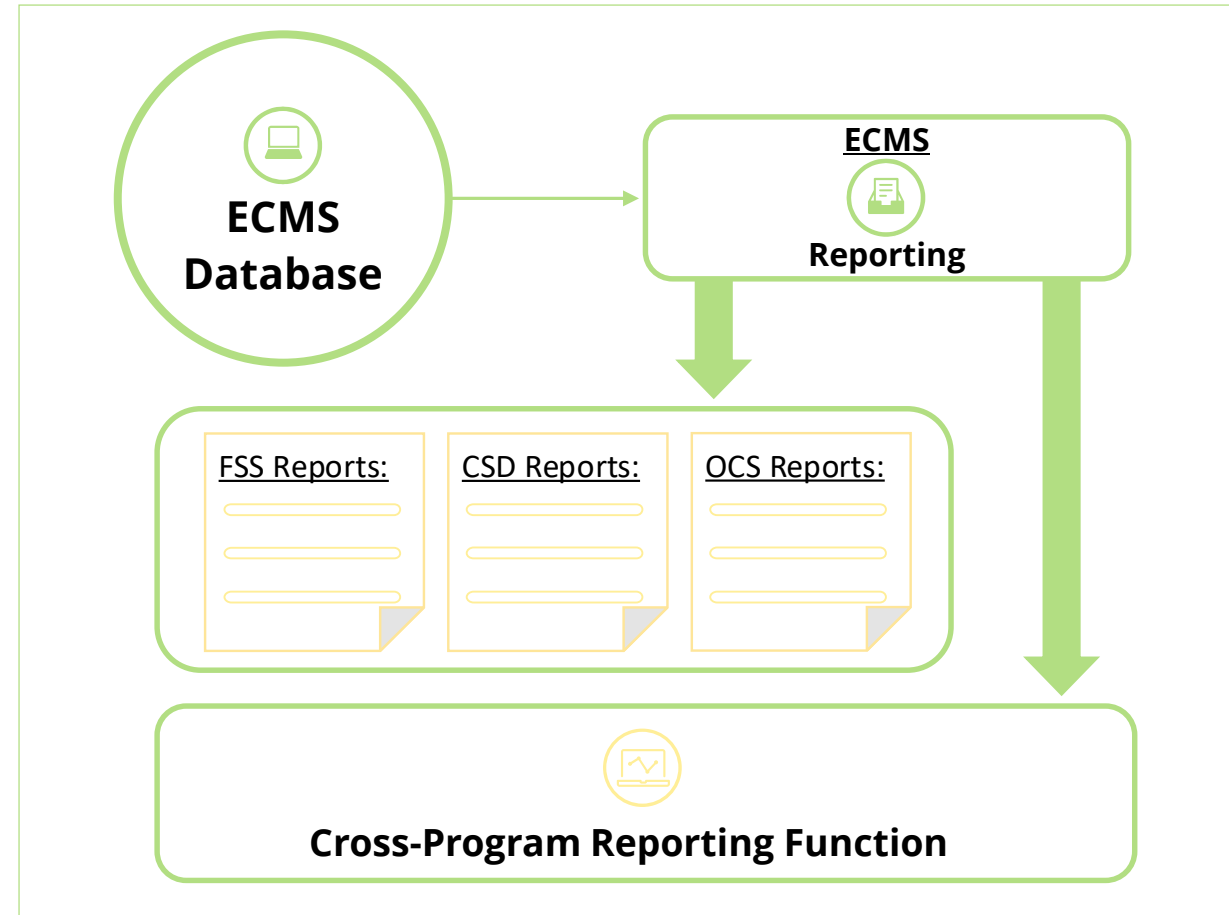
DASHBOARD ANALYTICS

Dashboard functionality in ECMS offers real-time insight into client, demographic, and program trends by accessing ECMS's consolidated database. The graphics below offer various representations of visualizing data.

Benefits

Information Hub
Executive and operational dashboards pull data from the consolidated ECMS database and display relevant information in one easy-to-navigate page.

Activity Hub
Staff dashboards assist with understanding workload and outstanding tasks from a centralized location and provide an intuitive launching point for workflows.

Standardization
Analytics provide an opportunity to align program outcomes and efficiency metrics across HHS by tracking and visualizing shared metrics and measurements.

Configurable Display
ECMS will come with a set of analytics tools that support configuration of dashboard visualization to support what needs to be tracked, measured, and displayed for a given division or program.

