

Streamlining Navigation of Greening Programs for the Community Housing Sector

Introduction

- This Project in Industry team is working with the **Greening and Sustainable Business Practices Department from the Nova Scotia Department of Municipal Housing and Affairs**.
- The main problem is that the department is brand new and has no formal processes, leading to issues in achieving their goals.
- Essentially, the team has developed a solution to improve the accessibility of Greening Funding Programs to the Community Housing Sector, as well as the efficiency of how the department facilitates this process.
- The working prototype is a tool in **MS Access that is composed of a database, queries and a user-interface of forms and reports**.
- The function of this tool is to **match the Community Housing Sector to funding programs based on their eligibility and program requirements**.



Details of Design

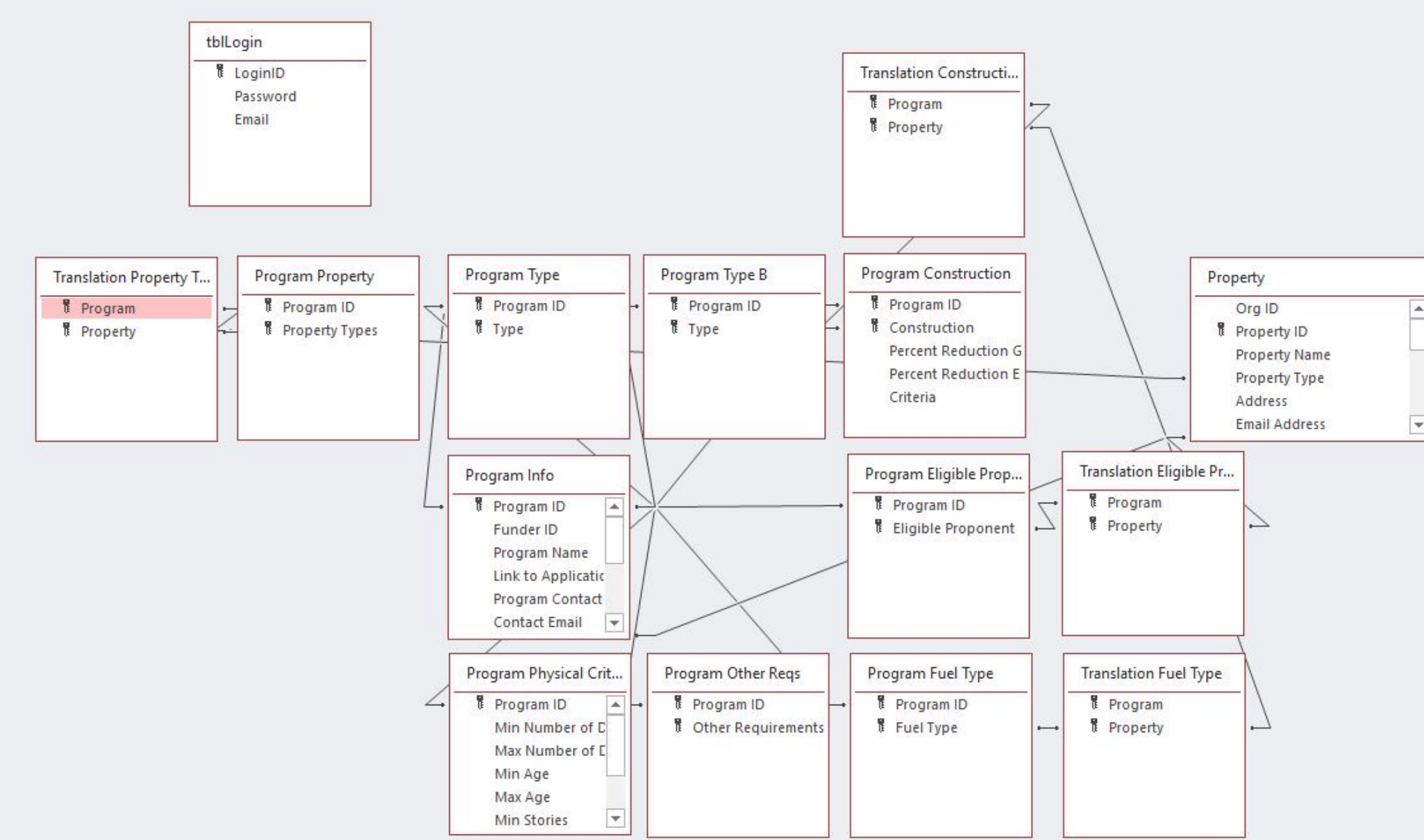


Figure 1: The tables and relationships of the database.

The network of tables in final prototype is shown above in Figure 1. Most of these tables include login information, information about the funders providing programs, information on the CHS organizations and their properties, and the funding programs available. 5 of the tables are used as translation tables for query functionality.

The main ID numbers used to create relationships include:

- Login ID
- Funder ID
- Program ID
- Organization ID
- Property ID

Home Page

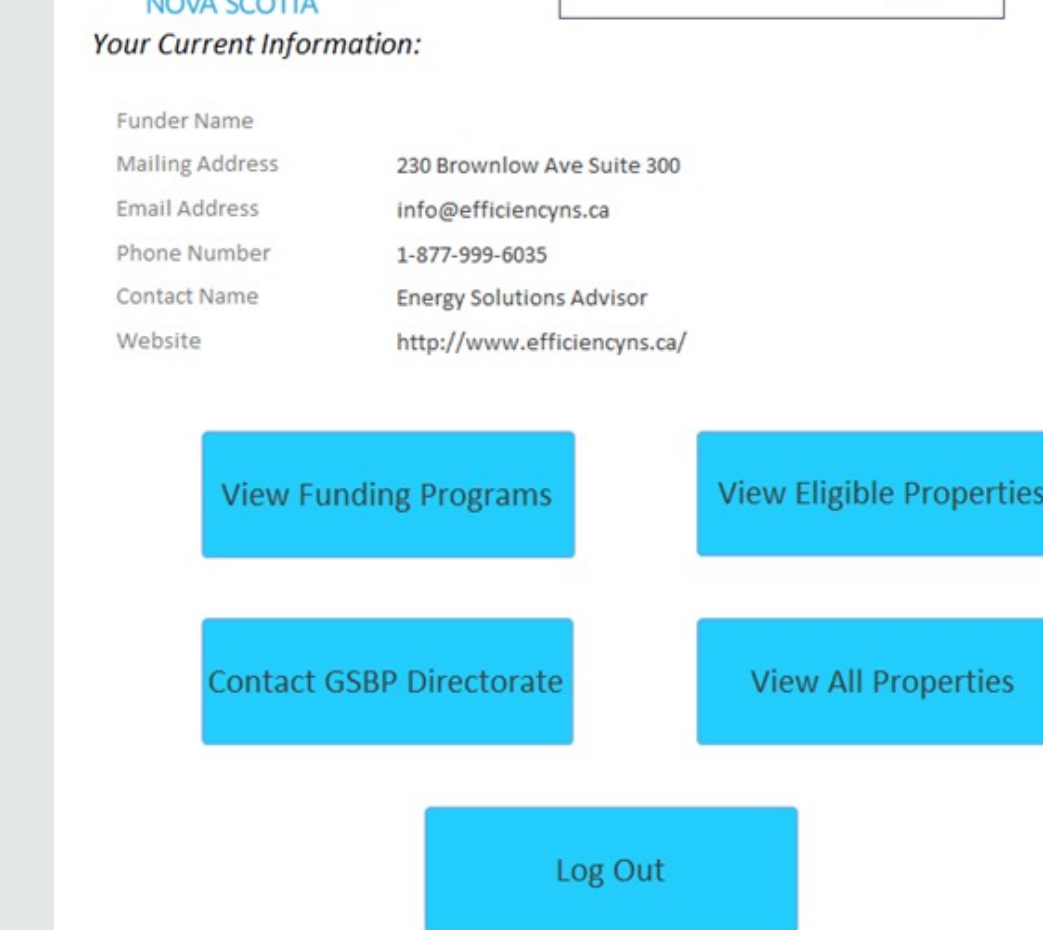


Figure 2: Funder Home Page.

