
Texas Utility Wrangler

UX Strategy Report

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Introduction

According to the United States Census Bureau, Texas had the largest numeric population increase in the United States. Over 562,941 new residents moved to the Lone Star State between 2023 and 2024. In 2023, 3,356,000 residents moved within the state (Barrett, 2018). With Texas having the highest number of people in the US moving to and around the state, setting up new or transferring utility services for water, gas and electricity can be very confusing.

To streamline the process of transferring or setting up new utility services, I am proposing a new mobile app called *Texas Utilities Wrangler*. This app will allow Texans to pay their utility bills (water, gas, and electric) with just one tap. It will also provide a live, crowd-enhanced outage and alert reporting system for each utility.

Using Jesse James Garrett's Five Elements of User Experience (strategy, scope, structure, skeleton, and surface) as a guide, this report will describe the process of creating the *Texas Utilities Wrangler* app from the ground up.

Strategy

Jesse James Garrett's first of his Five Elements is Strategy. Strategy helped me in my research to determine a strong reason for the app, who I'd be creating it for, and why people would want to use it (Elgabry, 2016). Once I gathered articles on users frustrated with setting up, paying and contacting their utility services, I set out to see if any apps were currently on the market.

Reason Behind Texas Utility Wrangler

After moving to three different major Texas cities, I personally found setting up my utilities to be a chore worse than packing boxes. I knew each of the three cities had its

own water utilities company, where do I look for them? When I moved to my third city, Houston, my realtor helped me navigate the water utilities website and set up a separate account for gas. As for electricity, he told me I was on my own. Houston is a part of the Texas deregulation energy market, and as of May 2025, Houston has more 300 different electricity plans offered by more than 140 electricity companies (Minasian-Koncewicz, 2025). When all my utilities were finally set up, each company had different billing due dates and completely different companies to contact for outages or issues.

After remembering my last moving fiasco from Austin to Houston, TX, my goal in creating *Texas Utility Wrangler* focused on an app that prevents fellow Texans from experiencing my “utility anxiety” when setting up their services. The app would be offered in both English and Spanish, focus only on Texas utility services, allow users to report and immediately see utility outages in their area, and give payment and service alerts. I searched for apps on Google Play and the Apple App Store for any existing all-in-one payment services that guide users to connect their utility services, have community engagement, and offers reliable payments without surprise charges. If an app already existed or met the majority of my app’s concepts, then there would not be a need to develop another.

The Competition

After searching mobile app stores for “all-in-one utility payment,” I narrowed down my search to three competitors and compared their features to my app’s concept. I was unable to find an app that combined payments and outages information, but did find all-in-one payment applications for individual use (not businesses) that included utility payments.



Quicken Classic Bill Manager

Quicken is a well-known and trusted bill management platform that was first released in 1984. It is the leading #1 best selling application with over 20 million users and the first payment platform I thought of when researching apps.

Similarities to *Texas Utility Wrangler*

- One mobile app to pay multiple companies
- Secure payments with customized billing reminders
- One app to see all bills and upcoming payments

Strengths

Being so well known and trusted for over 40 years allows Quicken instant trust. Their mobile billing payment app syncs with a yearly paid desktop plan. Users note other strengths as:

- Offering no hidden fees or annoying advertisements when paying bills
- Same-day electronic payments
- Automatically syncs desktop information to mobile

Disappointments

- To use the app, you must have a Quicken account that includes bill pay.
- After reading the app reviews, many users found the app to be unreliable, clunky and buggy
- Although I have used and greatly enjoyed the desktop version of Quicken in the past, I no longer have an account and could not interact with the app



Papaya

Papaya's mission is to “alleviate the stress and anxiety Americans face in paying bills.” Users take photo and upload their bill, confirm the payment method and track the bill's status. They also state the app is free to use for paying any type of bill.

