Data Warehouse and Business Intelligence: Enhancing Programs and the Customer Experience

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Meghan Marshall, Flexible Supportive Rehousing Manager
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Homelessness across the nation increased for the first time in seven years.
California experienced the largest increase at 13.7%.
Half of all people experiencing homelessness reside in 5 states, California is at the top of that list with 25%.
50% of all unsheltered persons experiencing homelessness reside in California.
2017 Point-In-Time Count Data: Sacramento

2015-17 saw a 38% increase in total homeless population

85% increase in unsheltered homeless population

Chronic homeless accounted for 71% of unsheltered population
Community Needs and Assessment

- Community assessment of County investments in homeless services to determine:
  - Programs that were no longer effective in meeting the needs of the community
  - Opportunities to repurpose funding for new services
  - Services that could be enhanced through strategic redesign
  - Unmet community needs that required innovative solutions and new program services
Initiatives to Reduce Homelessness

**Strategic Redesign**
- Family Shelter System Redesign
- Strategic Use of Transitional Housing

**Innovative Solutions**
- Full Service Re-Housing Shelters
- Flexible Supportive Re-Housing Program
SHINE Technology
(Sacramento Homeless Information Network Ecosystem)
Initiatives to Reduce Homelessness

- **Strategic Redesign**
  - Family Shelter System Redesign
  - Strategic Use of Transitional Housing

- **Innovative Solutions**
  - Full Service Re-Housing Shelters
  - Flexible Supportive Re-Housing Program

October 10, 2018
# Full Service Rehousing Shelters

<table>
<thead>
<tr>
<th>DHA Need</th>
<th>Customer Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Establish a low barrier shelter and provide rehousing services and financial assistance to all shelter guests</td>
<td>• Connect to persons who do not engage with or have been successfully housed through traditional homeless supportive services</td>
</tr>
<tr>
<td>• Work collaboratively with County and community partners; Sheriff, Park Rangers, APS, etc. to identify vulnerable individuals and encampments for placement into the shelter</td>
<td>• Create a seamless transition from street to home with the scattered site shelter model</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DTECH Delivery</th>
<th>Coming Soon!</th>
</tr>
</thead>
</table>
FSRS Rehousing Shelter Network

- Private residential homes utilized for shelter
- Geographically spread
- Five guests and one house leader
- On site case management
- Emphasis on rehousing guests quickly and appropriately
FSRS Rehousing Shelter Network

- Rapid community response
- County partner referral base
- Low barrier entry
- Come as you are acceptance and support
- Individualized case management services with an emphasis on increasing income and rehousing quickly
FSRS Rehousing Shelter Network

- Total number of guests cycling through shelter since March: 93
- Total number of men: 53
- Total number of women: 40
- Age range of shelter guests: 19-92
- Average length of stay: 62 days
- Exits to housing: 24
- Exits to street: 10
- Other exits (hospital, other temporary/interim shelter): 5
Development in Progress

- Re-Housing Shelter Network (RSN)
  - Will have following components:
    - Referral Process: This will be collaborative effort between DHA Outreach Team, Sacramento Self-Help Housing (SSHH) and local law enforcement agencies
    - Enrollment
    - Case management
    - Shelter participation
## Re-Design Family System

<table>
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<tr>
<th>DHA Need</th>
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<th>DTECH Delivery</th>
</tr>
</thead>
</table>
| • Centralize shelter registration system  
• Remove biases through an automated rank assignment based on well-defined business rules  
• Immediate identification of family needs for proper placement  
• Reporting capabilities for evaluation  
• Capable of integration with other systems | • Eliminates daily calls and visits to multiple shelters  
• Ensures most vulnerable family is always prioritized  
• Connects unstably housed families to diversion resources without shelter entry | • [https://dhaservices.saccounty.net/efs](https://dhaservices.saccounty.net/efs) |
Sacramento County Emergency Family Shelter Reservation List

Primary Individual

<table>
<thead>
<tr>
<th>First Name</th>
<th>MI</th>
<th>Last Name</th>
<th>Date Of Birth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bobby</td>
<td>A</td>
<td>Smith</td>
<td>01/01/1988</td>
</tr>
</tbody>
</table>

Email: bobby-test@domain.com

Add Alternate Contact

Does this person have an ongoing and diagnosed medical condition (including pregnancy)?
- Yes
- No

Does this person have an ongoing and diagnosed mental health condition?
- Yes
- No

Does this person have an ongoing and diagnosed physical disability?
- Yes
- No

Where did this person sleep last night?
- Car

Secondary Individual

<table>
<thead>
<tr>
<th>First Name</th>
<th>MI</th>
<th>Last Name</th>
<th>Date Of Birth</th>
</tr>
</thead>
</table>