Dashboard
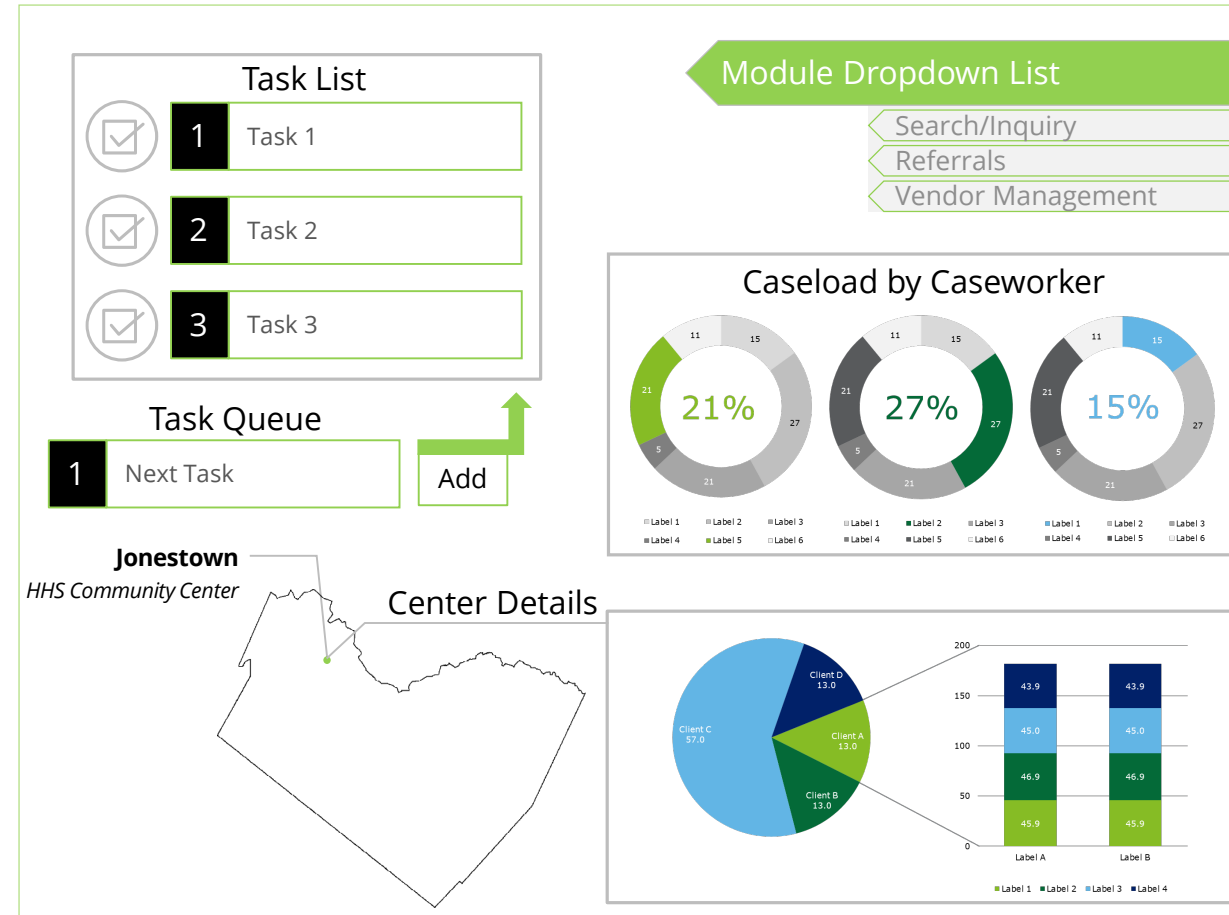
Next Steps

Along with the Data Mapping & Reporting Requirements Spreadsheets provided in the appendix, this deliverable provides both a comprehensive catalogue of data elements and reporting requirements for ECMS, as well as functional roadmap for data collection to inform and drive ECMS development.

WHAT'S NEXT?

## HOW CAN THIS REPORT DRIVE ECMS DEVELOPMENT?

NEXT STEPS: USING THIS REPORT

Pair with the **ECMS Data Mapping & Reporting Spreadsheets** *for a full understanding of ECMS data collection and reporting requirements*

Define and capture **ECMS database requirements and preferences**, *address design considerations, and identify opportunities for further integration between ECMS and existing HHS systems*

Combine with **ECMS Functional Requirements** *deliverable to inform procurement of a suitable solution of all business needs for the new system*

