

GS Design Systems

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Launched

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User Context

Goal

Create GS's first Design Systems
Component Library to improve user
experience and consistency across
products

User problem

Goldman Sachs(GS) has multiple enterprise and consumer facing products. Each product has its own branding externally but sends users back to GS's internal sites. This causes user confusion because visual systems are inconsistent. Because each visual system is custom built, developers are spending a lot of time building out each feature and 3 sprints behind design.

Hypothesis

A component-based UI Toolkit will help create a better user experience across GS products and save developer time.

Success Criteria:

#1 Reduction in customer complaints

#2 Increase in developer satisfaction and productivity

Discover

Discovery

In the discovery phase, we dug into the user to identify what could improve their pain points.

User Definition

Define the user by facilitating a workshop with stakeholders to identify primary users to focus on.

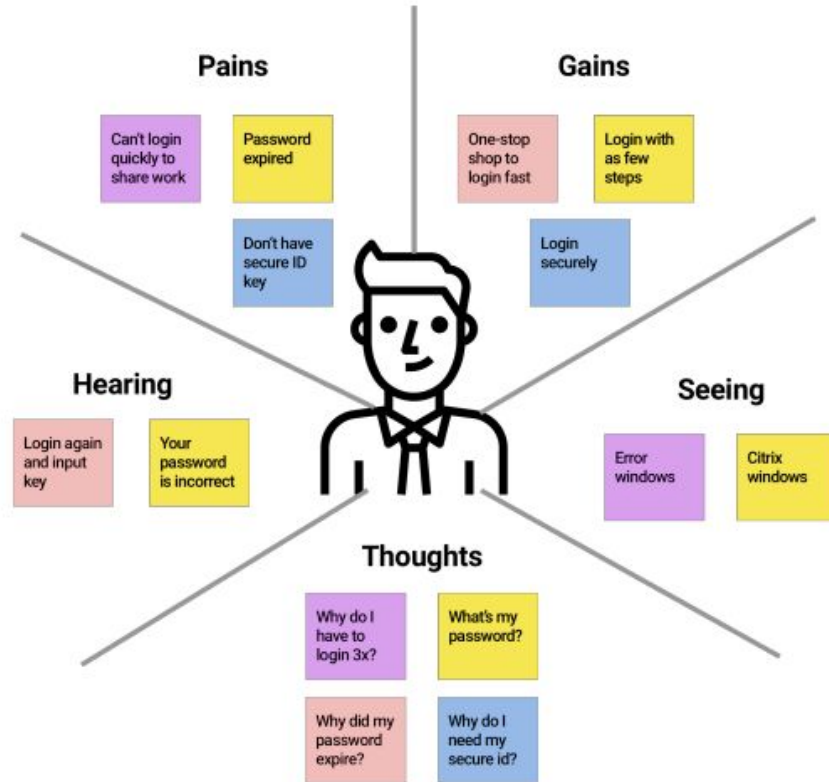
Product Definition

Brainstorm potential solution with primary stakeholders. All stakeholders would vote and align on which solution to move forward with.

Interviews + Affinity Map

I **interviewed** 5 developers and product managers who worked on internal tools to identify pain points.

We created an **affinity map** where it was revealed that developers were often 3-4 sprints behind designers because of privacy and access issues, and had heavy tech debt.



Jobs-to-be-done

Created a jobs-to-be-done to identify the internal GS user to focus on.

We analyzed issues of privacy, inability to access data, and lag time with development.

High-GS Current State

Job to be done: Access personal desktop from a remote location (Mac or PC)

Current Flow

Scenario
Jaspeel just started at Goldman Sachs a week ago and was excited to learn that she could access her personal desktop from a remote location outside the office.

When she got home that night, she went to log-in from her laptop. However, she didn't know she needed a PIN number and an OAuth Token. The next day, she asked her colleague how to obtain these credentials and found out that she needs to submit a TMS request to get remote access, acquire a PIN and OAuth token. This seemed like a lot of steps to go through but she did it anyway.

A few days later, she had all the necessary information and returned to log-in.



Task: Enter Username, Secure ID (PIN + 6 or 8 digit code)

Questions:
- By username do you mean my Kerberos?
- Where do I get a Secure ID?
- Where do I get a PIN number?
- What's OAuth Token?
- Which 8 digit code do I use?



