

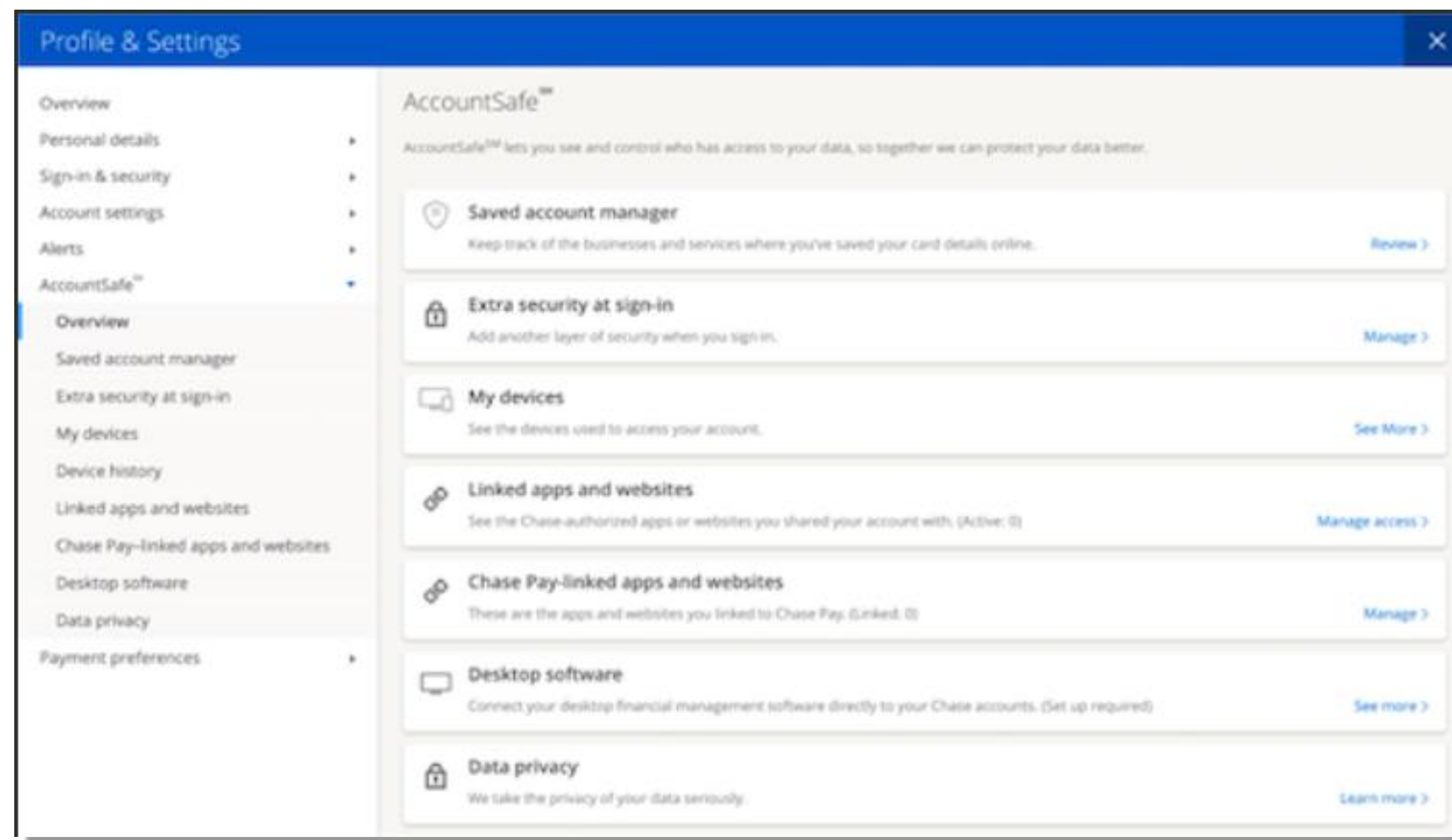
Security Center

JPMorgan Chase platform and
dashboard product strategy



Baseline testing

Analytics was showing no-one was discovering or interacting with our security features.



Goals

In 2018, Security was trending as a key opportunity to help build brand trust for banks.

- Help with discovery
- Improve engagement
- Do users find value in the features?
- How well do we educate the users?

CHASE | J.P.Morgan

Project Brief

March 2020

Engagement Framework Concept Test

1. Desktop study (SS)

1. Mobile study

2. A/B Quant (RR v SS)

April 2020

Formative

1. IA and Naming Conventions

2. Communications Strategy

May 2020

Generative

1. Omni Channel Experience

2. User Personas

May 2020

Evaluative

1. End-to-end usability (Toggle, Auth, Aggreg-Exp, ChasePay)

2. Iterative design evaluations

AccountSafe Dashboard MVP

Research Brief

Business Partner

Jill Abukarroum

Business Partner

Taylor Porter

Lead Researcher

Deborah Foley

Researcher

Jackie Say

Design Strategist

Jodi Mack

Project Background

AccountSafe is a collection of features that allow customers to see, manage, configure and control their data, security and privacy settings, transactions, and potentially more actions (tbd).

User research is proposed in a phased approach over the course of Q2 to collect and analyze customer feedback and desired interaction with the AccountSafe dashboard. Results from research will provide IA, content and design direction for the Q3 rollout of the AccountSafe 2.0.

The goals of this research are to:

- Determine if users **understand** the new engagement framework concept – education and persuasiveness.
- Gauge if users find **value** in the new engagement framework concept – usefulness and importance of modules.
- Observe user **interactions** with the engagement framework – layout and placement of key features.

Strategic Questions To Answer

The primary problem we are trying to solve is: How do we provide the best and most intuitive clickthrough experience for customers to help them understand and care about managing their data with us?

- How well does the landing page navigation bar engage users?
- How well does this page educate/inform users? What do they understand about security and privacy?
- How does it reassure users that their data security and privacy are cared for?
- How much does this page make users feel in control of managing their own security and privacy options?
- Which version of the engagement framework do users prefer, and why?

Research Approach

One-on-one remote and unmoderated* sessions:

- UserZoom test platform and recruitment

- 3 studies running incongruously:
- 1. Web study: Wed. March 25th
- 2. Mobile study: Wed. March 25th
- 3. RR vs SS: Fri, March 27th

- 30-minute sessions with static wireframes
- Unmoderated format, pre-scripted questions
- Clicktest, Heatmaps, ranking, open and closed-ended responses

Timeline

Launch dates:

- Web study: Wed. March 25th
- Mobile study: Wed. March 25th
- RR vs SS: Fri, March 27th

Results Readout: Friday, April 3rd

Proposed Deliverables

Clicktest results, heatmaps, attribute rankings, open and closed-ended responses to concept test.

Results Readout and Deck: Friday, April 3rd

Requirement

115 sample size for framework preference test. 8 web-primary users of online banking and 8 mobile-primary users of online banking, must meet following criteria:

- Gender mix
- Mix of ages 18-65 (groupings: 18-25; 26-35; 36-45; 46-65)
- HHI income: \$40-\$200k
- Must be avid digital users of mobile or web for banking
- Must have connected at least one 3rd party app to bank account

Context and Constraints

Focus on MVP requirements, framework preference to inform design for Q3 release.

Lead designer and content teams are focused on priority Q2 Covid-19 responses.

Prototypes will be limited to static screenshots of dashboard page, no clickthroughs

Generative testing

- There are three different type of users with different needs.
- They have different needs of education and reassurance.
- Customers do not expect security features, therefor they do not look for them.



Customer Mental Models

Mental Model

Experiences

Actions people have taken before;
ie., digital wallets, pwds

Dynamic Info

Customized messages like
This week's activity



Visual and Text Cues

Your data is secure
Shield icon

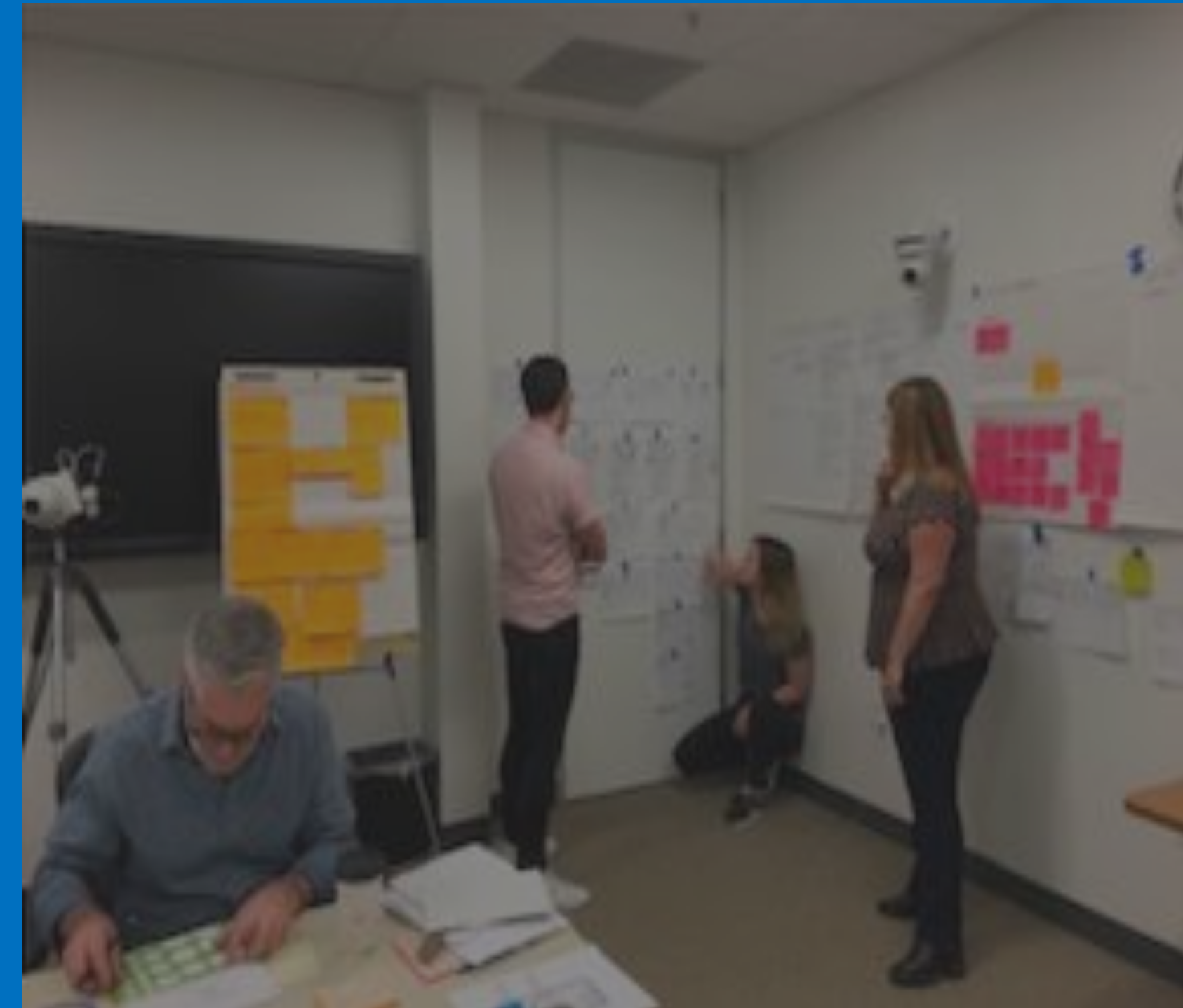
Social and technical

How many times or when
and with whom data is
shared/accessed

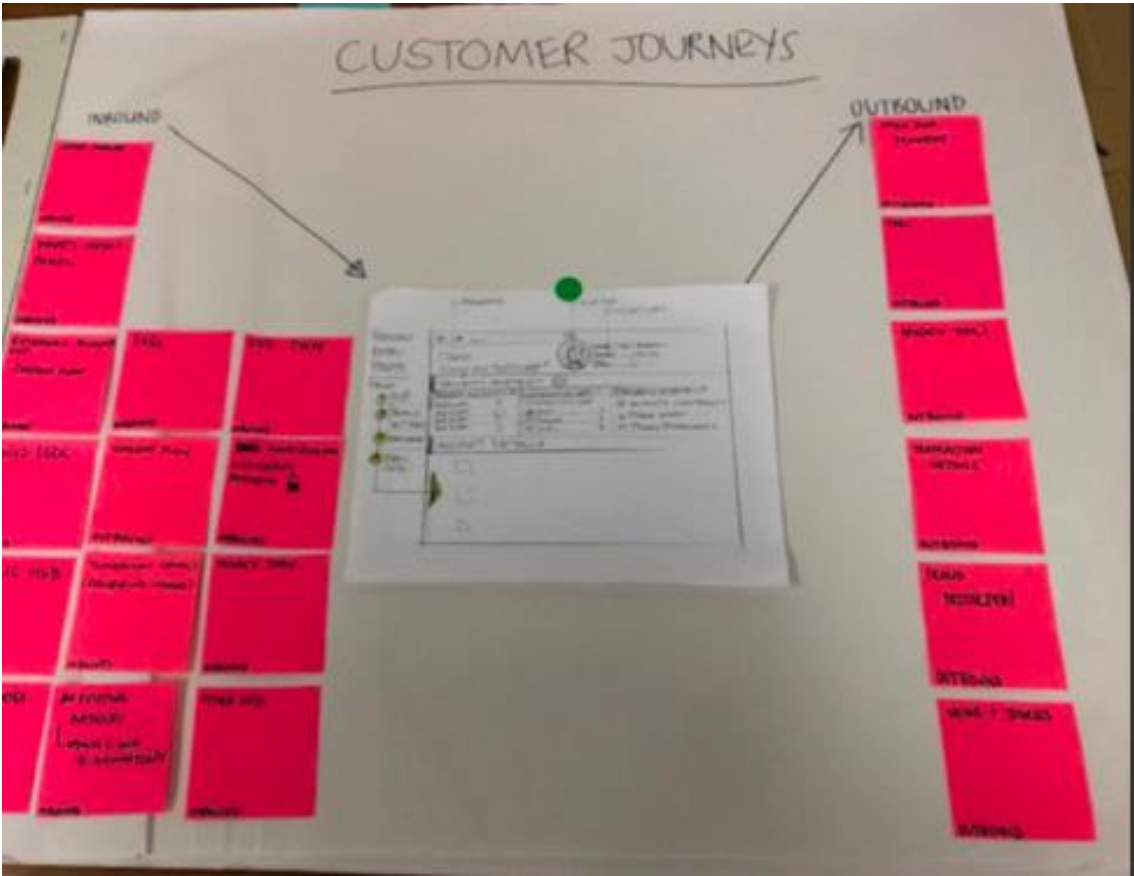
People rely on specific experiences and observable cues to understand how their info is accessed, used and protected online.
Numbers and data need interpretation before action.

Design Sprint

Facilitated a one-week workshop with the goal to align with the many feature stakeholders and technology teams.

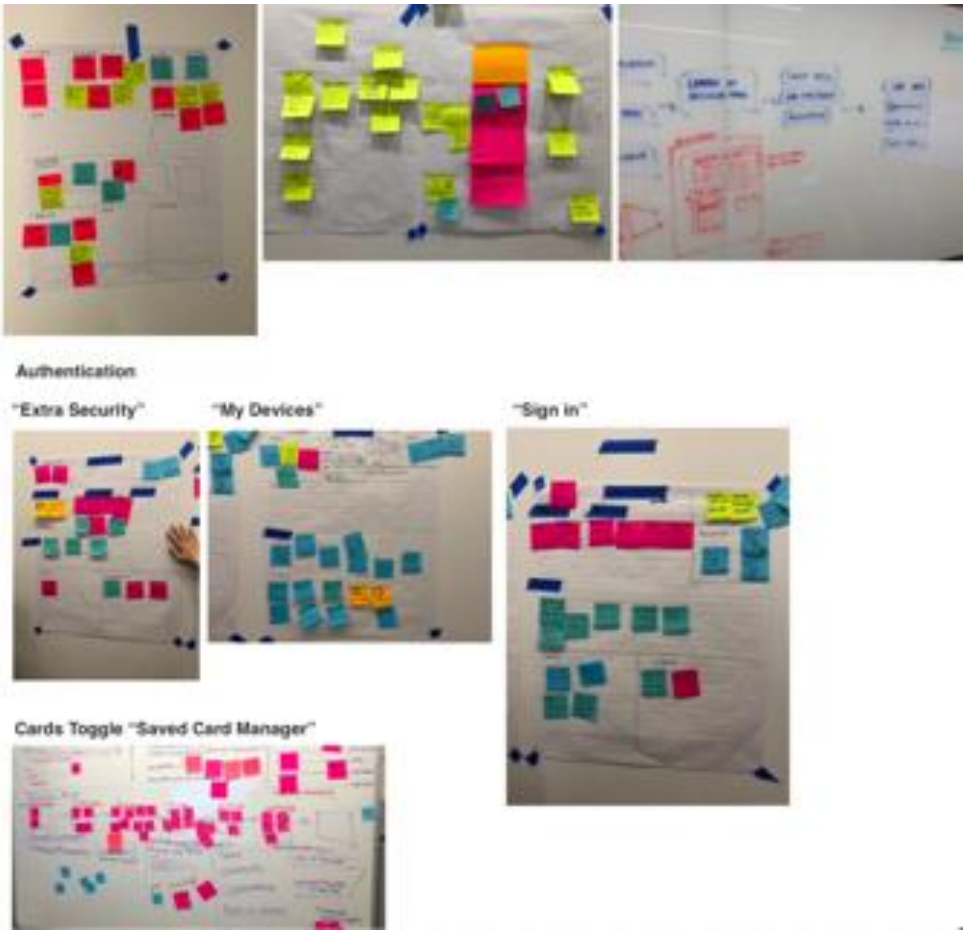


Ask the experts – Day 1



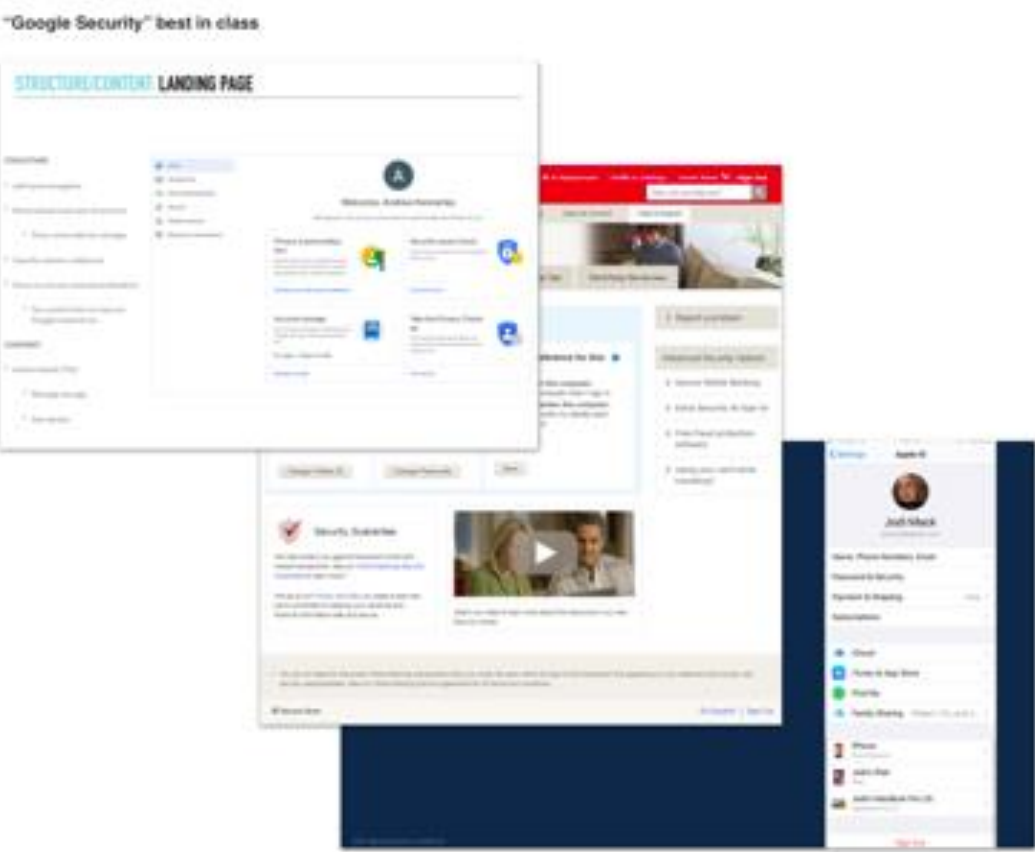
Customer Journey

Looked at potential touchpoints to understand user flows to entry points and discoverability.



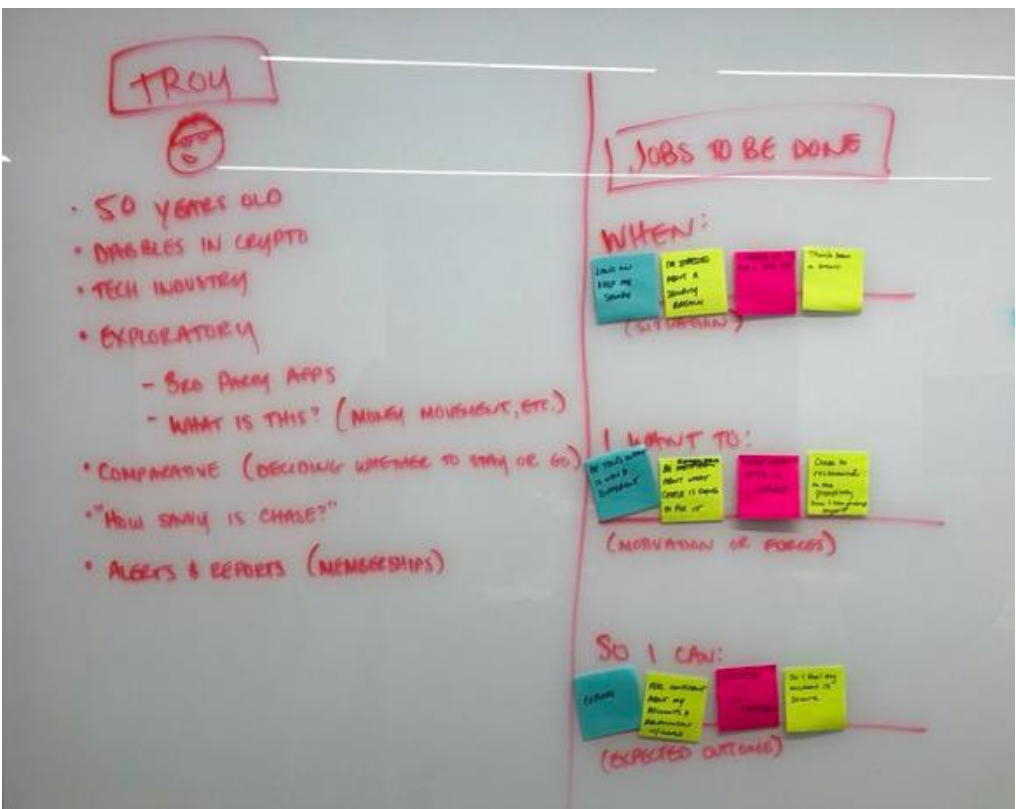
Feature Roadmaps and knowledge sharing

Breakout sessions to understand the different product roadmaps, user journeys, data, goals and systems.



Effective security experiences

Homework was for everyone to research effective security experiences for inspiration.



Defining the persona and jobs to be done

Prepare for an ideation session to solution a problem for the user.

Design Studio

Facilitated a sketch session to diverge and converge on many ideas and vote on the best concepts. We had about 20 in the session.

By objects



Dashboard



Customization



There has been a breach



Engagement and Card UI



Your activities



Roadmap Workshop – Day 2

End to end journey



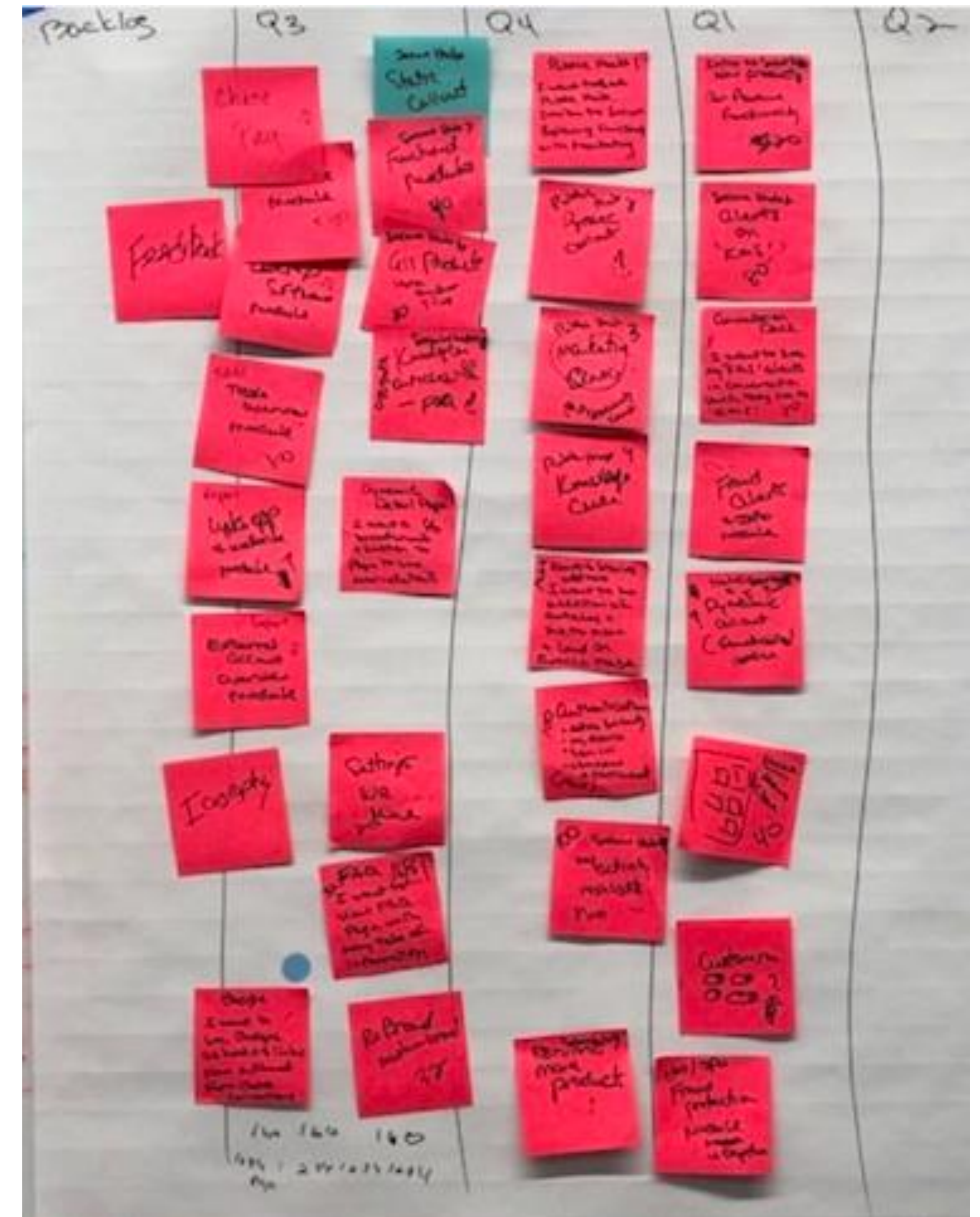
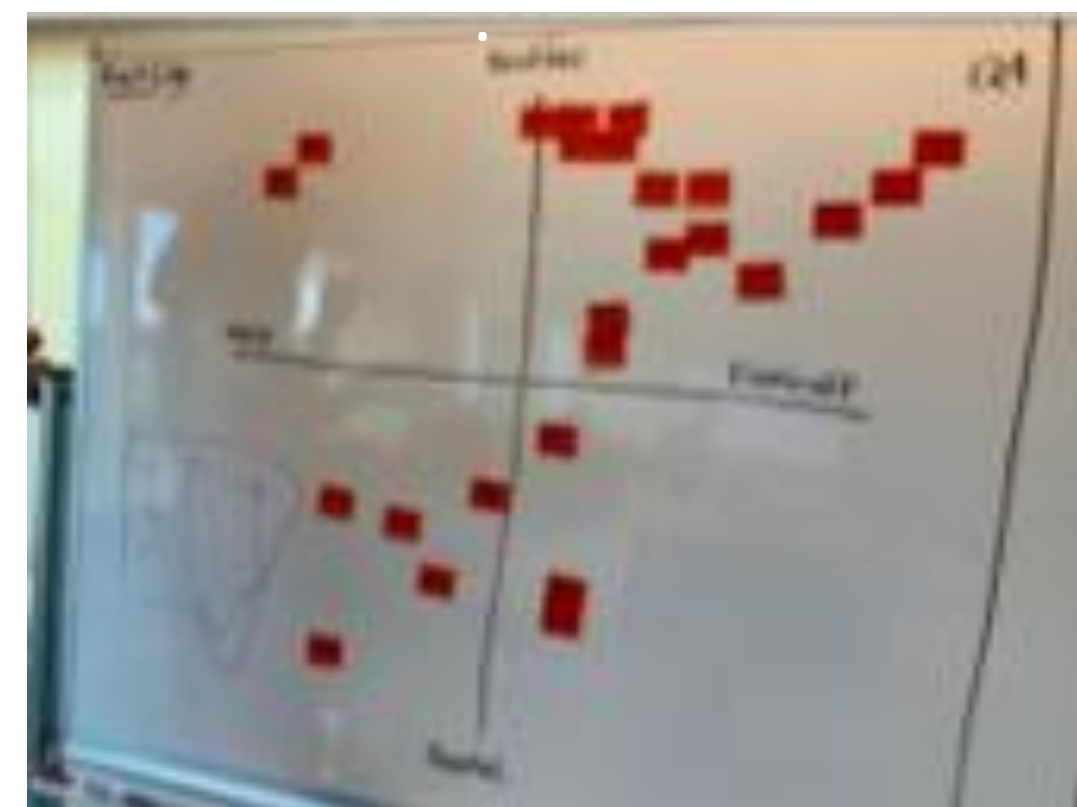
Poker planning estimation



Modular backlog items



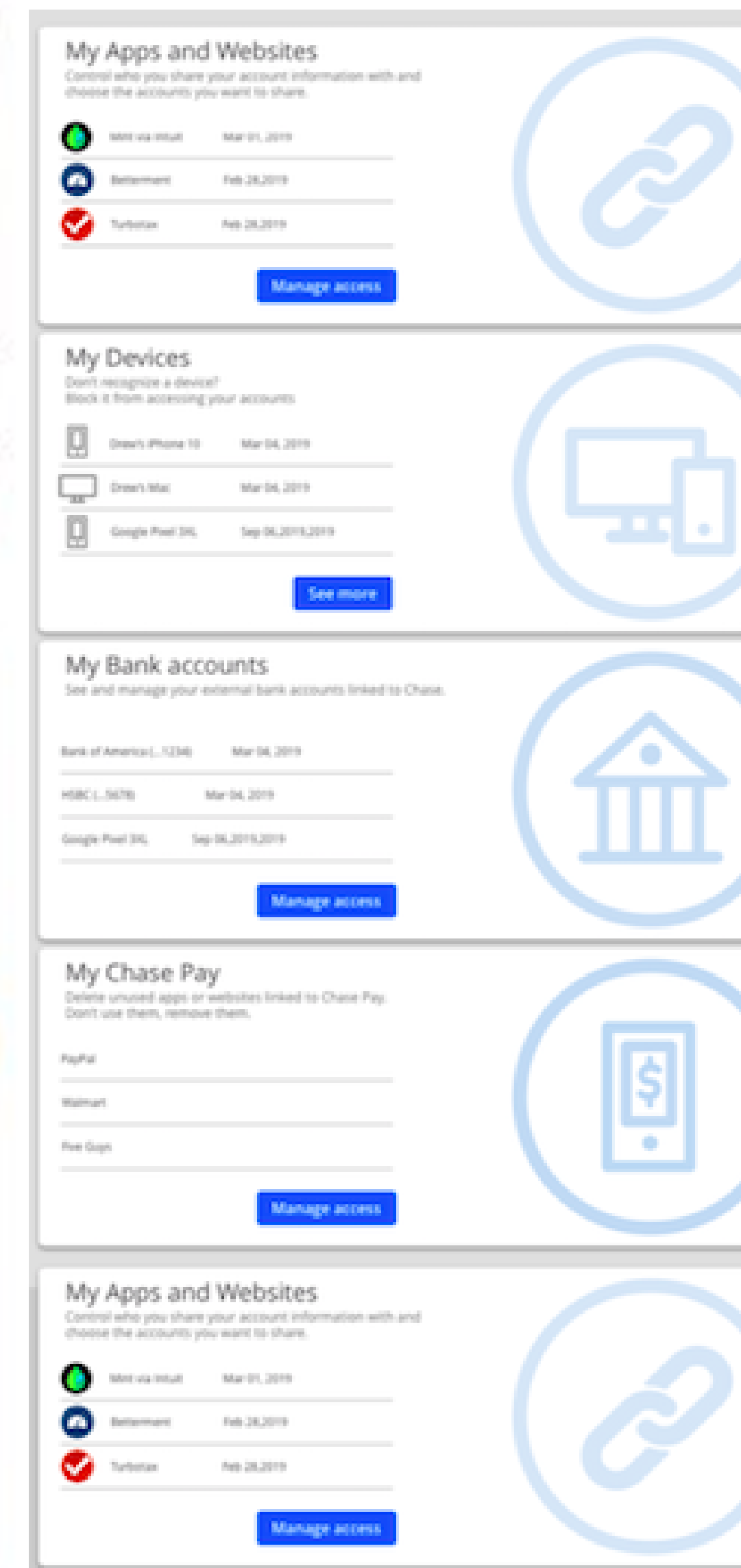
Customer value matrix



Concept ideation - Day 3

The team spent the rest of the week refining & sketching prototypes.