Home Page

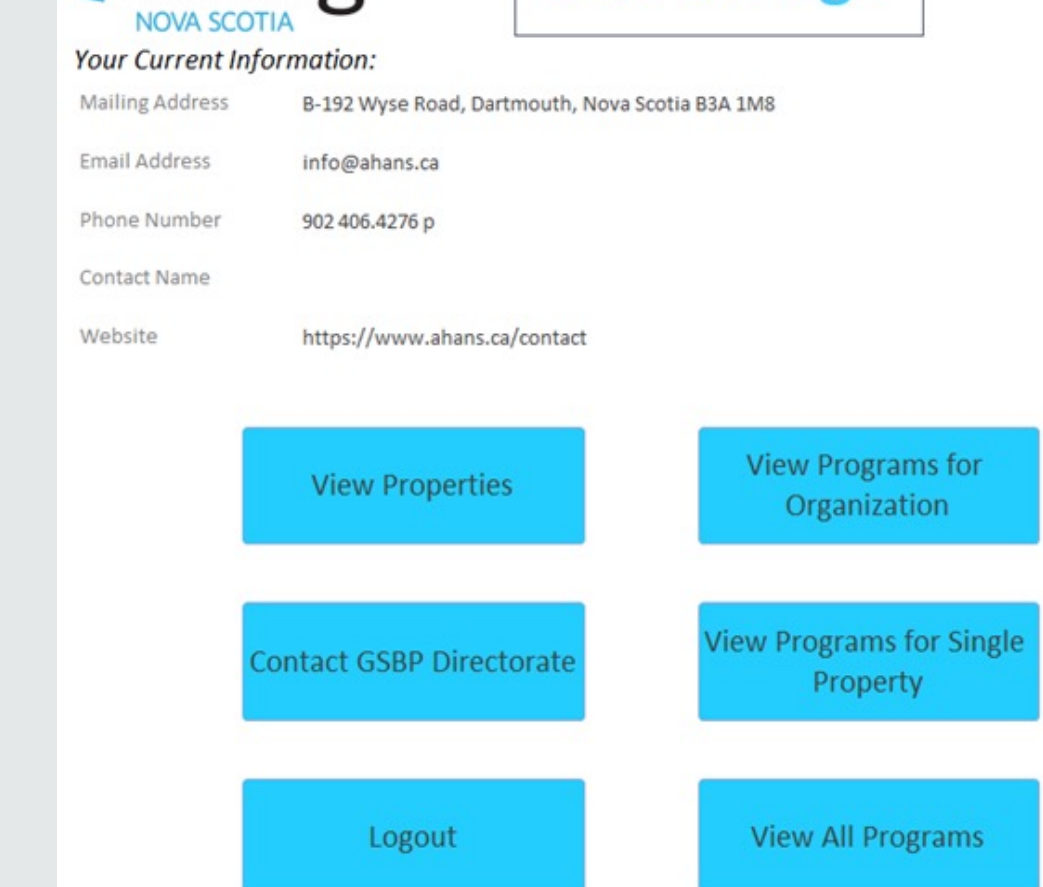


Figure 3: CHS Home Page.