Task: Select a method to receive registration code

Questions:
- What if I already have a code?



Task: Enter registration code and name your device

Questions:
- How do I get a new code?



Task: Log into desktop

Questions:
- What do I do here?



Task: Enter desktop password

Questions:
- Why do I have to enter a password again?
- Which password do I enter in?



Task: View personal desktop

Recommended Flow



Task: Enter Kerberos, PIN Number, OAuth Token



Task: Select a method to receive registration code



Task: Enter registration code and name your device



Task: Launch desktop or other GS application



Task: Enter Kerberos Password

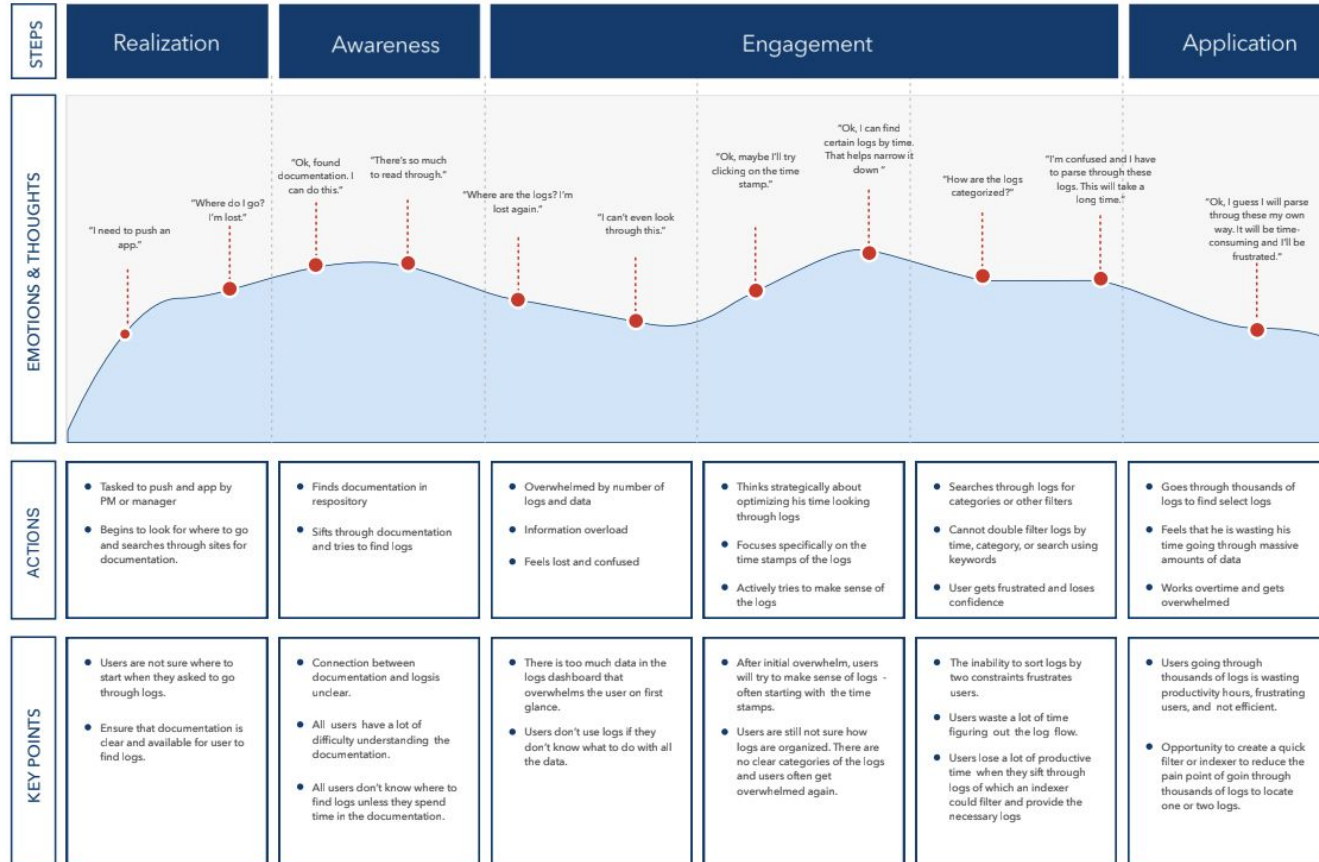


Task: View personal desktop

Optimization:
- Rename "username" to "Kerberos Username"
- Separate "Secure ID (PIN + 6 or 8 digit code)" into two fields: PIN Number and OAuth Token
- Add a brief tip to the PIN Number and OAuth Token Fields to let users know how to obtain those credentials

Critical User Journey

A CUJ was created to highlight the touchpoints that internal GS developer users might have to hone in on how to provide a potential solution.