Similarities to *Texas Utility Wrangler*

- One app to pay all bills
- Bill payment confirmations
- Different payment options

Strengths

Papaya has promising strengths as a bill payment app. As soon as you open the app, you are able to start paying bills by taking a photo or uploading a PDF of the bill. The app enters your and the billing company's information automatically. I found paying for one bill was a straightforward and the app provided a clear step-by-step process. Other strengths include:

- 4.8 star reviews from over 116,000 reviewers
- Over 500K downloads on Google Play
- Screenshots on the app store resemble the app

Disappointments

- The app states payments are a free and quick process. I agree that the initial process was very fast, but to pay the bill immediately with a credit card, there was a fee. For free payment, you must connect to a third party to enter your banking account information and wait a few days for it to verify before you can make the payment.

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- No clear instructions how to pay reoccurring monthly bills or how to set up reminders. There is an option to enter companies manually, but I could not find my water utility provider.
 - Many reviewers note they were charged an unexpected \$40 “privacy charge.” After scouring their app and setting up an account, I could not find any documentation about this charge.
 - Only offered in English.



doxo

The overall goal for doxo is to deliver a better bill paying service for both users and billers. The company provides a broad bill-pay platform that handles rent, utilities, and credit card bills in one app, helping users centralize payments. However, there was no direct interaction for alerts or outages with the companies besides reminders to pay your bill.

Similarities to *Texas Utility Wrangler*

- Searching and adding your utility company
- Setting up multiple payment methods
- Paying your bills directly from the app

Strengths

When researching doxo in Google Play and the Apple App Store, my first impression of their company was mostly positive:

- Over 500,000 downloads
- Well-known company reviews and awards
- Offers free payment delivery to over 120,000 companies

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- Multiple colorful screenshots of the app pointing out its main features

Disappointments

- After downloading and opening their app, I was immediately met with a pop-up screen wanting me pay monthly for their premium services. This push to subscribe also followed to the setup screen and buried what information was needed to set up the account.
- Once I finally figured out how to add bills, the account set-up screen was overwhelming with dropdown of multiple bill categories. If you did not have one of the categories, you had to manually remove each one to finalize the setup. The app would also freeze while entering payment information, then return to the starting page.
- What I really found odd was that the screenshots in app stores did not resemble the actual app pages. With over 10 million users, one would think the app would look and behave better.
- The app is only offered in English. Spanish users may find difficulty understanding many of the technical terms.

Research Conclusions

After interacting, studying and reading customer reviews of the three competitors' apps, I found a pattern of frustrations and areas of much needed improvement I did not want to carry over into my app's design. However, I also took note of each app's positive design choices and functionality.

For *Texas Utility Wrangler*, I would incorporate from the competitors:

- A learn as you go process to complete tasks
- Screens with little clutter, lots of white space and limited visual noise

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- Friendly graphics, labeled icons
 - Allow users to interact with the app before committing to an account

My app will stand apart from the other competitors by:

- Partnering directly with Texas utility companies to ensure fast, reliable payments without surprise charges
- Serving only utility services for electricity, water and gas that will allow a targeted user experience and clear functionality- unlike other generic bill payment apps
- Combining payments with real-time outage reporting strengthens user trust and provides a much needed civic tech tool for Texans

Scope

The second element of the five is Scope. It defines the functional and content requirements in the application or product (Elgabry, 2016). Functional requirements are what the product needs to do. These features and how they work together help users reach their goals while supporting the overall project vision. Content requirements are what the product needs. This could be text, images audio or video. Defining this content early in the project helps plan the work and ensures the right information is in place to give value to users (Garrett, p. 68 - 71).

Functional Requirements

The two main functions of the *Texas Utilities Wrangler* app, creating an account and paying gas, water and electricity utility bills all on one app works directly with its unique feature- real-time outage reporting for each utility. If a user does not add their utility account information, that includes the user's address and exact Texas location, the live outage reporting and utility alerts will not function properly.