Search Programs

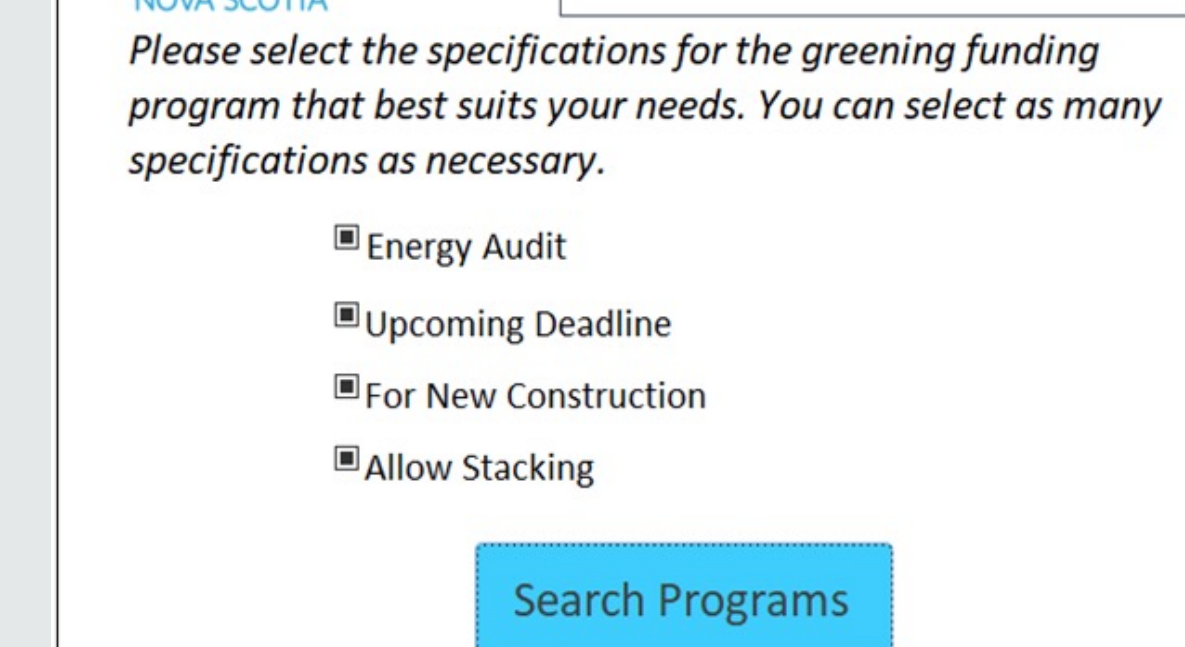


Figure 4: CHS Selecting Specifications

Figure 5 shows both the CHS organization perspective and the Funder perspective as they interact with the interface and move through the tool, key pages are shown in Figure 2, Figure 3, and Figure 4.

Figure 6 shows the matching of programs to a property, generated for a CHS organization. The programs are narrowed down first by eligibilities (things like type of building, fuel type, etc.), which are what make a building eligible for a program.

The CHS organization decides which program specifications are necessary for their needs, such as energy audit or new construction.

The selected specifications are then used to further narrow down the list of eligible programs.

A report is generated at the end of this process, so the CHS organization can view programs and start the application processes.