With no mental model of expecting security features, can we bring list views to a dashboard view and help with visual cues and education for quicker understanding of both the what and why they should be engaging with these features.



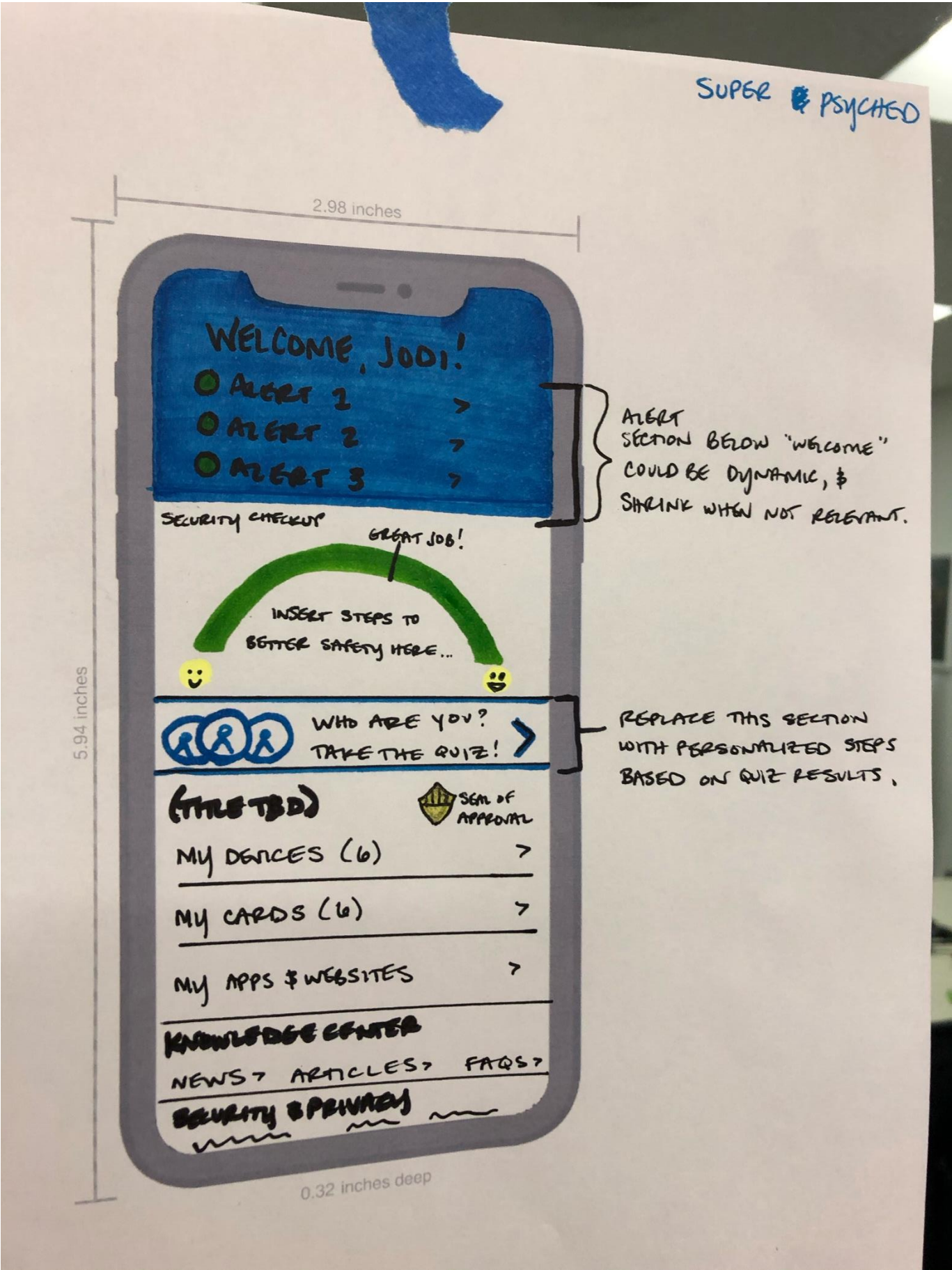
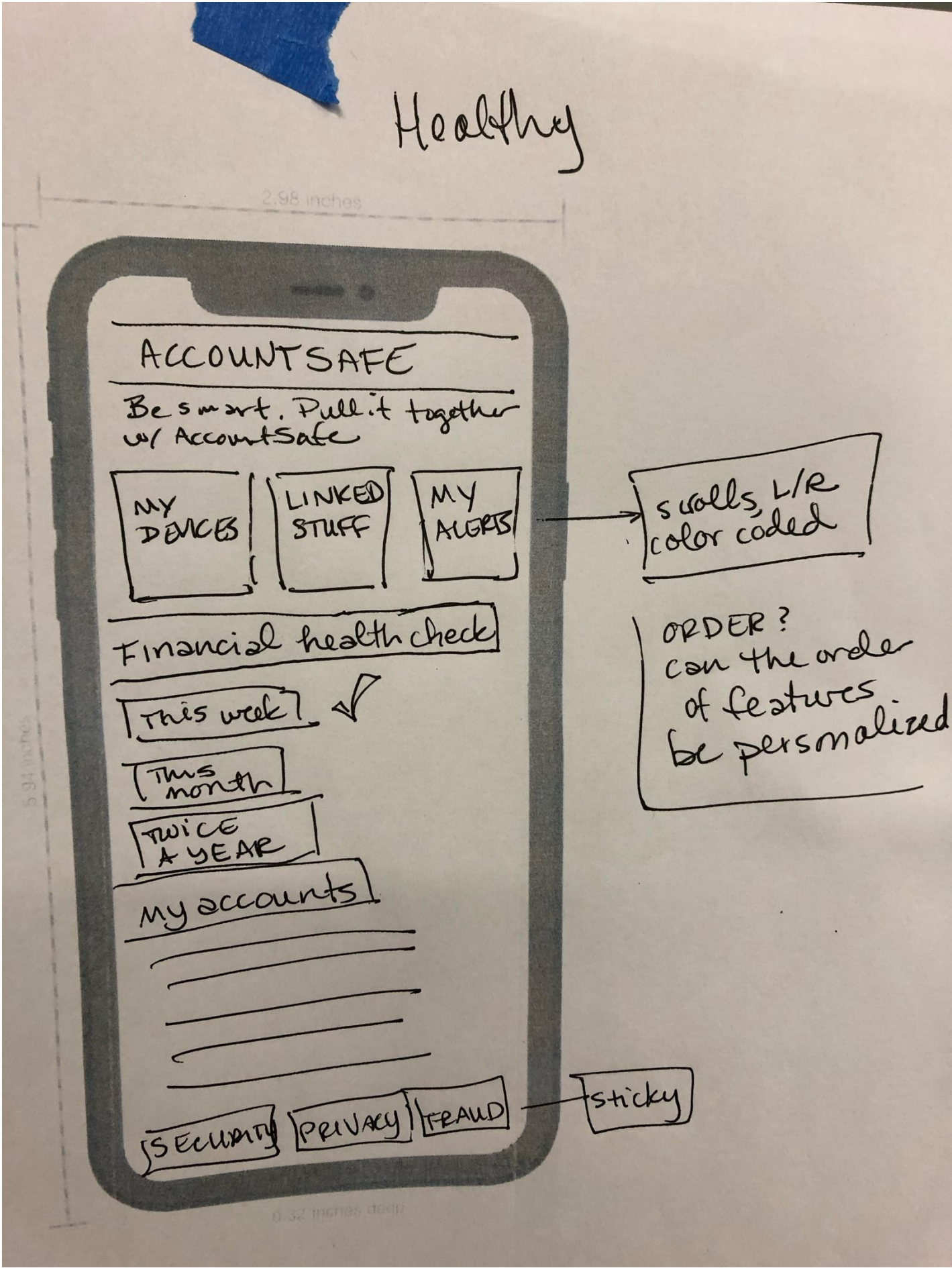
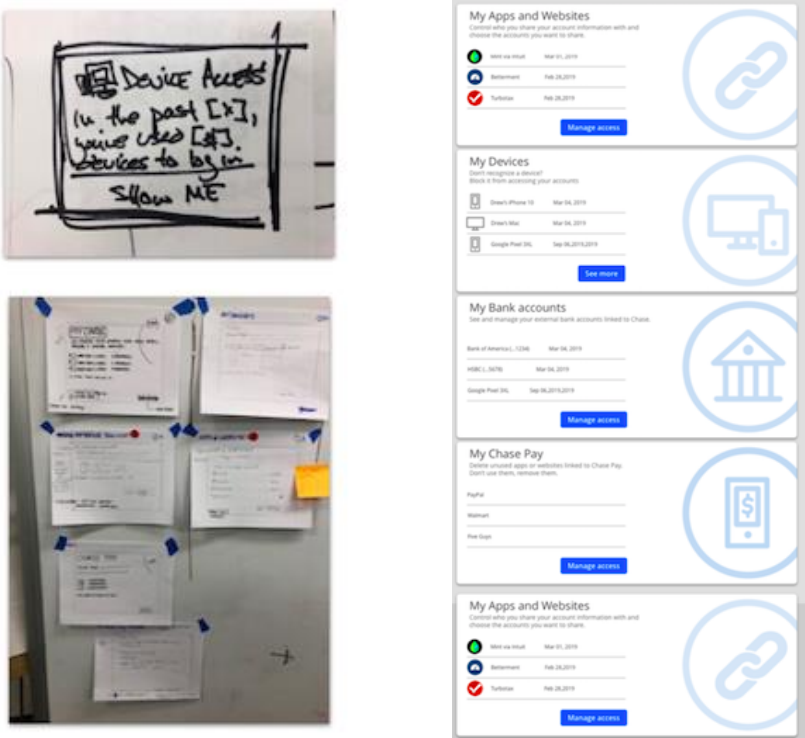
Skim, dip, & dive - modular tiles

Concept ideation - Day 3

The team spent the rest of the week refining & sketching prototypes.

Mobile iconography tiles or list views

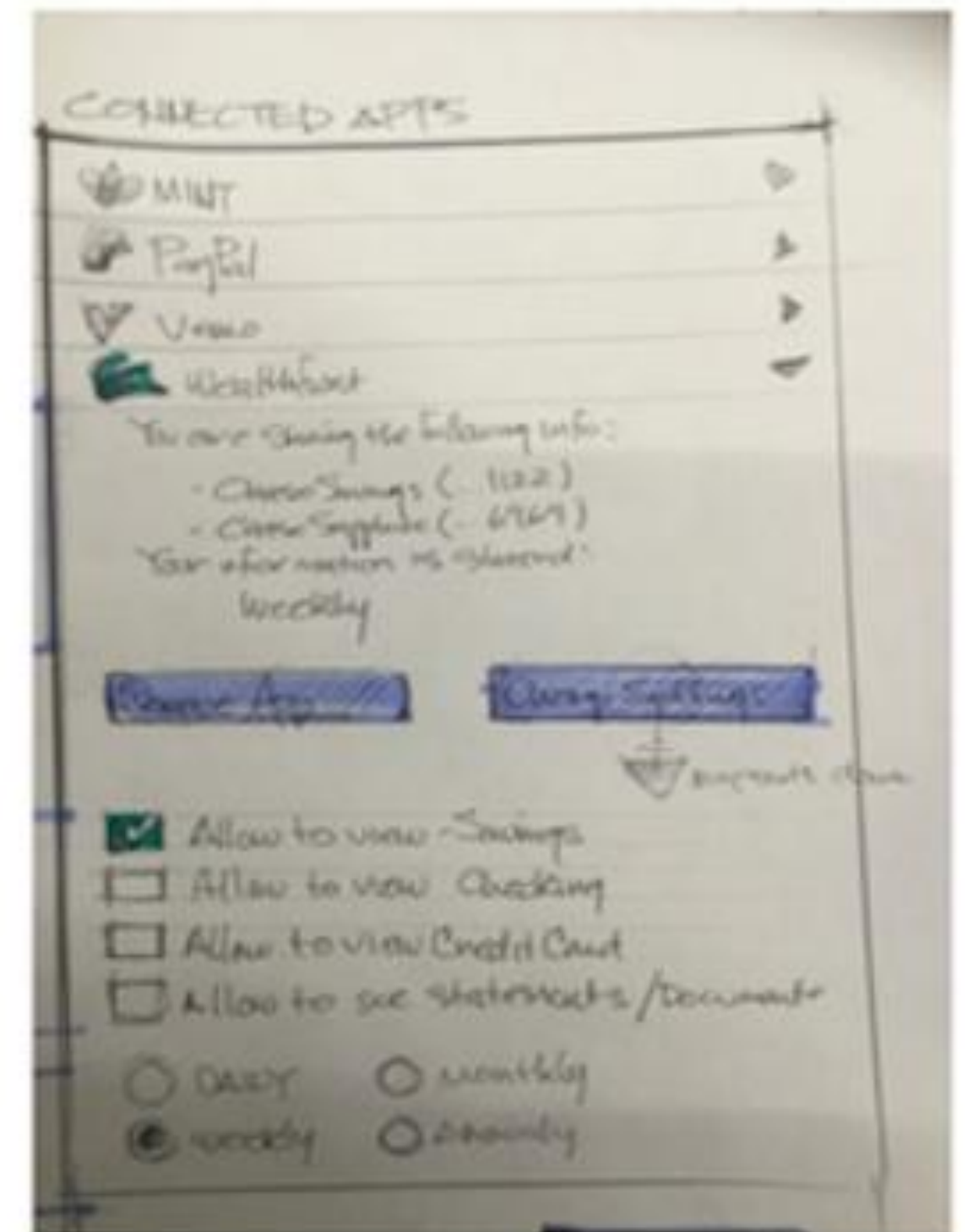
Skim, dip, & dive - modular tiles



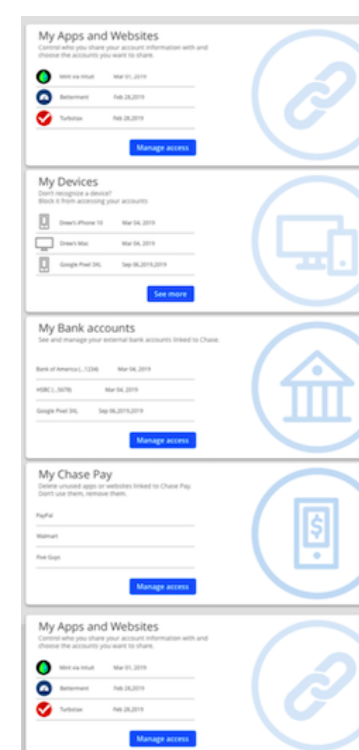
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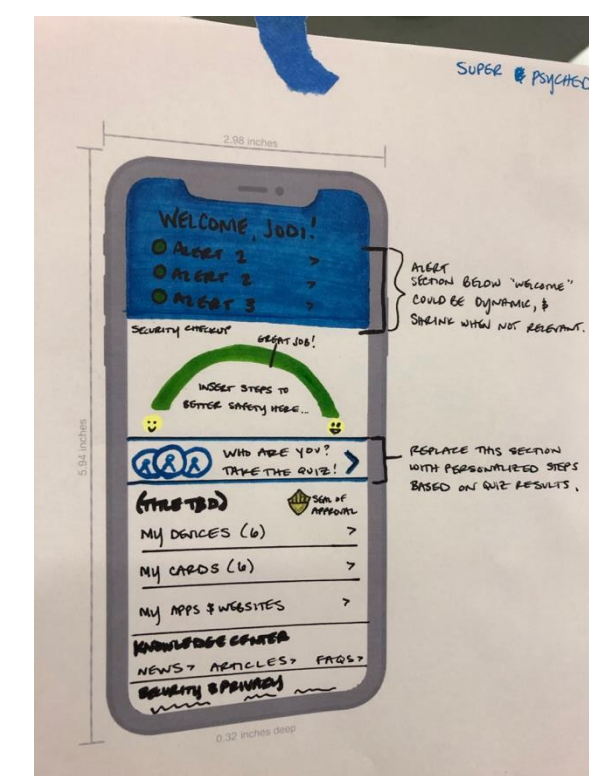
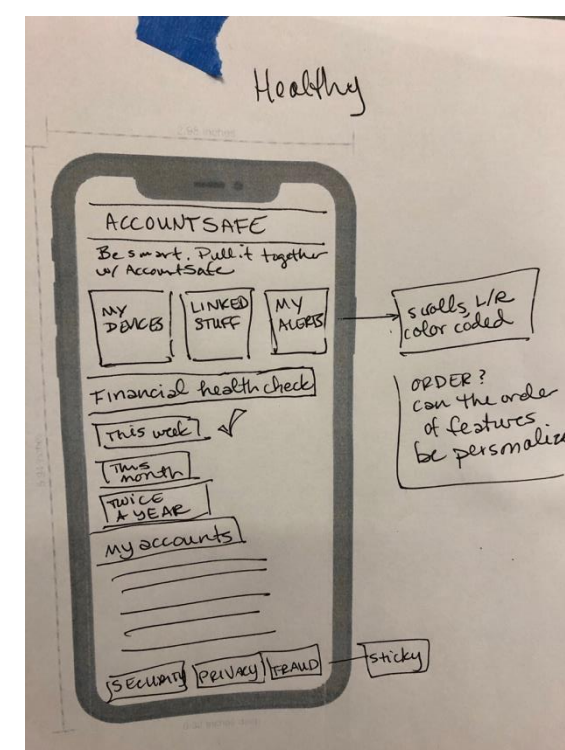
One stop shop dashboards



Skim, dip, & dive - modular tiles

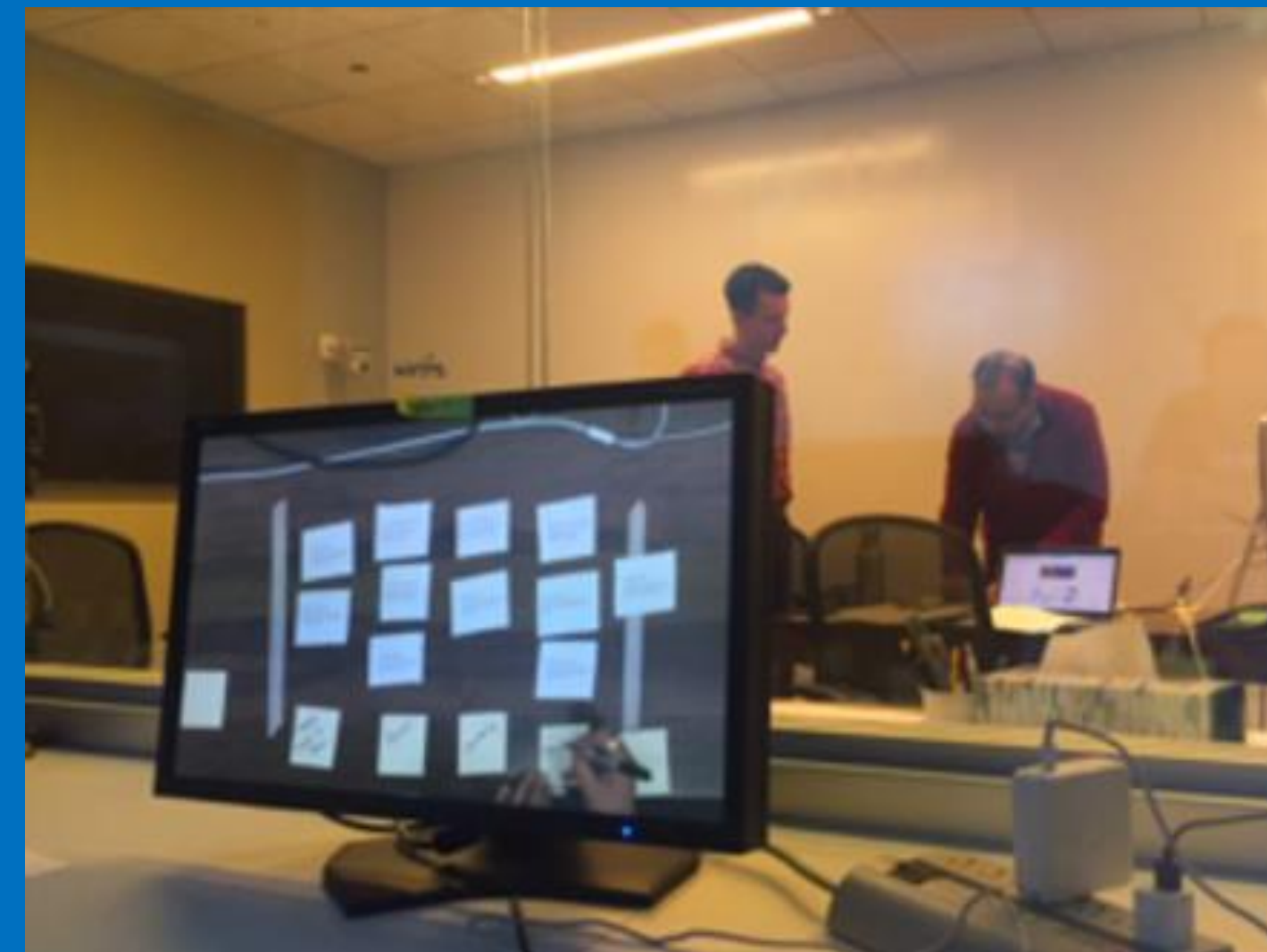


Mobile iconography tiles or list views

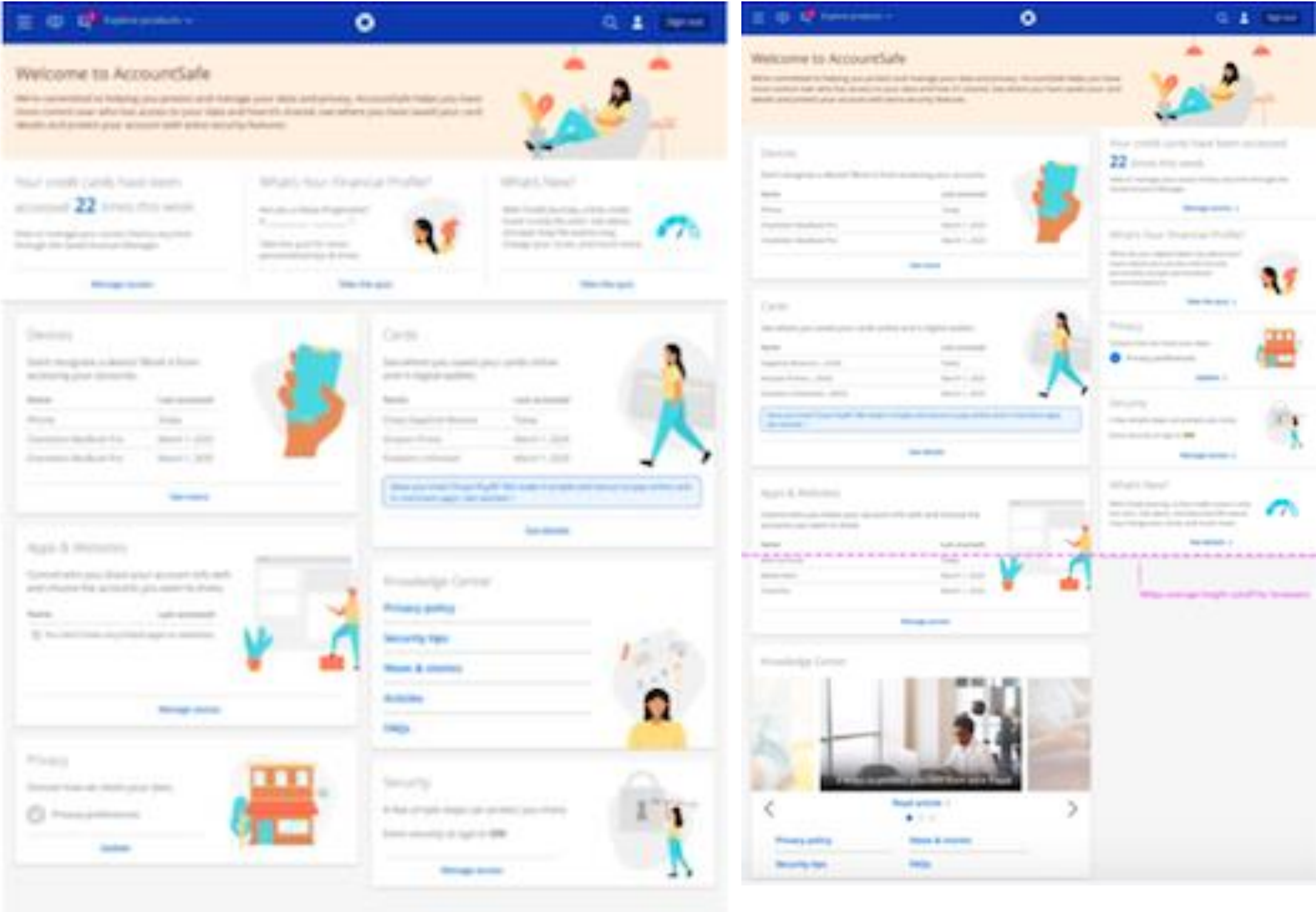


User Research

Test our assumptions and get feedback from our users.

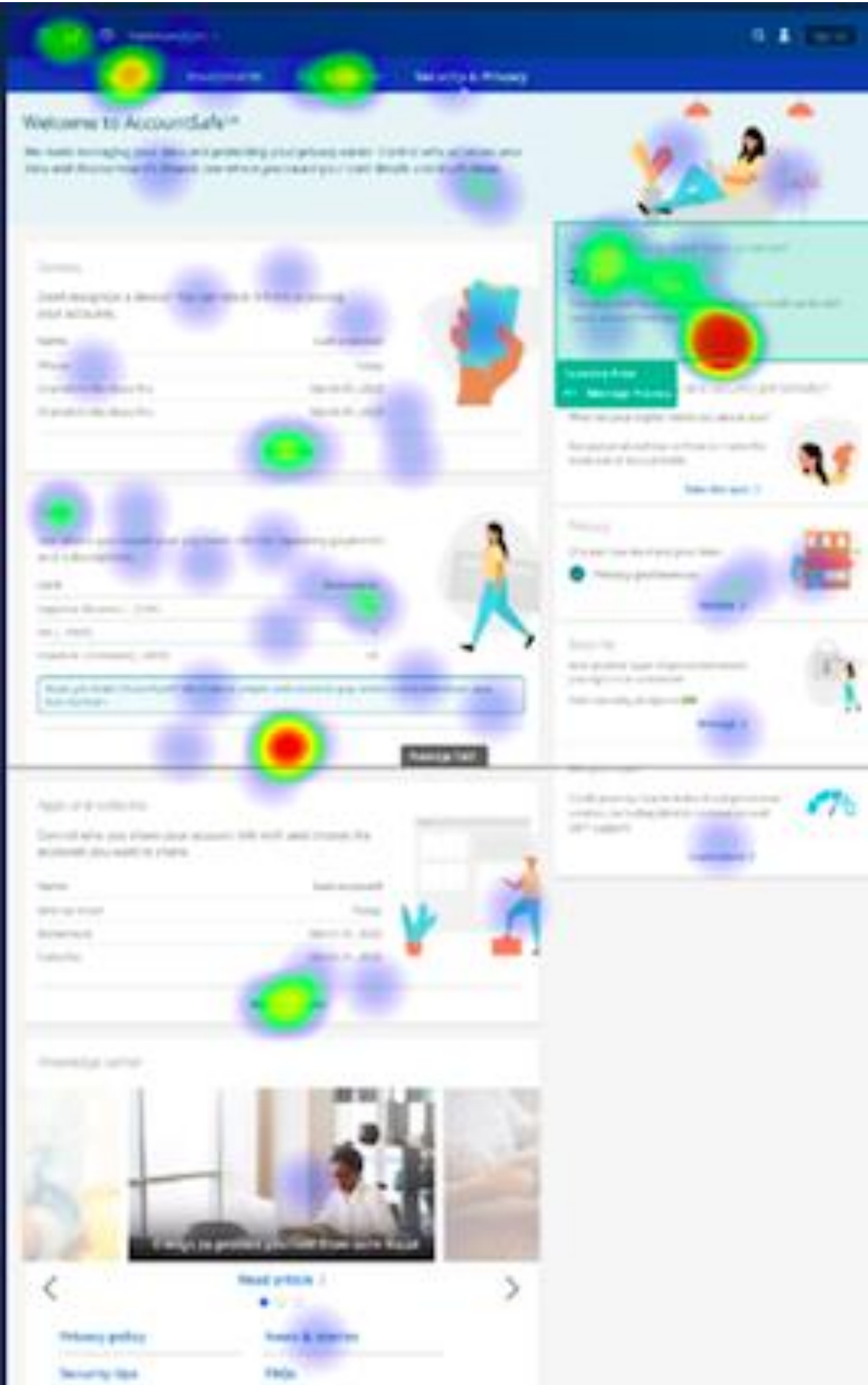


Web A / B testing



Eye Tracking

Split screen did slightly better with click rates.