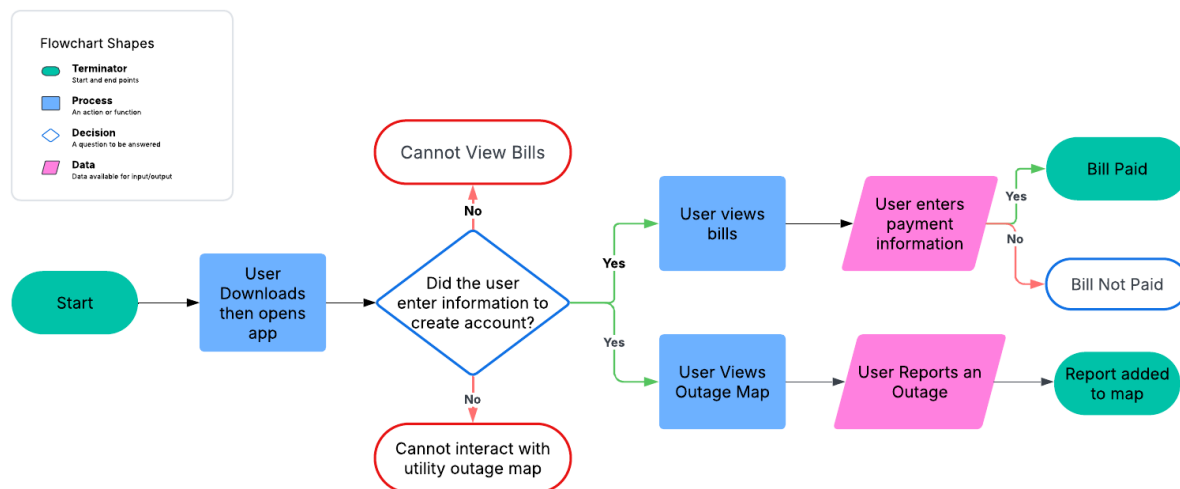


Figure 1 - Flowchart illustrating function requirements of Texas Utility Wrangler app

For example, residents in certain areas of Austin, TX must issue a boil water notice (pesky zebra muscles). If the user does not enter their water utility account information, the alert will not show, because only parts of Austin is under that notice, not the entire city or state of Texas.

Another vital feature of the app is dependent on the user choosing and entering their payment method information. Without this information, the payment process cannot finalize and the utility company will not be paid.

Content Requirements

This assignment requires creating two interfaces- the home screen and a resulting screen when an action is taken. Because the main features depend on one another, I will explore the home screen, one of the utility pages, and the interactive outage screen. The following components are content requirements for the entire mobile application:

Typography

One of the simplest ways to reduce clutter in an app is to reduce the number of fonts you use. (Osborn, 2017). To achieve a clean (but still on brand) look, I chose Rockwell for the logo and main headers and Nunito for section headers and body copy. Both fonts are highly legible at small sizes, friendly, but also professional to match the cowboy branding.

Logo and Main Headers (H1-H2) - Rockwell Bold
Style: UPPERCASE, bold

Section Headers (H3-H4): Nunito Bold
Style: Sentence case

Body Copy (P1-P2): Nunito Regular
Size: 14-16px, depending on size
Line Height: 1.5 for readability

Color

When choosing colors for this application, I wanted it to feel professional but also have subtle nods to Texas. I also chose colors that would allow maximum contrast for text readability and not alarm users while paying bills. By limiting the number of colors, the app's feel is clean and uncluttered (Osborn, 2017).