Define

User + Product Definition: Ideation Workshop

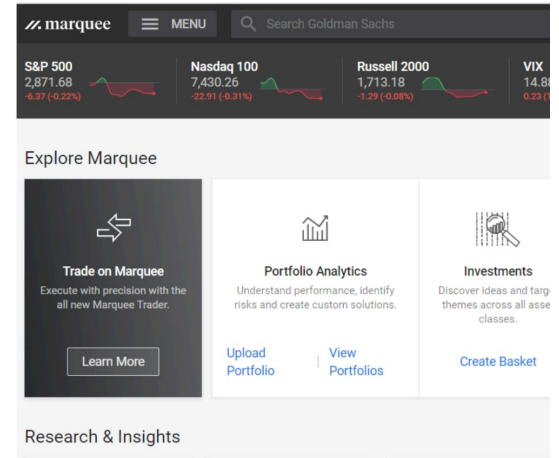
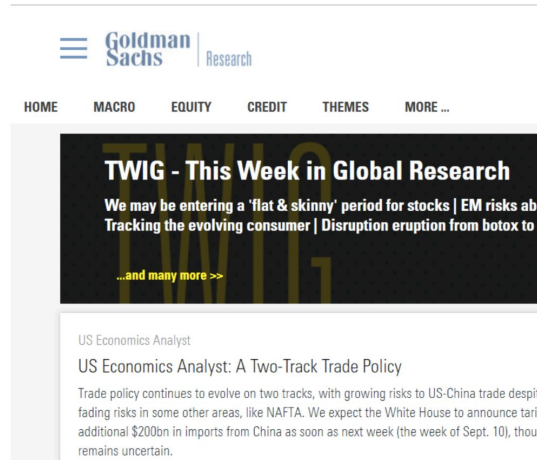
Facilitated a 3-day ideation workshop with developers, product, and designers to identify the problems GS users were facing with the current GS Design Systems.



The user problem:

When users logged into trading or research portals, visual systems would change from one brand to another. **Visual changes would confuse users.**

Inconsistency caused time inefficiencies with developers having to custom build each page and feature resulting in a Frankenstein effect.

