

The Architecture and Capabilities of Monterey/San Benito's Open Source Coordinated Entry System

Presenters:

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Javier Celedon, Community Technology Alliance

Bob Russell, Community Technology Alliance

Norris Brown, ServingLynk

Eric Jahn, Alexandria Consulting

Bridging Input to Impact

Learning from Data to Create
Smarter Systems of Care



Introductions

Roxanne Wilson- HMIS Data Coordinator, Coalition of Homeless Services Providers

Bob Russell- Executive Director, Community Technology Alliance

Javier Celedon- Programs Director, Community Technology Alliance

Norris Brown- President, ServingLynk

Eric Jahn- Data Architect/IT Director, Alexandria Consulting LLC

The Continuum of Care

The CA-506 Continuum of Care is comprised of two counties: Monterey County and San Benito County.



Monterey County

- Monterey County is located on the Pacific Coast of California.
- As of the 2010 census, the population was 415,057.
- 3,771 square miles.
- Median household income: \$58,582
- Per capita income in past 12 months: \$25,048
- Poverty Rate: 17%
- Extremely tight rental market with very high monthly rents.

San Benito County

- San Benito County is located in the Coast Range Mountains of California.
- Is directly adjacent to Monterey County.
- Population: 58,792
- 1,390 square miles
- Median household income: \$67,874
- Per capita income in past 12 months: \$26,317
- Poverty Rate: 14.1%
- Extremely tight rental market with very high monthly rents.

Homelessness in Both Counties

On any given night, 2,959 men, women and children experience homelessness in CA-506.

29% are sheltered in transitional housing or emergency shelters.

71% are unsheltered with most living in places not meant for human habitation.