Color Usage

- Primary colors should dominate navigation bars, primary buttons and headers.
- Secondary colors are for icons, highlights and decorative accents
- Neutrals keep things clean and readable, especially for larger bodies of text or forms

Primary Colors



Texas Navy
#1F3B5C



Golden Lasso
#F4B63D

Secondary Colors



Leather Brown
#8B4E27



Water Blue
#2D9CDB



Electric Yellow
#FFD43B



Gas Flame
#F77F00

Neutral Colors



Sand Beige
#F3E9DD



Metal Gray
#666666



Charcoal Black
#1A1A1A

Figure 2 - Color choices for Texas Utility Wrangler app

Images

For the Texas Utility Wrangler apps, images and icons need to strike a balance between friendly Texan cartoon charm and clean simplicity for a payment app. The overall image style is flat or semi-flat illustration with bold outlines, rounded corners and soft edges.

Logo and Icons

For the logo and icon images, I used multiple AI-powered logo generation tools to explore a variety of potential design and typography layout options. I wanted a friendly cartoon cowboy on a charging horse lassoing icons for gas, water and power using my chosen color colors and fonts. After several hits and misses, AI Logo Generator from [design.com](https://www.design.com) helped me create a concept logo I found to be very close to what I had envisioned. I also used the AI service to create icons for overall image

consistency. The logo and icons concepts can be explored further and finalized with a design team.



Figure 3, Texas Utility Wrangler Main logo concept



Figure 4, Texas Utility Wrangler logo concept with tagline

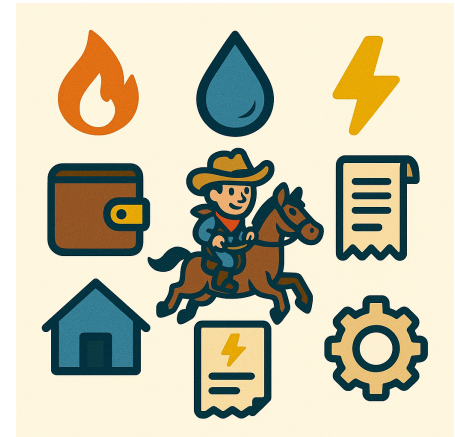


Figure 5, Texas Utility Wrangler icons concept

Structure

The third element, Structure, “defines how the user interacts with the product, how the system behaves when the user interacts, how it’s organized, prioritized, and how much of it.” (Elgabry, 2016). The structure for an app is split into two components, Interaction Design and Information Architecture. (Elgabry, 2016)

Interaction Design

When users interact with *Texas Utility Wrangler*, they have one of two main goals: paying their bills fast or using the outages map without friction. Good interaction design is vital to helping users accomplish their goal in focus. (Elgabry, 2016) For this app to be easy to use, it must include solid navigation, provide use-as-you-go instructions, and give effective feedback to the user’s interactions to inform and prevent errors.

How the App Works for the User

- When you open the app, the first thing you will see is a simple home screen with three big buttons for Electricity, Water and Gas. Each button shows if you have a bill due or if there is a problem with the service.
- A button for Outages is located directly below the three large buttons on the home screen. Like the utilities button, the Outages button will show if any outages have been reported in your area.
- At the very top is a status bar that tells you if everything is working normally, or if there is an alert. For example, “5 power outages nearby” or “Gas company updating lines.”
- If you tap a utility button (like Water), the app takes you to a payment screen that shows you how much you owe, the due date and a “Pay Now” button. You can choose your payment method, and once you pay, you receive a payment received notification right away.
- A bottom navigation bar is present on all screens with names and icons for Home, Payments, Outages and settings
- If you tap the button or the bottom navigation outages icon, you see a map of your neighborhood with added icons. The icons are different colors indicating the outage status. Green means all clear, red shows outages, and orange shows planned work. You can zoom in to see exact locations and tap to read details like when the service should be restored.
- You can also report a problem directly from the map by entering a description or adding a photo.

Information Architecture

Information architecture is how the app's information and features are organized so a user can find what they need quickly and easily (Elgabry, 2016). For the *Texas Utility Wrangler*, the content is grouped into three main areas- Payments, Outage Map and Account Settings. On the home screen, these areas are clearly labeled and use large buttons so users don't have to guess where to tap.

