Pierce County
Human Services

Modernizing Energy Assistance Processing

Team E5 - Kalcifer

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Andrew Le
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Nina Lin
(UXD/PM)

Jerry Yan
(Data Science)

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Problem context

6,000+

LIHEAP applications this annual cycle

4

total Pierce County processors

3-7

applications successfully processed daily

57-70% of applications have missing information

Low Income Home Energy Assistance Program (LIHEAP)

Problem statement

How might **Pierce County staff** achieve **online access to energy assistance** so that they can **better serve low-income households by helping more residents save on energy costs and reduce staff application processing times**?

Key research insights

- 84,239 people under poverty line
- Lack of accessibility
    - Application only available via paper/phone (business hours)
- Process is difficult, inefficient, and confusing

Personas

Sarah, PC Processor, 46

- PC processor for 8 years
- Little tech experience, strong people skills
- Frustrated about incomplete applications, inputting info into numerous places

Jane, Applicant, 66

- Unemployed, retired
- Health complications; Relies on food stamps
- Wants quick and efficient way to access energy assistance to meet basic needs

Solution approach

Online Platform
(desktop/mobile)

- Applicant Eligibility
- Flag Incomplete

Centralized System

Database/ Dataverse

- Real Time Updates
- Eliminate redundant data changes

Data Visualization via PowerBI

- Report stats of processing time and benefits need to Commerce department

User testing & validation

2 Processors

- Edge cases
- Common errors & mistakes
- Content language

6 Residents

- Form flow
- Field clarification
- Security & privacy concerns

Product demo

For subtitles: https://youtu.be/LURtUXlAaqU

Ethical considerations

1

Data privacy

Sensitive information
- Location/ SSN

Data protection
- Spam/leaks

2

Accessible

Personalized help

Original method

Simple interface

3

Funds

Limited funds

Prioritization of people in need

Next steps beyond capstone

Brief human services

- Present capstone project
- Backend demos for processors
- Data export & DOC requirements check

Handoff to IT

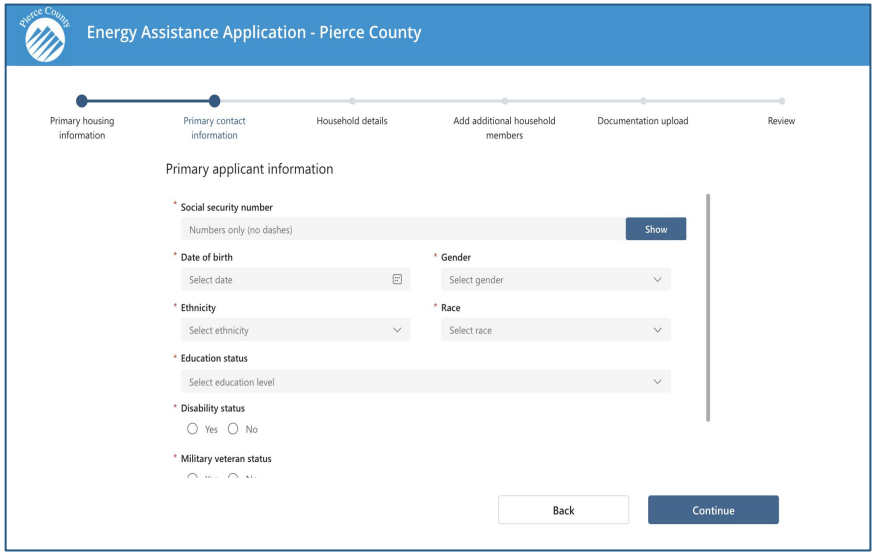
- Provide technical documentation
- Discuss limitations

Implementation

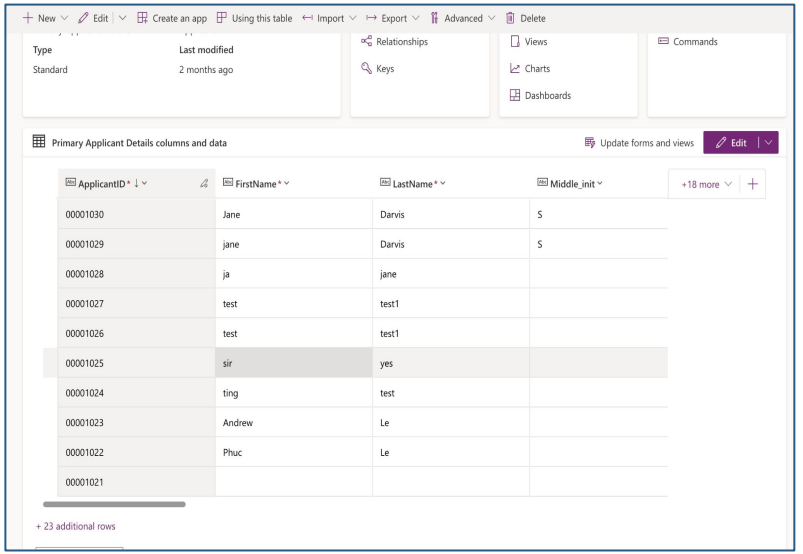
- Hope to see PC build on our foundation (language services)
- Release to public