14 TRANSITIONAL
HOUSING PROGRAMS



13 EMERGENCY
SHELTERS



2 RAPID
REHOUSING



5 RESIDENTIAL
RECOVERY

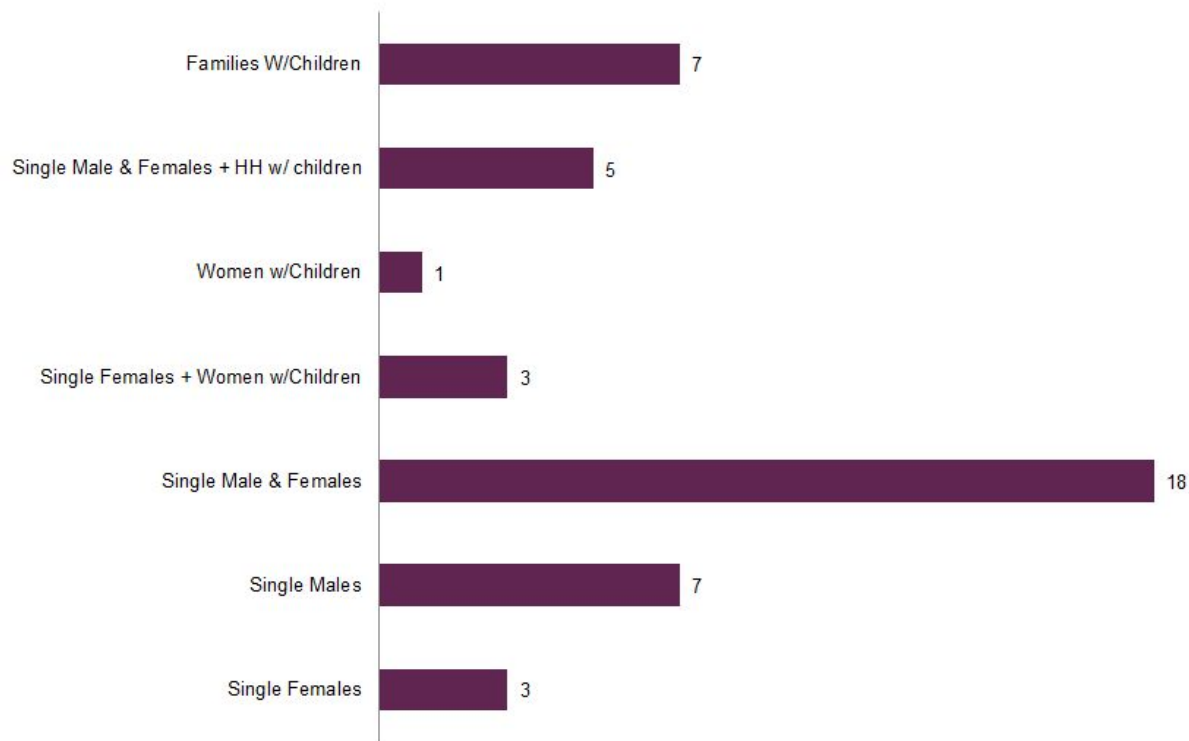


8 PERMANENT
SUPPORTIVE



2 PERMANENT
HOUSING

Programs Per Household Structure



Process

- In 2012, the Leadership Council (CA-506 *CoC governing board*) commissioned a 10-year strategic plan designed to address homelessness.
- Activity coordinated by HomeBase/The Center for Common Concerns.
- Input gathered from wide variety of stakeholders that included, but was not limited to; County governments, jurisdictional representatives, funders, law enforcement, medical, education, community-based nonprofits, and homeless/formerly homeless.

Result

- LEAD ME HOME (LMH)....The game plan for housing homeless people in Monterey and San Benito Counties.
- LMH laid out specific strategies, timelines and action steps in the following areas: Assure Access to Adequate Housing, Provide Services to Keep People Housed, Support Economic Stability, Return to Housing, and Organize Resources and Govern a Network.

The Beginning

Exploring ways to provide easy access for individuals and families to homeless programs was a critically identified strategy. At the time, expanding the scale and functionality of HMIS seemed to be the best course of action.

LMH placed a 7 year timeline for full exploration, development, piloting and implementation.

What it Became

- Over time and with guidance from HUD and other federal partners, Coordinated Entry became the end goal.
- The Coalition of Homeless Services Providers was identified to serve as lead for Coordinated Entry System activities.
- A new committee was formed and work began in 2013.
- Due to the large geographic area in CA-506, a decentralized system was preferred.

The Truth of the Matter

- We spun in circles for the first couple of years.
- We always seemed to focus on what “couldn’t” be done or how a particular program might be affected.
- Or how will it really work? A Master List? VI- SPDAT? Only enrolling the most vulnerable?

Then We Got Over Our Own Selves

- We took a long look at ourselves and decided to shift gears.
- We agreed to move forward and tackle each hurdle as it came as opposed to anticipating problems.
- We agreed that prioritizing the most vulnerable was important. Especially here with such a tight rental market.

The Architecture and Capabilities of Monterey's Open Source Coordinated Entry System

Roxanne Wilson

Movement

- Community Technology Alliance (CTA) has long served as the technological HMIS consultant to CA-506. CTA contracts directly with CHSP who serves as the local HMIS lead agency.
- CTA began exploring technological options related to Coordinated Entry systems.
- CA-506 selected the VI-SPDAT as the assessment tool with OrgCode contracted to provide training to almost 100 homeless service provider staff members.

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Movement (contd.)

Two major organizational challenges remained.

1. Insufficient capacity
2. Insufficient funding

After six months, CHSP was finally able to negotiate funding from the County government to: secure a consultant, add 2 staff members to CHSP, and pay for some technological costs related to Coordinated Entry.

Movement (contd.)

After much exploration and consultation, an app was identified as the most logical mechanism for Coordinated Entry. Others will dazzle you with the sophistication, user interface and expandability, but I can tell you about one huge advantage from a provider level.

A custom built app does not require a person to have an HMIS license in order to VI-SPDAT a homeless person and place them on the Master List.

This is very useful in our local community.

In the End

The fusion of policy, technology, compassion, and sheer collective will to move it all forward.