Mobile A / B testing

Dashboard Engagement

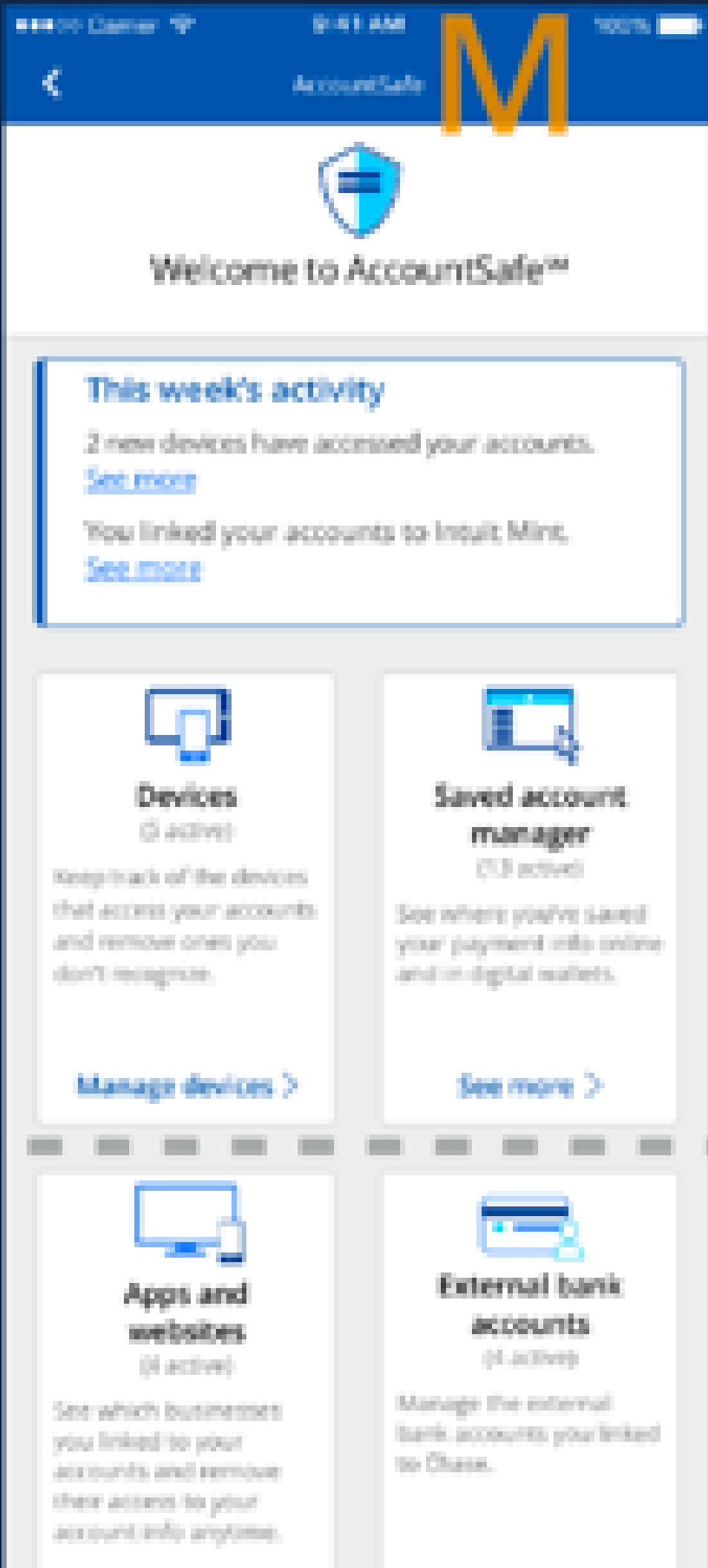
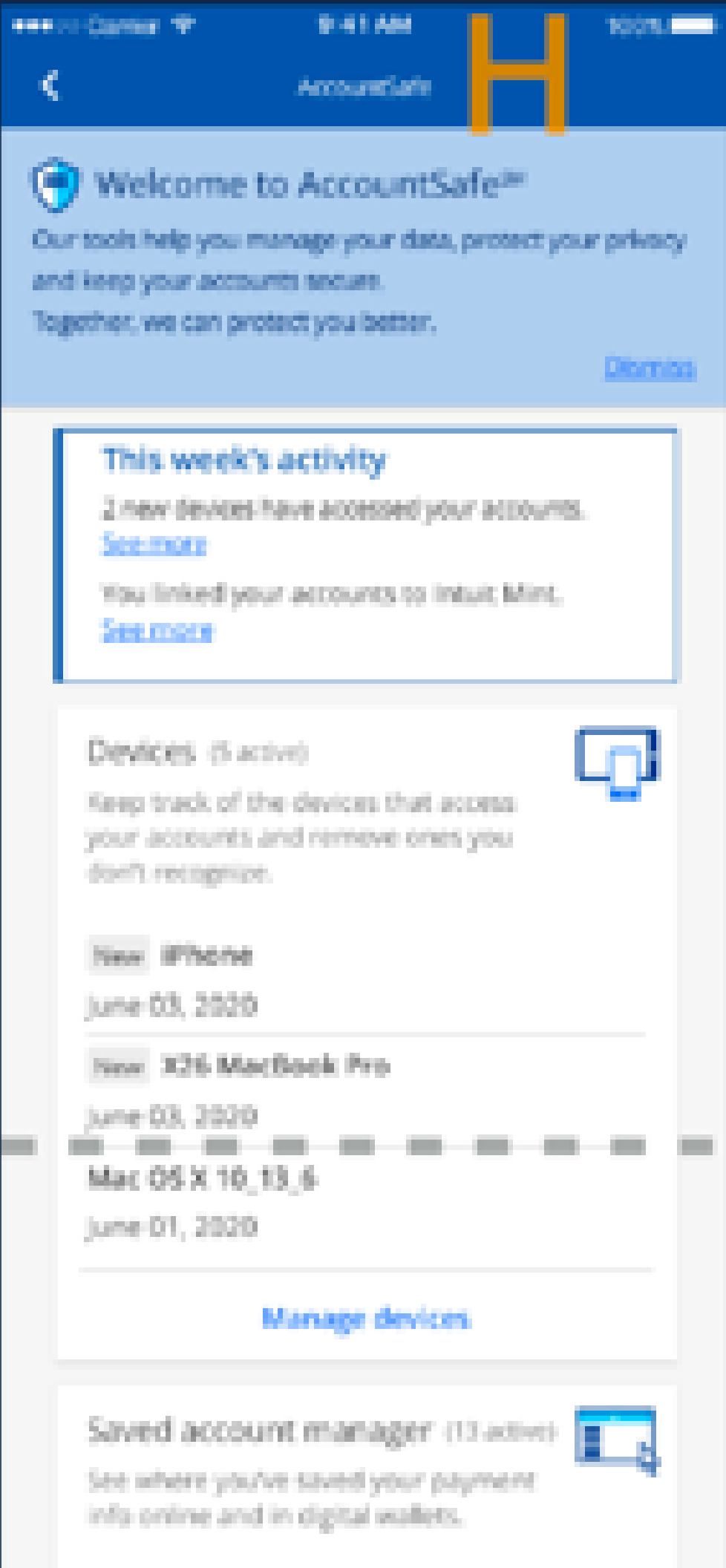
'H' layout seems to promote more exploration of the dashboard page and higher recall of all primary tiles.

More mentions of dashboard features during immediate recall including Linked apps, External accounts, and Account settings in Resources.

Majority of participants who saw layout 'H' thought there were 5 or more sections.

Only 3 sections mentioned for M; this indicates less scrolling and awareness for the second tier of primary tiles.

Bottom
of screen



Hub & Spoke Proposal

Value Proposition Banner

Users need an explanation of what this page is and why should they care. Users don't have any experience interacting with security and privacy tools—especially in a banking platform. We need to tell them what the page can do for them.



AccountSafe new Masterbrand illustration feel

AccountSafe along with Home Lending and Mobile Next are the first slated to come out with the new feel of our Masterbrand. Note: This is a placeholder - the Masterbrand team is engaged.

Personalization Q4

With Your Alerts and activities we will help drive users back to the page to see the latest security and privacy activities.



Engagement Quiz and What's New

Quiz helps identify user of how careful, smart or cavalier they are with their data and we will make recommendations about what features they may find useful in AccountSafe.

With many exciting tools being added on through 2020, credit journey and Privacy tools freemium and premium services we want to share with are users some announcements until we see if these additional tools can be integrated.

Marketing Nudge

In some cases we're grouping items together, because it makes sense to the user and we may call out a marketing "blurb" to pull attention to the product and make them aware of this useful feature. Chase Pay may be one example of this.

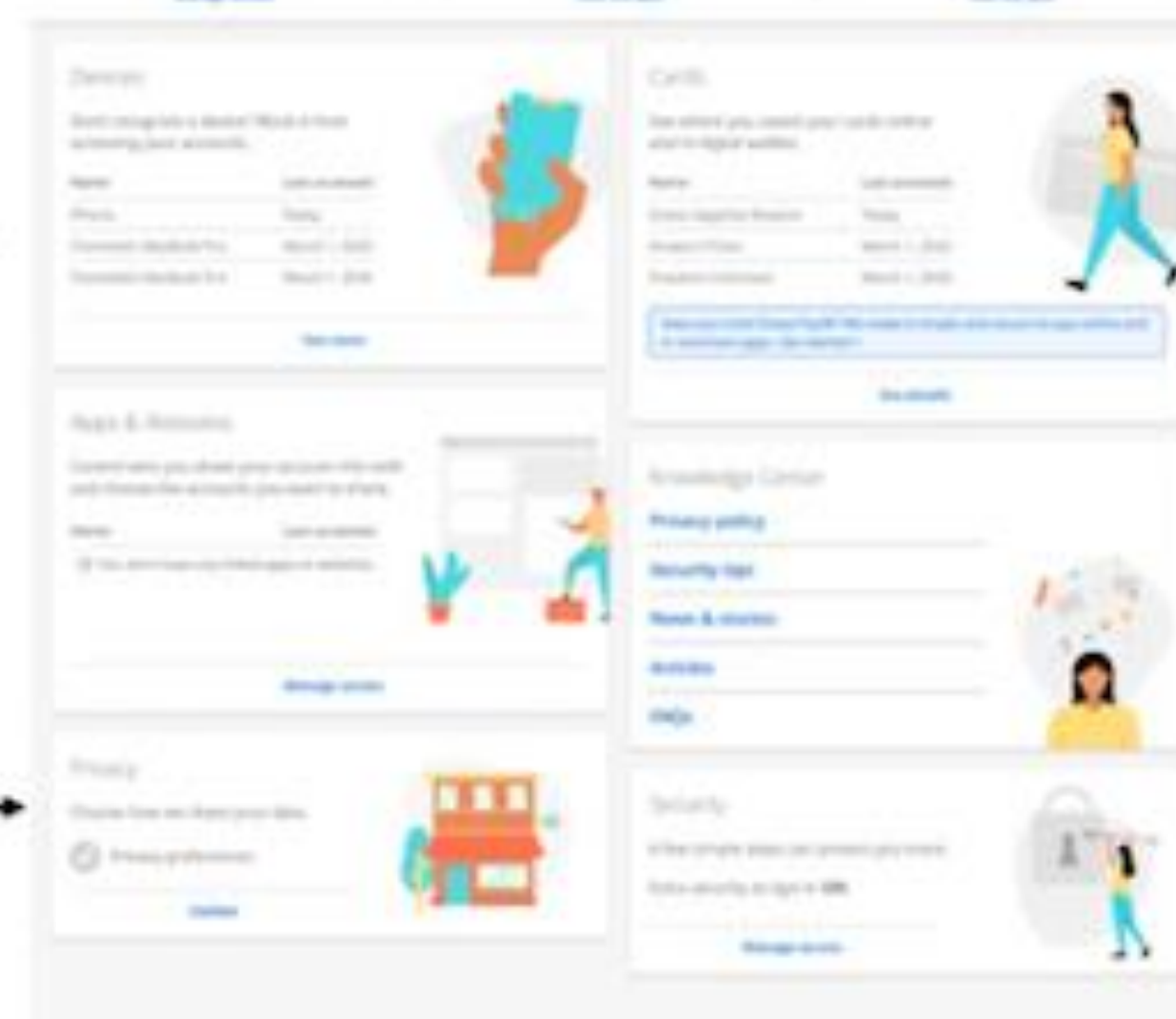
Having two views of External Accounts either through AccountSafe or on their Investment dashboard is another example.

Knowledge Center

We have many articles and links spread out throughout the applications about security, privacy and fraud that are not easily found. We are proposing to collect and organize them and make them easily discoverable.

Feature cards

Our different products will each have a card that gives a brief educational summary, snapshot of their activity and a link to view full view.



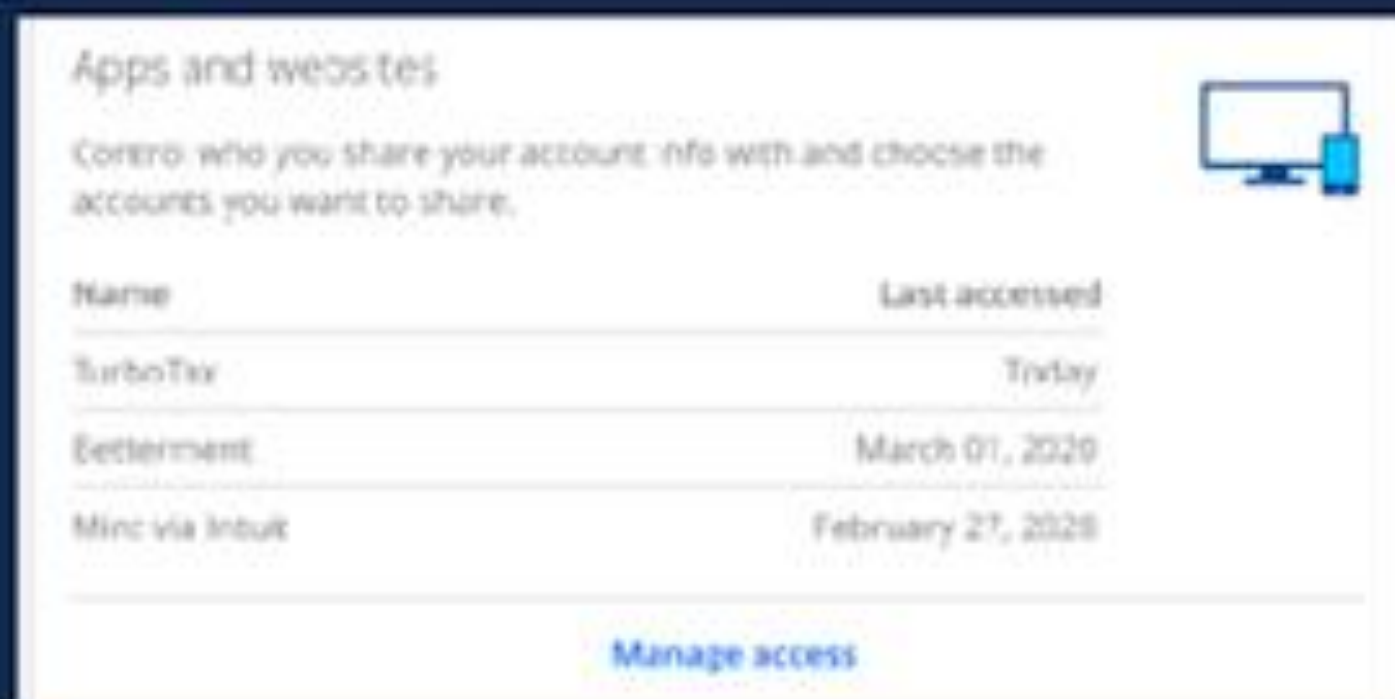
Important callouts

For some scenarios we have important legal callouts as an example "Privacy documentation". We need to make sure users are aware of other tools available to them that relate to security & privacy, fraud and other settings tools.



Apps and websites

CPO_v1



Comprehension of tile

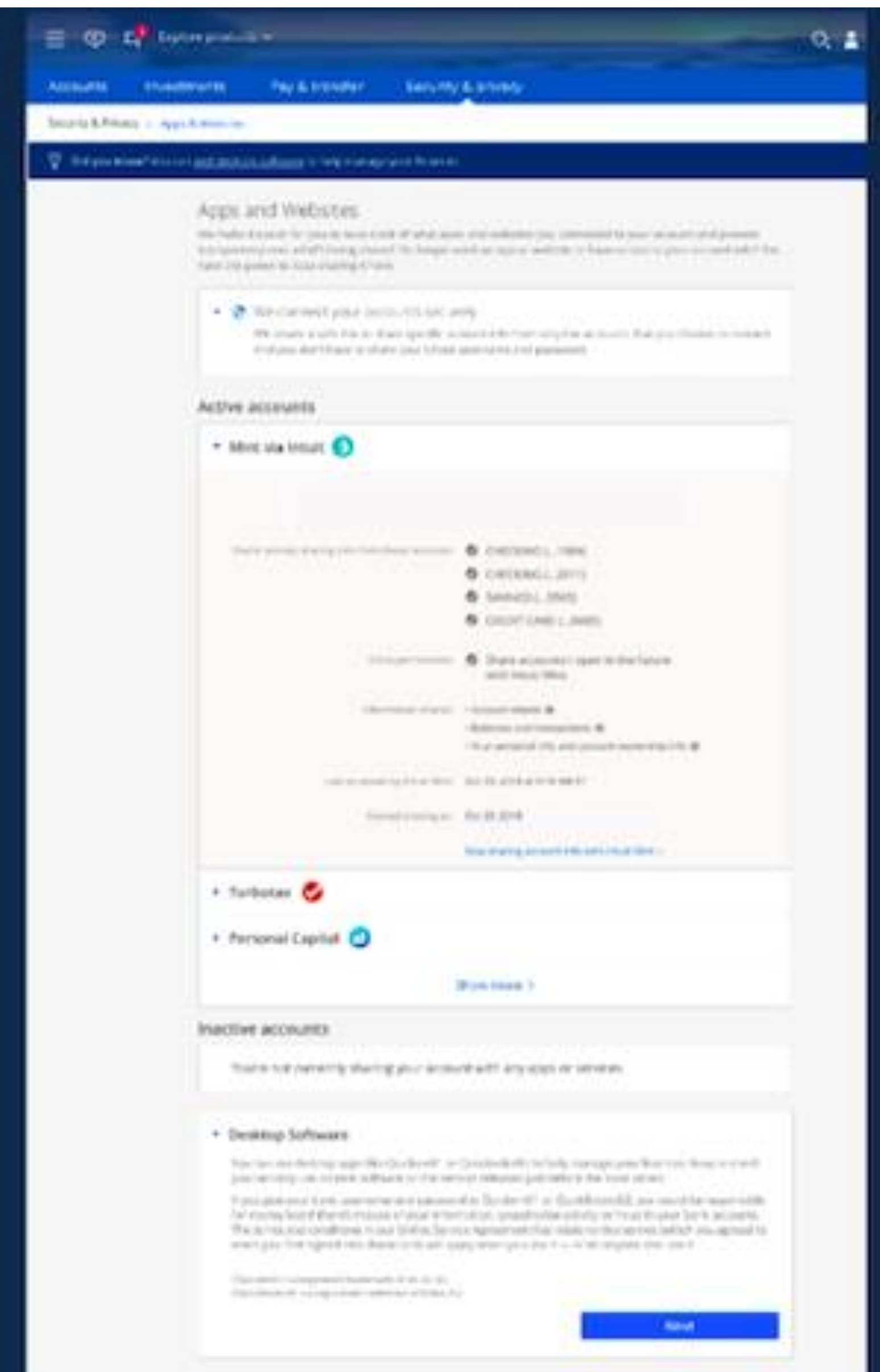
Fairly good understanding that account linkage to apps/sites are managed here, though almost none had heard of Mint or Betterment. Clicking through to details page helped.

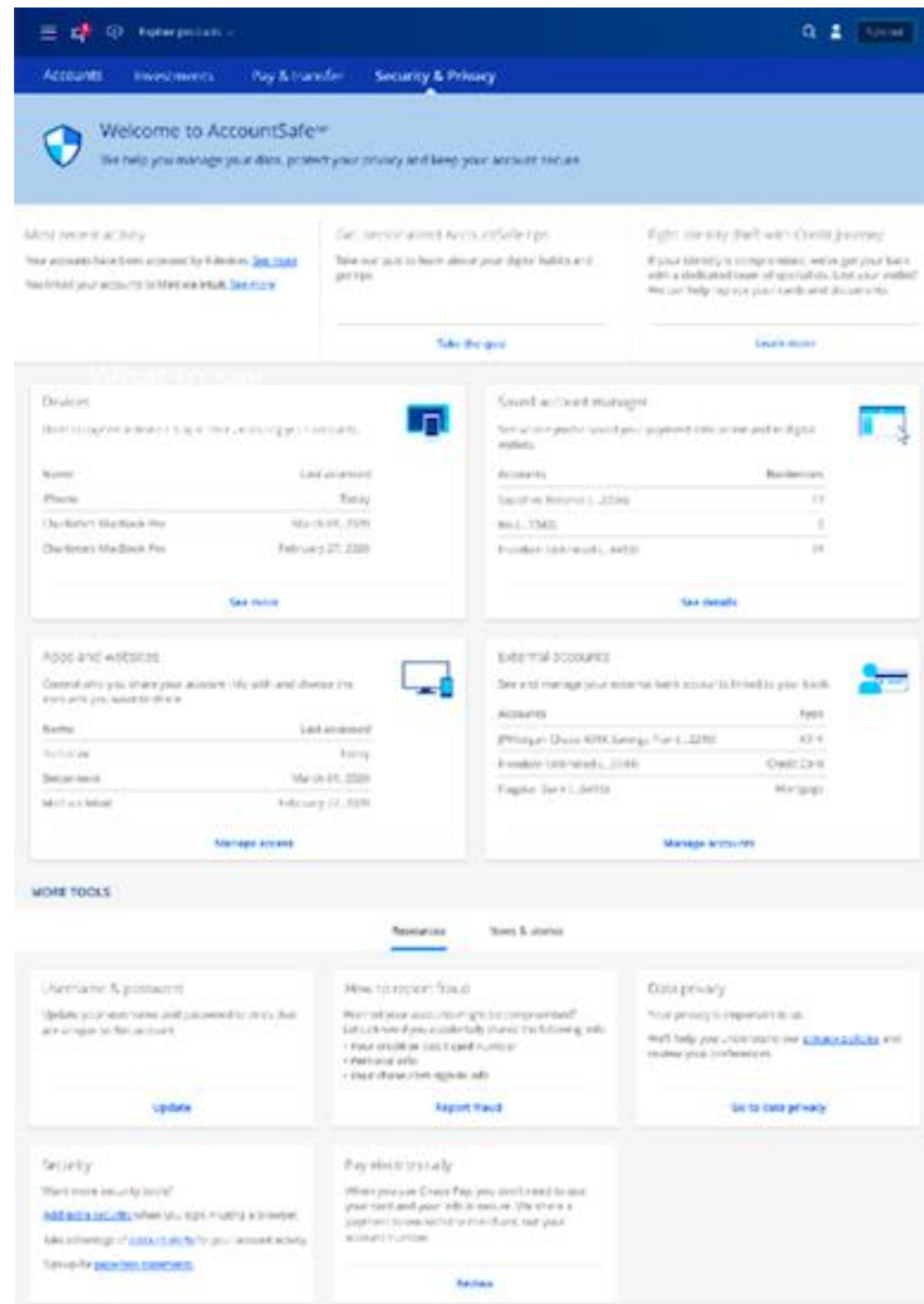
Some thought there were only 3 apps as displayed on main tile.



Further clarification needed on details page

- Stop Sharing link was undiscoverable to a third of participants. Users expected to find a delete button at top of each listed app rather than on lower section.
- 'Extra permissions' assumed share with people.
- What level of access can be shared?
- Checkmarks assumed radio control buttons.
- 'We connect your accounts securely' looks like an ad; explanation needs clarification.
- Can add or edit names of apps or merchant businesses to increase recognition?





AccountSafe Iteration

CPO Prototype v1

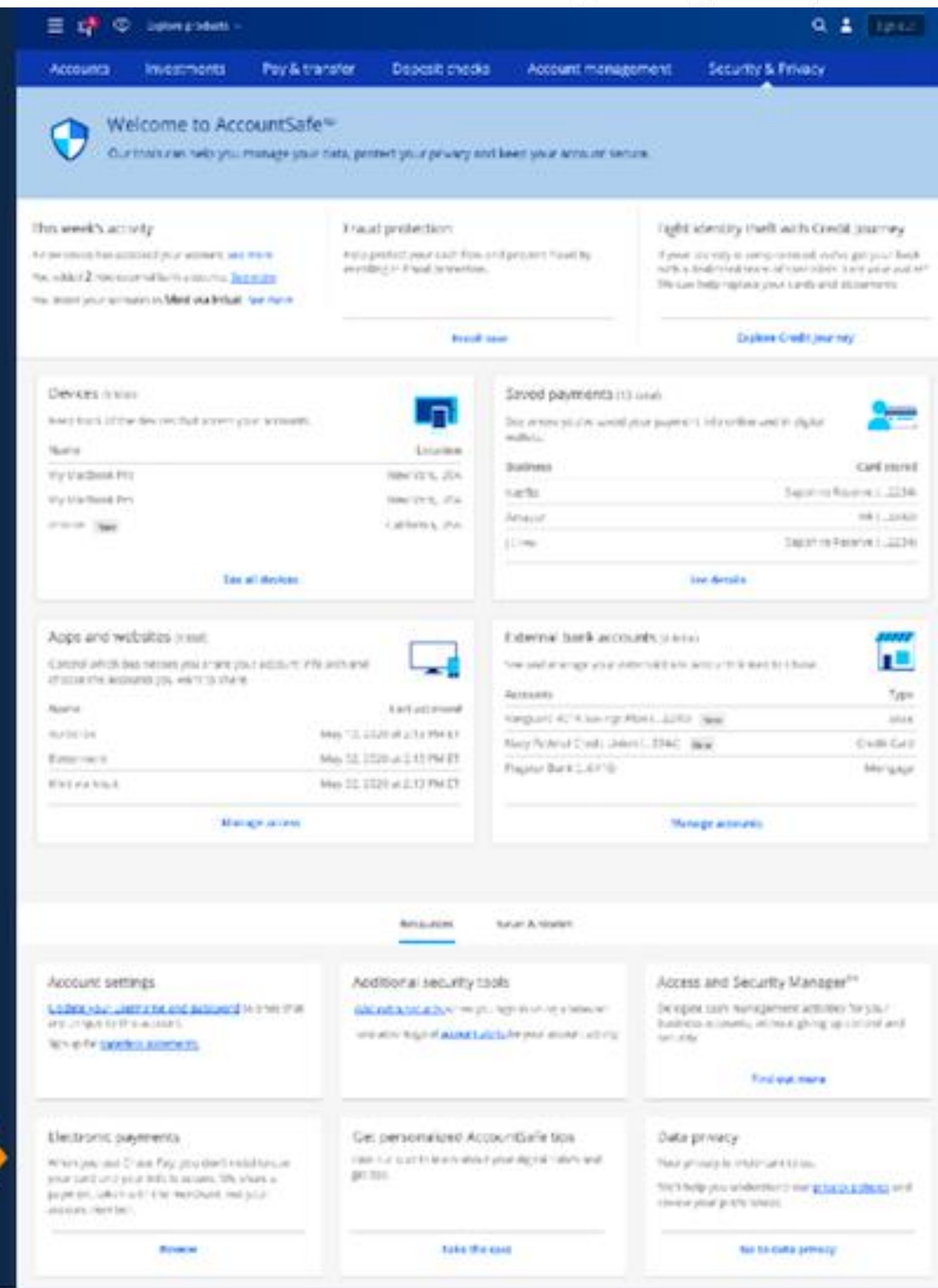
Rapid iterations improved:

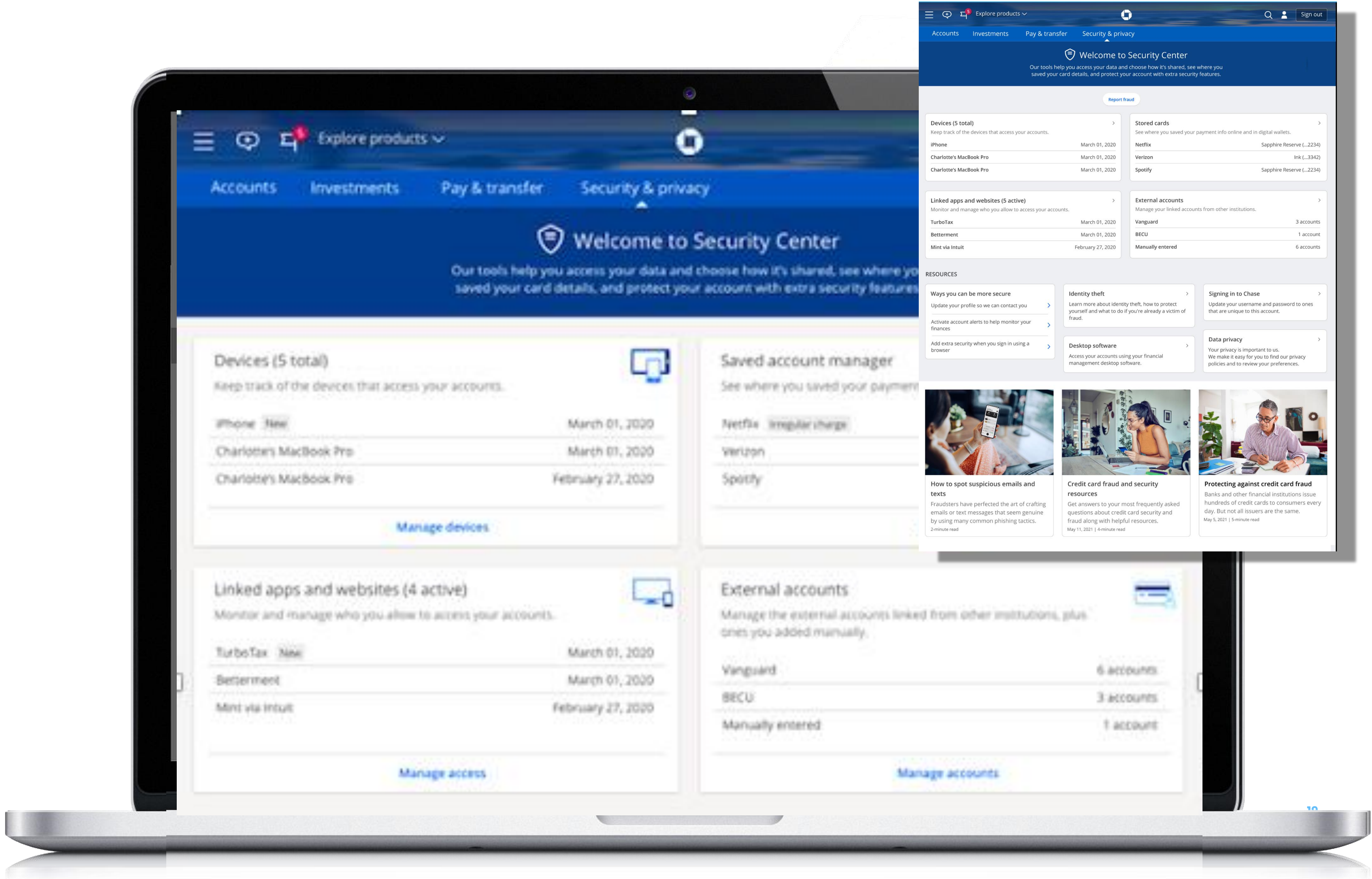
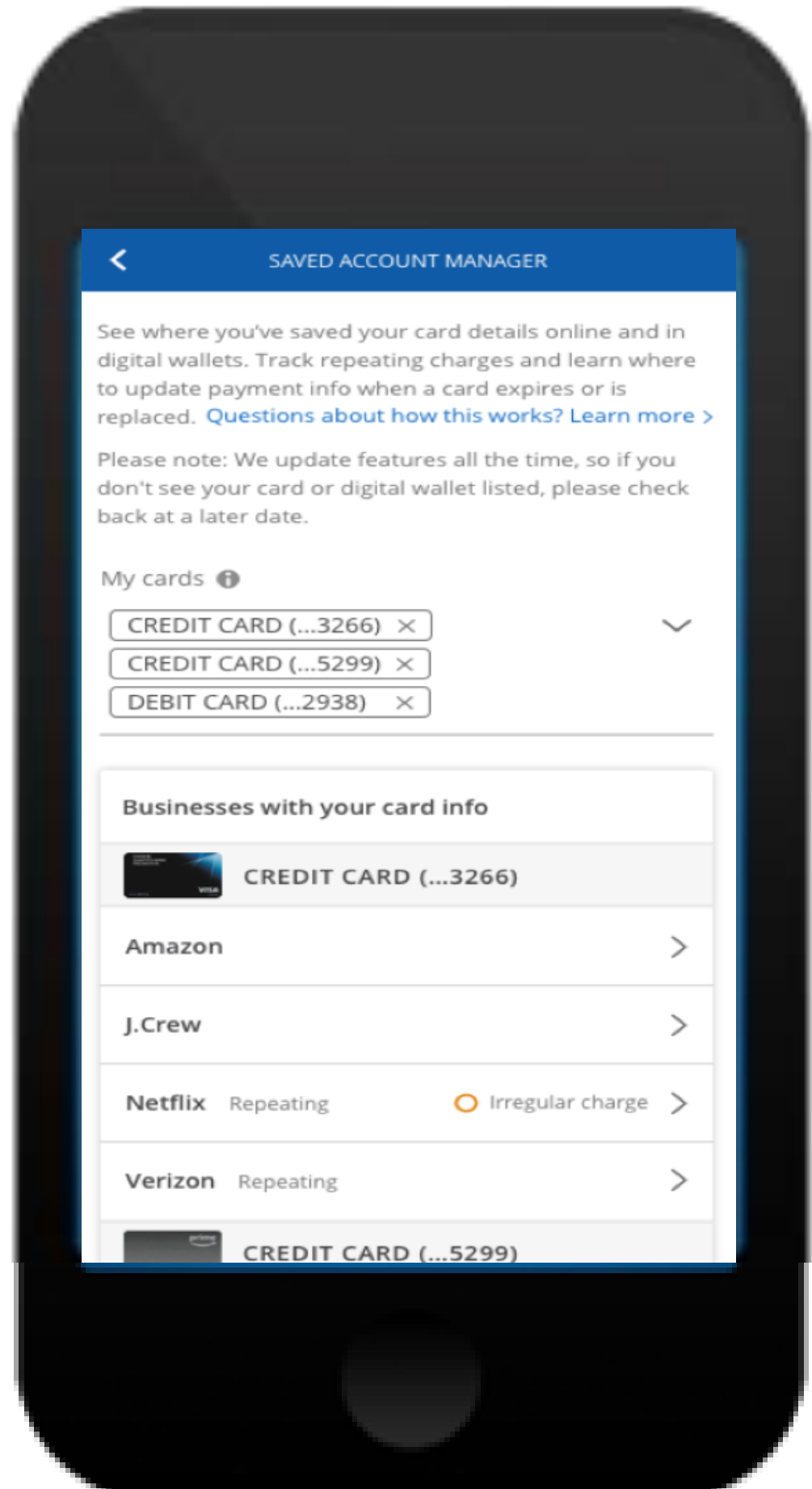
- Statement of offerings (hero)
- Relevance of engagement triplet
- Better defined timeframe (MRA)
- Readability (tile headers)
- Cognitive load (total count added)
- Location highlights (Device tile)
- Tags to flag "new" activity
- Extra headings removed (More Tools)
- Visuals (iconography)

Further explorations in:

- Alternate headings for SAM
- Order of tile layouts
- Secondary tile layouts (resources)
- Alternate CTA - action focused

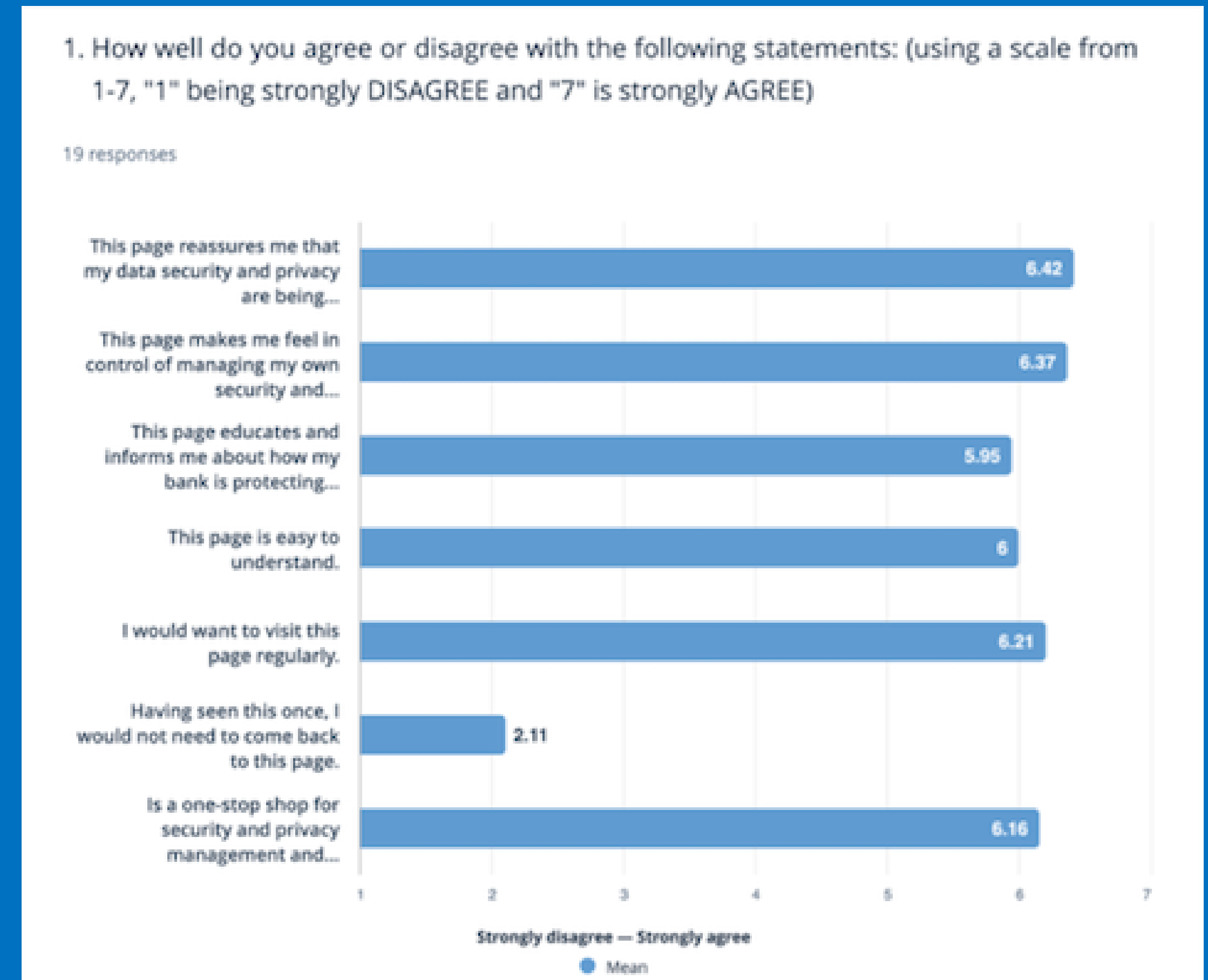
Iterated Prototype CBO





Final Designs

Research showed users desire to visit often the page and we received high ratings on how they valued the features.