Project screens

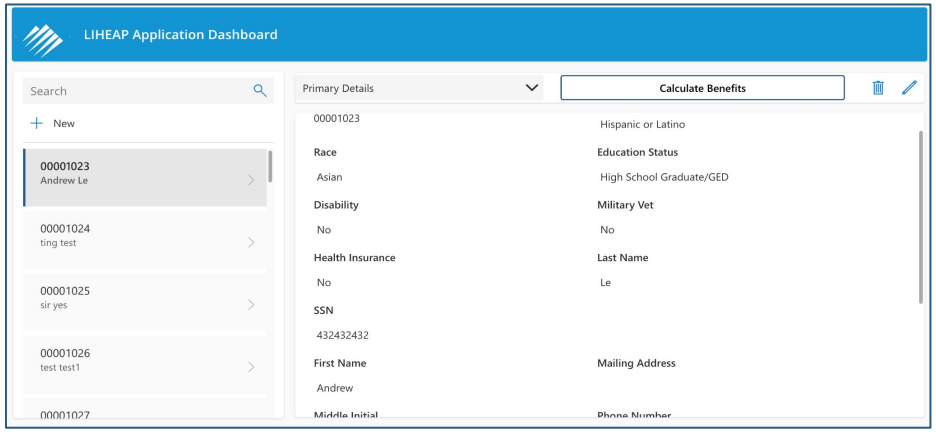
LIHEAP application via PowerApps



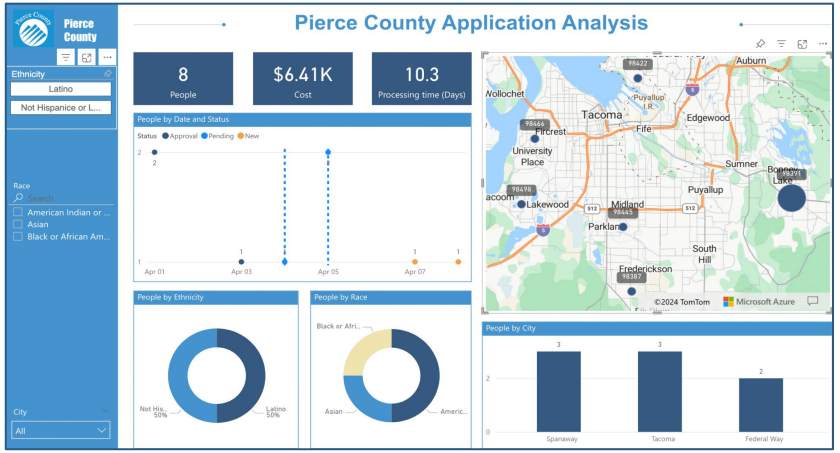
Database via Dataverse



Project screens



Processor facing application dashboard via PowerApps



Data Viz via PowerBI

Thank you!

Remi Kahn

Andrew Le

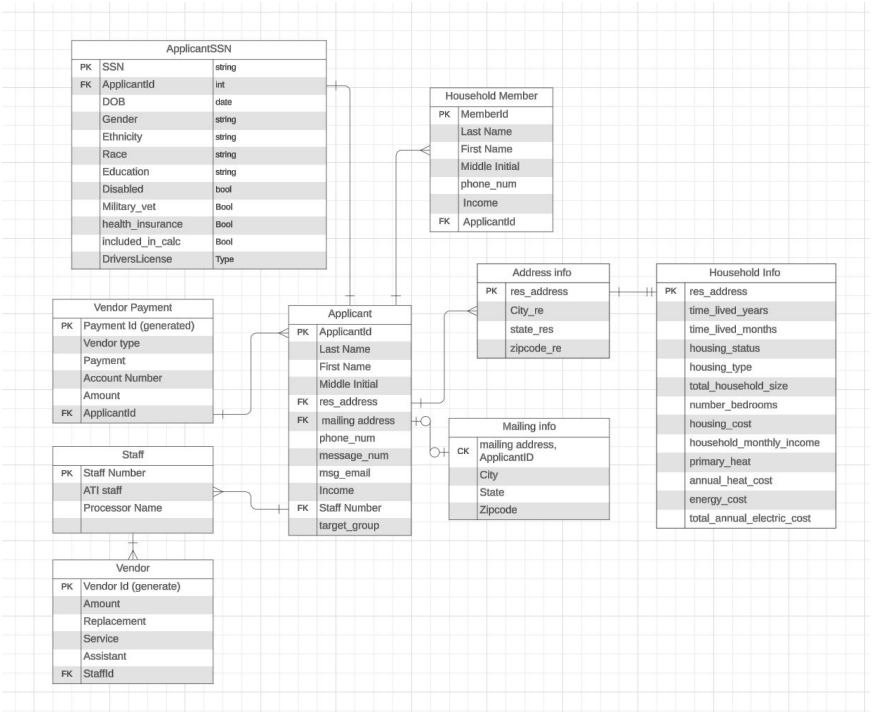
Nina Lin

Jerry Yan

Recognizing the essential need for warmth in winter and the inefficiencies of manual paper processes, our project, sponsored by Pierce County Human Services, aims to streamline energy assistance processing for low-income residents. Through a centralized application portal and database, this user-friendly online platform, accessible via mobile and desktop, prioritizes equity in information access for low-income communities. By minimizing errors and the need for back-and-forth phone calls or mail, residents gain faster access to energy assistance. We address critical information issues related to affordability and energy access in underserved populations, ensuring compliance and enabling robust data collection for informed decision-making.

Demo - Database

In-house database allows for improved work-flow and accurate record-keeping



Measures of Success

Long term goal: PC community members are receiving heat assistance

Decrease amount of staff time per application

Increase # of applications being processed