CES Implementation Overview

- In our discussions with multiple CoCs, several themes became apparent:
 - Replacing our current systems is not an option;
 - Automated communication between systems;
 - Create a “single source of truth” for reporting and visualization purposes.
- Open source software is software with source code that anyone can inspect, modify, and enhance. Open source products and initiatives embrace principles of open exchange, collaborative participation, rapid prototyping, transparency and community-oriented development.
- Technology can be expensive. Corporate and private funding was critical in order to provide open source and enterprise level tools in a cost-effective way to CoCs and communities.

CES Technical Implementation Requirements

- Use the VI-SPDAT to determine level of service clients need
- Use local priorities in combination with VI SPDAT to rank clients based on need
- Generate an “Active List”
- Create and send referrals to agencies with available housing
- Keep and track housing inventory information
- Keep and track status of clients as they go through the system
- Report on data collected and HMIS data

CES Technical Implementation

How we work together (ongoing):

Issue trackers and code repositories:

- Trello for HOME
- github for Data Warehouse/HMIS API Server:
<https://goo.gl/cvC9B1>
- github for Coordinated Entry API Server: <https://goo.gl/hL28AZ>

Conference calls and #slack channels (we have a public one anyone can join on request) for coordination between developers.

Ongoing development to add more general human services features and stay current with the changing data standards.