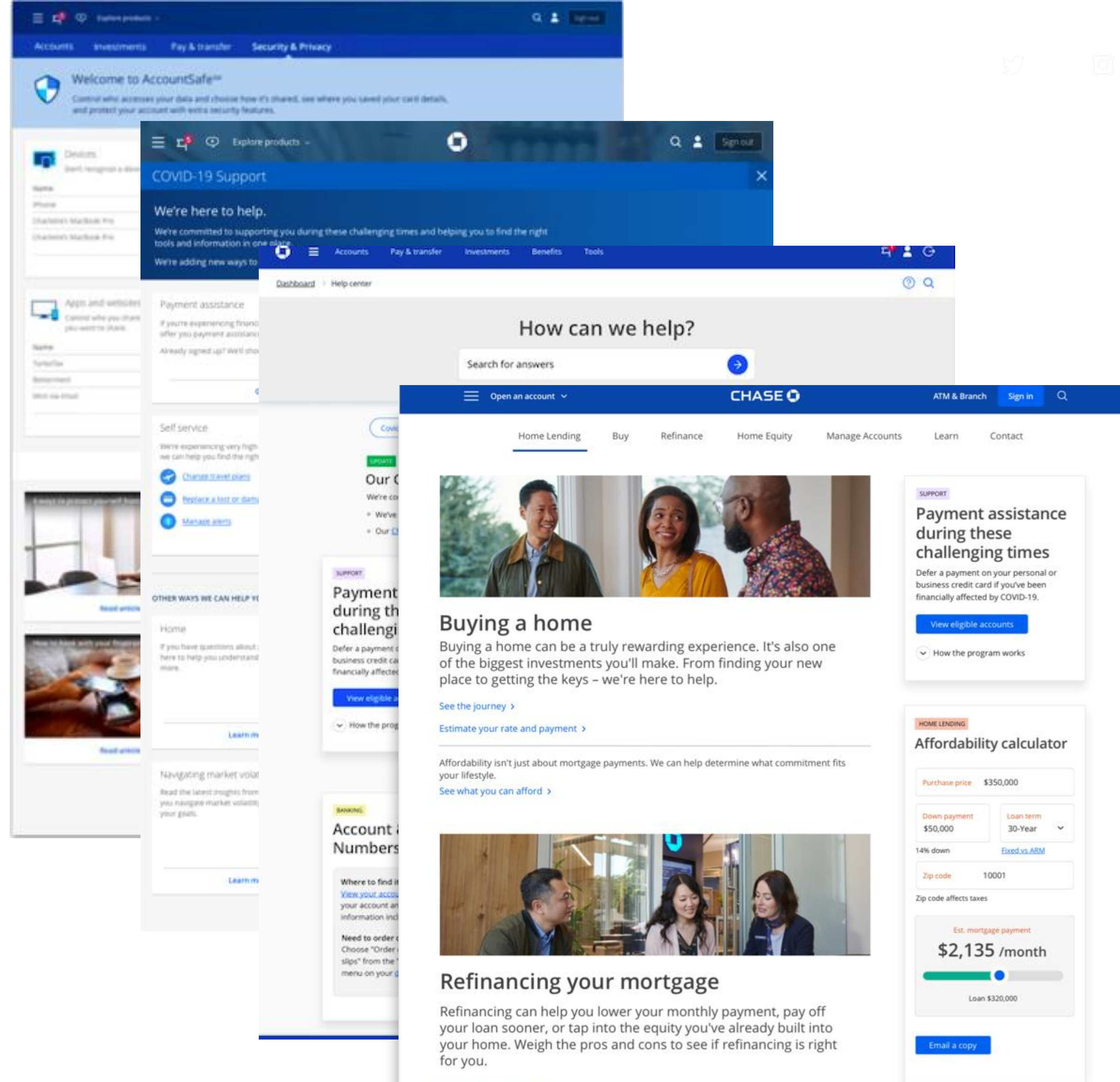
Results

Chase was rated #1 by JD Powers in both Web Channels and in the subject of Security in 2020.

When COVID arrived in New York, the call centers were overwhelmed with the branches closing. We were asked to covert our Security hub into a crisis hub in just two weeks.

Began evolving the hubs into Help & Support, getting Chase to think more about modular systems, utilizing templates and content management for more re-usability and search capability.

This also inspired a new redesign of all our public pages to utilize the systems as section templates.



Results

- Both Security Center and the COVID hub were released in the spring of 2020 to 4 million customers.
- Help & Support and the MVP of the public experience followed in the fall of 2021.
- In 2021, JD Powers and Global Banking Magazine rated Chase #1 for Mobile and Digital Channels.
- COVID-19 Support hub was mentioned in all reports on how well this digital hub responded to the crisis.

COVID-19 Hub – our data insights

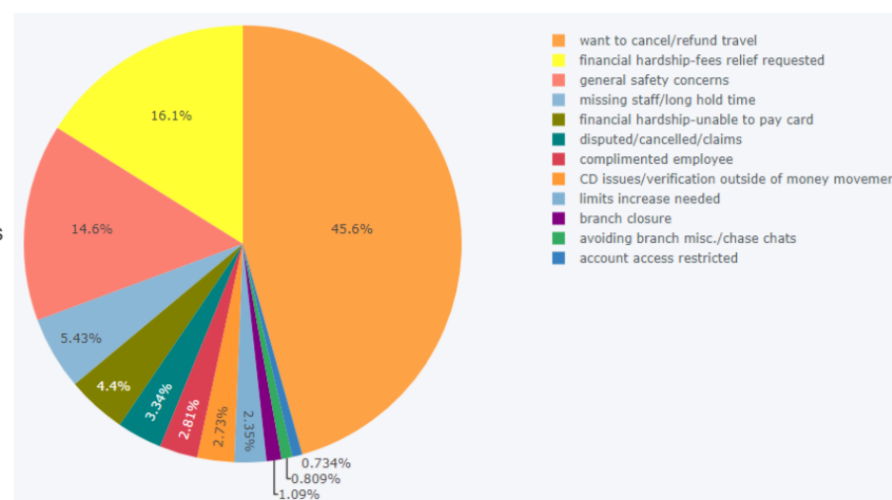
3 key area that has come out of the data:

- Customers want to cancel/refund travel
- Customers have requested financial hardship relief
- Customers are generally concerned about safety

This informs us about what information our customers want and need:

- How do I cancel my travel or get a refund?
- How is Chase helping me with payment concerns?
- How can I bank safely?

(total feedback Feb 1st – April 1st: 17,471 customers)



COVID-19 Hub – our plan

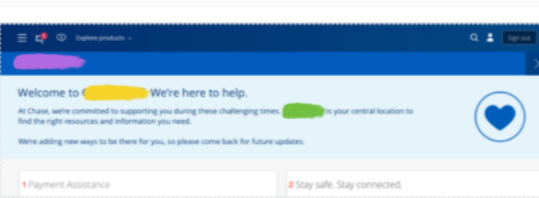
To build a scalable hub that can evolve as the crisis unfolds. We will add features based on our customers need to be **helped** and **supported**.

- We will **help** our customers by adding critical information to help with their everyday banking needs and concerns.
- We will **support** our customers by adding key features to help with their financial health (split by LOB: Auto, Home, Card and Consumer).

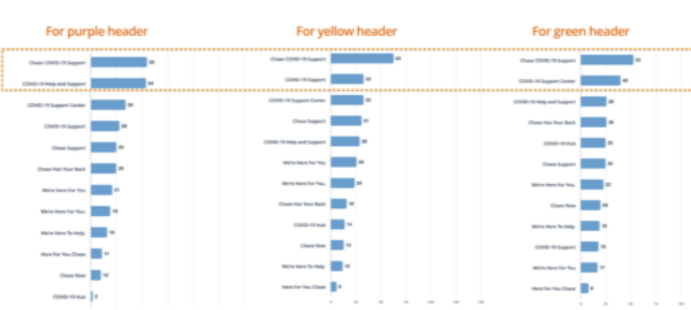
INTRO

How we got our name and brand

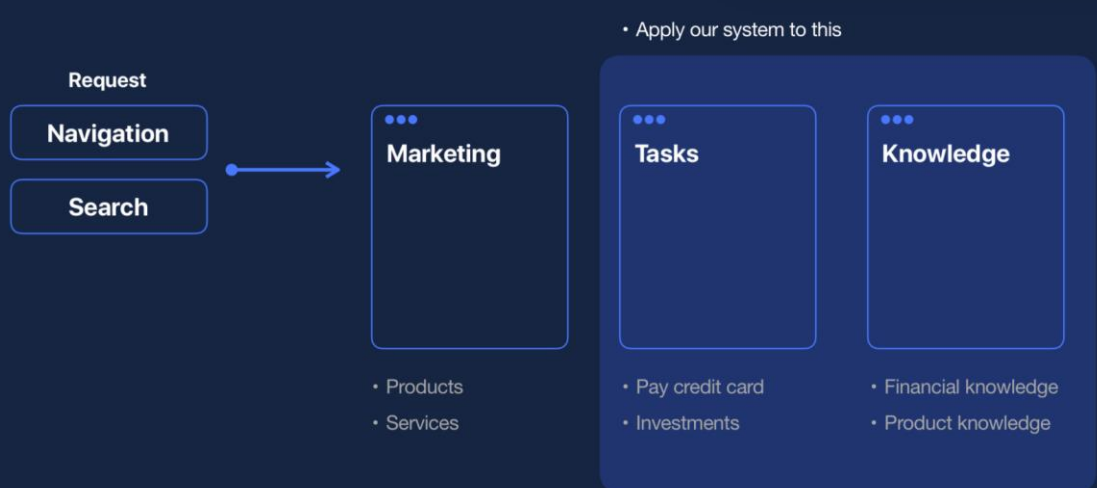
Jodi Mack worked closely with the marketing team that had come already out with "Stay Connected", they wanted to be sure we were in sync with our brand. Also Jackie Say initiated an online survey that helped us choose our title.



Top 2 choices



Our content



- Audit all customer tasks (all things customers want to do)

- Tag/label

- Identify everything that supports that task (related tasks + knowledge)

Credit card Transactions

Credit card dispute

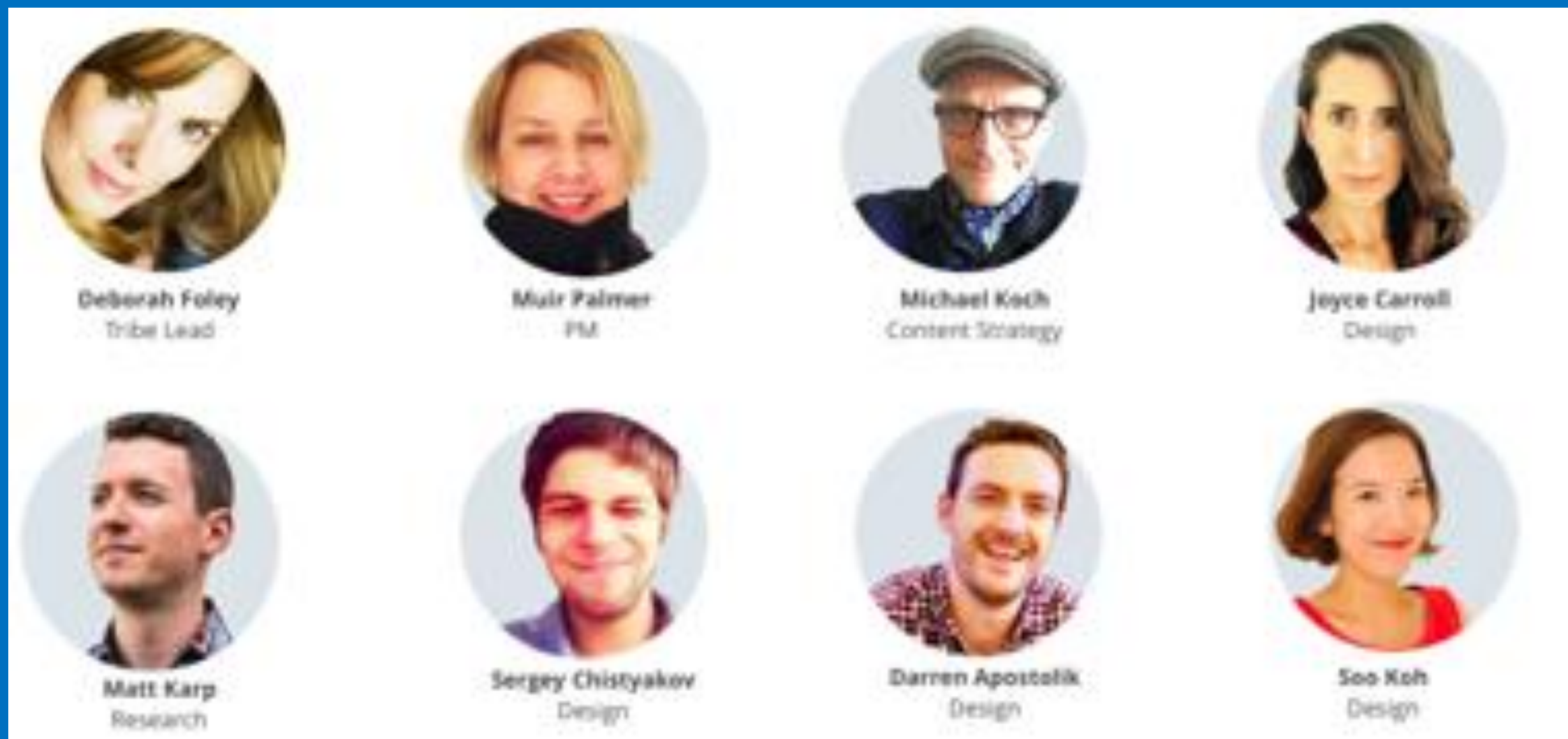
Dispute FAQs

Avoid Fraud Article

Add extra security with AccountSafe

Developer Ecosystems

API Management and what makes a great developer experience.



Final 2021 - New look and feel

Chase developer August analysis

31

Partners

109

External developers

20

External APIs

668

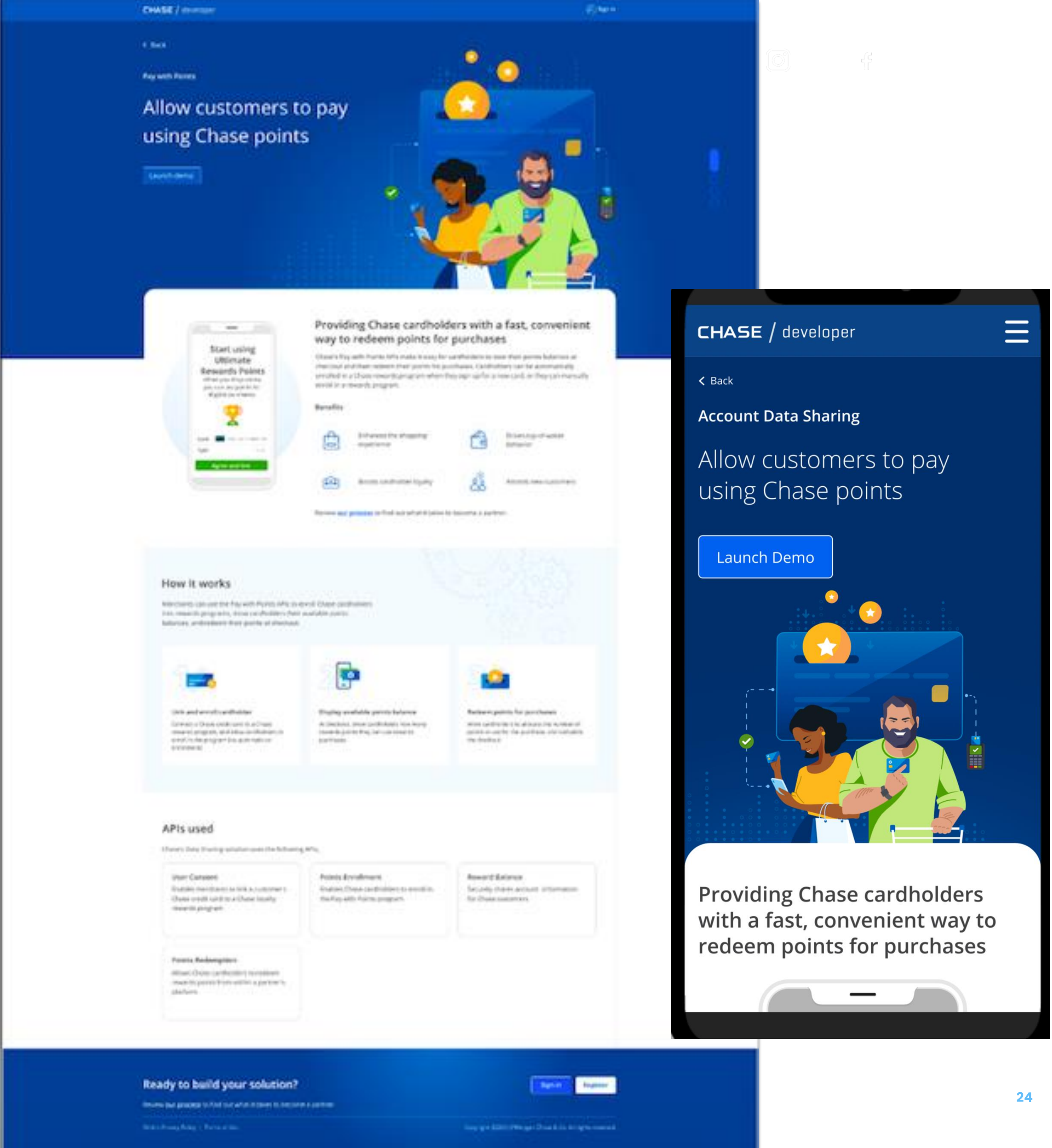
Internal APIs

24K

Total visits

A

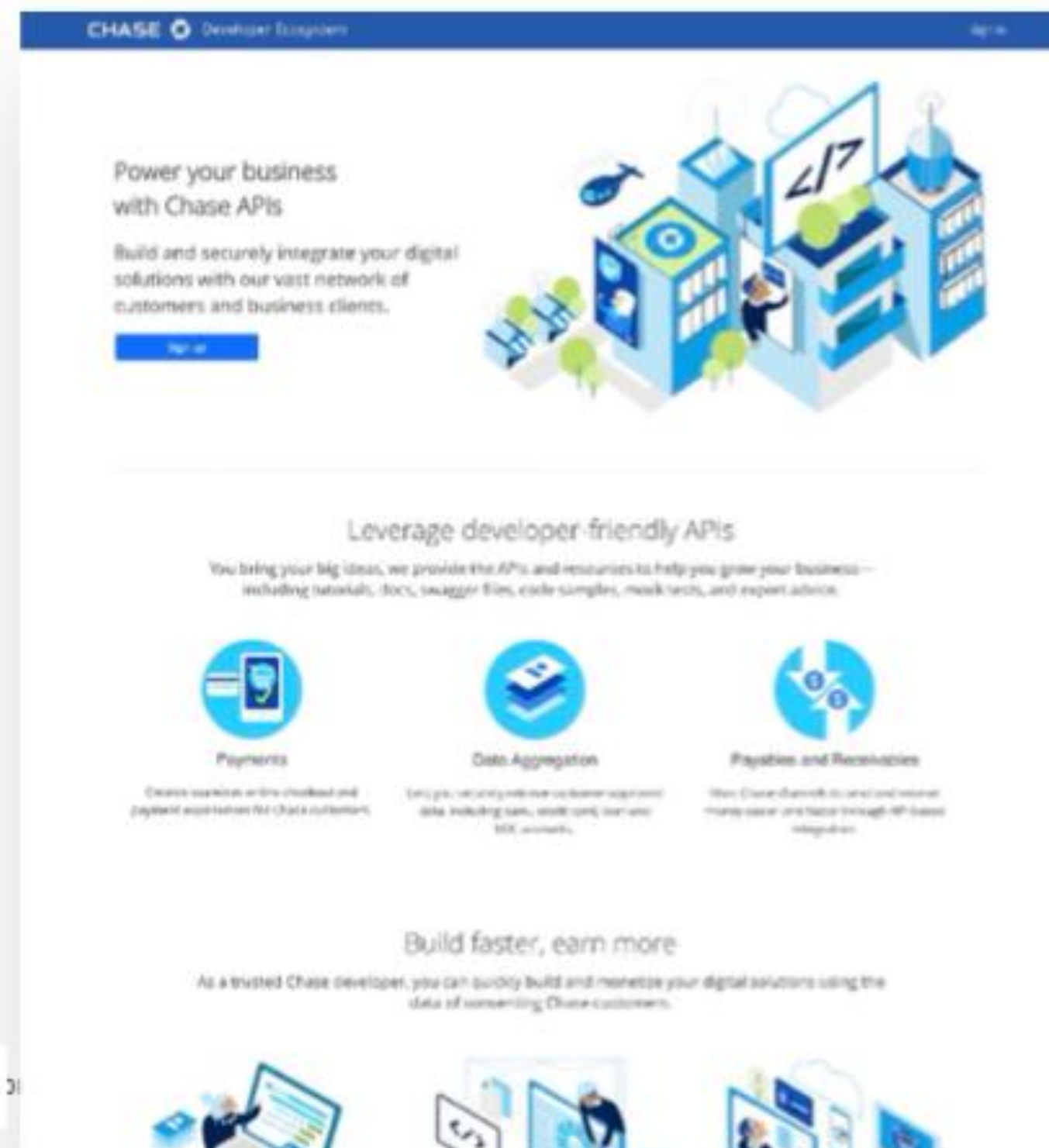
Average API score



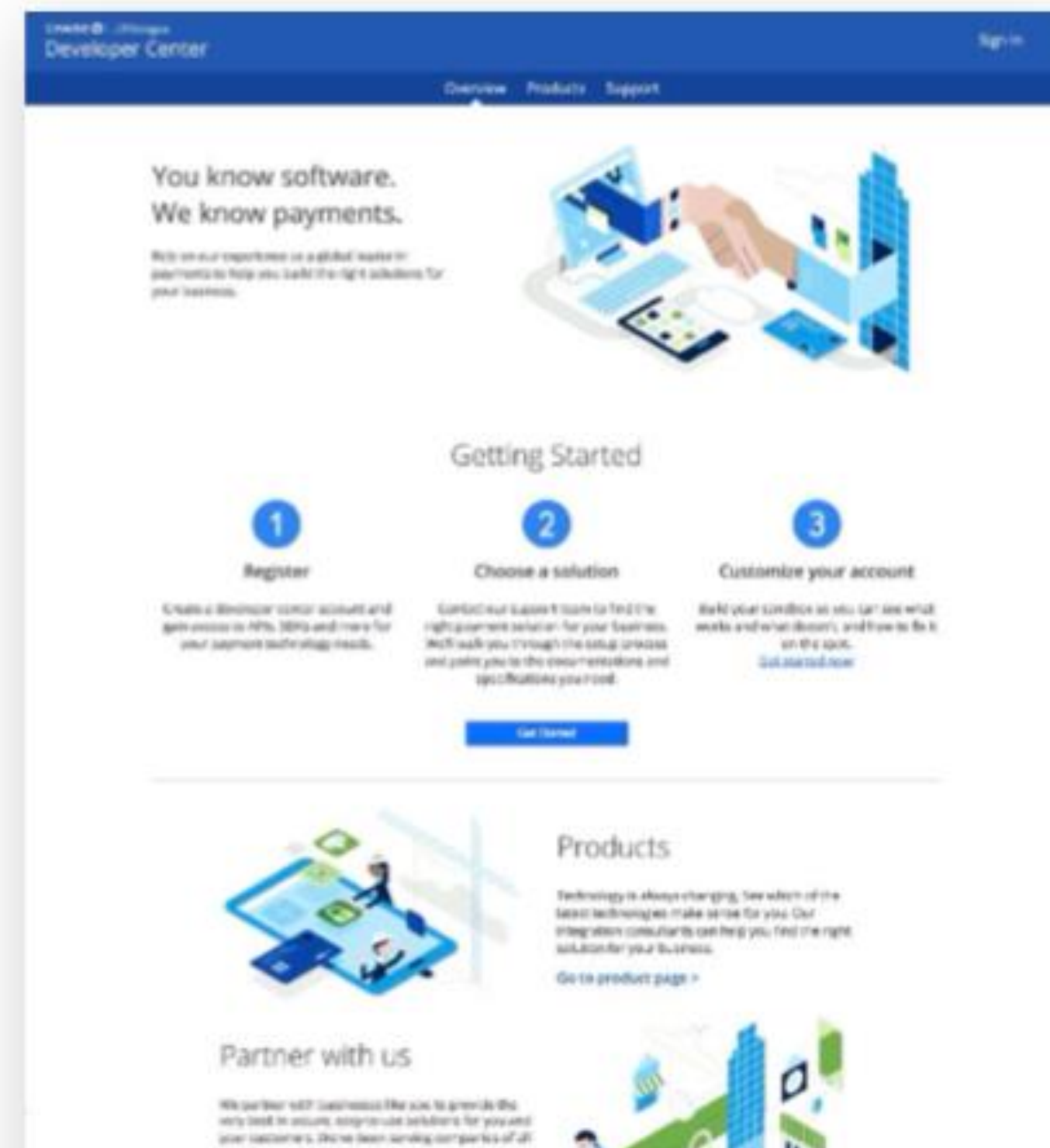
Our API landscape

Three sites. Different target audiences. Different stages of evolution.

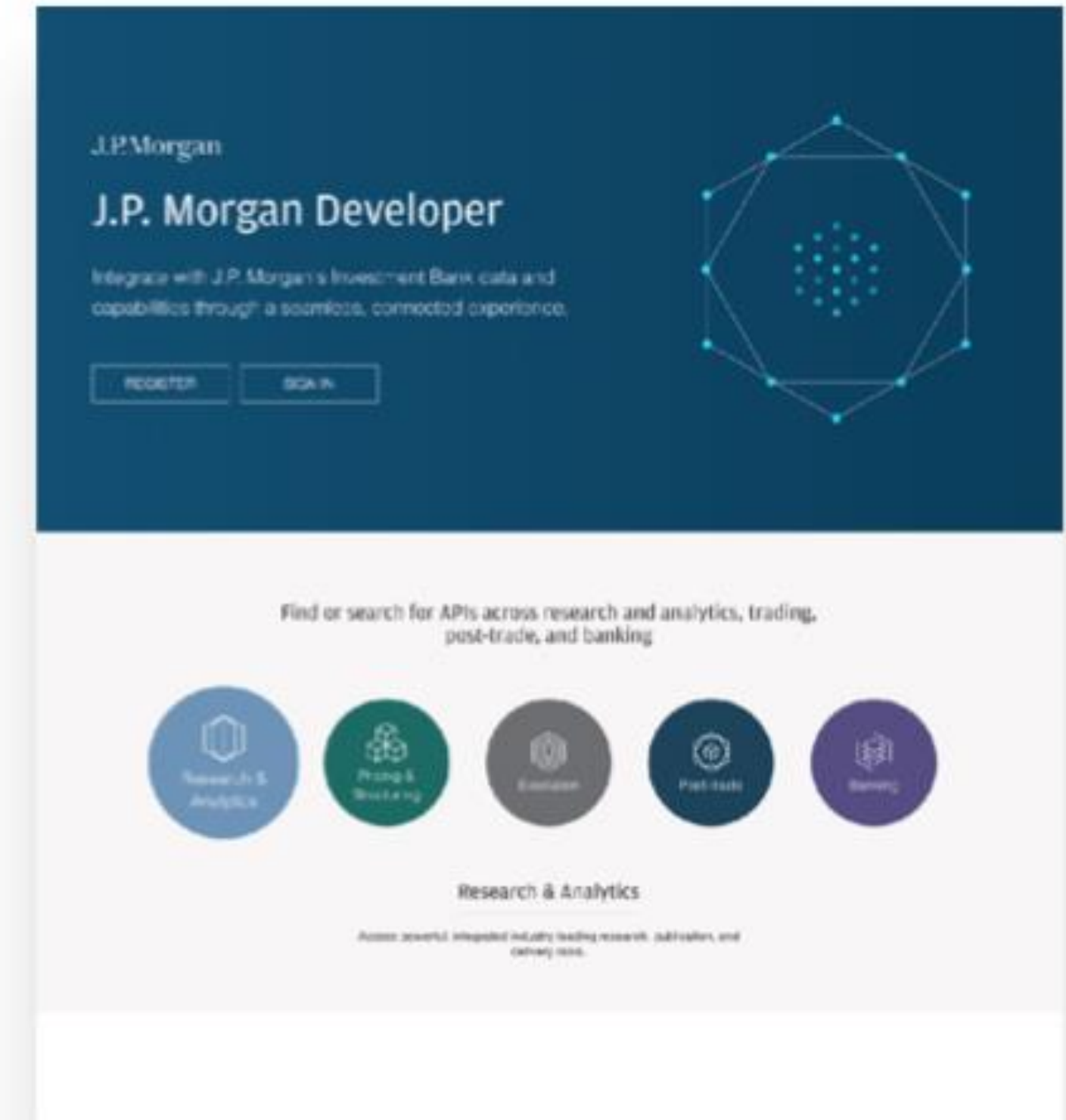
Chase Developer *aka DevEco* (launched 2018)
Consumer Banking



Developer Center *aka DevCenter* (launched 2013)
Merchant Services Banking



JPMorgan Developer (launched 2017)
Investment Banking



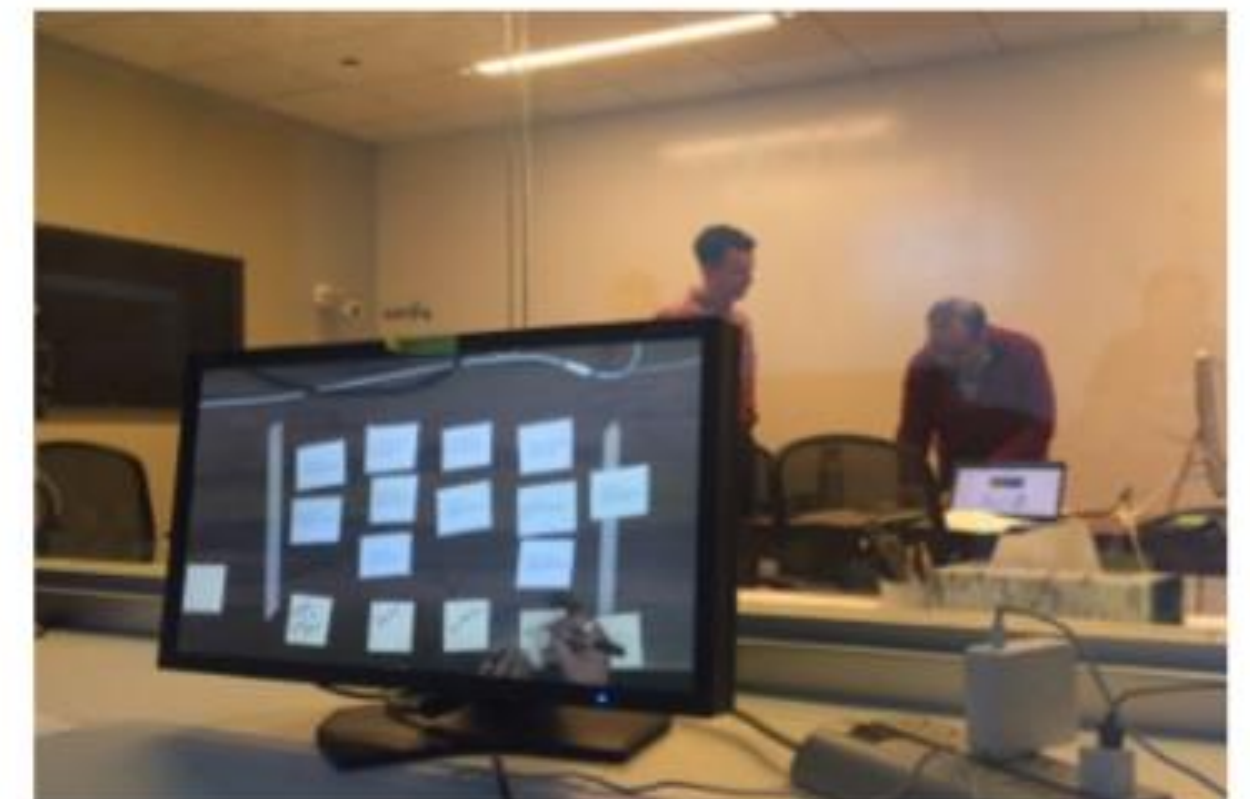
We're learning a lot about developers

Research is a critical component of our process.