Email: 

Add Alternate Contact 2018

Does this person have an ongoing and diagnosed medical condition (including pregnancy)?
- Yes
- No

Does this person have an ongoing and diagnosed mental health condition?
- Yes
- No

Does this person have an ongoing and diagnosed physical disability?
- Yes
- No

Email: 
### Flexible Supportive Rehousing Program

| DHA Need | • Develop a by-name list of frequent users of County systems experiencing homelessness from multiple data sources, ranked by cost  
  • Homeless Management Information System (HMIS)  
  • Jail Information Management System (JIMS)  
  • Mental Health, Alcohol and Drug Treatment Services (Behavior Health Services)  
  • Develop a web-based case management assignment, housing and tracking system for County and service provider use |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Benefit</td>
<td>• Proactive identification and case management location services brings FSRP to the customer, instead of the customer coming to multiple programs</td>
</tr>
<tr>
<td>DTECH Delivery</td>
<td>• <a href="https://dhaservices.saccounty.net/">https://dhaservices.saccounty.net/</a></td>
</tr>
</tbody>
</table>
## Manage FSRP Case List

Click on the case’s row to assign to ICMS Provider. Click on folder icon to view and edit details.

<table>
<thead>
<tr>
<th>ID</th>
<th>Rank</th>
<th>Source</th>
<th>First Name</th>
<th>Last Name</th>
<th>DOB</th>
<th>SSN</th>
<th>Rank $</th>
<th>Status</th>
<th>Updated</th>
<th>Create Date</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>12629</td>
<td>1</td>
<td>List</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$149,797.50</td>
<td>PRTS Housed</td>
<td>6 Days</td>
<td>2018-02-01</td>
<td></td>
</tr>
<tr>
<td>12631</td>
<td>3</td>
<td>List</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$137,141.64</td>
<td>PRTS Assigned</td>
<td>1 Days</td>
<td>2018-02-01</td>
<td></td>
</tr>
<tr>
<td>12633</td>
<td>5</td>
<td>List</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$135,995.29</td>
<td>PRTS Housed</td>
<td>1 Days</td>
<td>2018-02-01</td>
<td></td>
</tr>
<tr>
<td>12635</td>
<td>7</td>
<td>List</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$129,011.39</td>
<td>PRTS Assigned</td>
<td>6 Days</td>
<td>2018-02-01</td>
<td></td>
</tr>
</tbody>
</table>
## Technology Stack Used

- **Technologies:** Microsoft Development Platform .NET and SQL Server
- **Frontend:** Angular 5 with Bootstrap 4 for mobile responsiveness
- **API Backend:** Microsoft Web API 2.2 hosted on IIS 8.5
- **ETL (reporting):** SQL Server Integration Services (SSIS)
- **DMZ Database:** Microsoft SQL Server 2012 SP3
- **Batch Server:** Microsoft SQL Server 2014 SP2

### Technology Stack Overview

<table>
<thead>
<tr>
<th>Technology</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SSIS 2014</strong></td>
<td>Power BI</td>
</tr>
<tr>
<td><strong>HTML5</strong></td>
<td>SHINE Web UI</td>
</tr>
<tr>
<td><strong>Font Awesome</strong></td>
<td></td>
</tr>
<tr>
<td><strong>CSS 3</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Bootstrap 4</strong></td>
<td></td>
</tr>
<tr>
<td><strong>C#</strong></td>
<td></td>
</tr>
<tr>
<td><strong>TypeScript</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Angular 5</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Web API 2.2</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Data Access Layer</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Entity Framework 6.1</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Database</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DHA Services DMZ DB</strong></td>
<td>Microsoft SQL Server 2012 SP3</td>
</tr>
<tr>
<td><strong>.NET Framework 4.5.2</strong></td>
<td></td>
</tr>
<tr>
<td><strong>SHINE DMZ DB</strong></td>
<td>Microsoft SQL Server 2012 SP3</td>
</tr>
<tr>
<td><strong>IIS 8.5</strong></td>
<td></td>
</tr>
</tbody>
</table>
Security

- Web API Security
  - OWIN (Open Web Interface for .NET)
  - Implements an OAuth 2.0 (Open Authentication) protocol with a Resource Owner Flow model

- User Passwords
  - Salted and Hashed using Scrypt, a slow hashing function
  - Passwords required to be strong with combination of numbers, uppercase, and a special characters

- User Access
  - Role Based Access
    - DHA Admin, DHA User, and Providers

- Database Security/Encryption
  - Encryption: Microsoft SQL Server Transparent Data Encryption (TDE)
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