CES Technical Implementation

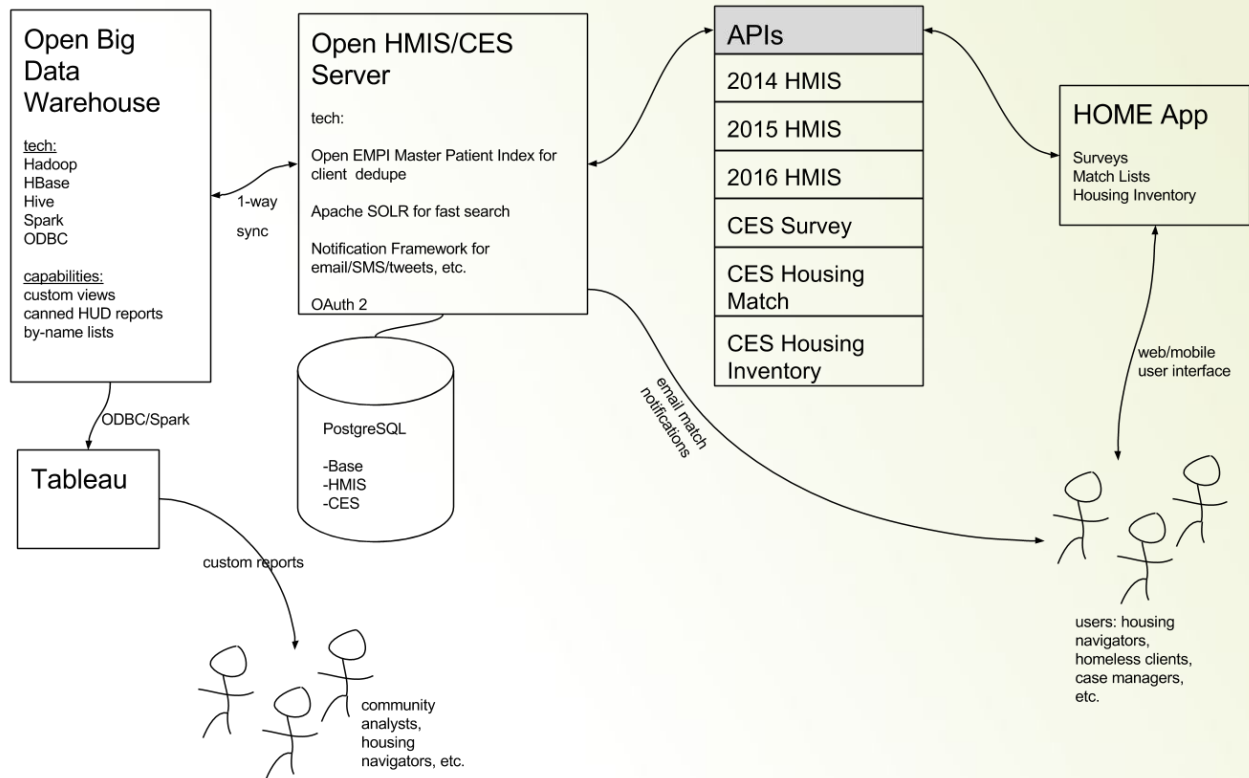


diagram at: <http://goo.gl/OQn7hh>

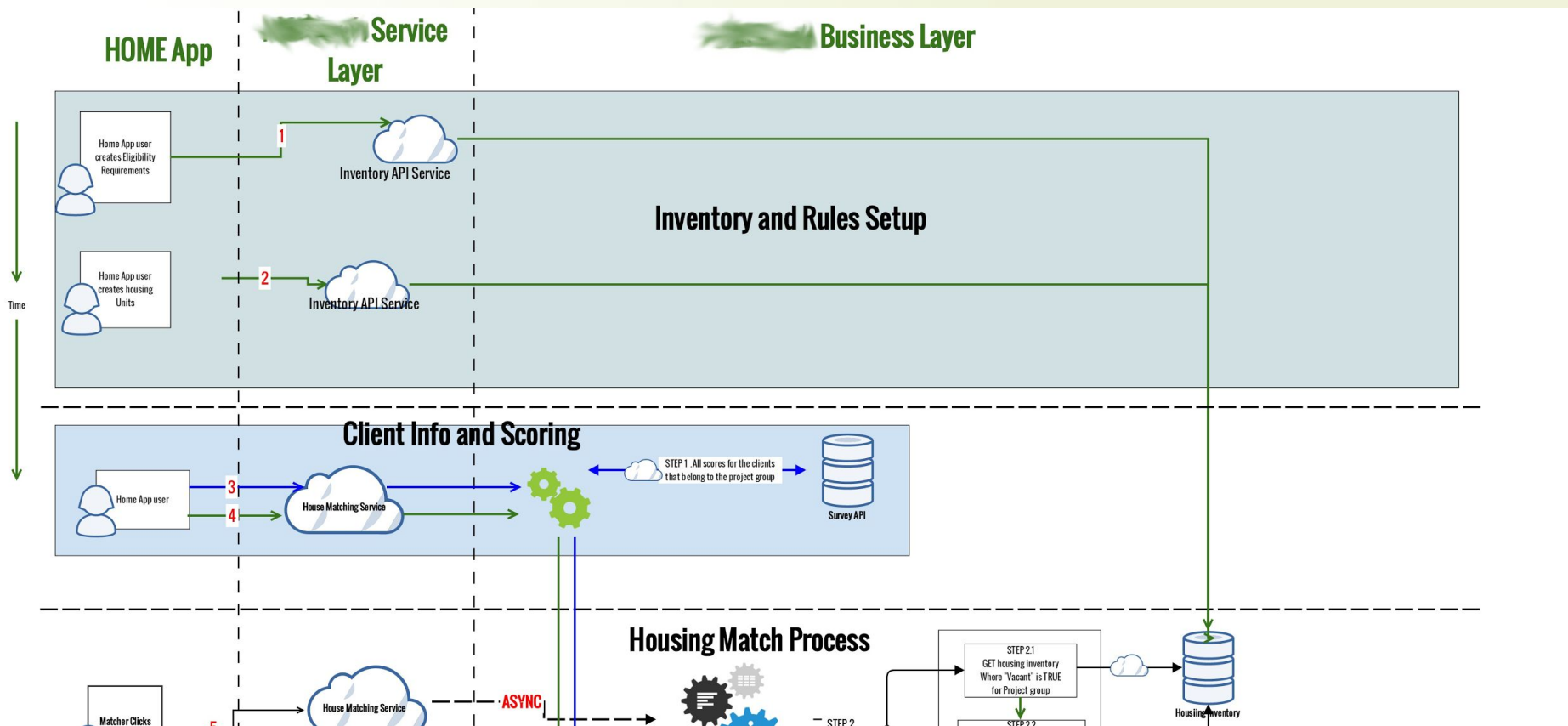


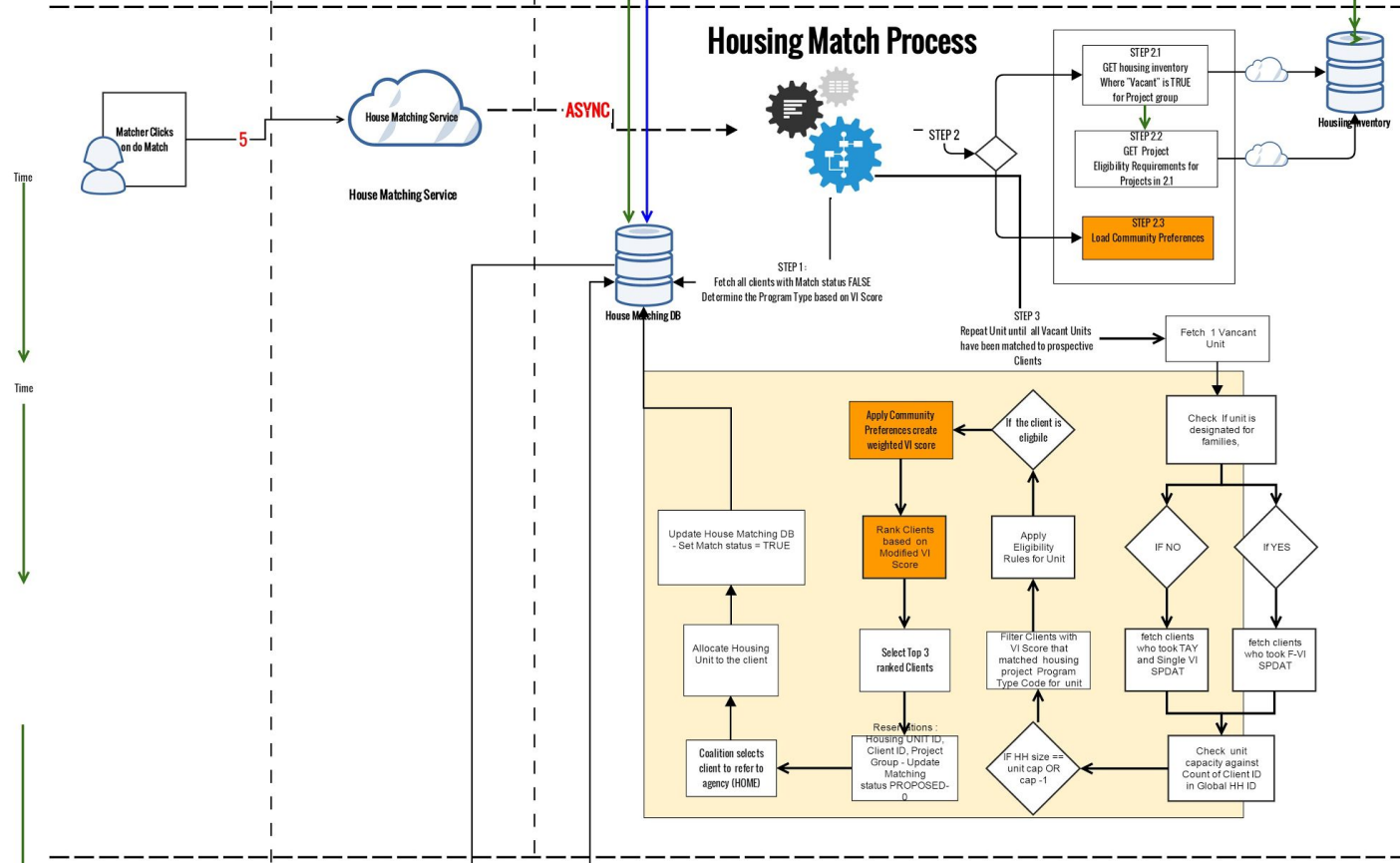
diagram at: <https://goo.gl/bUQW8f>



HOME App

Service Layer

Business Layer



1. Maintain Project ID - Match reservations table
2. When the Move is complete, Beds_current (Housing Inventory table) should be reduced by 1. Should we do this when Client move is complete or should we do this when the Match is complete. Question here is, if we do not do it when the match is done, we could potentially have more clients assigned to housing units, although not available.