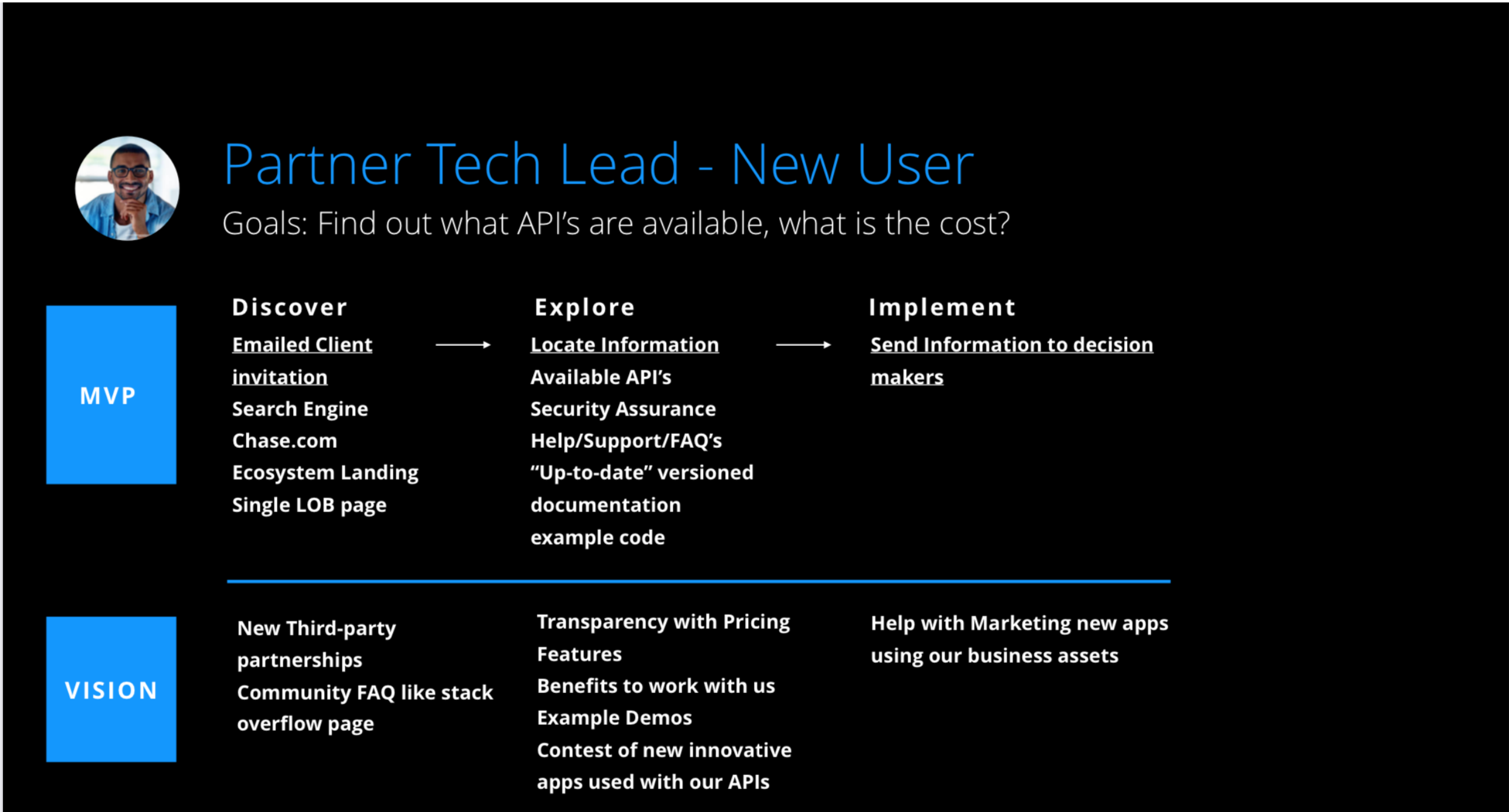
We're building a solid understanding of how our target users work, interact, and consume information, in addition to what they expect from an API platform.

We find ourselves in a unique place for conducting research with the firm: we're designing for both internal and external users outside the "traditional" banking or financial spaces.

That said...



Customer Journeys



Personas



Partner Tech Lead

Jonathan Williams

Age: 43

Job Title: Senior Technical Lead

Development Experience: 15 years

"I need to find the best API solutions for the company that I can trust."

Bio:

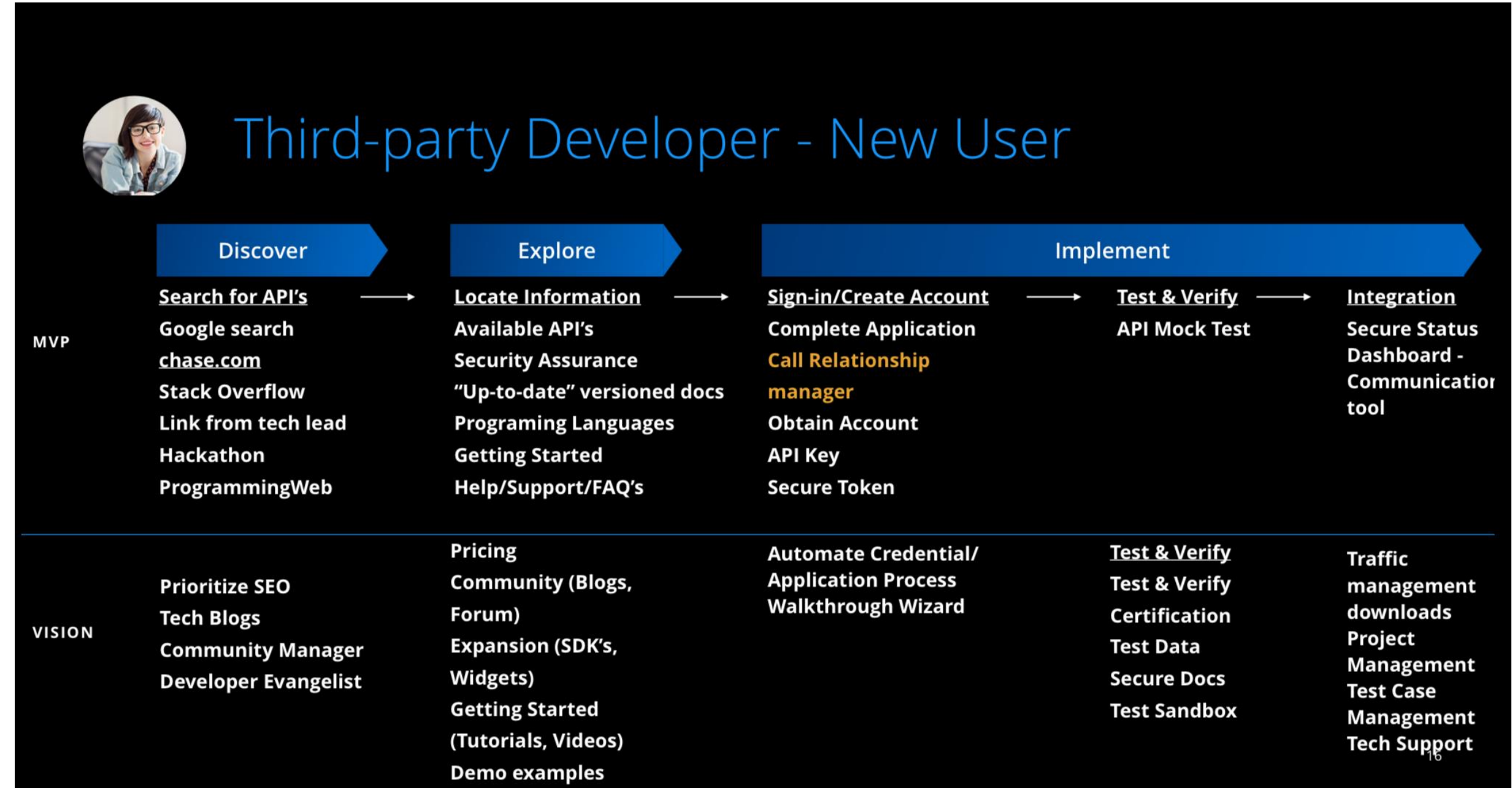
Jonathan works with Amex and has been leading tech teams for over 10 years. In his role, he is responsible for staying on the edge of technology, finding new ways to improve the efficiency of his team and improving the products he supports.

Pain Points:

Security is a big concern and working and partnering with a trusted source Doesn't want to deal with the manual process of a relationship manager. Finding strong community support of a product with versioning confirming it's stability

Goals:

Needs to quickly and easily understand API products and solutions that are offered and how easily they can be implemented.



JPMC Developer

Jacob

Age: #

Job Title: Developer

Development Experience: # years

"I need find API solutions quickly and have documentation all in one place. "

Bio:

Jacob has been working at chase for about 5 years. He has been assigned to find new innovative ways to create Chase Marketplace apps. He has been learning about Alexa and sees opportunities with JPMChase APIs that may help quickly build out some of his ideas.

Pain Points:

Documentation is in pdf and is not searchable or easy to read. It's hard to learn who throughout the company is designing APIs that might fit his next solution. With no example code it is hard to know if this is an easy process to implement

Goals:

- Find step-by-step tutorials, examples, demos, and documentation
- Implement API solutions

Our Audience



We design for a wide range of users, both inside and outside the firm:

Developer (External)	Developer (Internal)	Publisher (Internal)	Governance (Internal)	Relationship Manager (Internal)	Business Owner (External)	Tech Support (Internal)	Global Onboarding (Internal)
Goal: Construct an application that leverages Chase's data.	Goal: Construct an application that leverages another group's data/tech.	Goal: Make an API available for use by other LOBs/groups within Chase.	Goal: Ensure the high quality of JPMC APIs.	Goal: Foster business with our external partners and help them on board.	Goal: Increase business by partnering with third party tech providers.	Goal: Diagnose and direct users' technical support requests.	Goal: Usher, verify and orient new users through the JPMC platform.

External titles have included:



Software Engineers



CIOs, Global Heads of IT

Internal titles have included:

Software Engineers
API Product Owners
API Publishers

Administrators
API Strategists
Tech Support

MVP 2018

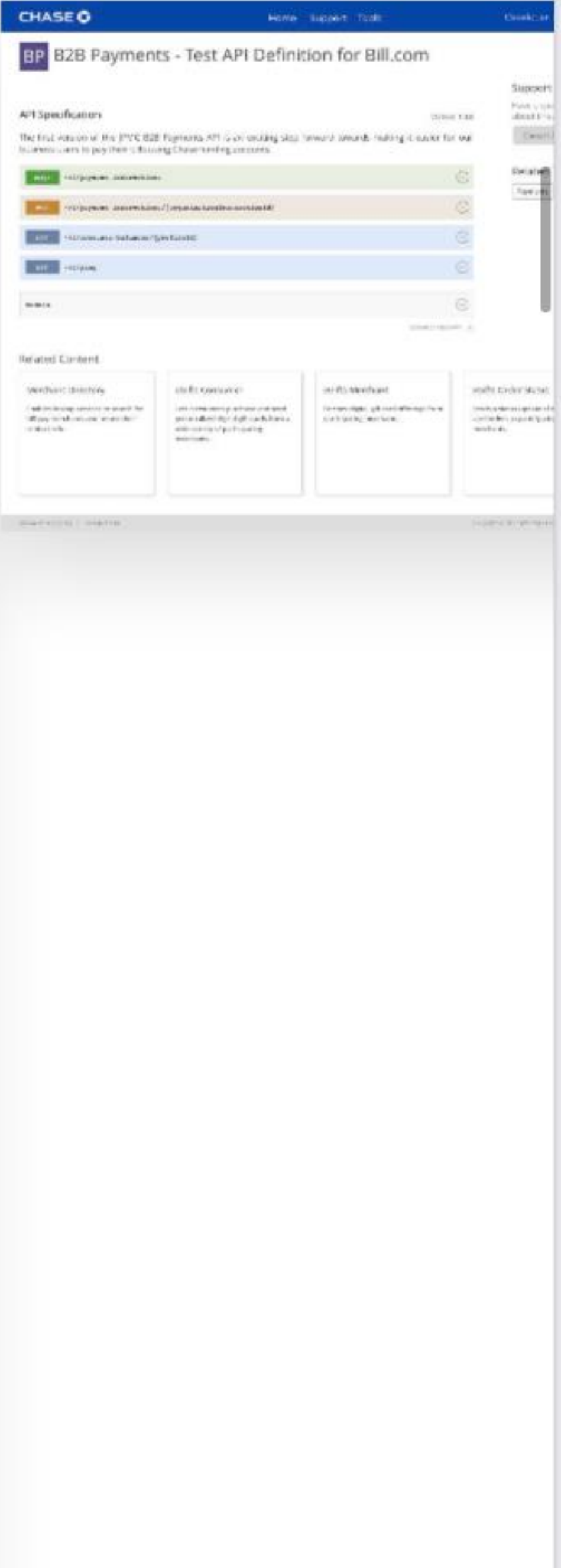
Login Homepage



Home / Product listing



API Swagger file

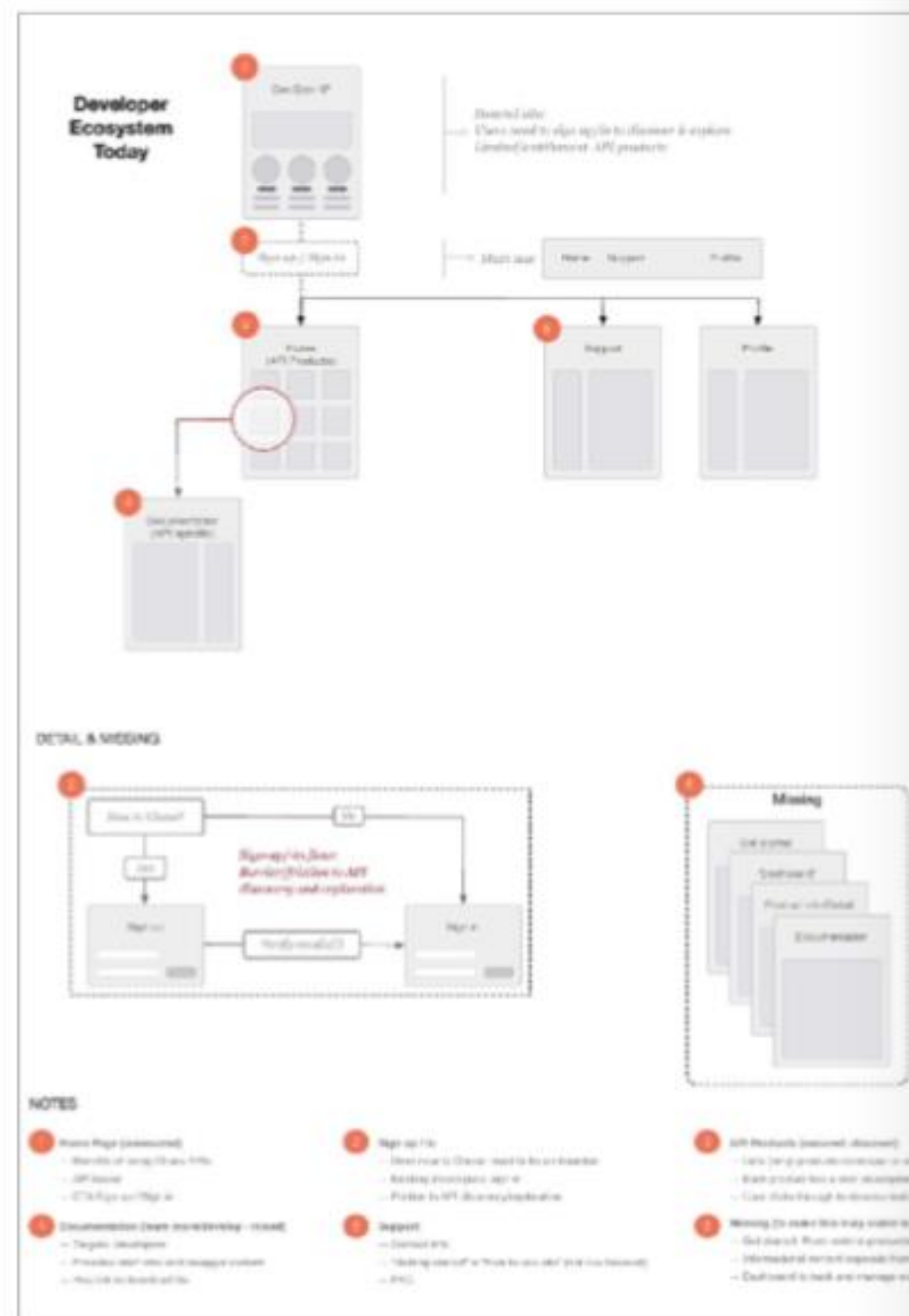


Goals for 2019

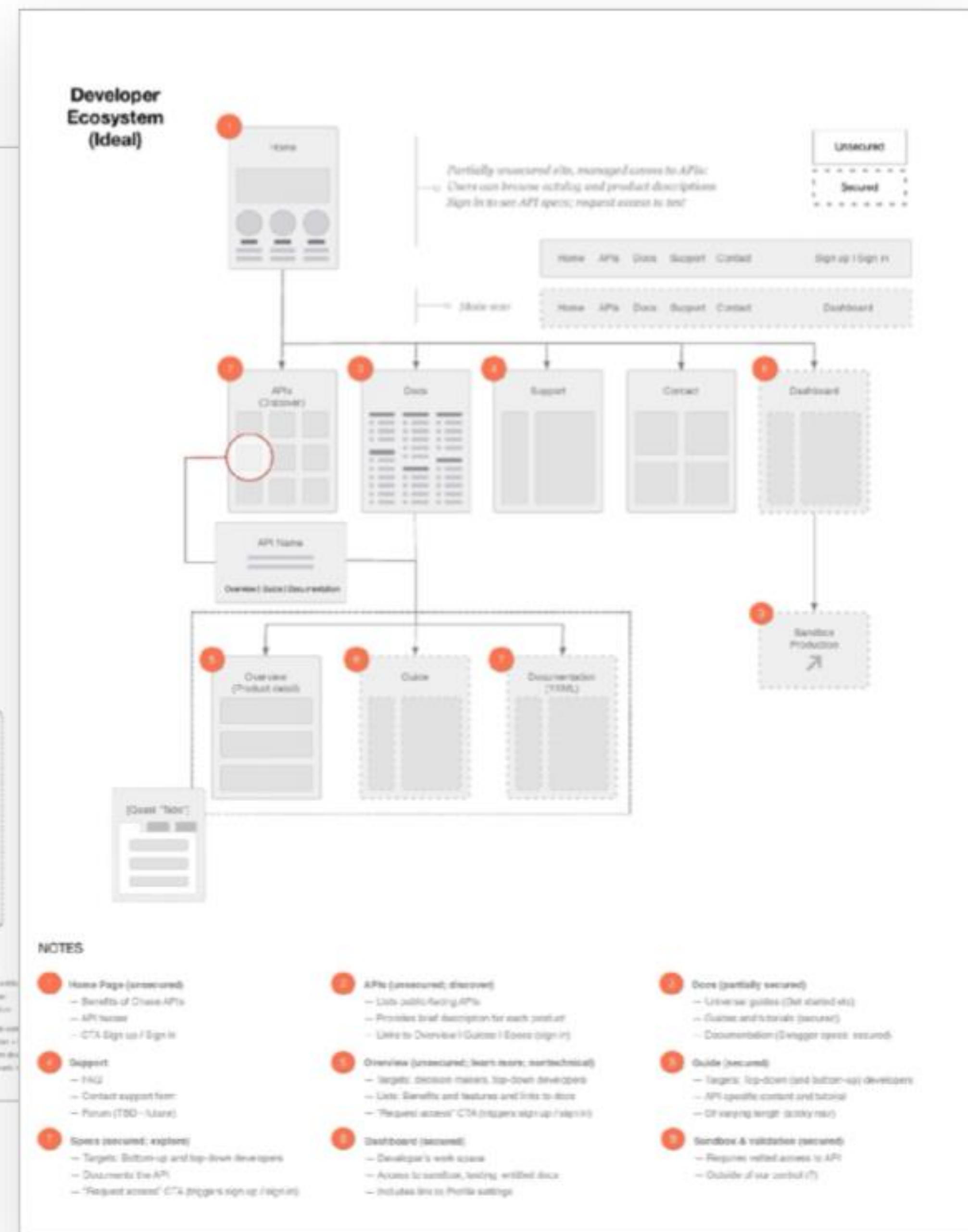
Next Release April 1, 2019

Explorations include:

- Improved Documentation
- API Catalog/Categorization
- Adding a Developer Dashboard
- Improved onboarding through Getting Started Guide
- Notifications
- Improved backend Tools