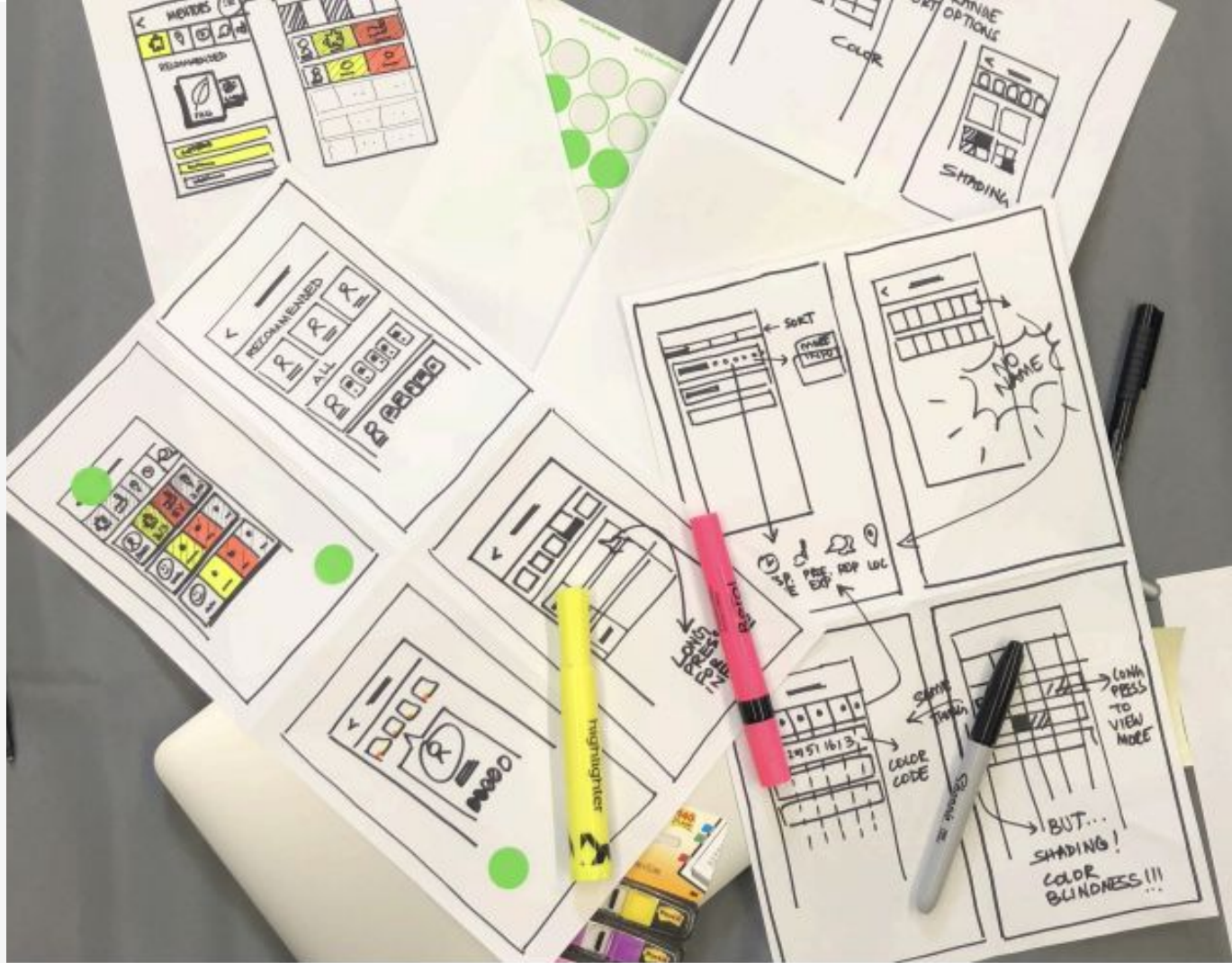


Define

Design Sprint: Alignment

Our team facilitated alignment through dot voting to identify which components developers, product, and designers agreed were the most important.

We identified **Foundational Typography and Colors, Cards, and Interactive States** as our MVP component Toolkit.



Design

Constraints of Redesign

There were the prioritized areas our team focused on redesigning. We worked to **visually design each component initially in Adobe Illustrator, exported as SVGs and PNGs to Powerpoint.**

Our first Component Toolkit was in Powerpoint and highly usable across the bank because the accessibility of Powerpoint. Design tools such as Figma, Sketch, Adobe, and Invision were not introduced until the next year because of firewalls.

While only designers had access to design tools, we began to move components to Sketch over the course of a year.

Type

I performed an audit of the typography and color across the brands to focus on a foundation.

Cards

Customized content views (out of scope) and user generated custom reports remove need to call for information.

Navigation

A primary navigation existed. However, secondary and tertiary navigation items were not available.