3. How exactly do we fetch eligible clients- currently we are fetching all the eligible clients from Survey DB which leads to duplicate client records in eligible clients table- each time we call PUT /scores.
4. Supposing that the match status - TRUE (PROPOSED) . For some reason if the housing unit allocation is not complete, should we consider the client again, when the match process runs again ?
5. Once A client is matched for a housing unit for a project, we cannot matching him for other projects. Should we check his potential housing eligibility for other projects also.
6. What is the purpose of global household service. We are not using this service anywhere during this process.

Not in place yet How exactly community preferences are maintained and how they look like is still not clear

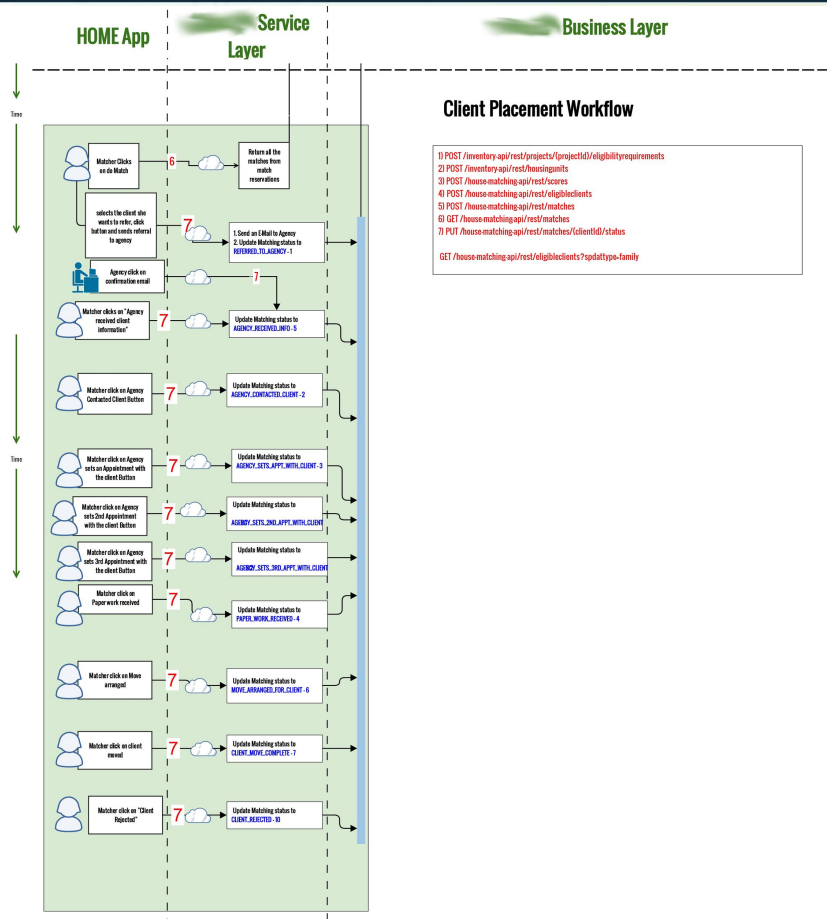


diagram at: <http://goo.gl/OQn7hh>

Paused for phase 2

Client Profile - Update profile values to HMIS

Chat Module - Fix Chat Module
🗨 4

Handle questionCopyID in DB
🗨 2

Handle surveyCopyID in DB
🗨 2

Audience check for questions is commented for now. Need to fix it in phase 2

Entity Surveys
☰

Move chat page to admin

Check Survey Questions [View](#)