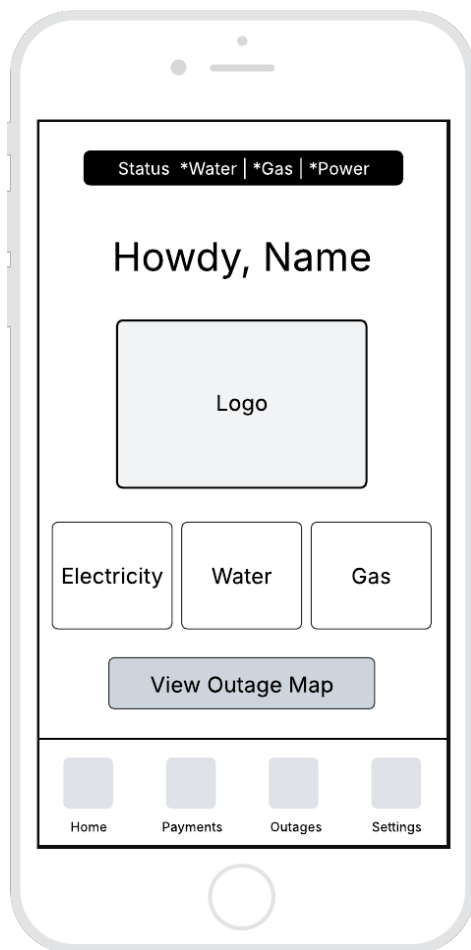
Steve Krug states, "If you can't make something self-evident, you at least need to make it self explanatory" (Krug, p.18, 2014). Good information architecture for this app:

- Organizes, categorizes and prioritizes content based on what users need most (like paying bills or checking for outages) while supporting on time payments and accurate outage reports.
- Makes it easy to understand and move through the app by keeping related features together and showing the most important actions first. For example, in Payments, the first thing users see is the amount due and a "Pay Now" button, followed by optional information like payment history and auto-pay settings.
- Is flexible to accommodate growth for new services or utilities to be added in the future. If new features are added, they can fit naturally in the existing layout without confusing users.
- Is appropriate for the target audience by using clear language, familiar icons, and simple navigation. This app will work for Texans of all ages and technical comfort levels and includes multilingual support.

Skeleton

The skeleton determines the visual structure of an app. The visual structure is the way buttons, menus, maps and other elements are arranged on the screen so people can easily interact with its features (Elgabry, 2016).

To visually explain my brainstorming for how a user moves through the app's information in an effective manner, I will present two low-fidelity wireframes for the home screen and a payment screen. Low-fidelity wireframes are a basic "sketch" to get an idea for the overall structure, content placement and how the system will work (Joy, 2019).



Low-Fidelity Wireframe - Home Screen

Interface Design

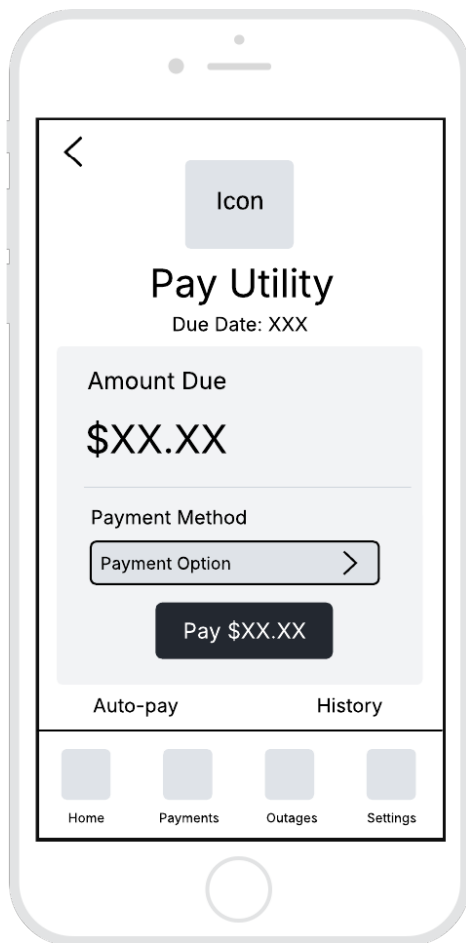
The home page screen design is designed for users to tap the buttons to instantly complete the action they want to achieve. The layout includes large amounts of white space and dominant large buttons for any sized finger to tap. Buttons are grouped together by what action they achieve and contain a large colorful icon that immediately attracts attention. The payment feature is most important, followed by the outage map. This is why I placed the payment buttons above the outage map button.