Developer Ecosystem today

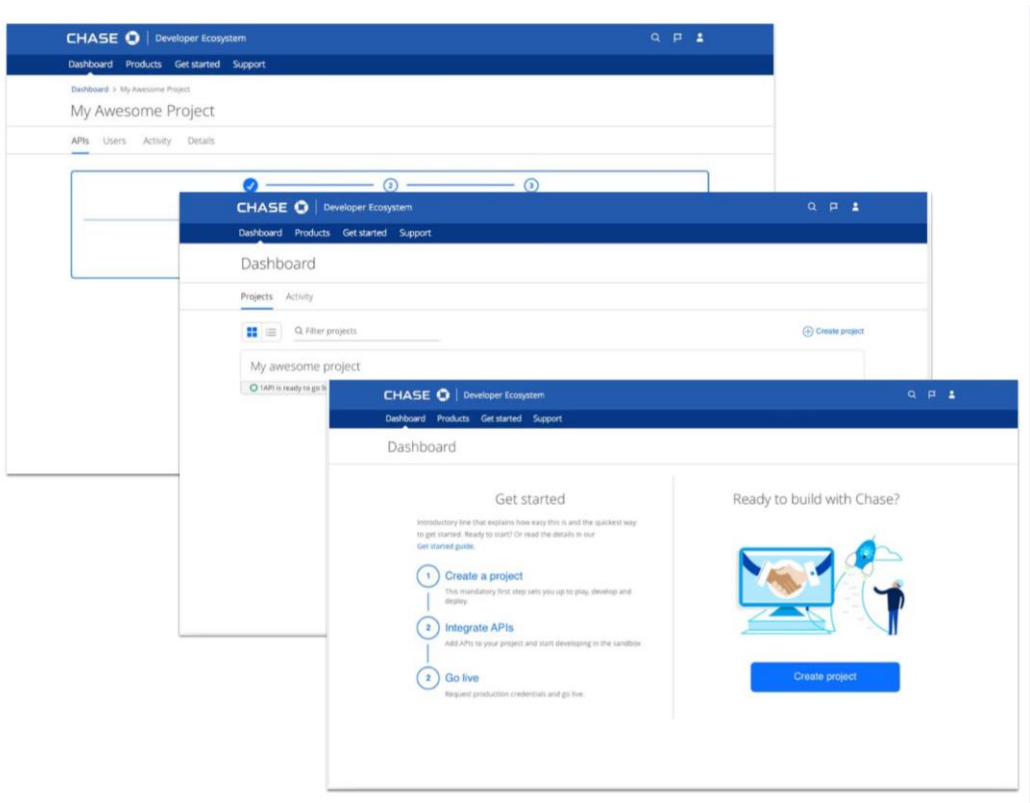


Developer Ecosystem - Vision

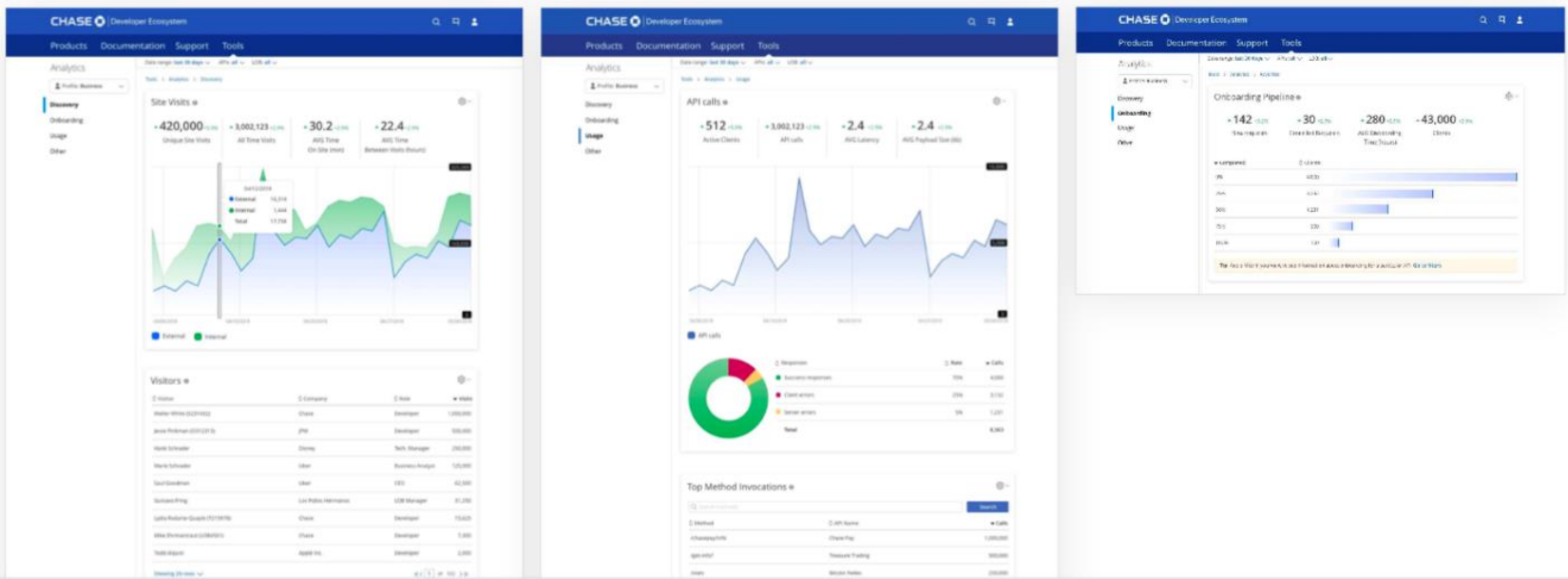
2019 Diversity of skills and projects



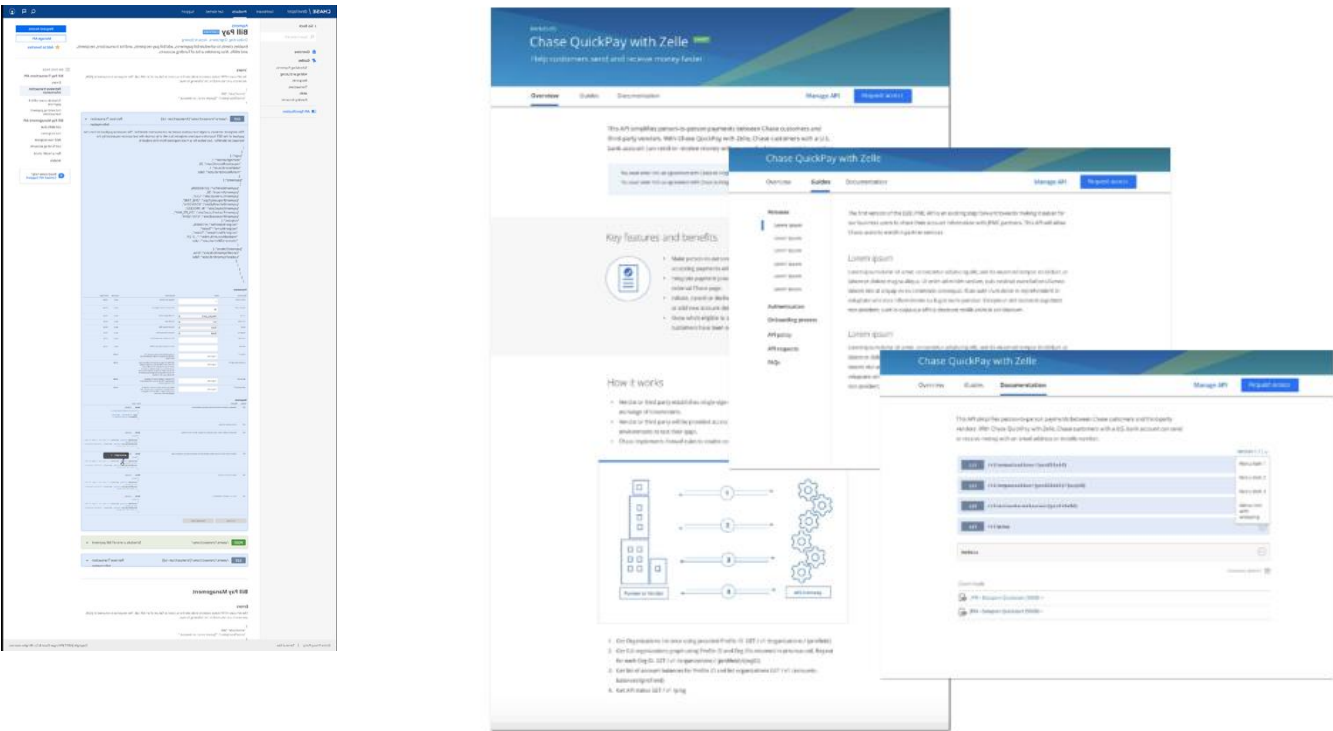
On-boarding partners



Analytics



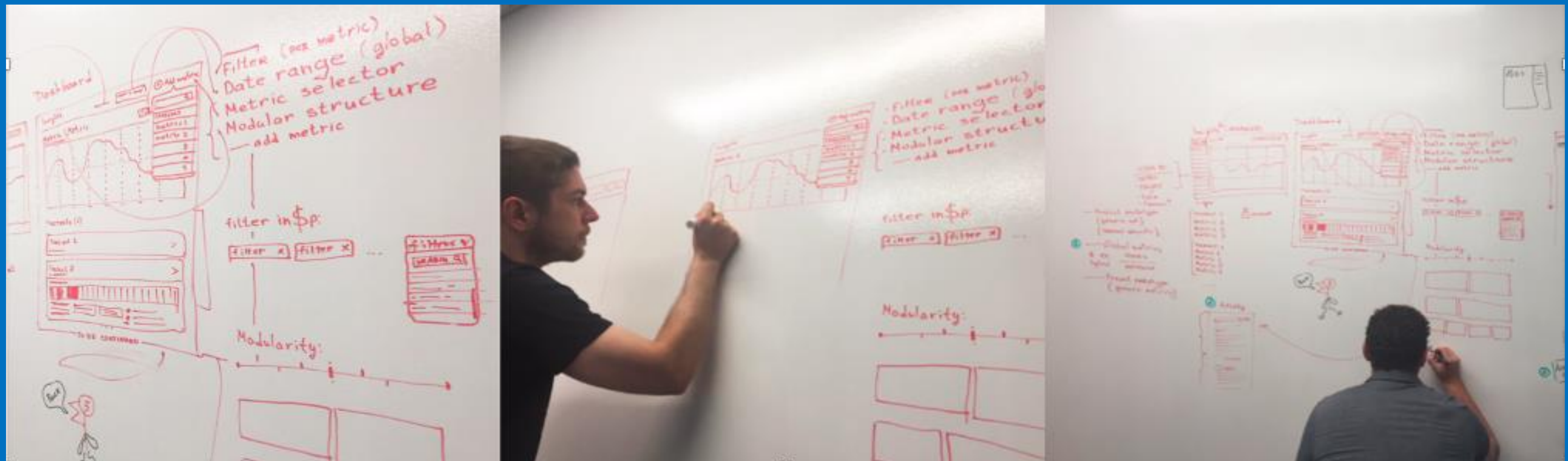
Marketing vs Guides vs code examples



Catalog and Taxonomy

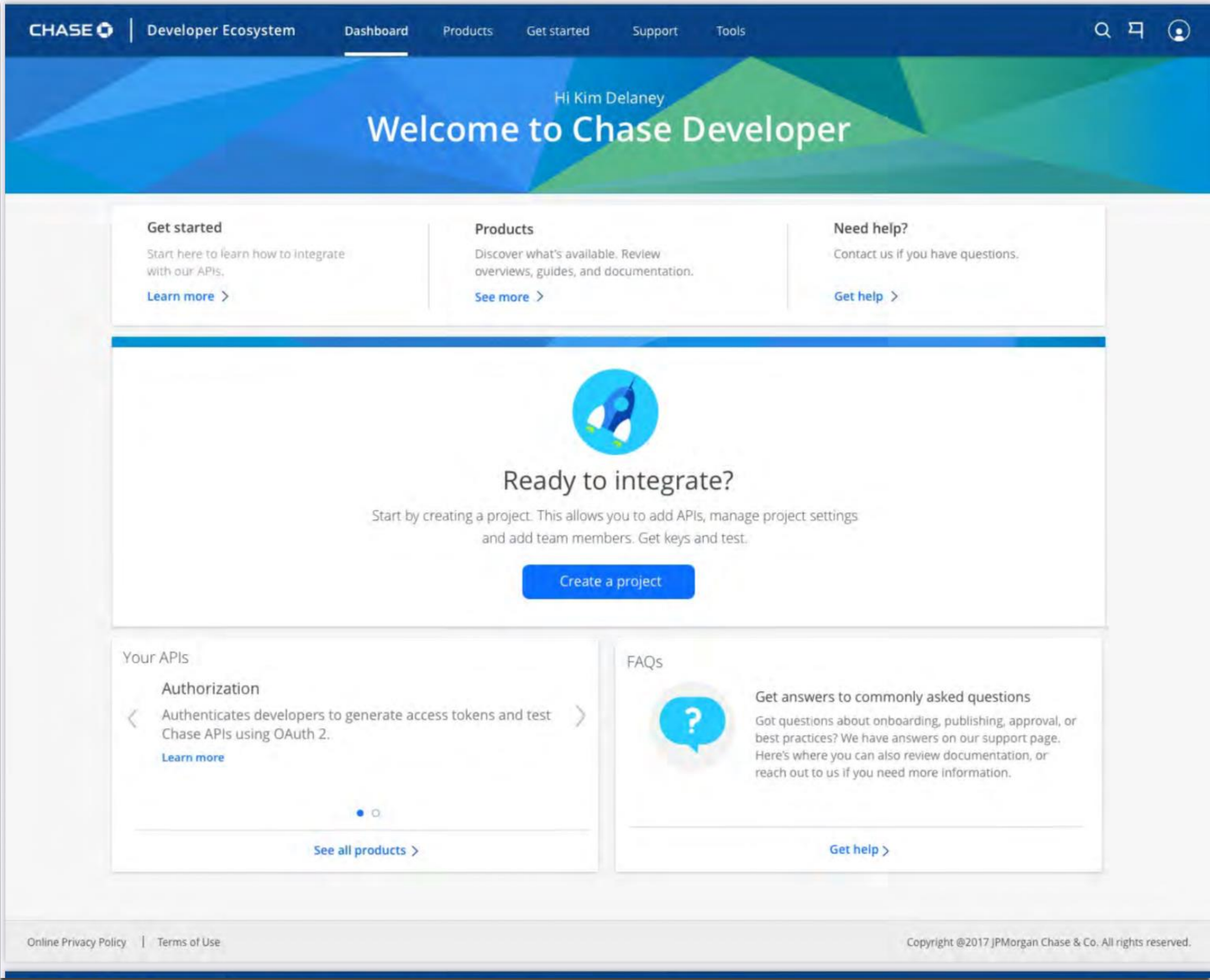


2020 Self Service External Partnerships



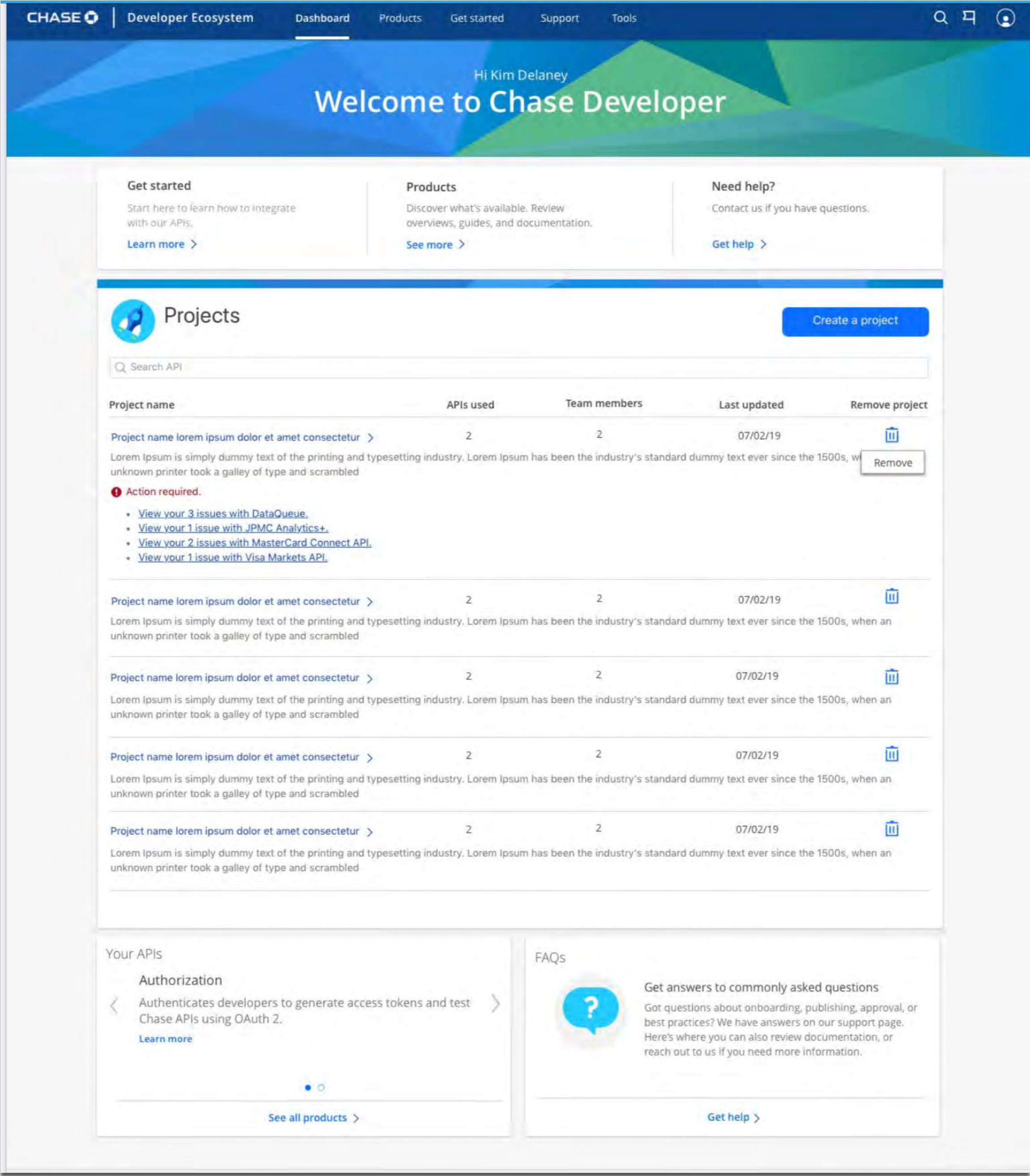
Dashboard landing

Self service communication area when first signed in to help the user know where to start and what to do.



Adding Project

Developer can view their project, add users and APIs and view onboarding requirements.



© 2006 The Authors
Journal compilation © 2006 Blackwell Publishing Ltd

HASE

Developer Ecosystem

DashboardProductsSupportTools

Dashboard > Test Project > Account Balances

Account Balances

11%

Action Required 3

Pending 4

Complete 1

STAGES

Choose your authentication method

Action Required

OAuth Overview ✓

OAuth Step 1 - Create CSR

Action Required

OAuth Step 2 - Receive Client ID and Public Cert

OAuth Step 3 - Use credentials to call our API

Action Required

OAuth Troubleshooting Help

SSL certificate upload - UAT

SSL certificate upload - PROD

Choose your authentication method

Started : 19-Mar-2020

Please select below which option of API authentication you would like to use

OAuth: J.P. Morgan will provide instructions for you to generate an X509 Certificate Signing Request (CSR) which you will use to request a token for making API calls.

Please note: OAuth is currently not available for clients based in the Asia Pacific.

SSL certificates: You will need to provide J.P. Morgan with UAT and Production SSL certificates issued by an approved Certificate Authority. These certificates should be installed on your server, and we will install them on ours.

Please provide us with your desired authentication option. *

☐ SSL Certificates

☐ OAuth

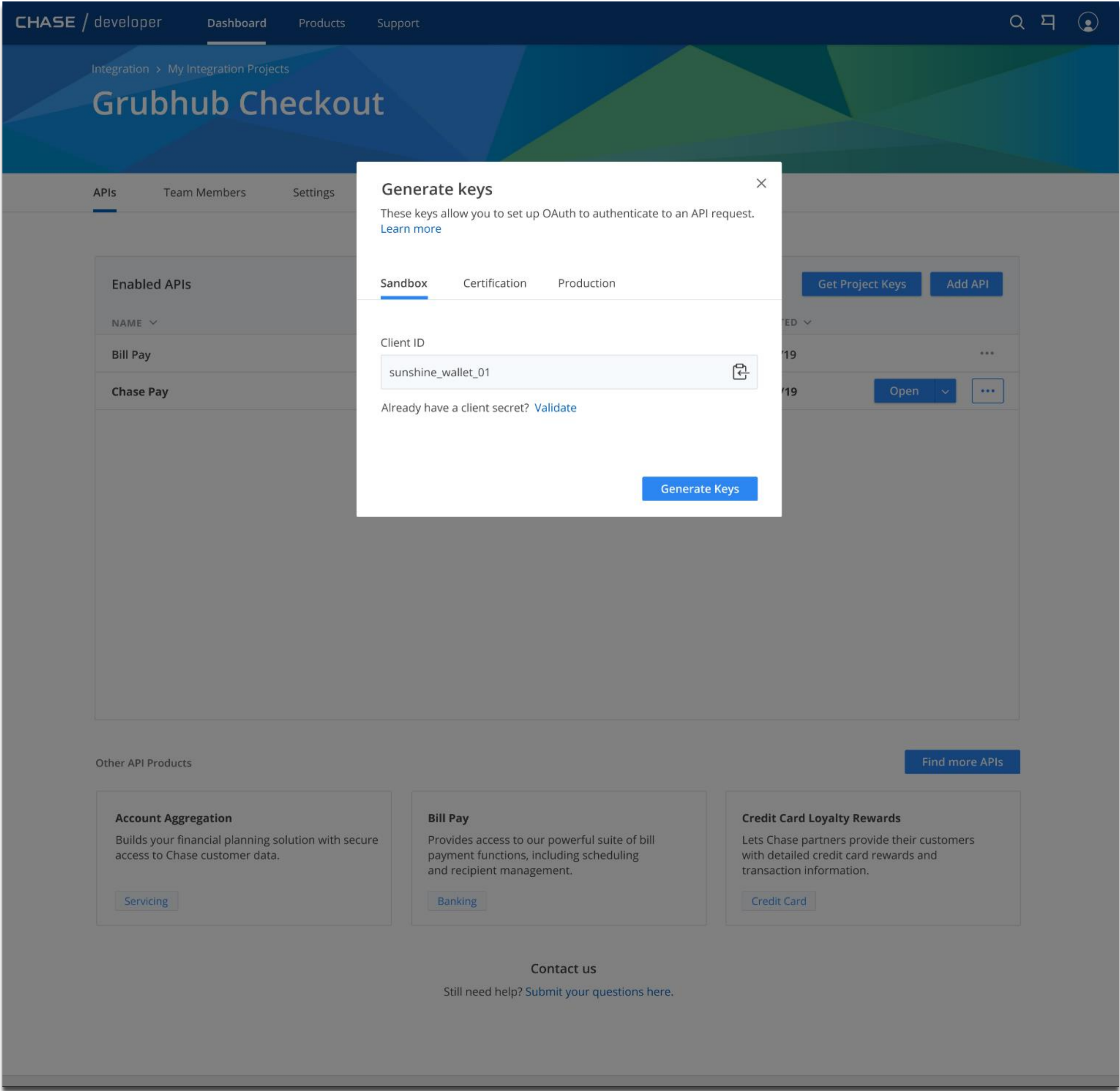
Reset

Save Changes

Submit Form

Get keys once entitled

Once developer has been approved as a partner, they can get the keys to call the APIs from the gateway.



Marketing API Products

Different external partners include Developers, CTOs as decision makers and business owners. They have different needs in documentation. For example, a business owner would appreciate this marketing page to explain capabilities, but the developer would call this fluff.

CHASEDeveloper Ecosystem

DashboardProductsGet startedSupport

PAYMENTS

Chase QuickPay with Zelle

DRAFT

Help customers send and receive money faster.

Overview

Guides

Documentation

Manage API

Request access

This API simplifies person-to-person payments between Chase customers and third-party vendors. With Chase QuickPay with Zelle, Chase customers with a U.S. bank account can send or receive money with an email address or mobile number.

You must enter into an agreement with Chase to integrate with this API.

You must enter into an agreement with Chase to integrate with this API.

Key features and benefits

- Make person-to-person money transfers fast and convenient by accepting payments with email addresses or mobile numbers.
- Integrate payment processing so that users aren't redirected to an external Chase page.
- Initiate, cancel or decline payment requests and retrieve, update or add new account details.
- Know who's eligible to send or receive payments and see which customers have been securely authenticated.

How it works

- Vendor or third party establishes single-sign-on integration with Chase through an exchange of tokens/certs.
- Vendor or third party will be provided access to Chase's test and certification environments to test their apps.
- Chase implements firewall rules to enable connectivity between vendor and Chase.

- Get Organizations list once using provided Profile ID GET / v1 /organizations / {profileId}
- Get full organizations graph using Profile ID and Org IDs returned in previous call. Repeat for each Org ID. GET / v1 /organizations / {profileId}/{orgId}
- Get list of account balances for Profile ID and list organizations GET / v1 /accounts-balances/{profileId}
- Get API status GET / v1 /ping

Use Case

Enhance and Automate

FreeTrade, a global financial technology company, integrated B2B Customer Info into its existing technology platform to enhance and automate the way thousands of businesses manage their supplier payments and employee expenses.

Related

Authorization

Authenticates developers to generate access tokens and test Chase APIs using OAuth 2.

Learn more | Documentation

Chase QuickPay triumphs

Authenticates developers to generate access tokens and test Chase APIs using OAuth 2.

Learn more

QuickPay Blog post

Authenticates developers to generate access tokens and test Chase APIs using OAuth 2.

Learn more

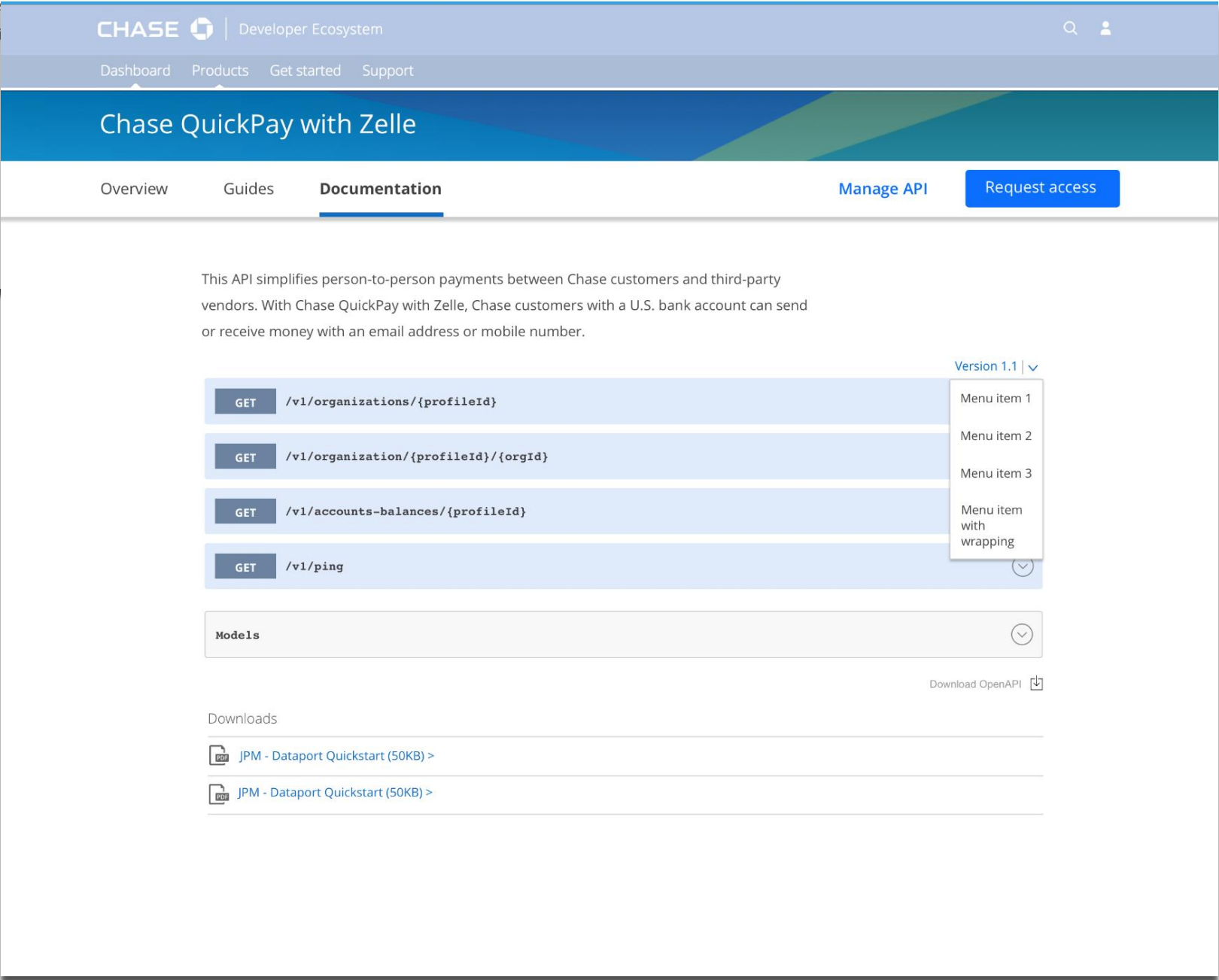
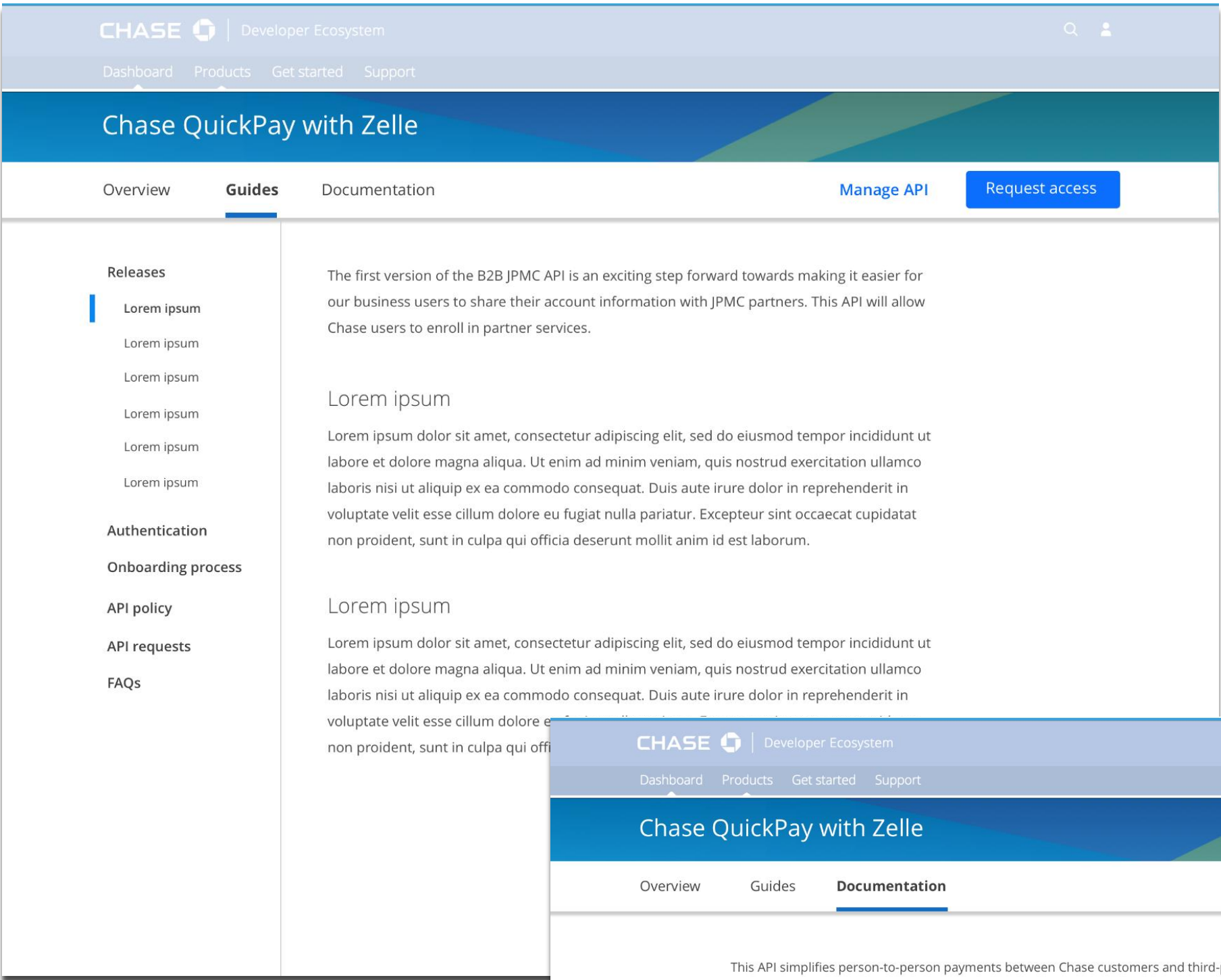
QuickPay Blog post

Authenticates developers to generate access tokens and test Chase APIs using OAuth 2.

Learn more

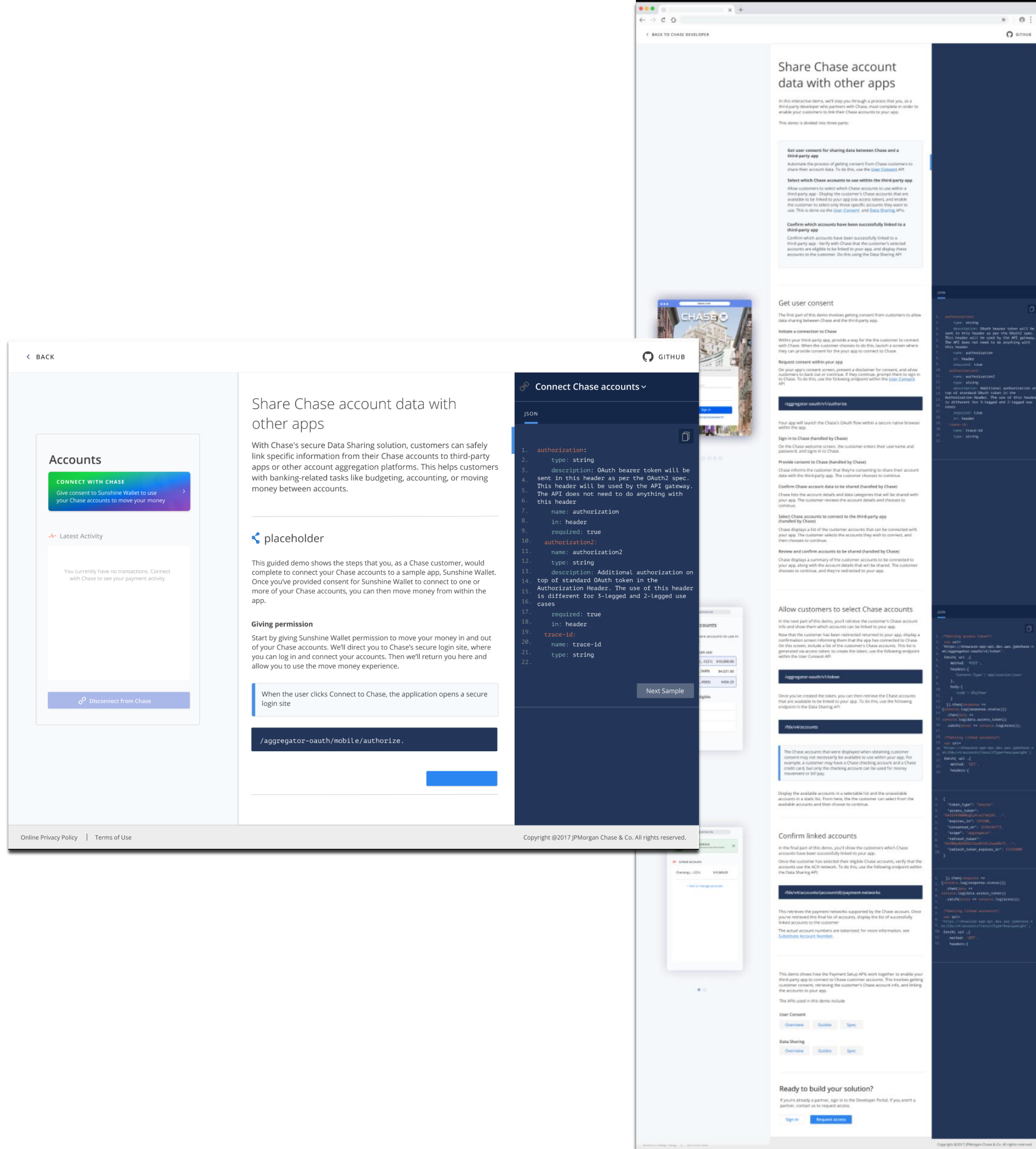
Guides and Swagger

Most developers would say “Just get me to the code”, as bottom-up thinkers, but less seasoned may prefer guides to walk them thru the flows and tutorials.



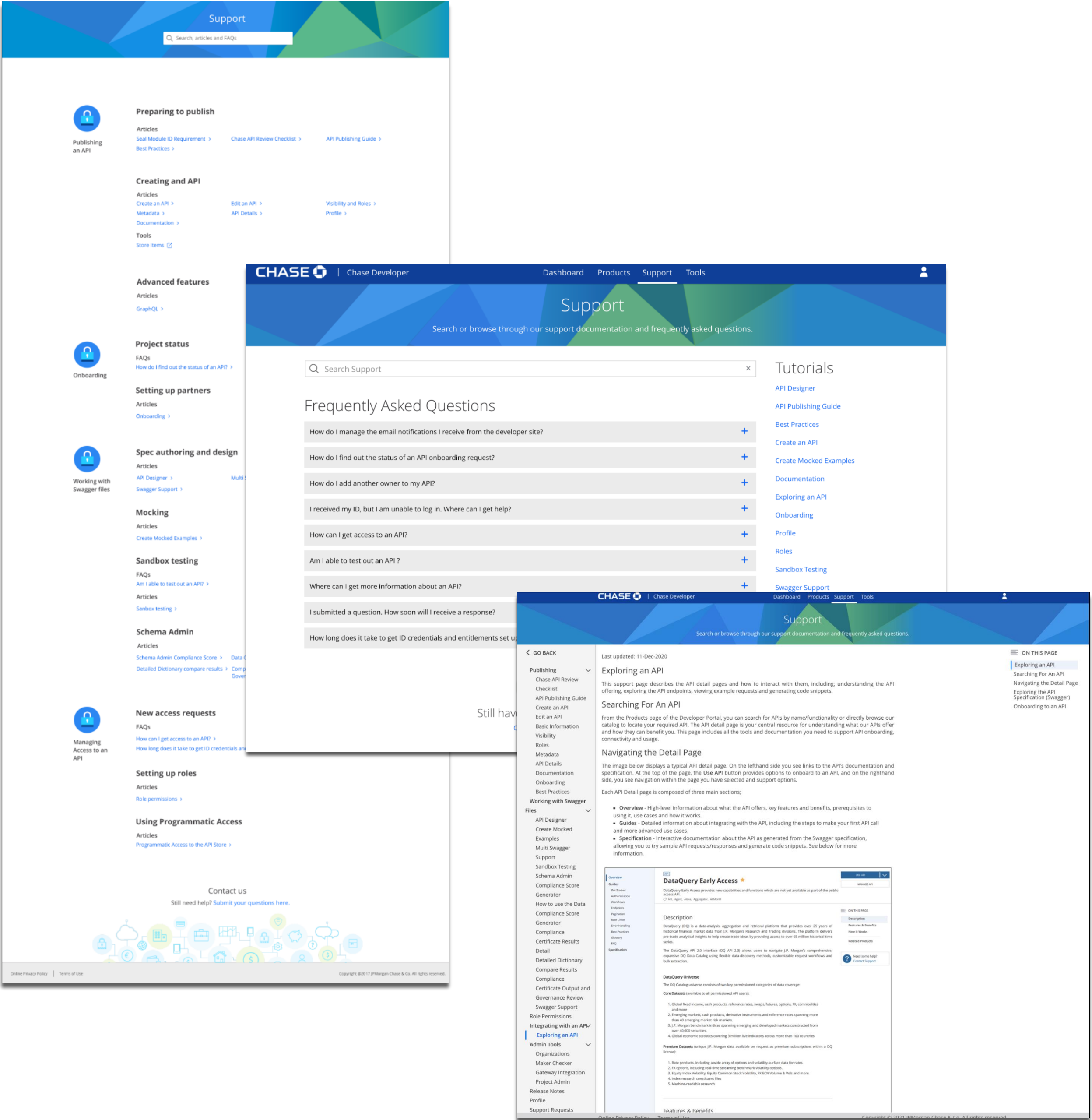
Interactive demos

Adding richer media and code examples for quicker comprehension of what the API does.