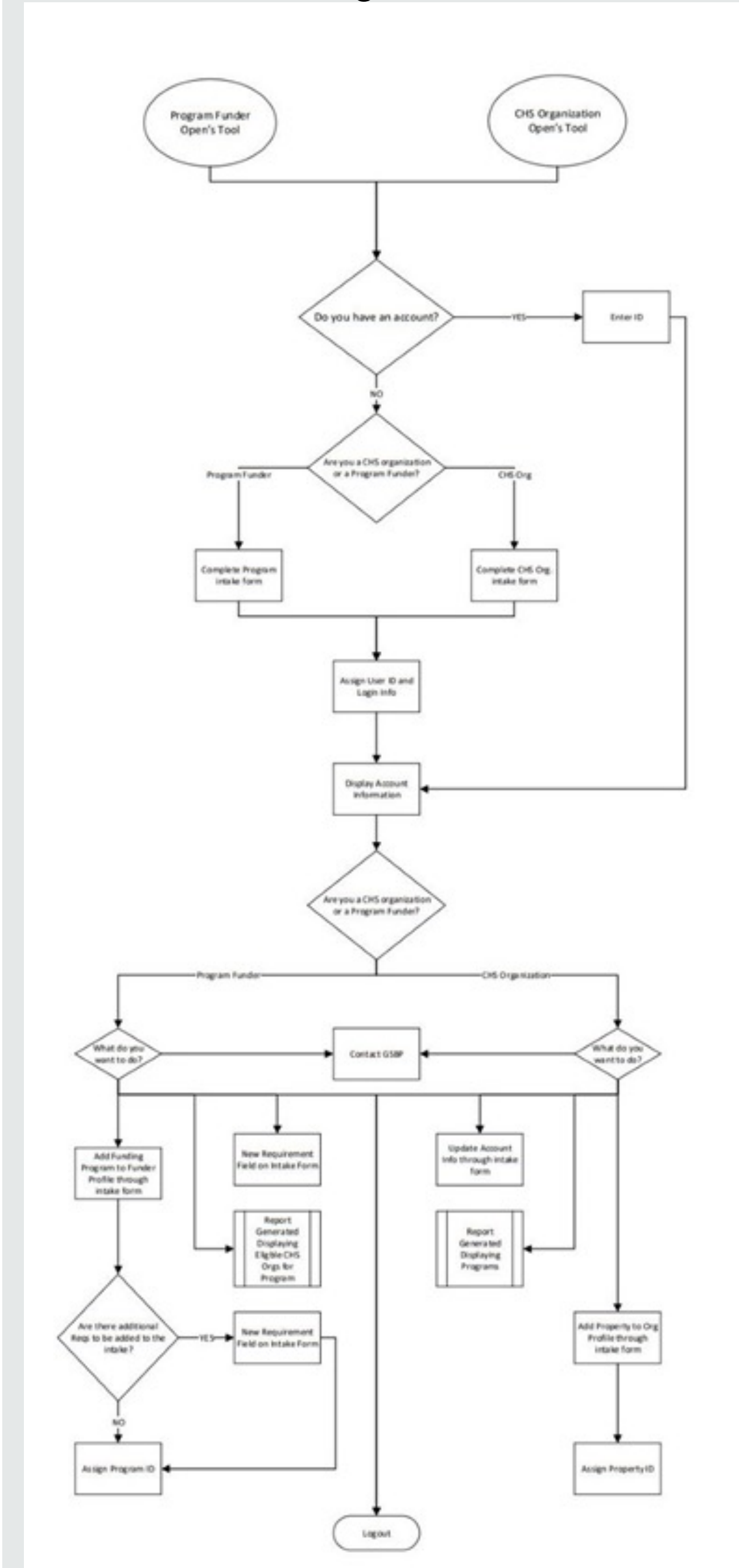


Figure 5: Interface Flow Chart.

