How do we make it easier for users to follow projects and tasks through every stage using the Construct mobile app?

Product/Client
Apollo Construct

Platform
iOS, Android

Timeline
April 2019 - June 2019

Role/Responsibility
User Experience, User Research Information Design, Wireframes, Interaction Design, High Fidelity Prototyping. Revamped the UX and UI completely for the mobile app. Lead the redesign initiative.

The Challenge

With our users expecting to do an increasing number of things on the mobile app, inconsistencies started to creep in, in both the flow and information architecture. We had to craft a more accessible, understandable app that affords all of Construct's existing features in a consistent, logical and coherent manner.

Over time, the demands of the Construct app have grown exponentially. What started as a tool for managing tasks, updating drawings and recording daily logs, must now meet the needs of on-site workers across cities, in different situations – responding to schedule update requests, conducting inspections during different phases of a project, raising safety observations or even recording the observed weather conditions. Construct was being used for a variety of things that were never imagined at its inception. We worked closely with our PM's and on-site team both in India and the US, to design a better app.

Here I'll be walking through how we redesigned the observations workflow.

Exploring the Pain Points

We were maintaining a log of painpoints (across the app) internally, noting down the painpoints we need to address. Even before the redesign effort commenced, we had a good sense of the our users' painpoints:

"We want the app to be prompt and engaging."
"I spend a lot of time to create an observation."
"I'm not able to view the attached photos."

We didn't just want to address the major painpoints, we wanted to refresh the identity of the app and build a simple, frictionless experience for our users.

1. Our users were spending more than 7 seconds to simply understand the form while creating an observation. They found it complex and unintuitive.

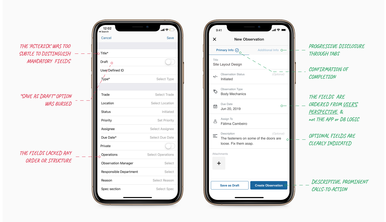
Our users found the old UI confusing and overwhelming. They spent more 7 seconds understanding the form and over 400 seconds to complete the process. We had users reporting not finding particular fields / calls-to-action, when in fact they were present. Often they had to return to the form, since they missed certain details.

Perception of Complexity
We realised our users were scanning instead of reading. The first thing users did when they saw the form was, estimate how long it would take to complete it. Perception was crucial. When they saw too many fields, they were quick to abandon the process.

Cognitive Load and Interaction Cost
The old design presented all the fields stacked one below the other. The lack of hierarchy and structure and an increasing number of fields, made the form difficult to comprehend. The mental and physical load on the user were too high.

Our users were hesitant to fill out forms. So, our goal was to make the process of filling out a form as easy as possible. We looked to avoid clutter and build on existing mental models of our users. We used a simple layout to make it look familiar and reduce the amount of learning.

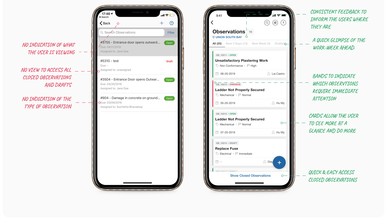
In new design we focused on progressive disclosure of information and provided visual cues to make the form more glanceable and scannable



2. Managers and on-site engineers wanted to see observations that required their attention the most and quickly decide which ones to dive into.

In the old app a lot of information was buried, making it difficult to view the critical observations. Managers told us what information was valuable to them and when it is most useful to see them. They wanted to see Observation Title, Status, Due Date, Priority and Assignee. On-site engineers wanted to see ID and type as well.

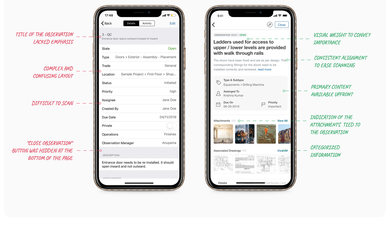
We wanted to provide all these data points in one place, to help users decide which observation to dive into. After a lot of chopping and changing, we eventually landed on a consolidated card structure with all these data points.



3. The information in the details page lacked any order. The users were spending far too much time scrambling across the page from one detail to the other. They were struggling to make associations and found the page taxing.

In the old design, the details page lacked any structure and hierarchy. The elements were ill-ordered and frustrated users. Important data points lacked emphasis and related data points weren't grouped. (For example, the status field followed the location field and was buried in the form).

Our goal was simple. We wanted to craft a details page with a simple structure, that provided the right amount of information (too much data can overwhelm while too little can cause confusion). We wanted users to quickly understand what they see and find what they want in a glance. We wanted the page to resemble a conversation.



Being mindful of the user's environment

The old app was confusing and not functional, as a result of which it was hardly used. In the redesign, we were careful to track every nuance and detail. One thing we did was, considered the context of use. We knew that a lot of our users will be using the app outdoors. Here are some insights,

1. On-site engineers were often at an arm's distance from the device, often amidst noise and a lot happening in the background.
We iterated a lot to decide what information to present, which actions to highlight. We ensured that text was comfortably legible at an arm's distance.

2. A lot of our users were switching from holding the phone with one hand to holding it in two hands without even realising.
This meant that the common practice of placing low-priority and dangerous actions at the top left corner of the screen wouldn't work. To tackle this, when we warranted (such as when a user is closing an observation), we used modal boxes for confirmation to protect the user.

3. Accounting for sun glare, low light environments and fat fingers.
We maintained a healthy contrast ratio of fields so that the content is easier to perceive. We tested our designs with an online color contrast calculator. We restructured information, so that the important information was always front and center. We designed prominent calls-to-action and ample touch targets, so that they are easier to identify and tap.

Takeaways

I learnt that data visualisation is very interdisciplinary. I learnt that each visualisation always started from the data. While working on this redesign, I tried to have a dialog with the data; Poking at it, looking at it from different perspectives. We tried a number of ways to visualise the data, until we stumbled upon one way that made sense and was most useful to the user. Here are some questions we kept asking ourselves,

What works visually?
What works from a design perspective?
Which way tells a story?
Which way is it most helpful to the user?

Here's a quote that I stumbled upon, "The more you know your user the better the design will be."