

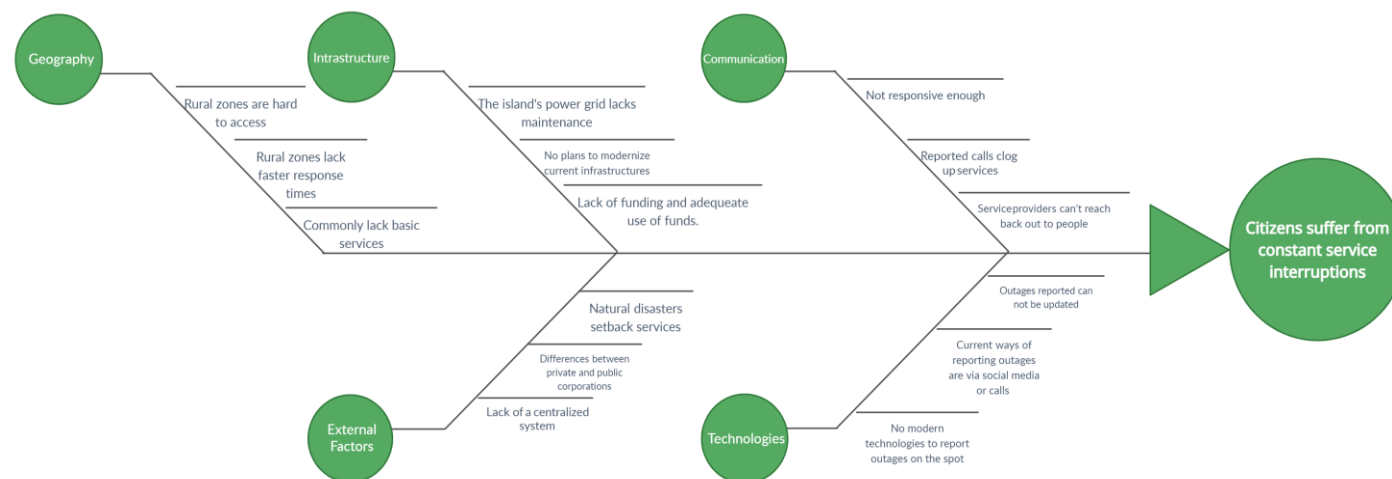
Problem Background

- The electrical, water, and communications systems infrastructures in Puerto Rico are not in the most optimal conditions.
- Since Hurricane Maria, the companies of these systems have been working on improving their infrastructures and modernizing them. However, the systems are still widely vulnerable to outages.
- Due to the fragility and the poor conditions of the systems and infrastructures, power, water, and internet outages occur daily for many Puerto Ricans.
- Consequently, citizens are not being able to work, attend virtual classes, open shops, or even survive if the citizen needs a machine for his or her body to be able to function properly.
- There does not exist an effective way for citizens to report power, water, or internet outages around the island. The only ways of reporting outages to providers are via customer service calls, social media or, in the case of LUMA (a power distribution company), their interactive outages map found in their webpage and app.

Target

- People in Puerto Rico will be able to report outages of essential services like water/electricity/internet in under a minute and provide important geographical information without having to go through the slow reporting methods of the companies associated with these services.
- Utility companies will be able to better track and identify outages thanks to an increase in customer reporting which will allow them to better allocate their resources and improve the uptime of these services.

Causes



Countermeasures

1. An interactive map that keeps track of the areas in Puerto Rico that currently have outages.
2. A centralized system that helps providers identify outages more efficiently.
3. Minimize the response time and repair time of outages in rural areas.
4. Prioritize the areas where there are outages, making it easier to reach these areas.

Check/Evaluate

- Survey users on how the downtime of their services has changed since they began using our platform.
- Compare the amount of electricity reports made on our platform with the LUMA platform to compare user engagement.
- Survey utility companies to see if the platform offers valuable information for them and if they are acting on it.

Act/Standardize

- Continuous success will be ensured by expanding the platform's capabilities by growing the user base and providing an incentive for utility companies to use the platform.
- False reporting can be diminished by forcing clients to verify their cell phone number.
- The domain can be transferred to other services such as traffic, climate, and crimes. It can also be scaled to other countries and regions outside Puerto Rico, where such occurrences are also incredibly common.
- By the end of the project, team members will have acquired vital software engineering skills in full stack development, databases, and will be capable of providing products and solutions to third parties.
- The obtained skills and experience could be applied to the development of any domain involving a GUI manager.