Grids

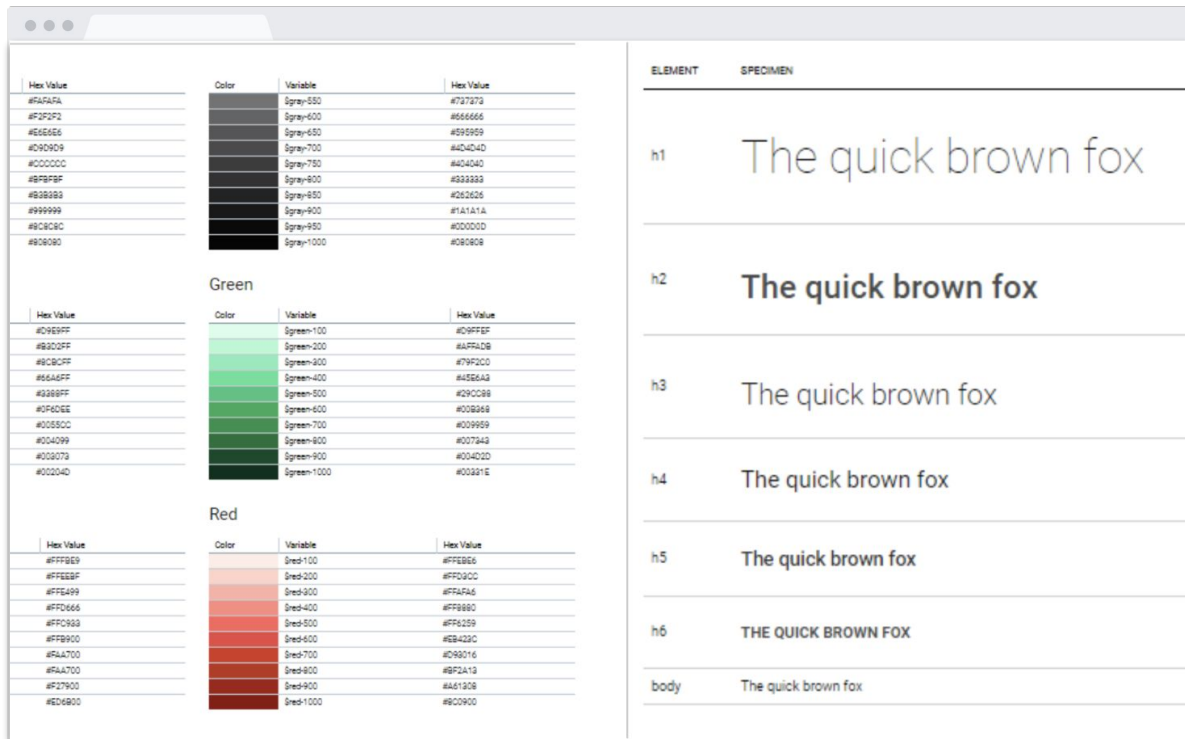
Self-service money management experience.

Visual Design

I audited and identified the **typography, brand colors, and element sizes** with an Accessibility vendor for our UI Toolkit. Our Design System was **AA accessible**.

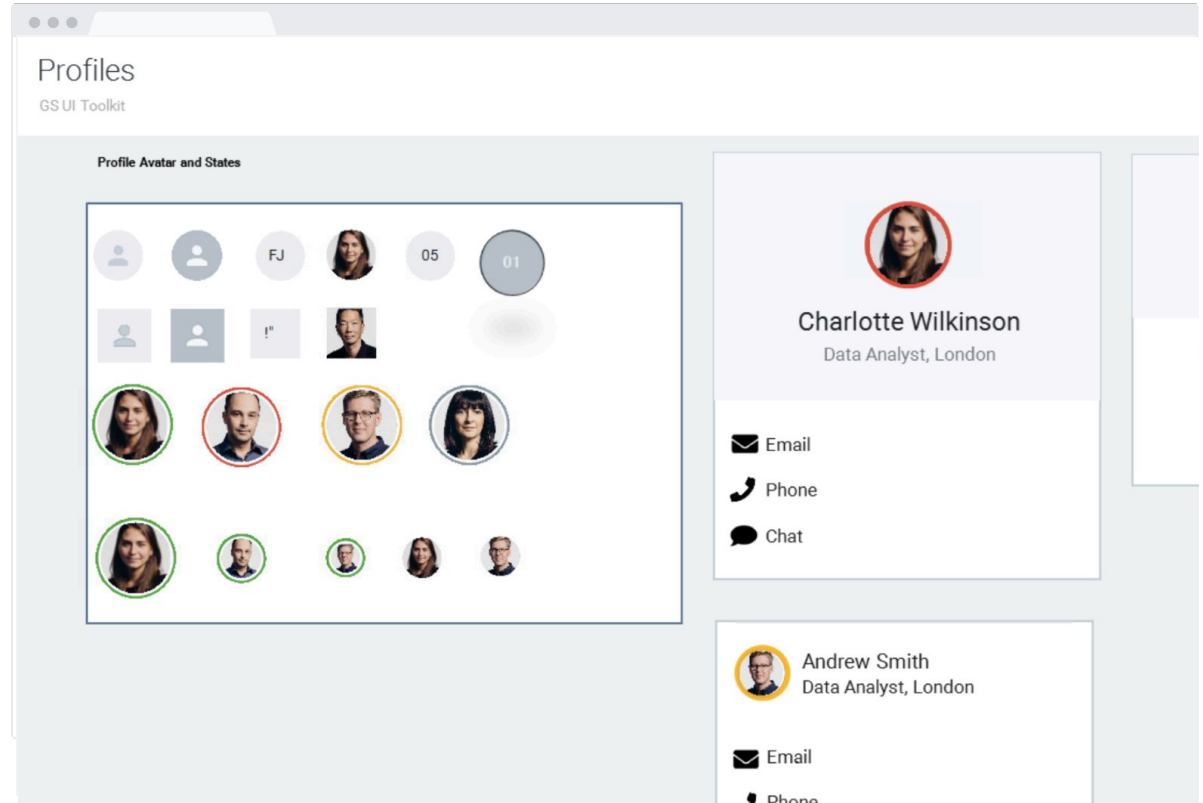
To implement, I worked with a front-end developer to create a Foundational Styles page for these Visual Design guidelines.