Navigation Design

The app's navigation is easily found at the bottom of each page, and does not scroll with the content. This way, a user can tap and navigate to any screen at any time.

Information Design

For each button icon, I will include a descriptive label to help identify what it is and where it will take you. As for the navigation icons, like Payment and Settings, I will use commonly used icons that relate directly to their meaning. I will also add color icons to the buttons for attention. For example, if a payment is past due, the button will include a red attention icon with label.



Low-Fidelity Wireframe - Payment Screen

Interface Design

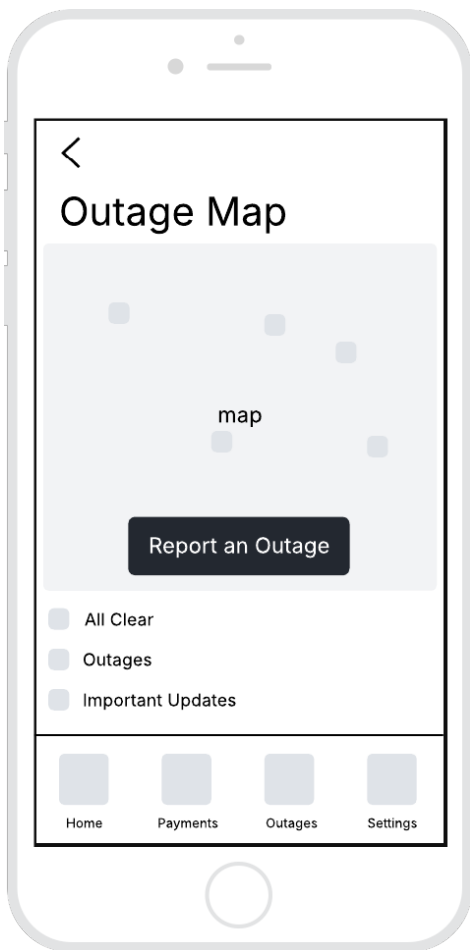
To keep consistent design throughout the whole app, I designed the Payment Screen with the same elements of the Home Screen: plenty of white space, large icons and minimal text. I also included a drop down menu for payment options the user included when setting up their account. The design encourages users to tap and pay. The status bar at the top of the Home Screen is not included to reduce clutter.

Navigation Design

I kept the navigation design of the payment page very simple. The goal is for the user to complete their payment with just one tap.

Information Design

I will need to test with users what they would do if they needed to change their payment method. I will also need to conduct a one-click test with users to determine where to add this feature.



Low-Fidelity Wireframe - Outage Map Screen

Interface Design

Even though the Outage Map provides a service different from payment, I kept the clean design consistent with a large map of the customer's area and a single button for reporting an outage.

Navigation Design

The navigation bar at the bottom of the screen does not change from the Home or Payment Screens. This will reassure the user that they have not entered another app and that their information is safe.