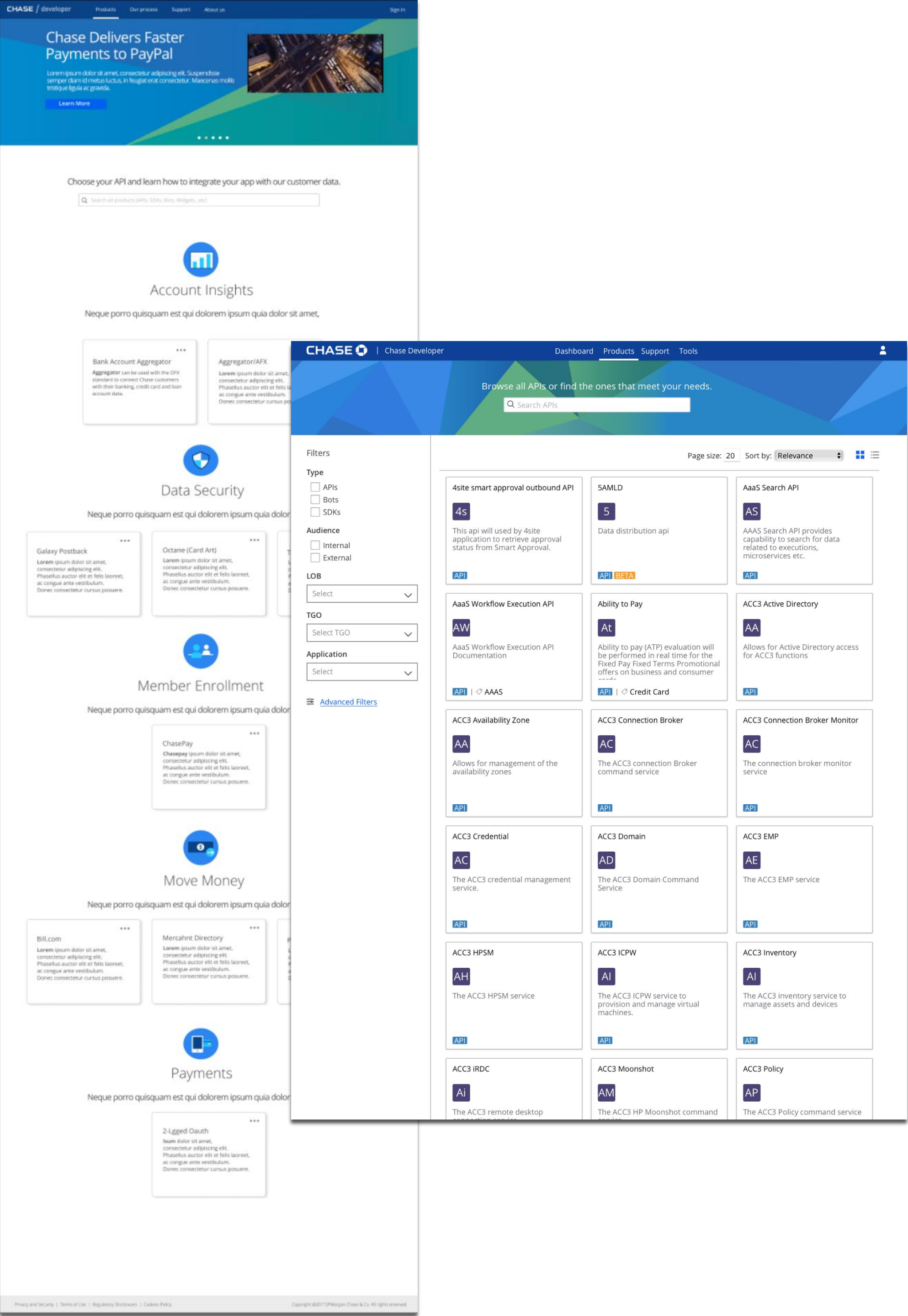
Supporting docs

Orient the user on all the support docs we have available with getting started information.

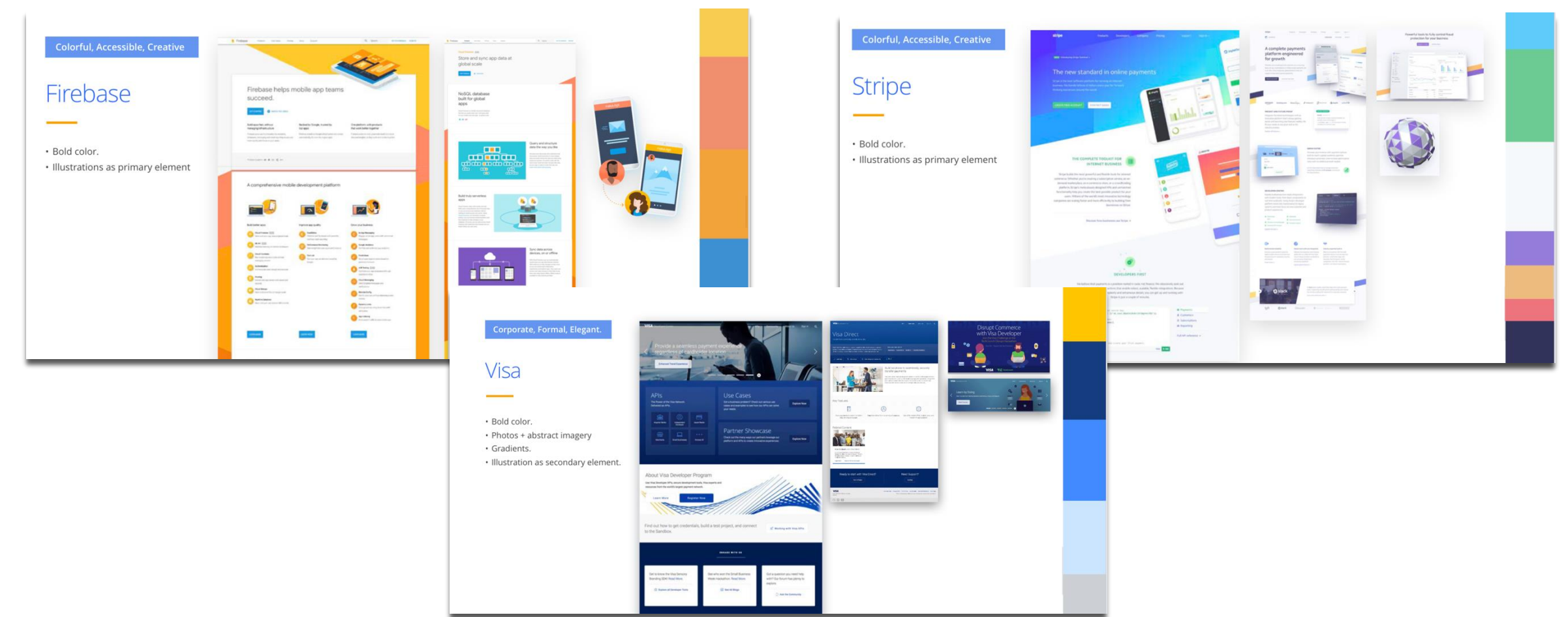
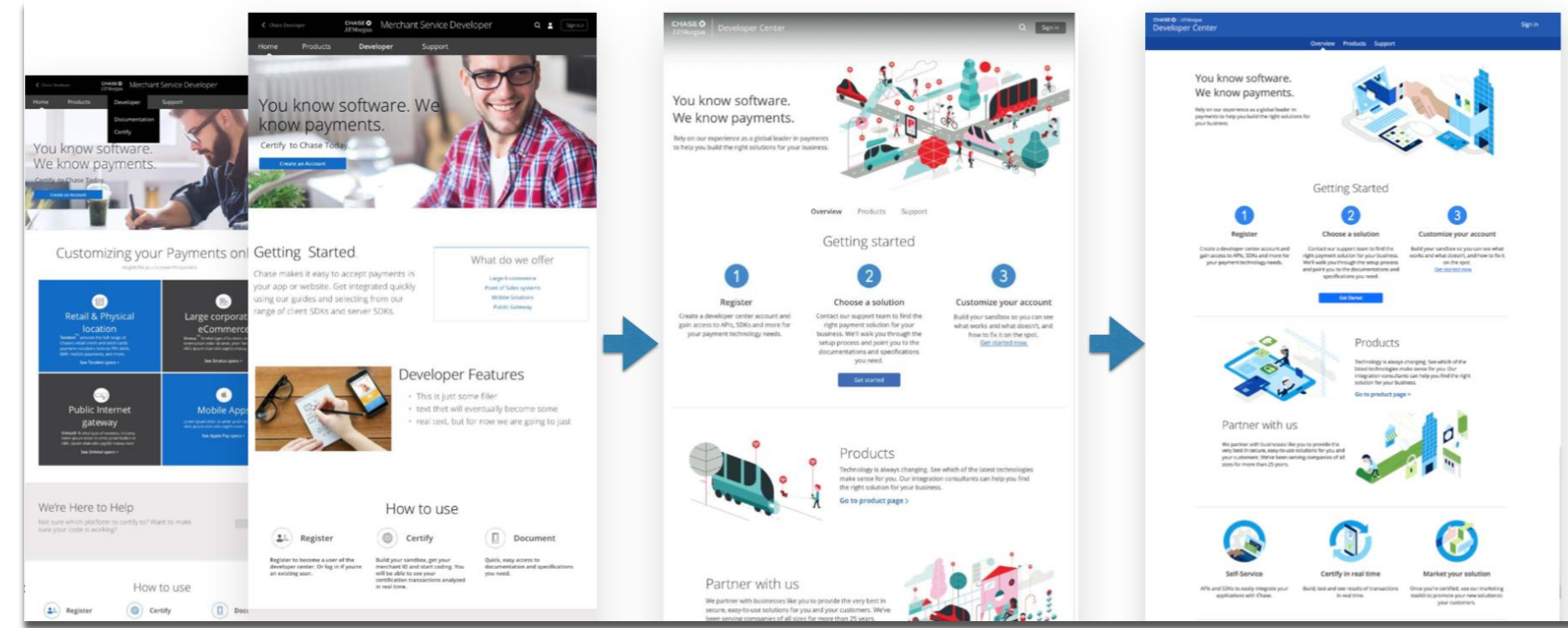


Discover APIs

External versus internal API discovery shows the scaling need to add search, filtering capabilities and determining the taxonomy of categorization.

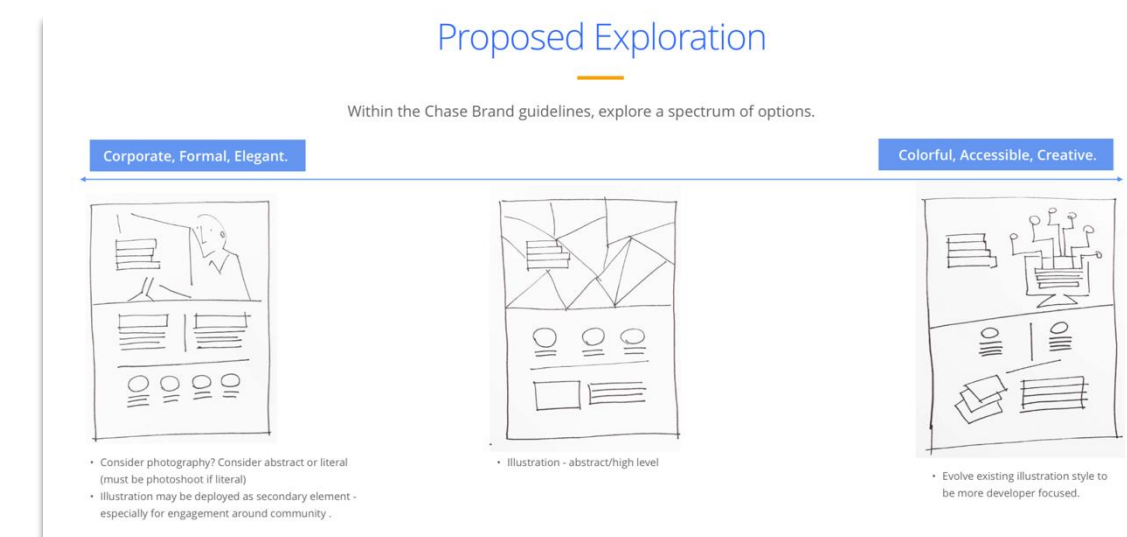
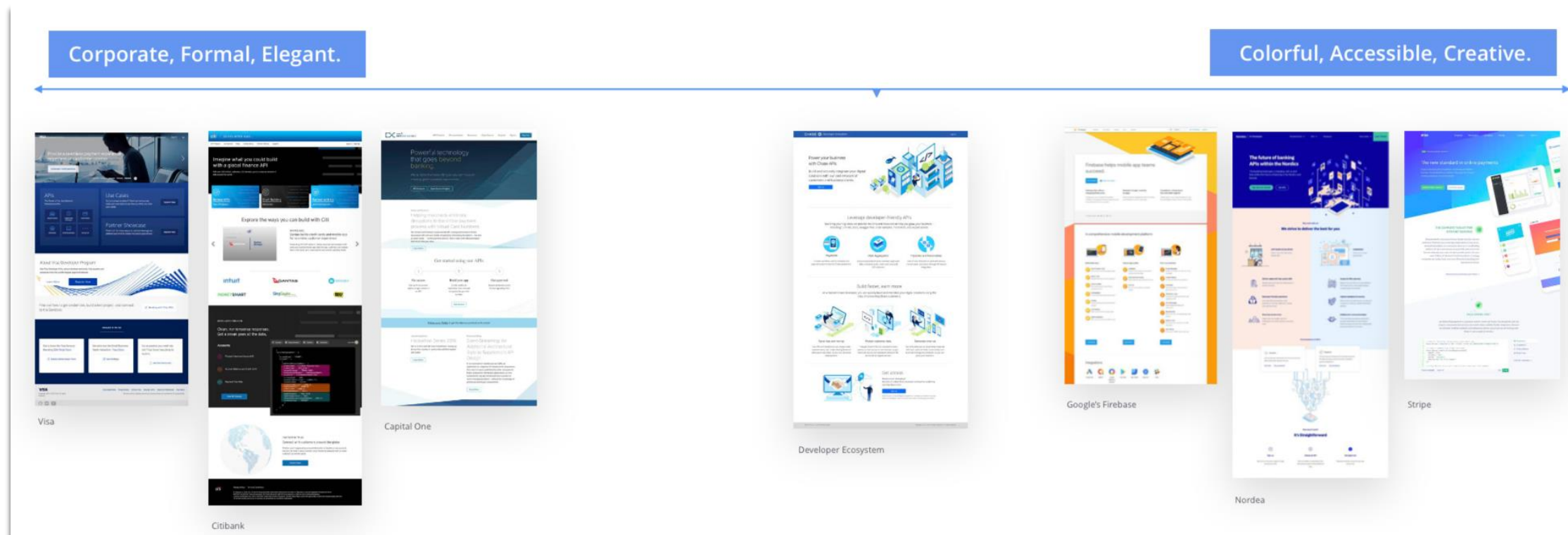


Branding



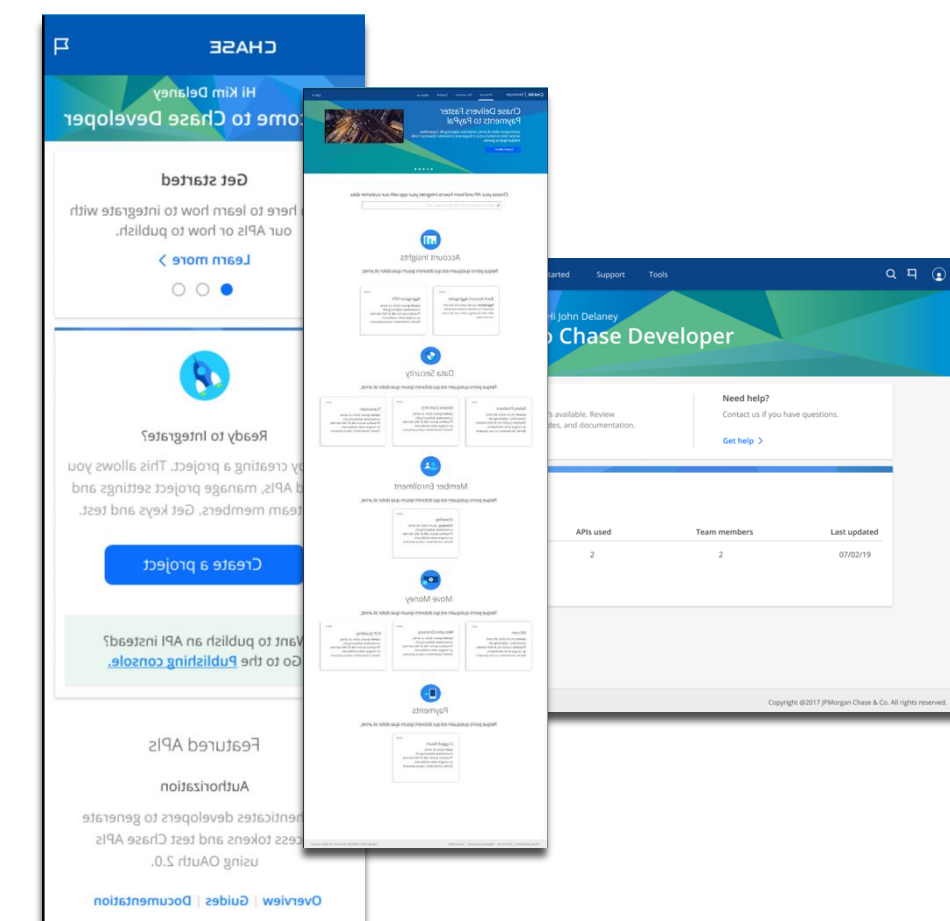
We studied our competitors both big tech and banks to determine their mood boards, branding and color schemes.

Testing showed us developers liked minimal, colorful, illustrative feel.



For the interim we went with a abstract feel to not be dependent on illustrators, but our goal was to hire an illustrator for that Google-esque feel.

Our original designs was to integrate several JPMorgan & Chase portals, but with multiple front doors the preference was to go with the strong Chase brand.



Goldman Sachs Wealth Management Application

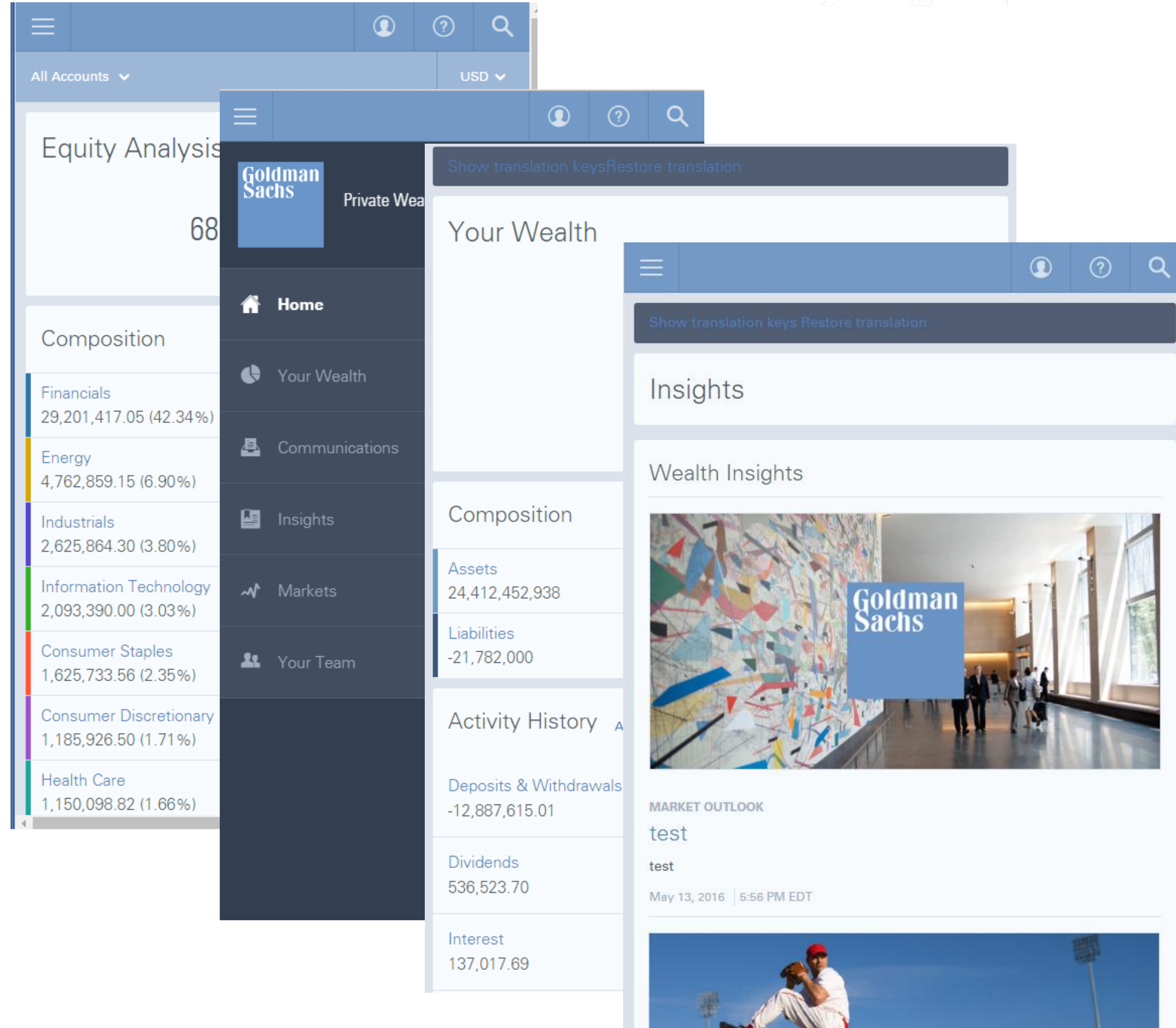
Role: Sapient Design System Lead Consultant, Technology Manager and CSS Expert

Partners: Lead Architect, Product Owner and Application Tech Lead

Teams: Two Design teams both in-house and vendor, 20 front-end developers both in-house and offshore

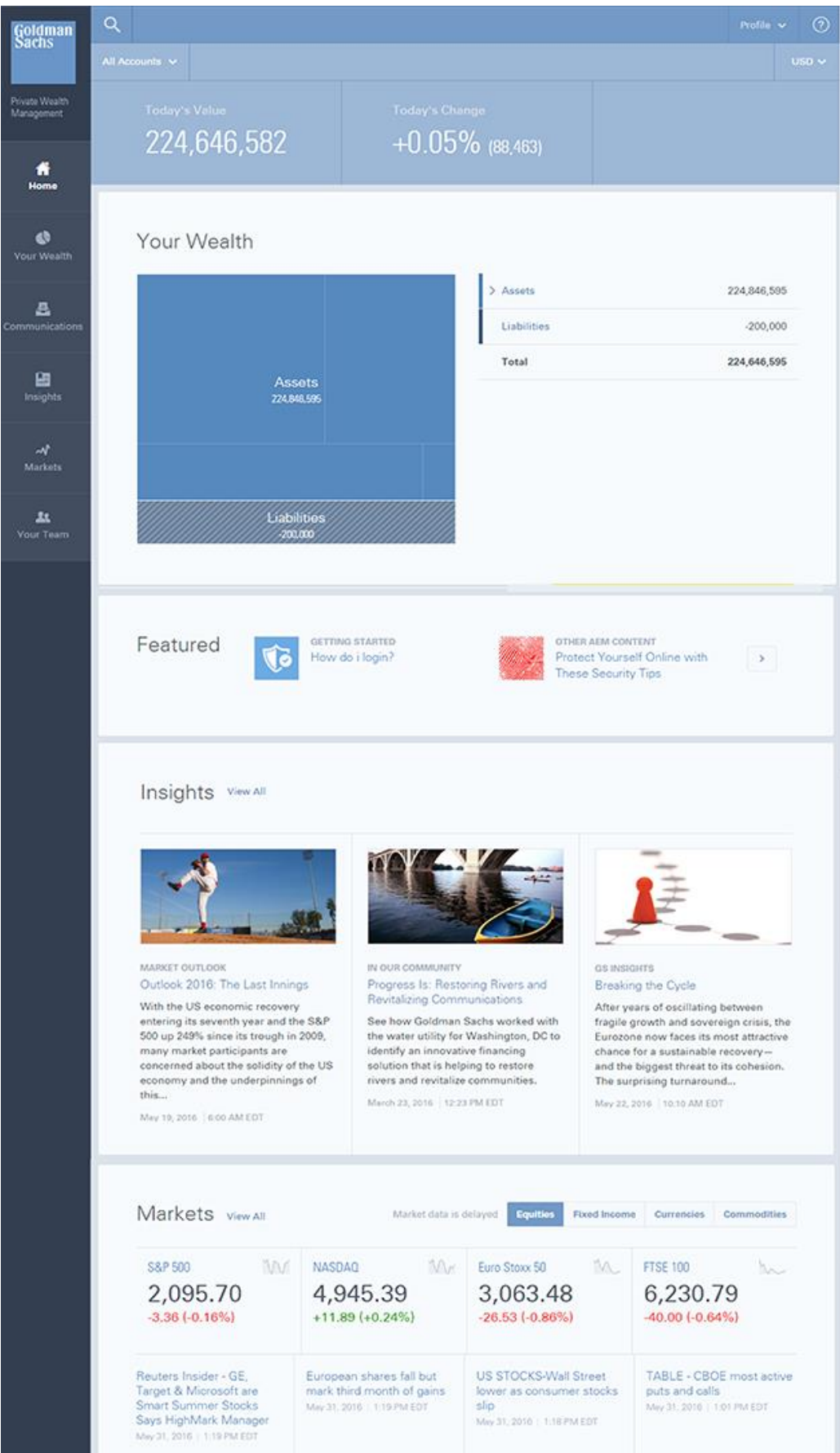
Results

- CSS files reduced by 50%
- UI Bug reporting reduced by 85%
- Load times decreased significantly
- Development velocity improved by 45%
- Design focused more on problem solving and innovation than on design reviews and visual QA
- Component library improved faster onboarding and training
- Sketch versioning design files improved consistency and quality of design

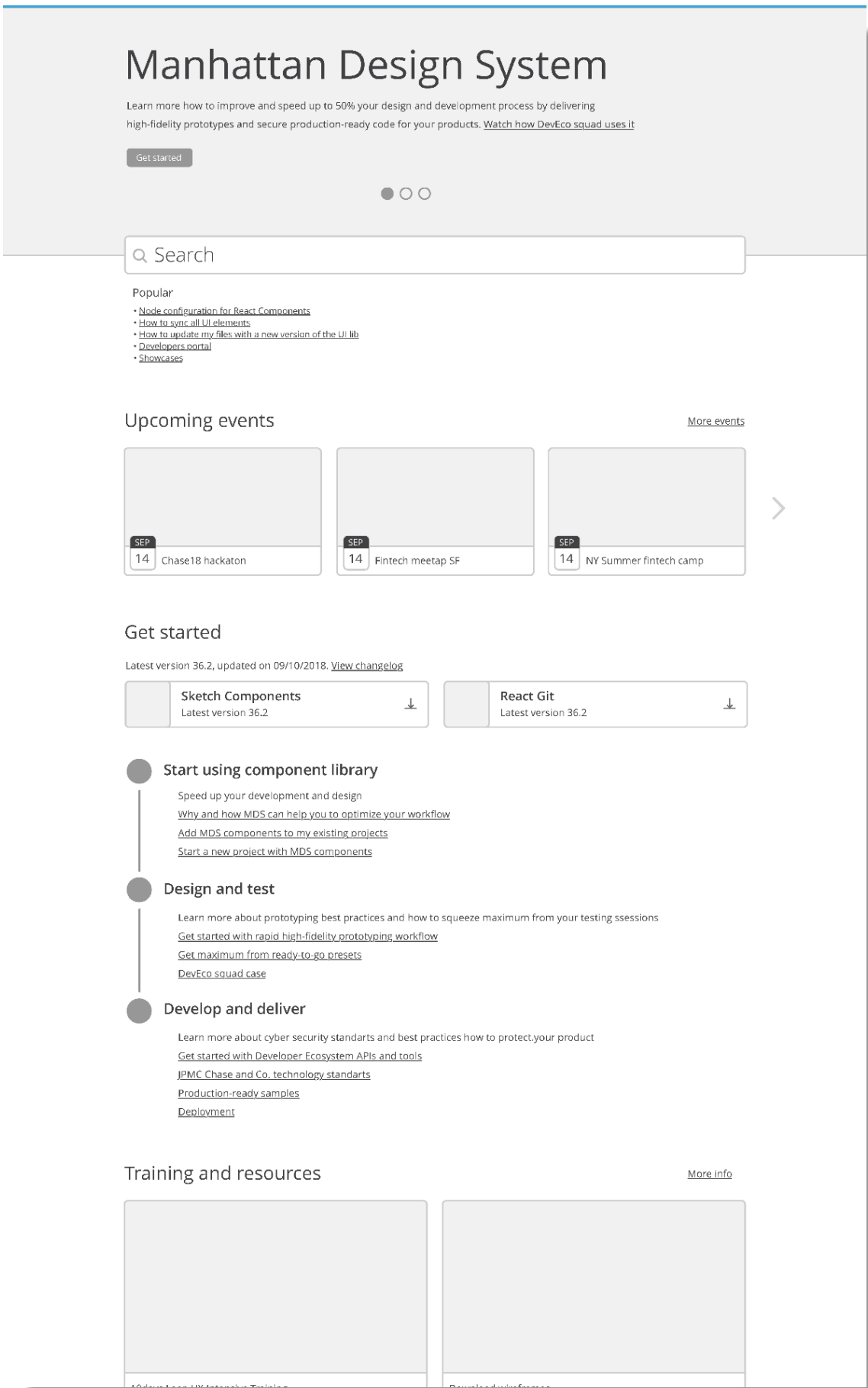


System thinker

I managed building design systems for over 12 years, both from the technology and design perspective.



Goldman Sachs
Technology Manager, Design
System Lead,
CSS Expert

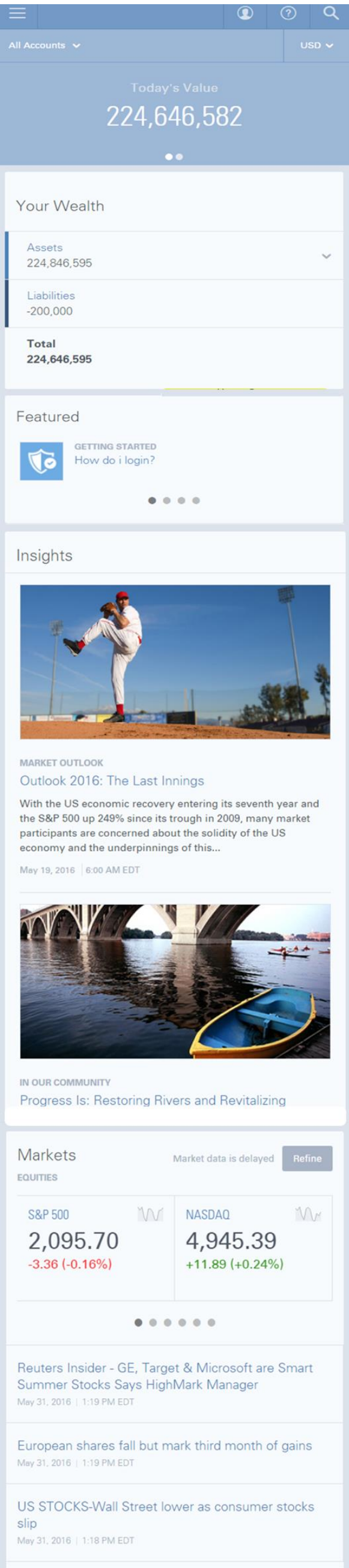
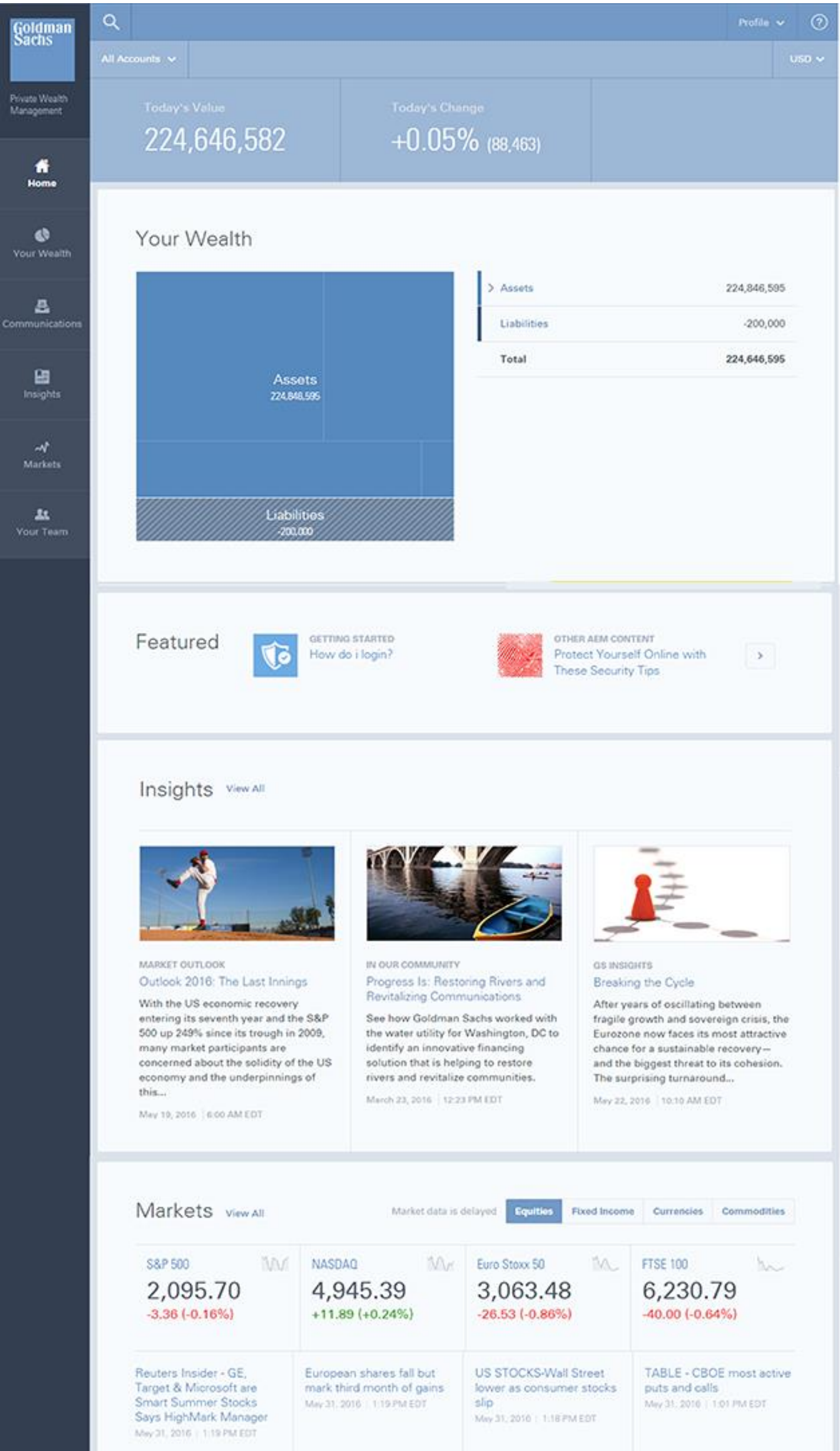


Chase
Cross Channels Design Systems,
VP Design UX Lead

Problem Statement

Goldman Sachs Wealth Management application was two years into production and was having issues with performance, long load times and prone to visual UI bugs.