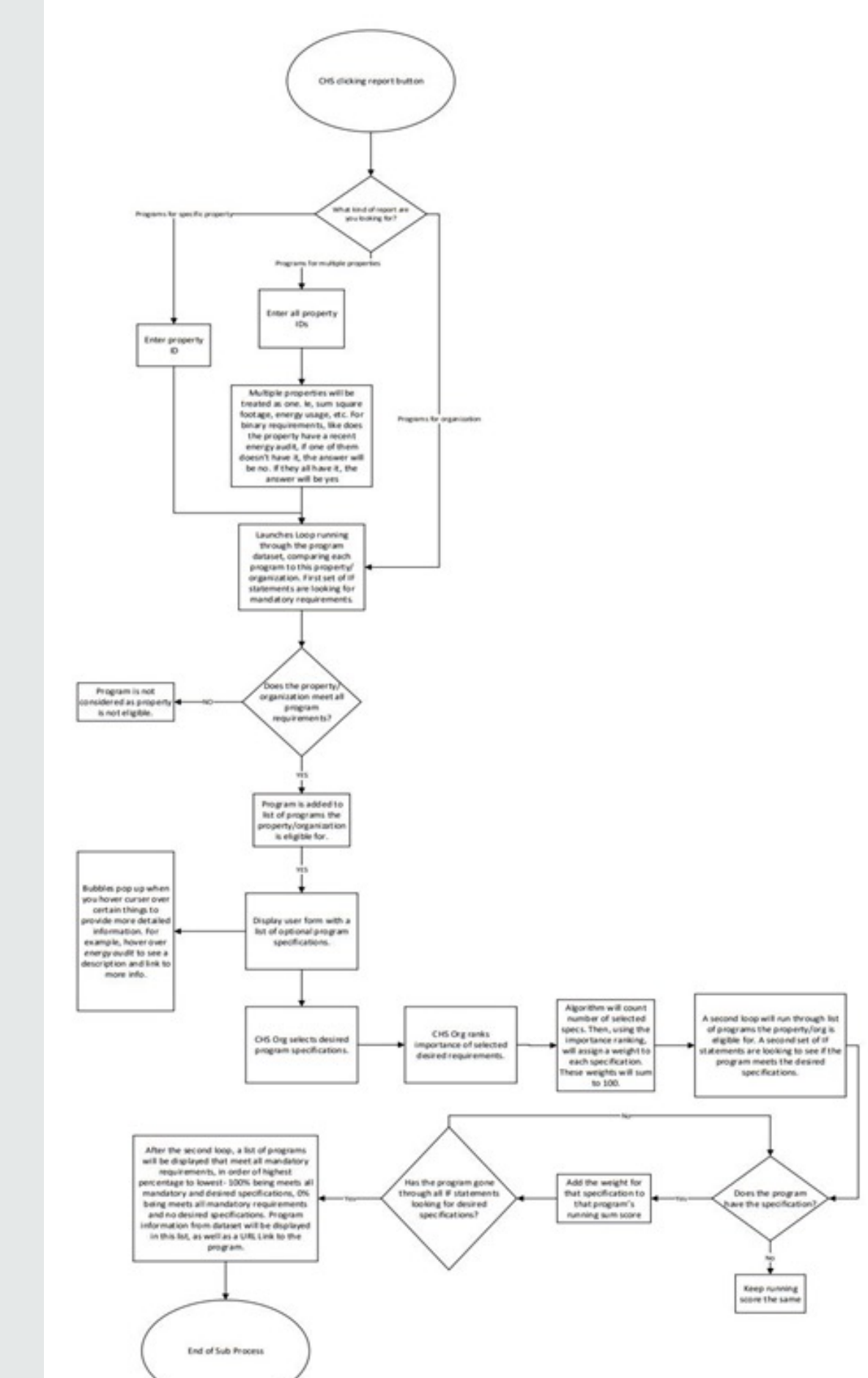


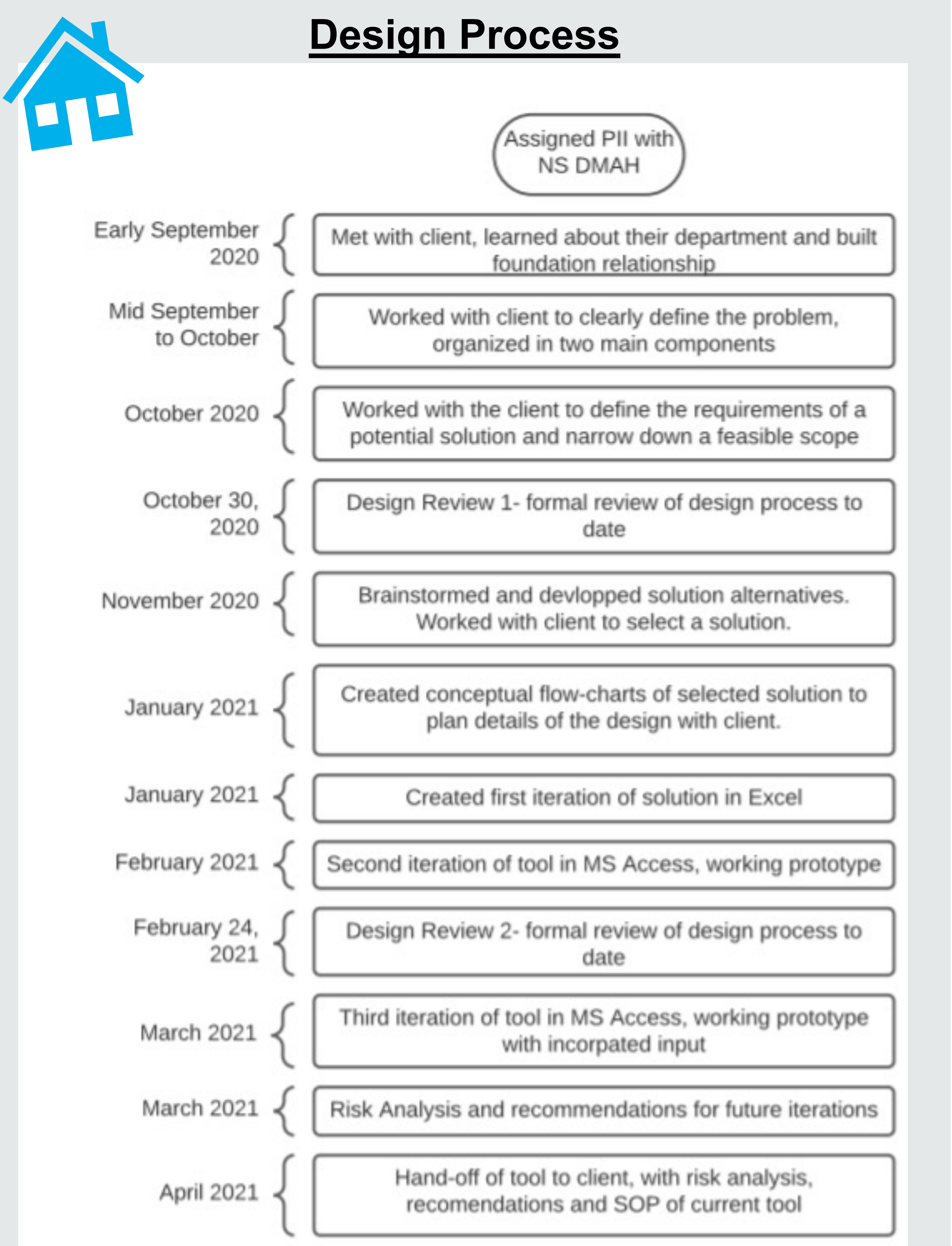
Figure 6: Finding Programs for CHS Organization.

Risk Analysis and Recommendations

As this is a new department and there are only two members on the team, there are many limitations to what can be accomplished. There are a few risks that could not be addressed during this project due to these limitations.

Shortfalls of Current Tool	Associated Risks	Recommendations
Insufficient data in database	<ul style="list-style-type: none"> Incomplete query results displayed in reports Loosing user buy-in 	<ul style="list-style-type: none"> Work with Dalhousie in the future to hire a co-op student to complete data gathering/entry
Built in local Access file	<ul style="list-style-type: none"> Security risks by providing public access to a local drive Legal obligations 	<ul style="list-style-type: none"> Investigate whether there are existing publicly accessible drives in neighboring departments that could host this file Work with Dalhousie in the future to develop a future iteration of the tool that is a web-based tool
Tool is orphaned	<ul style="list-style-type: none"> With no owner, no one is performing maintenance Invalid data will affect the accuracy of the tool 	<ul style="list-style-type: none"> Use this PII project/report as a business case for receiving more resources to hire new staff, having the capacity to accommodate this tool and achieve departmental goals

Design Process



Conclusion

- The problem definition, along with the scope and requirements were agreed upon by both the students and the client to set clear expectations and direction over the course of the project.
- The final iteration of the solution is a **matching database with a user interface, that functions for both CHS organizations and program funders**.
- The team performed a risk assessment of the tool and found these main sources of risk: **the lack of data, the file status of the tool and ownership and maintenance**.
- Upon finalization of this project, the client is satisfied with the progress that was made and are optimistic about the value that has been added to their team as a result.

