Build Change is a post-disaster housing reconstruction NGO that emphasizes technical excellence, community training, and high quality building standards. They were founded in 2004 and are currently working in Haiti, Indonesia, Colombia, and the Philippines. They manage their housing projects by administering homeowner and local professional surveys on an electronic tablet. My work with Build Change was centered on this tablet-based system.

The key components of the existing mobile data collection system are Salesforce, a cloud computing and social enterprise software, and Taroworks, a suite of mobile technology tools primarily designed for use by development field staff working in remote areas. It is built on the Salesforce platform and accessed in the field via Android devices. The combination of these systems has many benefits, including data collection without a network connection, ability to query data, creation of graphs and a dashboard view, and ability to collect GPS and image data. It also has some limitations, however, including a relatively high cost and an inability to create maps, export image data, and create aesthetic reports. Because of these limitations, Build Change began to search for an alternate mobile data collection system, or combination of systems, to better accomplish the goals of the project.

To find the best available system, I was tasked with doing preliminary research on the available mobile data collection and management platforms. I was given a set of criteria, and was to judge all options I found based on these criteria, via web searches, contacting developers, and using platform demos. I was then to report my findings to various supervisors on a daily and weekly basis and follow up on any feedback and suggestions they gave me. I researched nearly 20 solutions and combinations of solutions and judged them on Build Change’s criteria and represented my findings in a spreadsheet-format deliverable.

By the conclusion of my practicum, the research team and myself had narrowed the search down to two distinct solutions. The first was a single platform called DevResults, that has powerful data analysis and visual representation tools, though a high annual cost and a lack of a data collection component. The second was a combination of four individual tools and a customized software solution to bridge the gap between the different components. These components were as follows: 1) Fulcrum, a mobile data collection application, 2) CartoDB, a mapping application, 3) Salesforce, a data storage, management, and analysis database, and 4) Conga Composer, a report and document creation add-on to Salesforce. This combination of solutions also came with a high cost and delay in implementation, though
this price and schedule were relatively uncertain. Build Change continued this research after my practicum finished and their plan is not only to implement the new system for housing projects in Haiti, but also to eventually update their data collection and management system in the Indonesia country programs.

Overall, I learned many new things about data management in development projects, improved my research skills, and discovered the challenges of completing a project with numerous requirements and a low budget. Build Change was an excellent organization to work for. The people were extremely welcoming, I thoroughly enjoyed the work I did, and it was a great experience.