UX Team: ameliasander@



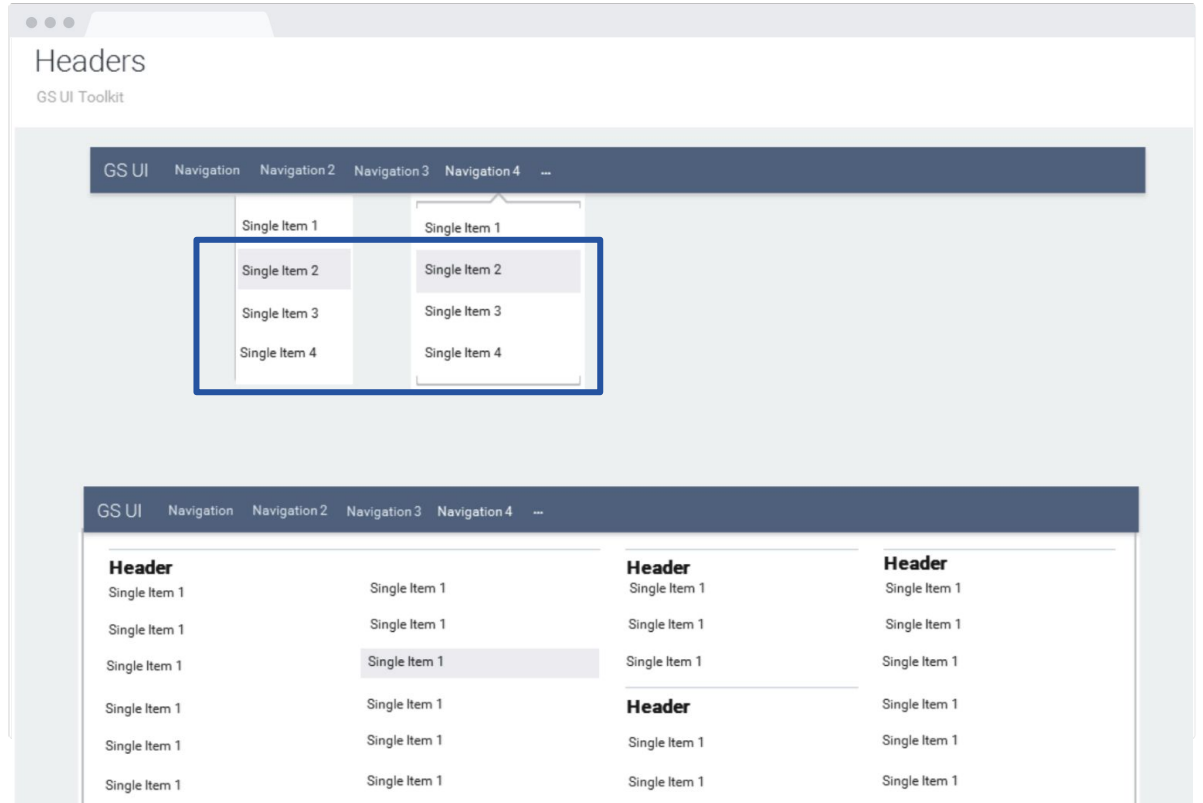
Component Library

- Built **cards and profiles** to focus on user activity status in GS's internal and external systems
- Cards and profiles were **expanded to create page templates** that designers and developers could drag and drop to quickly design and implement new pages.