Input field is too long. make it smaller
🗨 1

add dropdown to edit question order

Issues

Survey - Post Survey responses to HMIS

Meteor reload-on-resume Package - Host Push Reload issue in mobile
🗨 1

Client Info not coming up when taking survey of an HMIS client

Add new Question DataTypes
🗨 4/6

Labels Need to change for Client profile
🗨 2 🗨 1

Survey - Saved Options are not showing up after we pause the survey

Map Location Tracker to Survey Response and not Users
🗨 1

User Creation for HMIS from Admin.
☰ 🗨 4 🗨 1

Move Out Take Picture button from Edit client profile to View Profile


Incoming Bugs


In Progress

VI-SPDAT Scoring Algorithm 

Survey / Question Bank Brainstorming
🗨 11 📧 0/1 

CRUD Operations for Housing Inventory API
🗨 5 📧 3/7


update Tracking Method & Residential Affiliation fields in create project API call for app project setup
🗨 1 


Ask Javier, how to create new enrolment to submit HUD responses ?
🗨 1 


QA


fix login button color due to same background color

add a search fonticon in client search input field


Track User Location 

Add SSL on home.ctagroup.org 




Move Client page to admin 

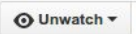


/projects/ does not return any projects. Ask Surya
🗨 2 

Add a tooltip for Question Label / Question Name

Create a Page to setup instance based Project for the App. This will be a common project to create enrollments for HUD
☰ 


Ready For Launch





















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hserv / **coordinated-entry**  1  0  1

[Code](#) **Issues 16** [Pull requests 0](#) [Wiki](#) [Pulse](#) [Graphs](#) [Settings](#)

Filters [Labels](#) [Milestones](#) [New issue](#)

 Clear current search query, filters, and sorts

<input type="checkbox"/>	 16 Open	<input checked="" type="checkbox"/> 14 Closed	Author	Labels	Milestones	Assignee	Sort
<input type="checkbox"/>		Survey API Handling of Section Scores and Responses	enhancement	top priority		 4	#29 opened 4 days ago by CTAJavier  0.9.0 - APIs impleme...
<input type="checkbox"/>		Pagination support for a few API endpoints	enhancement		#28 opened on Jul 21 by desaluditd  0.9.0 - APIs impleme...		
<input type="checkbox"/>		Housing Inventory API Error	housing inventory service	top priority		#27 opened on Jul 18 by eric-jahn  0.9.0 - APIs impleme...	
<input type="checkbox"/>		add eligibility criteria to housing inventory implementation and API	housing inventory service	 6	#23 opened on May 23 by eric-jahn  0.9.0 - APIs impleme...		
<input type="checkbox"/>		Handle eligibility criterion returned from Housing Inventory	housing_matcher		#22 opened on May 20 by Dinesh846  0.9.0 - APIs impleme... waiting on another CES microservice's functionality		
<input type="checkbox"/>		Utilize Global Household APIs to determine household type for eligibility	housing_matcher		#21 opened on May 20 by Dinesh846  0.9.0 - APIs impleme...		



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A HUD Compliant Coordinated Entry System — [Edit](#)

149 commits 1 branch 0 releases 5 contributors

Branch: master

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eric-jahn removing the old survey

Latest commit a00178b 22 seconds ago

hmis-survey-api	Create and update section scores (#29)	20 hours ago
housing-matching	(housing - matching) create matches endpoint implemented	10 days ago
housing_inventory	(housing_inventory) get all housing units filter bug fix	2 days ago
.gitignore	Validations included	2 months ago
LICENSE	Initial commit	6 months ago
README.md	Initial commit	6 months ago

[README.md](#)

API Reference

Resources

API is behind a firewall (?)

Collapse All

▼ /housing-units

PUT POST GET

/housing-units/{housing_unit_uuid}

housing inventory services for get,deactivate and delete.

DELETE PUT GET

/housing-units/{housing_unit_uuid}/addresses

Updating address of housing inventory.