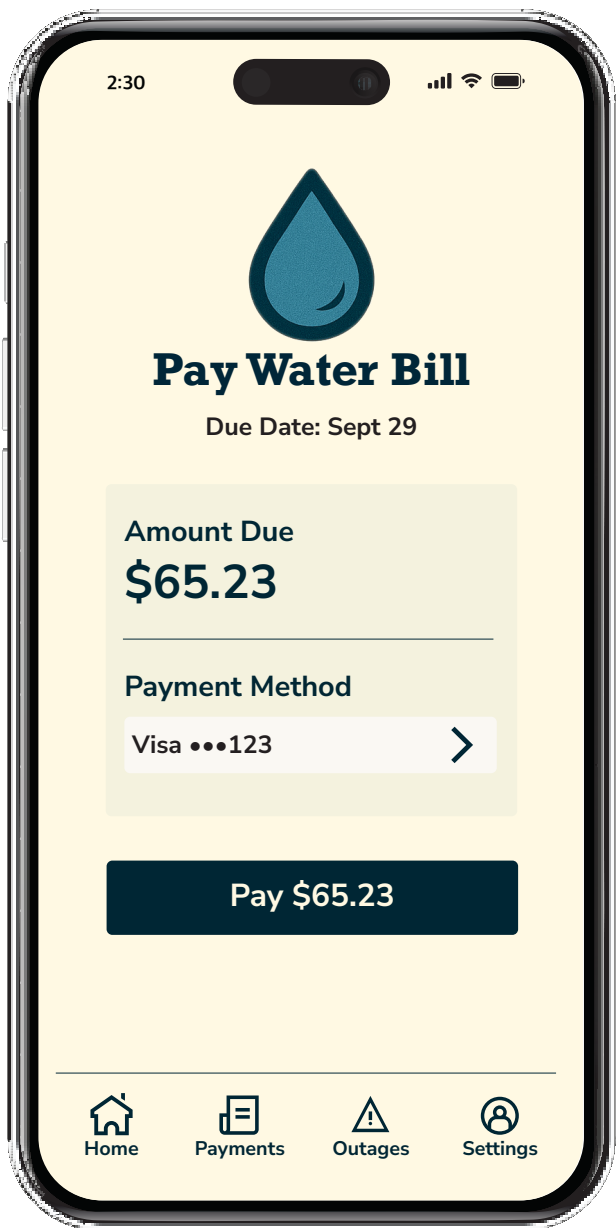
Information Design

To help users understand the icons and their colors on the map, a key is added to the bottom of the map to explain their meaning. If a utility company is not experiencing any outages or updates, it will not be shown on the map but will show as "All Clear."