Aspire Recommendations

MODES   MINDSETS

DATA MAPPING & REPORTING REQUIREMENTS

FUNCTIONAL REQUIREMENTS
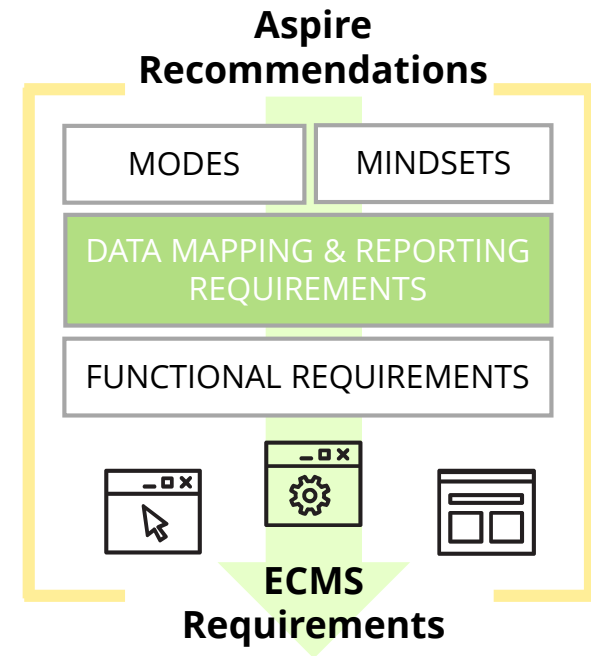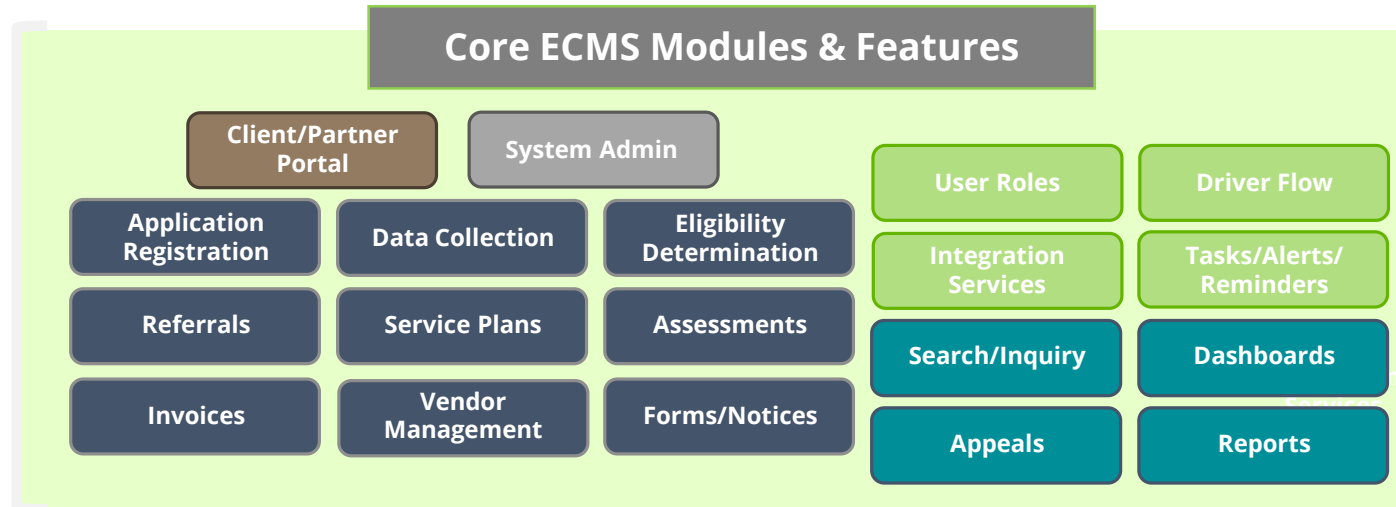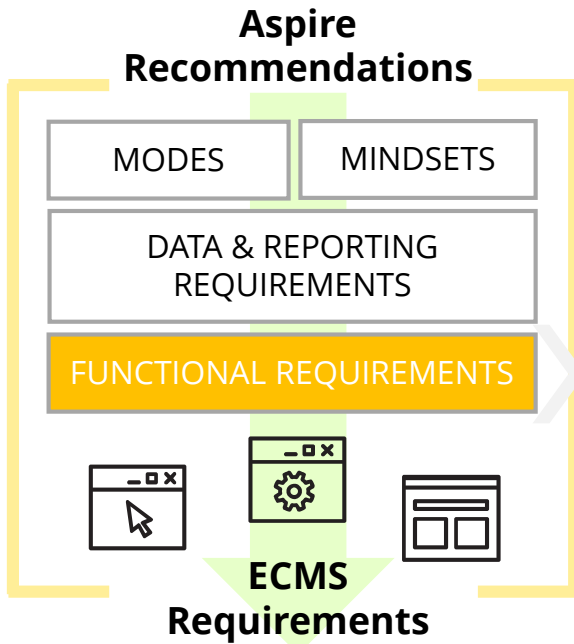
ECMS Requirements

