Deloitte.

Innovation Showcase for Challenge #6

Streamline Shelter Availability

September 2024



"An empty bed is unacceptable when you're dealing with crisis intervention and housing. In Chicago, there are 547 beds for approximately 14,000+ young people 18-26 that are experiencing homelessness. **Every bed counts.**"

- Cook County Community Advocate

Near Term Solutions to Streamline Shelter Availability

While a statewide system and technical infrastructure would be helpful in the long-term, we understand that CA is seeking high impact, fast, and portable microservices powered by Gen AI that can accelerate near-term gains.

Three portable modules are proposed to streamline shelter availability:

1 - Aggregate and Streamline Shelter Data

Leverage the **Community Crawler** to create a bed registry, or to improve the quality of data.

2 - Improve Real-Time Shelter Data Availability

Consider **GovConnect** SMS-nudge microservices to nudge for realtime shelter availability. 3 - Predict Areas of Need, to better align availability

Use **PeoplePrism** to model thirdparty data sources to proactively identify areas of need and risk (e.g. eviction).

Use GenAl to "crawl" the web for data

Our Community Crawler module can be used to

- Create an initial database of resources
- Validate and improve housing data quality over time

- The data is already out there GenAl can collect Community Crawler is developed using ML models to aggregate data that already exists.
 Google, Yelp, Charity Navigator, Non-Profit registries, Provider Websites, and more.
- Scoring to improve data quality

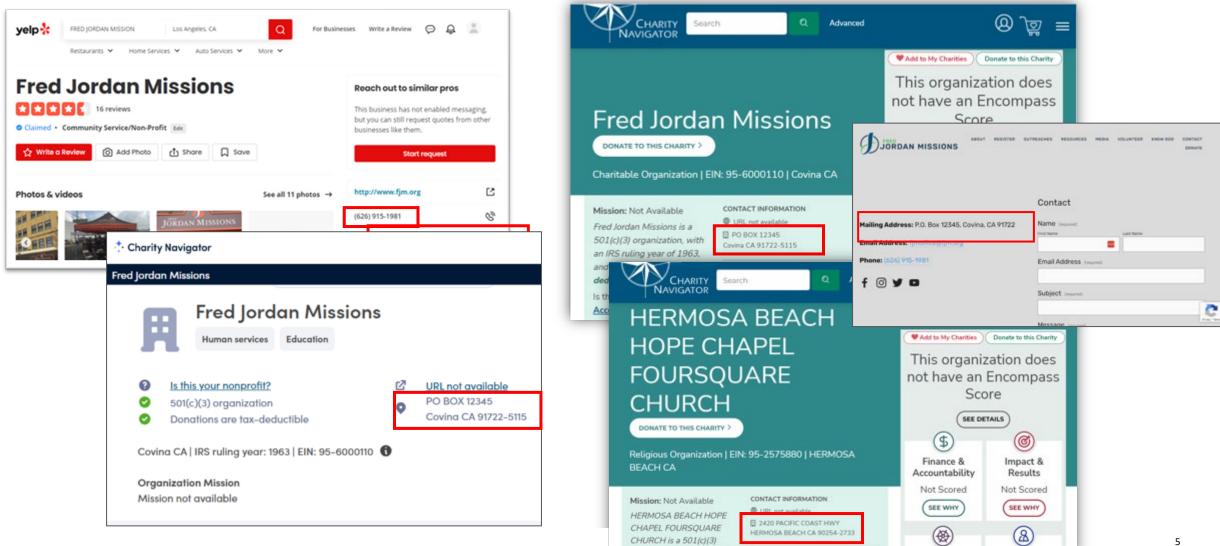
Community Crawler includes advanced scoring capabilities to validate the data – automating thousands of hours of manual work.

• Human in the Loop

While Gen AI can accelerate the data aggregation, a human-in-the-loop is helpful to build trust and determine the correct data.

Community Crawler: Aggregate Data from Multiple Web Sources

GenAl-based Community Crawler aggregates across Access Google Places API, Federal/State registries, provider websites, Yelp, Charity Navigator, and more.



organization, with an IRS

Landarchin 8

Culture

Community Crawler: Automated Updates to Improve Quality

During the initial cleanup process results will lean more heavily towards suggesting updates, with reduction as Community Partners review findings and accepted values are ingested into the system. Initial reporting on ~3500 active providers.