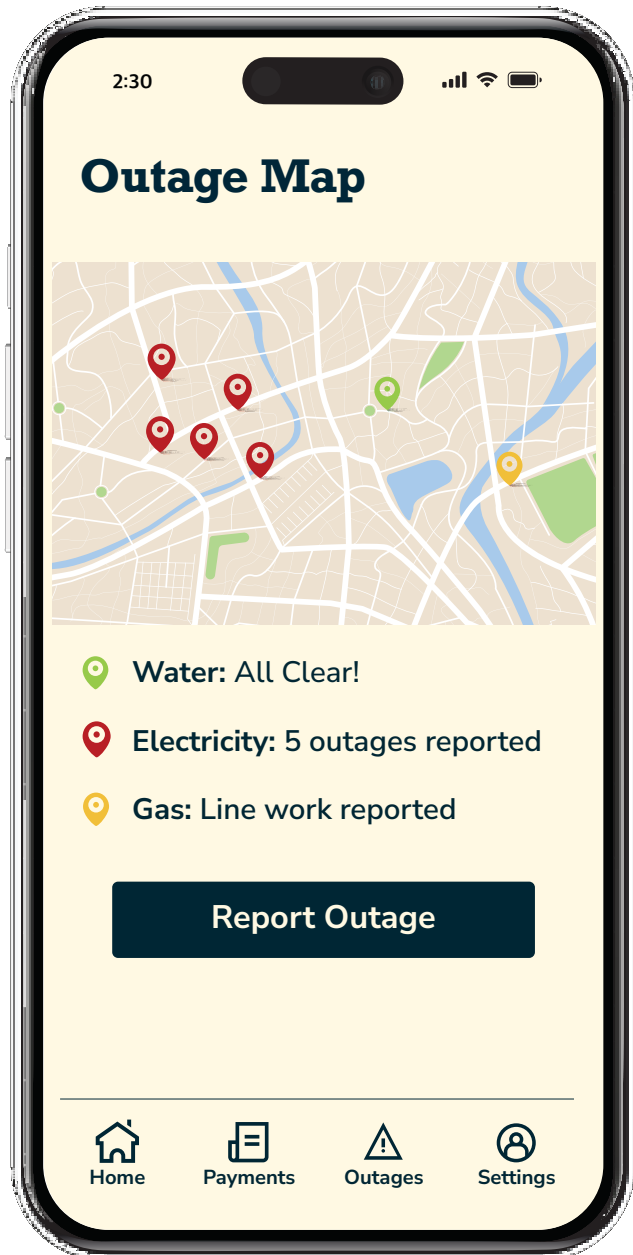
Surface

The last element of Jesse James Garrett's five design elements is surface. "It's the sum total of all the work and decisions we have made. It determines how does the product will look like, and choosing the right layout, typography, colors, ...etc" (Elgabry, 2016). The surface step focuses on how the visual appearance of the content interacts with the users. Visuals must make the content easier for the user to understand (Elgabry, 2016). Using my low-fidelity wireframe layouts, I designed high-fidelity wireframes for the Home Screen, Payment Screen, and Outage Map.

High-Fidelity - Home Screen and Payment Screen



High-Fidelity - Outage Map Screen



Rational

The interface design for *Texas Utility Wrangler* is intentionally clean, direct and accessible to ensure users can quickly complete core tasks of paying their bills, checking and reporting outages. I used many of Krug's first law of usability, "Don't make me think!" (Krug, p. 11, 2014) This is especially true during the event of a crisis. Users need to know why their utilities are out and be able to find where utilities, like electricity, are available.

My type choices include a slab serif typeface for headings and a separate sans serif typeface for the body copy. Sans-serif fonts have been shown to improve readability for users on digital platforms due to their simplified letterforms and reduced visual noise (Shaikh, Chaparro, & Fox, 2006).

The color scheme incorporates high-contrasting combinations, with distinct colors assigned to each utility type: blue for water, yellow for electricity, and orange for gas. These colors were chosen not only for their color contrast but also for their compliance with Web Content Accessibility Guidelines (WCAG) standards, ensuring legibility for users with visual impairments (W3C, 2018).

For navigation, I included a persistent bottom navigation bar with four main icons: Home, Payments, Outages, and Settings. This layout mirrors common mobile patterns that reduce cognitive load by keeping essential functions in predictable locations (Babich, 2016).

Together, these design decisions create an app that is consistent, predictable and optimized for quick decision making.

Conclusion

The *Texas Utility Wrangler* app is designed to be a one-stop app for users to find, add, and then pay for three separate utility companies. It also allows users to report and view utility outages in their surrounding neighborhood. The app is designed to be hassle-free, quick and fun.

After researching multiple competitors, I found that users are very frustrated with hidden fees, clunky designs and lack of functionality. Motivated by personal experiences setting up and paying utility bills, I wanted to create an app that avoided the many complaints listed in the competitors' one-star reviews. Houstonians getting creative during the 2024 Hurricane Beryl by using the Whataburger app to find electricity motivated me to create the utility outage map (Garley, 2024).

Following Jesse James Garrett's Five Elements of User Experience provided a clear framework for organizing and guiding my design process. This approach helped me identify and prioritize the most critical elements of the app, ensuring each layer, from strategy to surface, was thoughtfully developed. This structure made it easier to translate ideas into wireframes that reflect user needs and usability best practices.

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