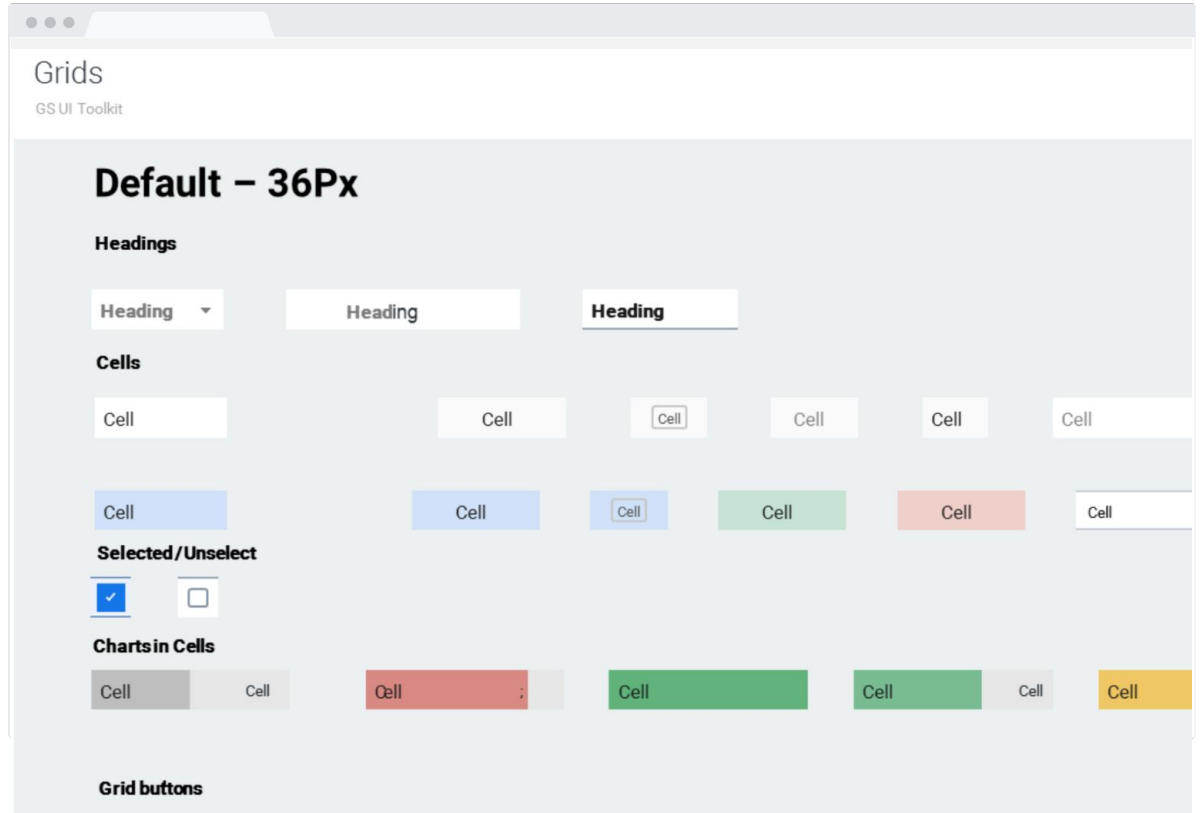
Headers and Navigation

- Navigation was expanded to **improve findability for users** and display multiple nested navigation items clearly.
- **Interactive hover states** were developed to show when users were hovering over or selecting specific menu items



Grids

- Delivered **12-column grid systems** based on 36PX to help with managing Big Data trading products
- Responsive cells were designed to show **error state and interactions** for selected items.



