Way Community Center of Greene County

Executive Summary

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Background

The Way Community Center of Greene County is a non-profit organization located in Waynesburg, Pennsylvania dedicated to promoting education, fostering relationships, and creating a safe and supportive environment for all members of the community. Supported by the First Baptist Church of Waynesburg and the local community, the Way Community Center operates with the goal of filling gaps and designing effective approaches to positively impact the community.

Project Description

Project Opportunity

After the discussion with our project organization, we determined two main problems in manual form collection and lack of a human-centered interface that have resulted in unnecessary costs and effort to our client. To determine eligibility for a proposed community development project to be funded by the Pennsylvania Department of Community and Economic Development (DCED), questions about family and household income need to be surveyed, and hence the reason for the survey form as depicted below. However, collecting socioeconomic data utilizing a pen and paper form is extremely burdensome, and even after transferring the data to an Excel sheet, the client is unable to extract specific data regarding demographics and general income levels. Secondly, the questionnaire on the survey is extremely confusing. We see that the question on household income is unintuitive, and if a participant has an annual income between the two different ranges, it is not clear which box to tick. This leads to drag on precious volunteer time, as well as a possible inaccurate collection of data.

Project Vision

Our team's project aims to provide a comprehensive solution to the problems faced by our client in community development initiatives. Our solution will automate the data collection and processing for the Community Development Block Grant Survey and provide monitoring of the demographics of participants who benefit from their programs. The proposed solution will save time and effort for community development organizations, accurately collect data, ensure that funding goes to its intended audience, and provide real-time monitoring to evaluate the impact and effectiveness of programs. Alternative solutions, such as traditional

paper-based surveys and manual data entry, are time-consuming and prone to error. Our solution leverages technology to provide a more efficient and accurate solution.

Project Outcomes

Our project focused on creating lasting outcomes by engaging in constant communication with our client to identify their problems and pain points, ideate potential solutions, and develop a feedback-driven product. As a team, we collaborated with our client to develop a solution that is tailored to their specific needs. The outcome of this collaboration is an online form collection process that automates the data collection and processing for the Community Development Block Grant Survey, while also providing real-time monitoring of participant demographics to ensure funding goes to its intended audience. Through ensuring a human-centered implementation of the form, we were able to design a product that can save time and effort. Furthermore, we implemented documentation, training procedures, and data management/safety processes to ensure that our client can continue to run the entire process without our assistance.

Project Deliverables

Our team has developed a system powered by Google Forms, Google Sheets, and UI Bakery. We have two forms available, one for socioeconomic data collection, and an additional form that will serve as an attendance tracking system once programs at the Way Community Center begin. Individuals will be able to submit their information into the forms, and all the data collected will be available in the Google Sheets backend. The UI Bakery link will act as a form of the admin dashboard, where our client will be able to query specific features and analytics utilizing the user-centered interface. In addition to the provided systems, we have also provided system set-up, bug fixes, data privacy, and admin queries documents for future maintenance.

Recommendations

The provided system will significantly optimize the data collection and extraction processes for our client, but there are future improvements that could be contributed as well. For instance, we recommend adding additional queries for the client's convenience, though extensive technical support may be required. As the project scales, it may be ideal to migrate the functionalities of UI Bakery into a custom built full-stack software to avoid subscription fees and limits on API calls.

Student Consulting Team

Bernard Sheng served as quality assurance lead. He is a third-year student studying Information Systems and Violin Performance with a minor in Human-Computer Interaction.

Hao-Wei Fu served as technical project manager. He is a third-year student studying Information Systems and Computer Science.

Yucheng He served as technical lead. He is a third-year student studying Information Systems and Computer Science.