NEXT UP: ECMS FUNCTIONAL REQUIREMENTS
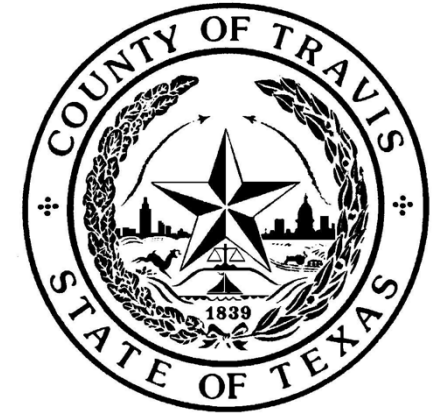
ECMS Requirements Spreadsheet

Developed through numerous discovery sessions with program staff, this document is a comprehensive list of all ECMS functional requirements that directly address documented insights, challenges, and recommendations from previous phases, as well as HHS goals.

ECMS Requirements Report

By contextualizing and exploring key ECMS features, this report serves as a guide to understanding the comprehensive ECMS functional requirements provided in the spreadsheet. Within it, we demonstrate how all project inputs and outputs come together to establish the core structure and functionality of ECMS.

Aspire Recommendations

MODES	MINDSETS
DATA & REPORTING REQUIREMENTS	
FUNCTIONAL REQUIREMENTS	

ECMS Requirements

Core ECMS Modules & Features

Client/Partner Portal	System Admin		
Application Registration	Data Collection	Eligibility Determination	User Roles / Driver Flow
Referrals	Service Plans	Assessments	Integration Services / Tasks/Alerts/Reminders
Invoices	Vendor Management	Forms/Notices	Search/Inquiry / Dashboards
			Appeals / Reports

Deloitte.

Thank you.

JR Ruiz
Contact: jrruiz@deloitte.com

Mayra Marquez
Contact: maymarquez@deloitte.com

Eric Egan
Contact: eegan@deloitte.com

Prasanna Nagarajan
Contact: pnagarajan@deloitte.com

**Will Solmssen**
**Contact:** wsolmssen@deloitte.com

Appendix & Attachments

This section provides the attachments for both Data Mapping spreadsheets and Reporting Requirements spreadsheets by division and program. These documents provide the comprehensive details regarding identified data elements and reports across HHS programs.

Data Mapping Spreadsheets

The attached spreadsheets provide complete mappings of all identified data elements across HHS divisions and programs. These spreadsheets include additional details for each data element where applicable, including system, screen, type of input/value, format, and whether the data element is mandatory for a program.

These spreadsheets will be referenced by the ECMS Requirements documents to clarify which data fields to include when developing ECMS screens.

FSS

FSS Data Mapping

CSD

CSD Data Mapping

OCS

OCS Data Mapping
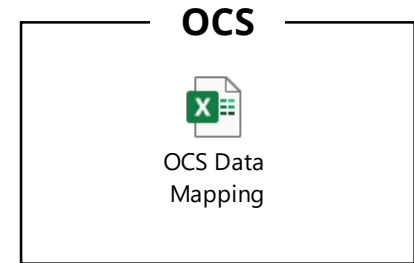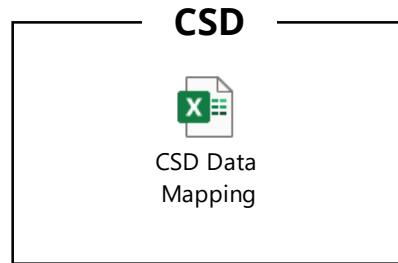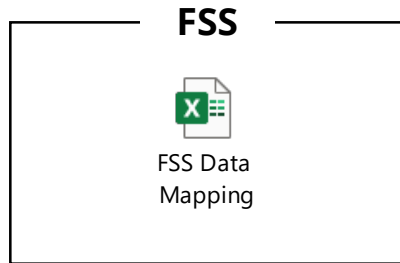
Reporting Requirements Spreadsheets

The attached spreadsheets provide reporting requirements as defined by program staff across all client-facing HHS divisions. Finance reports are included for the appropriate program/division. These spreadsheets include information on which measures are required for a given report, the format of these measures (number, percentage, dollar), frequency, and the existing or expected data sources.

These spreadsheets reflect reports have been identified as required for a given program (and therefore expected to be in ECMS), but do not encompass all known HHS reports. New reports have also been captured for ECMS and are designated with an asterisk.

FSS

FSS Report
Requirements

CSD

CSD Report
Requirements

OCS

OCS Report
Requirements

*Designates a new report for ECMS