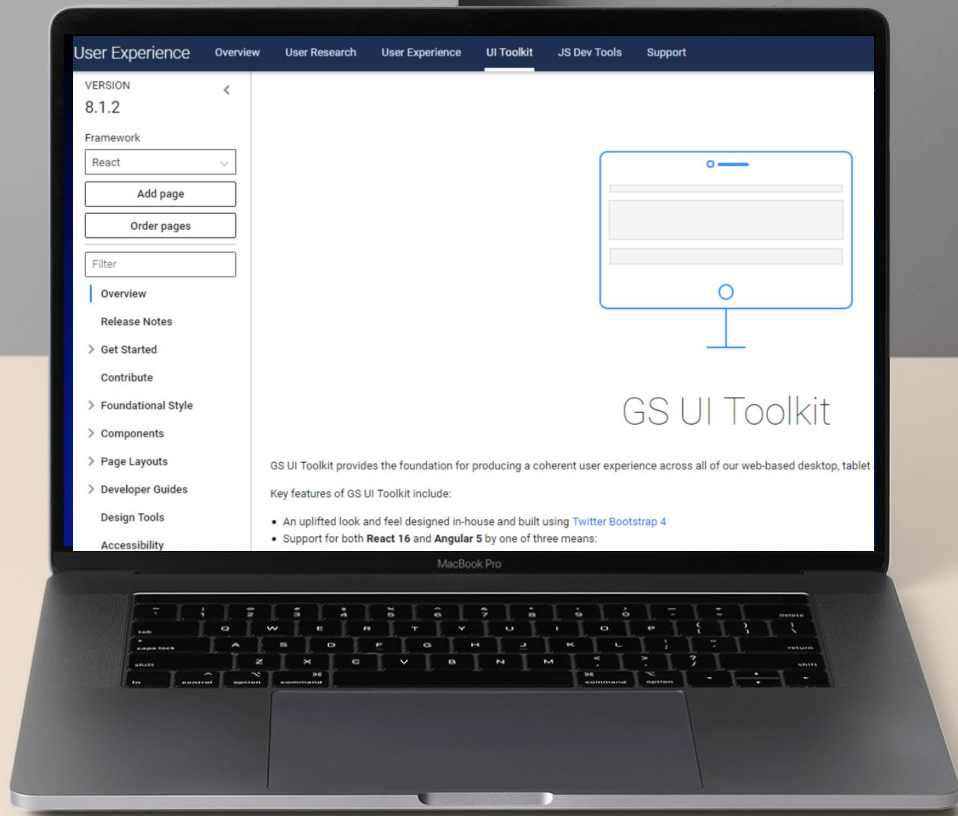
Deliver

UI Toolkit Design System

The new component based Design System allows users to drag and drop components to design + build pages.

The screenshot shows a web browser window displaying the GS UI Toolkit website. The navigation bar at the top includes 'User Experience', 'Overview', 'User Research', 'User Experience', 'UI Toolkit' (which is underlined), 'JS Dev Tools', and 'Support'. On the left side, there is a sidebar with the following elements: 'VERSION 8.1.2' with a back arrow, a 'Framework' dropdown menu set to 'React', 'Add page' and 'Order pages' buttons, a 'Filter' input field, and a list of menu items: 'Overview' (selected with a vertical bar), 'Release Notes', 'Get Started', 'Contribute', 'Foundational Style', 'Components', 'Page Layouts', and 'Developer Guides'. The main content area on the right features a blue-outlined icon of a computer monitor with a stand, representing a design system. Below the icon, the text 'GS UI Toolkit' is displayed in a large, clean font. At the bottom of the main content area, there is a paragraph of text: 'GS UI Toolkit provides the foundation for producing a coherent user experience across all of our web-based desktop, table' followed by 'Key features of GS UI Toolkit include:'.

Impact



VERSION

8.1.2

Framework

React

Add page

Order pages

Filter

Overview

Release Notes

> Get Started

Contribute

> Foundational Style

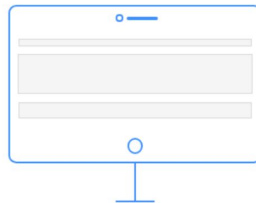
> Components

> Page Layouts

> Developer Guides

Design Tools

Accessibility



GS UI Toolkit

GS UI Toolkit provides the foundation for producing a coherent user experience across all of our web-based desktop, tablet

Key features of GS UI Toolkit include:

- An uplifted look and feel designed in-house and built using [Twitter Bootstrap 4](#)
- Support for both [React 16](#) and [Angular 5](#) by one of three means:

Deliverables & Outcomes

Successfully launched Component Library and scaled to Marcus, Marquee, GS Research products. Reduced development sprint time by 40%. Improved CSAT score and Developer Satisfaction.