DELETE PUT POST GET

/housing-units/{housing_unit_uuid}/addresses/{id}

DELETE PUT GET

/housing-units/{housing_unit_uuid}/assignments

DELETE PUT POST GET

/housing-units/{housing_unit_uuid}/assignments/{id}

DELETE PUT GET

▼ /projects/{projectid}/eligibilityrequirements

POST GET

/projects/{projectid}/eligibilityrequirements/{requirementid}

DELETE PUT GET

ROOT RAML URL: <https://anypoint.mulesoft.com/apiplatform/repository/v2/organizations/1d2d1eb1-46af-4ee8-aa04-bd79ed2764a3/public/apis/58593/versions/60900/fil...>



[Download API definition as a .zip file](#)

HOME



   Monterey Admin 

Dashboard

Clients

Questions

Surveys

Responses

Housing Units

Housing Matching Service

Global Household

Users

Role Manager

Opening Script

Project Setup

Clients [Search](#)

[Dashboard](#) > [Clients](#)

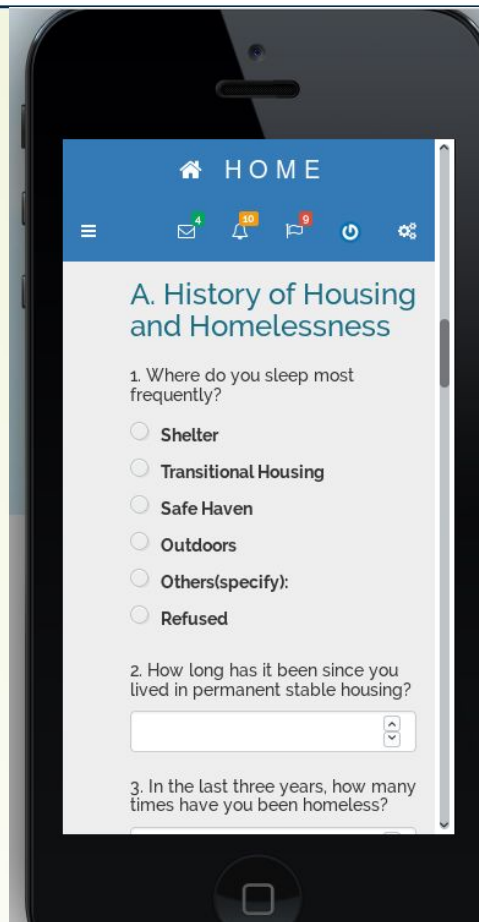
Search Existing Client

or

[Add New Client](#)

CES Technical Implementation

- First and foremost Monterey's CES is not an HMIS system, it works alongside HMIS.
- There is minimal duplicate data entry,
- Automatic server level deduplication
- Historical information is maintained and reportable
- Works on any device with a modern web browser
- Stores housing inventory information
- Allows for release of information to be captured on the spot
- [Demo](#)



CES Technical Implementation

- HOME App is built on the open source Meteor javascript framework
 - Runs on any modern web browser
 - Easy to code, it's all in javascript
 - Flexible enough to allow dedicated app creation (coming soon)
- HOME App consumes the recipes for communication (APIs) that the HMIS/CES Data Warehouse Server has implemented (<http://goo.gl/PnOC9u>)
 - We coded all client data to be stored on the HMIS CES server once we have enough information to create a client record.
 - The app pulls existing HMIS information from the data warehouse to prevent duplicate data entry.

CES Technical Implementation Reporting

- [Demo](#)
- We needed a tool that allowed us to visualize the data captured and see who we were serving
- We connected our reporting tool to the big data warehouse that allows us to report on information from the CES system and from HMIS.
- Live data from CES system, and daily uploads of HMIS data

Legacy HMIS

- Monterey's CES system is NOT an HMIS
- Monterey's Legacy HMIS system will continue to be used for all standard data entry, and for HUD mandated reporting.
- Exporting XML 4.1 (and now 5.1) is critical to be able to have enough information for matching clients to housing
- Much stricter control on who is using HMIS

Next Steps

- Get more apps to use its API, for more community connectedness
- Add more communities/CoCs
- More features
 - More complex notifications and workflow
 - More case management features, general human services functionality
- More community involvement in development process
- More hackathons/sprints/grants

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Q&A