Addresses Suggested

SMS-based nudges to improve realtime availability

GovConnect enabled SMSbased nudges as a microservice can be an effective tool to update real-time shelter availability. Imagine if GenAl were extended to strategically nudge.

| | ATI | | A |
|--|---|--|-----------------------------|
| LA County ATI: count for SALV SHELTER for to | ATION AR | MY BED | ANA |
| 5 male, 13 fer | male, all lo | w barrier | PM |
| A County ATI: as been upda | | our availabil | ity |
| | | 12.15 | PM . |
| | | | |
| | | | |
| | ÷ | Online ATI | ۵ |
| | (NO REPL reservatio | ATI Y)LA County ATI: n #8675309 has | been |
| Message | (NO REPL reservatio confirmed https://go maps/5M Click to cl | ATI */)LA County ATI: n #8675309 has s.gl/ MRKzgL1shJU739 heck in by 06/21 | been 18 /23 at 4pm or |
| 8 Message | (NO REPL reservatio confirmed https://go maps/5M Click to cl | ATI n #8675309 has l o.gl/ MRKzgLfshJUf38 heck-in by 06/21, vill be released | been 18 /23 at 4pm or |
| 8 Message | (NO REPL reservatio confirmed https://go maps/5M Click to cl your bed la atl.gom | ATI n #8675309 has l o.gl/ MRKzgLfshJUf38 heck-in by 06/21, vill be released | been 18 /23 at 4pm or |
| Message | (NO REPL reservatio confirmed https://go maps/5M Click to cl your bed la atl.gom | ATI n #8675309 has l o.gl/ MRKzgLfshJUf38 heck-in by 06/21, vill be released | been 18 /23 at 4pm or |

• Easy to Use

SMS messages are easy to reply to, removing barriers (e.g. I forgot my password)

• Effective

SMS yield a 98% open rate, and a 45% response rate, over 6% for email

• Interoperable

SMS pulse checks can be reused across geographies, and do not require login/ portals/ heavy technical investments

Better anticipate and predict housing needs

Our PeoplePrism module contains public data that can help *predict* where and when housing instability may result in shelter needs:

- At risk of eviction
- Eviction in progress
- Unemployment
- TANF enrollment
- And more...

• Predicting Needs

When we can anticipate when and where there may be housing instability, these insights can be used to inform where beds may be needed, and where investments (like HomeKey) may be most impactful

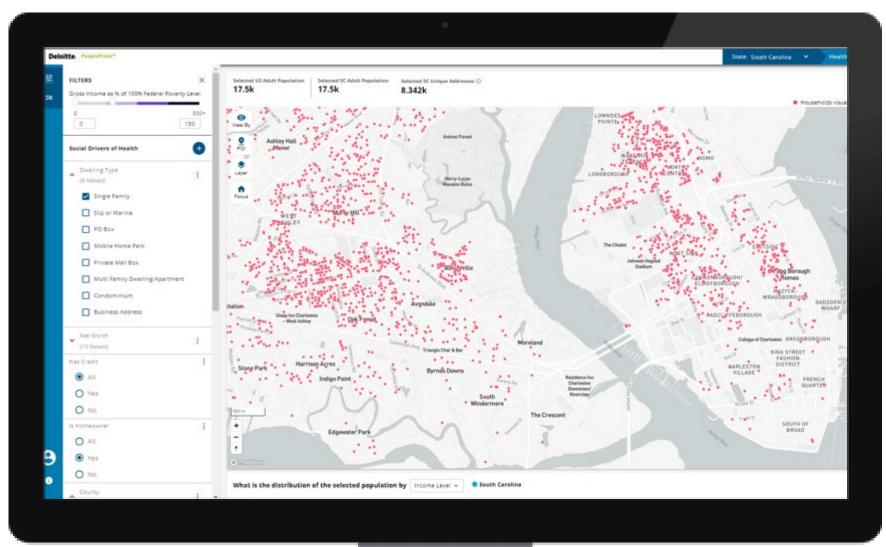
• Leverage third party data sources

At risk of eviction, eviction in progress, recently unemployed – there are many data points that can predict future housing instability

PeoplePrism™

KEY TAKEAWAYS

- This is an example of an ML-based
 predictive model using PeoplePrism
- Imagine if we could identify which households are at risk of eviction or housing instability, or are at risk of SUD, OUD
- Imagine if **targeted outreach** were provided to these households, to bridge the gap, and potentially divert individuals from shelter (to rent/housing assistance)
- Imagine if we could **model which types of beds are needed most**, and where, as eligibility for shelter is complex





Predict Bed Capacity and Needs

Within this confidential project, Deloitte assisted thousands of refugees to match to available and eligible beds and significantly reduced the number of individuals waiting for a shelter for more than 72 hours. The project team leveraged GenAI models to automate matching and reporting.