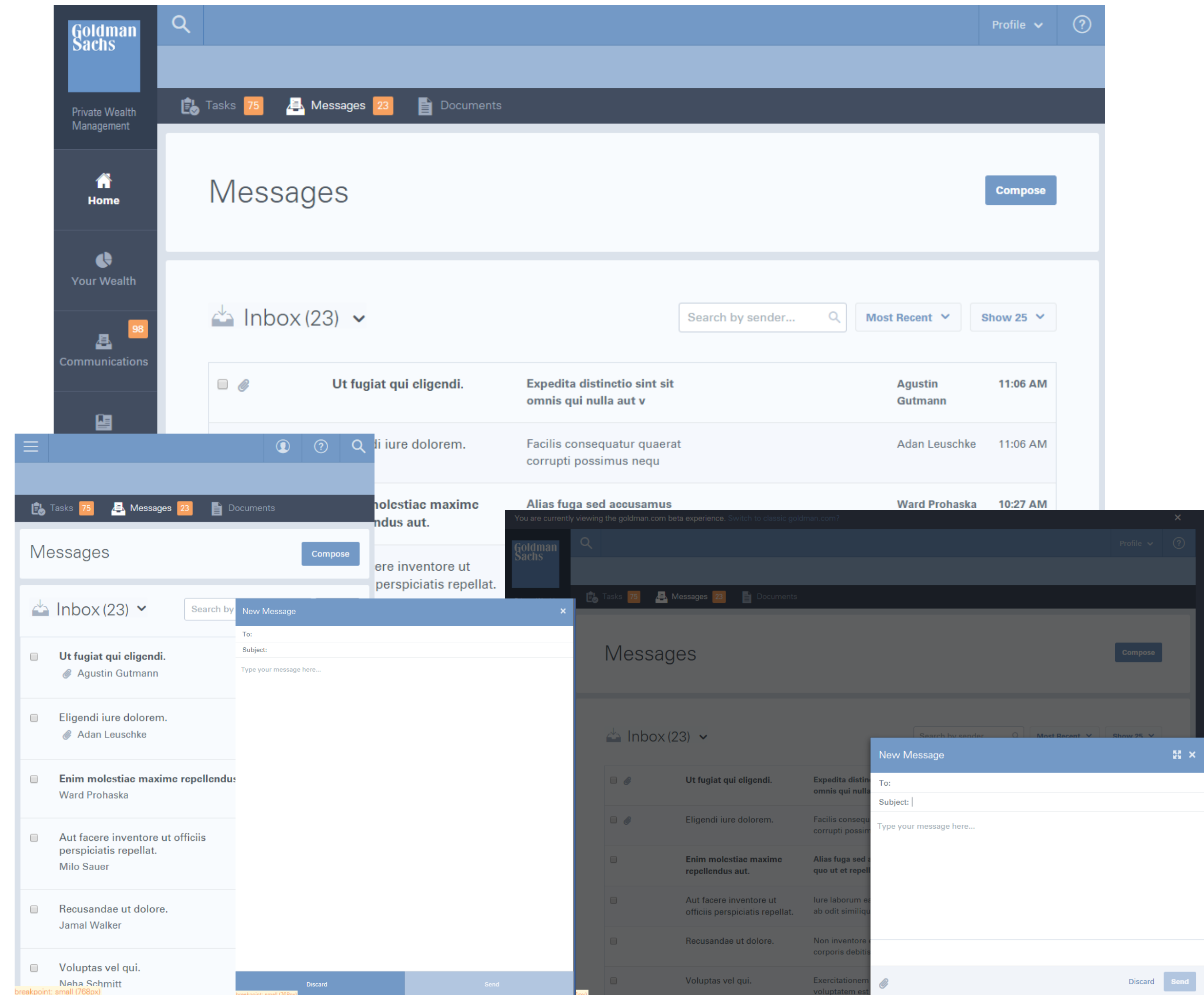
In addition, as the tech and design teams were growing, they were both contributing to a lot of inconsistencies. Each new design team would design alternative “Improved” component solutions and the different development teams were solutioning these same components but in custom variations, creating all sorts of bloat code.



Goal

Build a new design system and component library.

- Re-architect the HTML / CSS
- Refactor old legacy code with the new systems
- Build scalable and readable code, including folder and file structures
- Improve performance and bug reporting.
- I also had to learn about ADA compliance and built that into the systems
- I oversaw all front-end development on building new structure and fixed any cross-browser bugs. It all started and ended with me.



Even Gmail doesn't have a responsive email system.
Kind of proud of this work.

Atomic Design Architecture

Say yes to Sass and defining design tokens, but do not over-engineer the code to make it difficult to read. It needs to be understood 3 years from now by a new team.

Atomic Design both folders and file structure

- reset
- bootstrap-grid
- fonts
 - google-fonts
 - icon-fonts
- core
 - typography
 - colors
 - tokens
 - utilities
- modules
 - dropdowns
 - tables
- templates
 - nav
 - forms
 - wizards
 - marketing-sections
- pages
 - home
 - insights
 - messages

Say no to styling generic HTML5. Styling this way causes CSS code bloat, large file sizes, creates higher specificity and processing. Classes, are your best friend and improves reusability.

```
H1 { //LOOKS CLEAN
  Font-size:
  Font-style:
  Font-weight:
  Font-color:
  Line-height:
  margin-bottom:
}
```

EXAMPLE CODE BLOAT `.chase-brand H1.page-title—inverse !important`

Instead define once and one word reuse in the HTML

```
.page-title {
  Font-size:
  Font-style:
  Font-weight:
  Font-color:
  Line-height:
}
```

```
<h1 class="page-title mb-16">
```

CSS Proposal – No one size fits all

Use Object Oriented CSS and BEM methodology

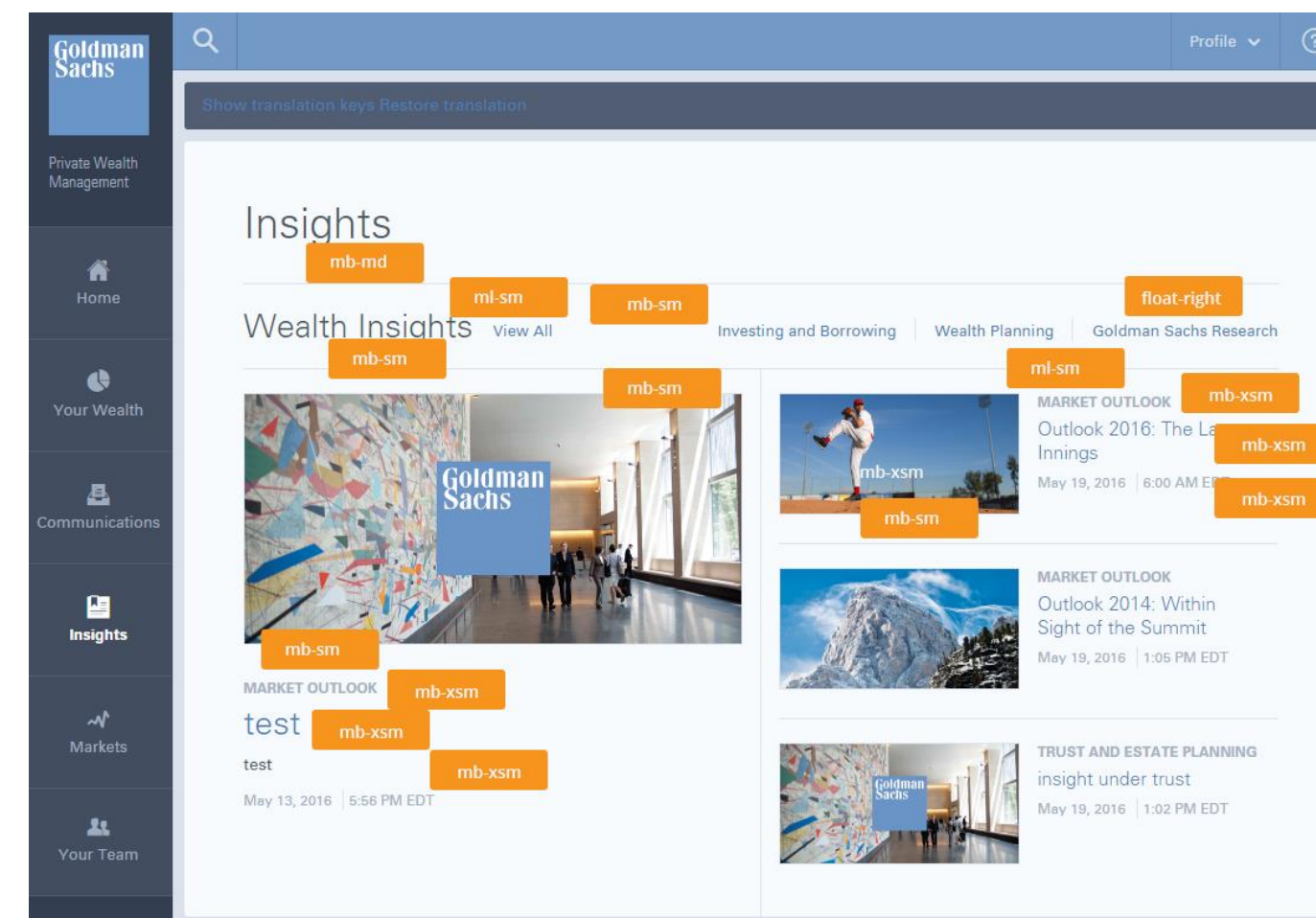


Typography classes

Use Semantic classes for easy understanding

Utility classes

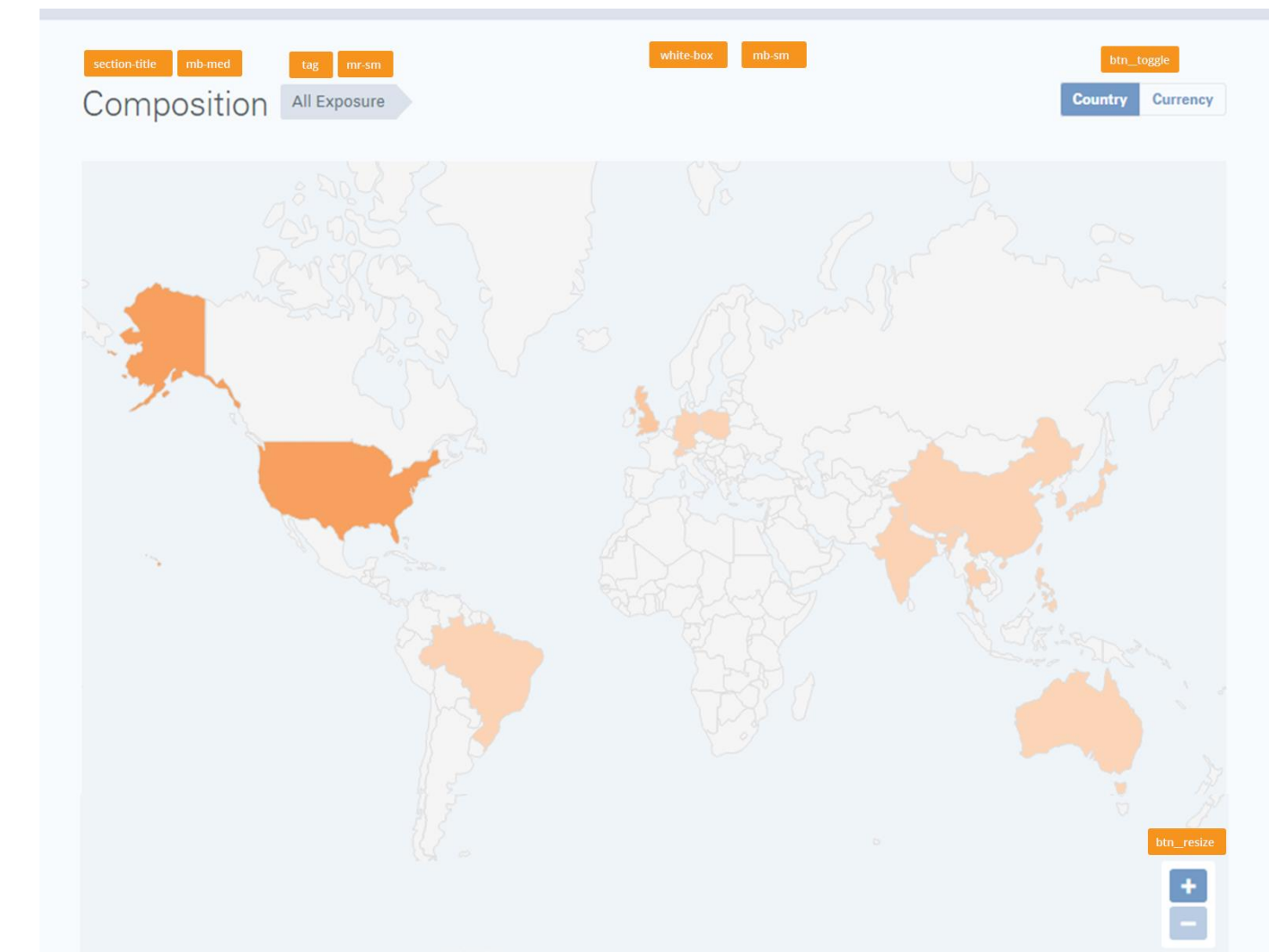
Constraints create consistency, proximity comprehension



Use BEM for components

Helps with encapsulation and readability. Less Bugs!

Block__Element--Modifier



Location		Market Value
United States	100.00%	198,521,120.94
Global		
Canada		
Netherlands		
Marshall Islands		
Total		198,521,120.94

Currency		Market Value
USD	55.44%	110,073,529.91
OTHER	29.21%	58,006,935.97
GBP	15.33%	30,440,655.05
CAD		
EUR		
Total		198,521,120.94

Beyond Your Wealth



category title

GS INSIGHTS

India: Back on Track

May 22, 2016 | 10:10 AM EDT

description

support-txt

Utility class
Constraints
consistency,
comprehens

Beyond Your Wealth

section-title



category-title

GS INSIGHTS

India: Back on Track

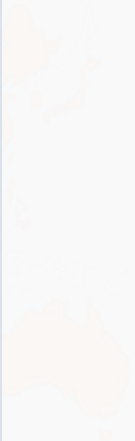
May 22, 2016 | 10:10 AM EDT

description

Link

support-txt

Country Currency



Market Value

110,073,528.91
58,006,935.87
30,440,855.05
198,521,120.94



Show translation keys Restore translation

Insights

mb-md

Wealth Insights

View All

Investing and Borrowing

Wealth Planning

Goldman Sachs Research

ml-sm

mb-sm

float-right

mb-sm

mb-sm



mb-sm

MARKET OUTLOOK

test

test

May 13, 2016 | 5:56 PM EDT

mb-xsm

mb-xsm

mb-xsm



mb-xsm

mb-sm

ml-sm

MARKET OUTLOOK

Outlook 2016: The Last Innings

May 19, 2016 | 6:00 AM EDT

mb-xsm

mb-xsm

mb-xsm



MARKET OUTLOOK

Outlook 2014: Within Sight of the Summit

May 19, 2016 | 1:05 PM EDT



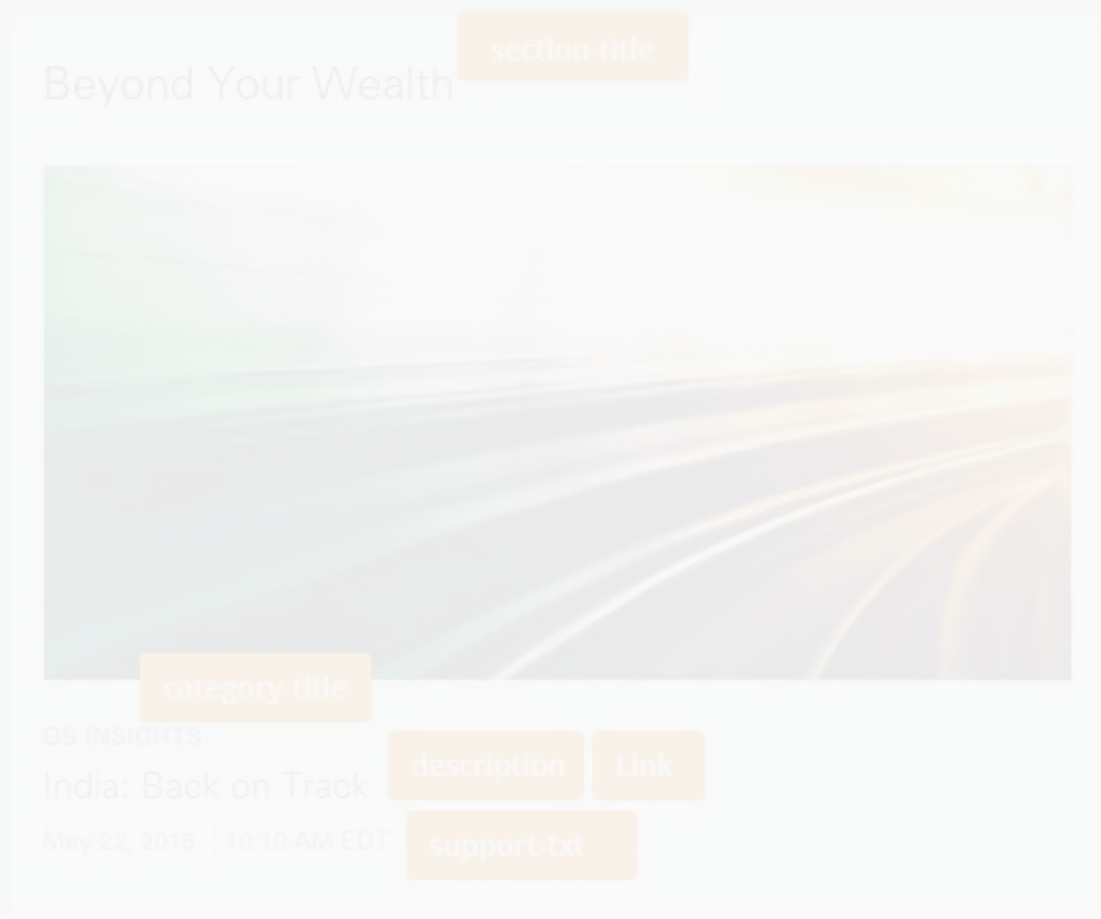
TRUST AND ESTATE PLANNING

insight under trust

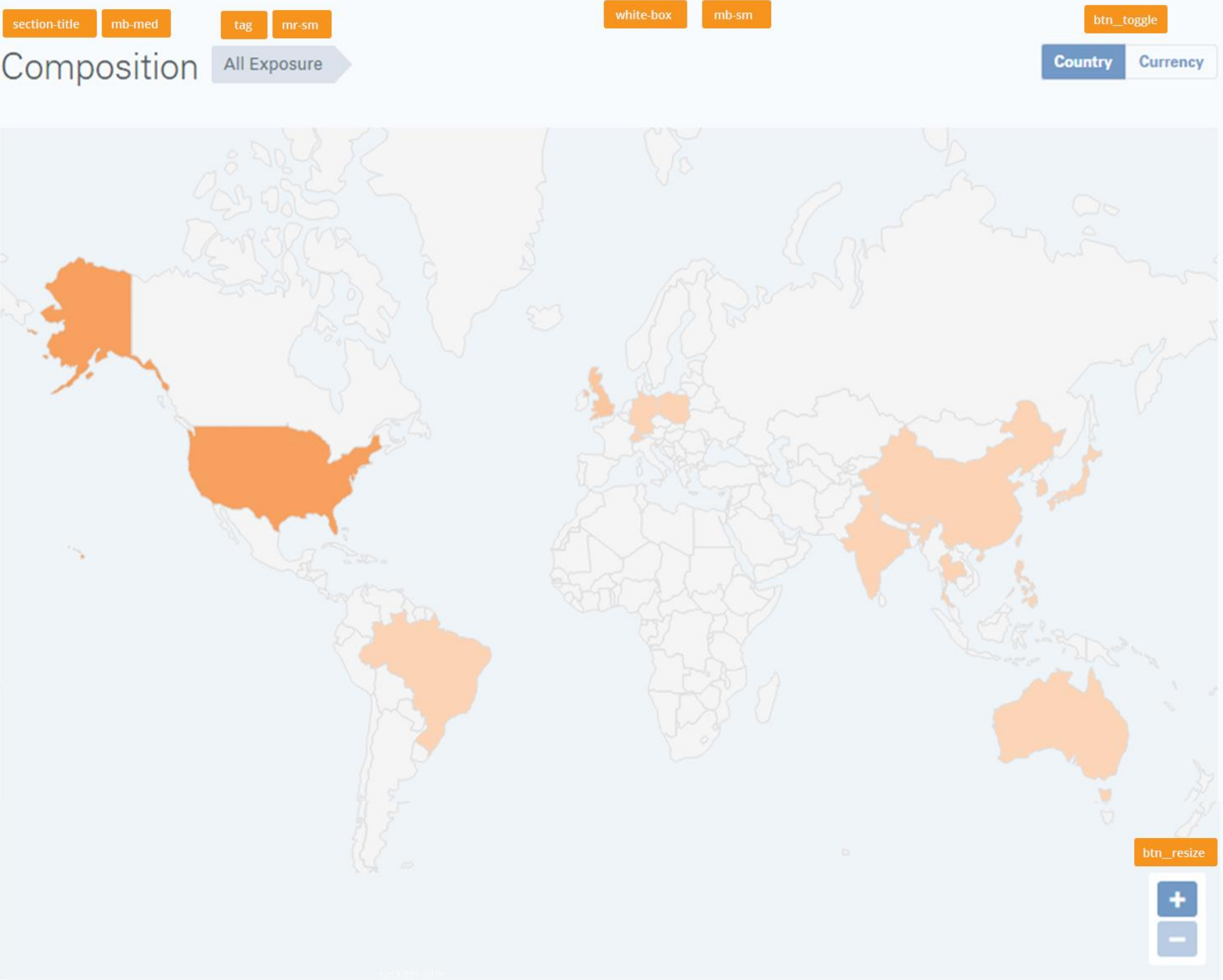
May 19, 2016 | 1:02 PM EDT

CSS Proposal – No one size

Use Object Oriented CSS and BE



Utility classes
Constraints create
consistency, proximity
comprehension



Location	Composition %	Market Value
United States	100.00%	198,521,120.94
Global		
Canada		
Netherlands		
Marshall Islands		
Total		198,521,120.94

Currency	Composition %	Market Value
USD	55.44%	110,073,529.91
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CAD		
EUR		
Total		198,521,120.94

BEM for components
is with encapsulation and
ability. Less Bugs!

k__Element--Modifier

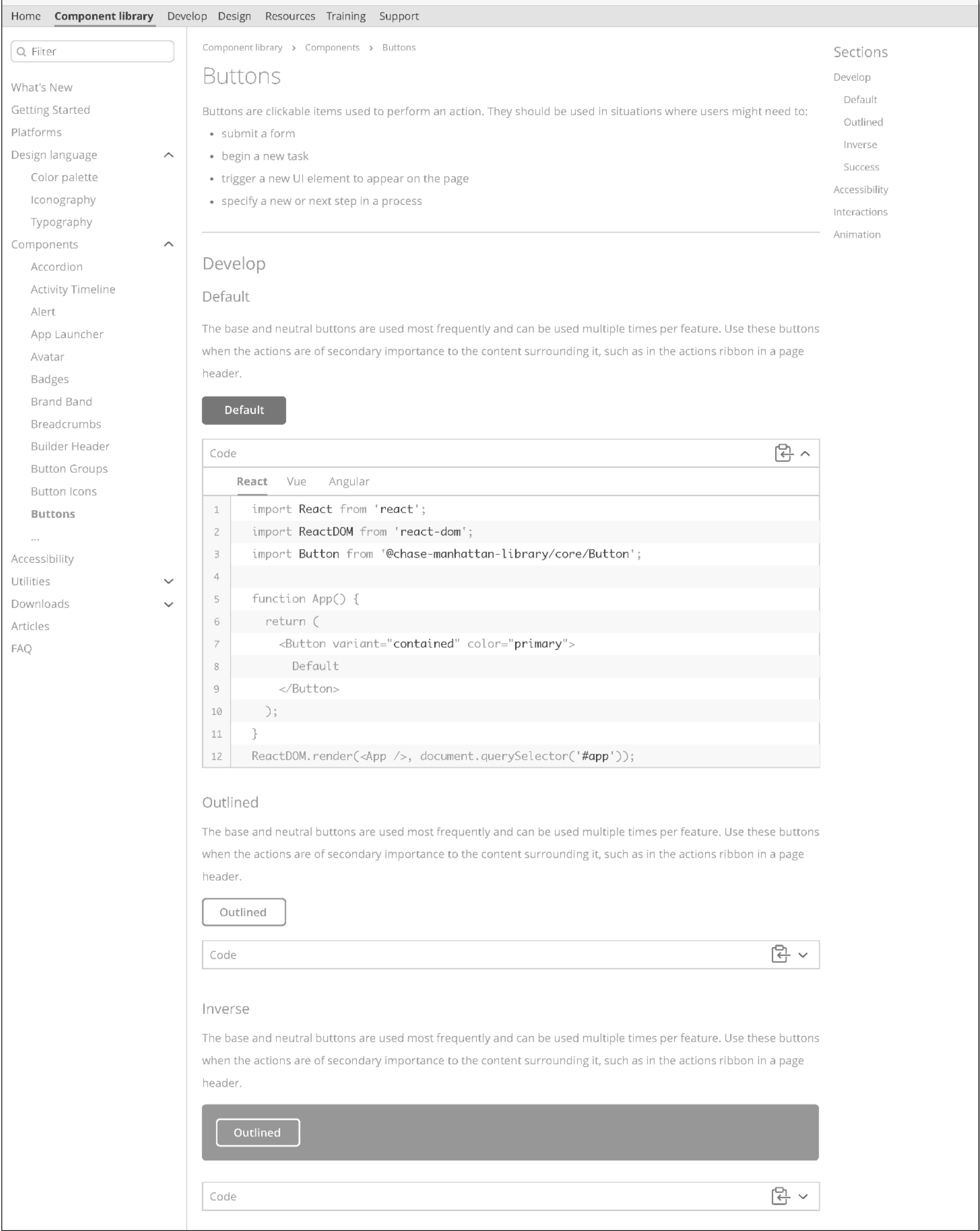
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Location		Currency	
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Global		OTHER	58,006,935.97
Canada		GBP	30,440,655.05
Netherlands		CAD	
Marshall Islands		EUR	
Total	198,521,120.94	Total	198,521,120.94

Training designers and developers

- Designed and built a component library website
- Sent out weekly new component release communication.
- Created trainings and workshops to help the developers learn to consume and extend the library.
- Set up weekly sessions with the designers to discuss new component rationale, inconsistencies, alternative responsive designs.



Wireframe of proposed Component Library website

Scaling design systems

Role: Product Design Manager for Cross Channels

Partners: Head of DCE, and Tech lead of Design Systems

Teams: 1 system designer, 2, UX designers, 1 illustrator, 1 motion designer, 1 Content strategist and 1 developer

Problem Statement

3 typical models of scaling design systems when growing large organizations and I have been involved with all three approaches.



**Design system team
leads for each team
To meet in a forum**

Good for only a handful of teams. The leads keep an eye on their team's designs and brings new components to the forum for discussions.

Challenges happen when too many teams add too many cooks. Sessions can become brutal with making decisions and delivering on time.



**Centralized
Center of Excellence
dedicated team**

Good for auditing and getting started when having a team dedicated to building, governing and recommending new component needs.

Challenges happen when the team becomes a bottle-neck in making decisions. It also prevents innovation with only a small team making decisions.



**Design system
consultants where
everyone
contributes**

Good for many teams. Team only consults, offers support and office hours and updates the versioning systems and documents.

Challenges are keeping the team motivated. Need strong system tinkers and skills with diplomacy and good communication to keep this system healthy.

Pain points

Foundation team used generative testing to speak to all the products teams, both designers and developers to understand what was working and not with our design system processes.

Pain Points

DESIGN

- Include accessibility, interactions, and developer code in patterns and components
- Have all patterns, components, design language and documentation in one place —Use one system instead of several
- Create consistency around Hybrid and XS
- Better communication of new or updated processes, patterns and components
- Need clear process of approvals and how to expedite updates or changes



Pain Points

DEVELOPMENT

- Better communication with LOBs to create an open dialog
- Lack of understanding of how developers work / handoff process
- No quick fix process for development (or design)



Pain Points

TRIBE SUPPORT

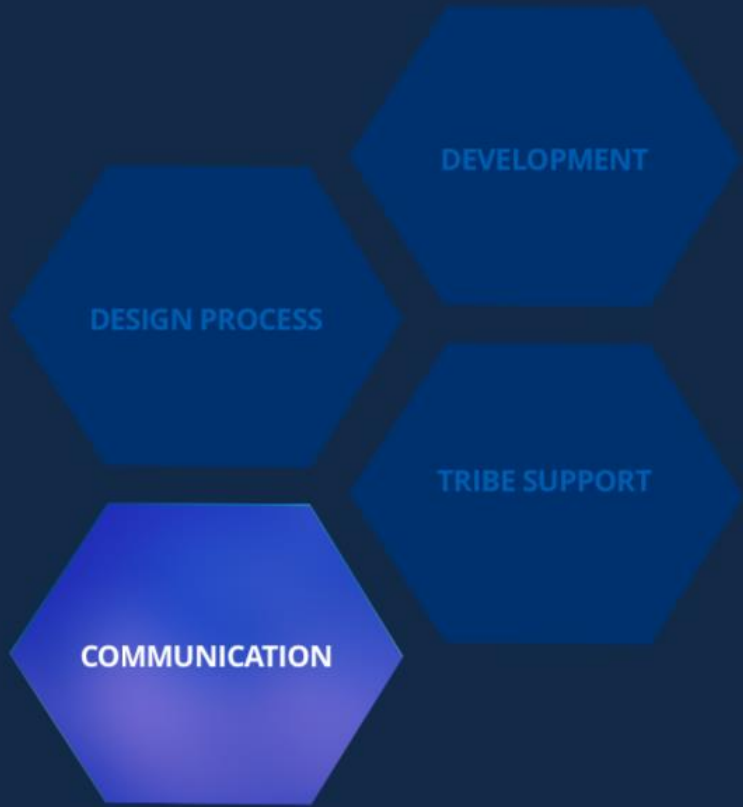
- Need a place to showcase their work, roadmap, process and a way to collaborate on projects
- Sharable calendars and an archive of past projects is also needed
- Lack of communication across tribes creates duplicated work and inconsistency



Pain Points

COMMUNICATION

- Designers need support, but do not know how to communicate and/or sync with the Foundation team
- Pull groups together that are cross-channel and understand how to better communicate
- Designers need to be educated on resources available and any updates to existing resources



Opportunity

Developed agile sprints, offered office hours, help desk support, and built a new team to document and communicate out the new releases.

What we heard

SOLUTIONS

- Having a stronger center for design excellence, liaise with Foundations to Tribes
- Better preparation and communication within tribes and development teams
- Clear understanding around approvals
- Concise documentation for hybrid, process, pattern and component usage
- Too many design inconsistencies; need a central location for all design screens
- Need more guidance around patterns and principles; Support from the pattern initiative across products
- More capability for collaboration

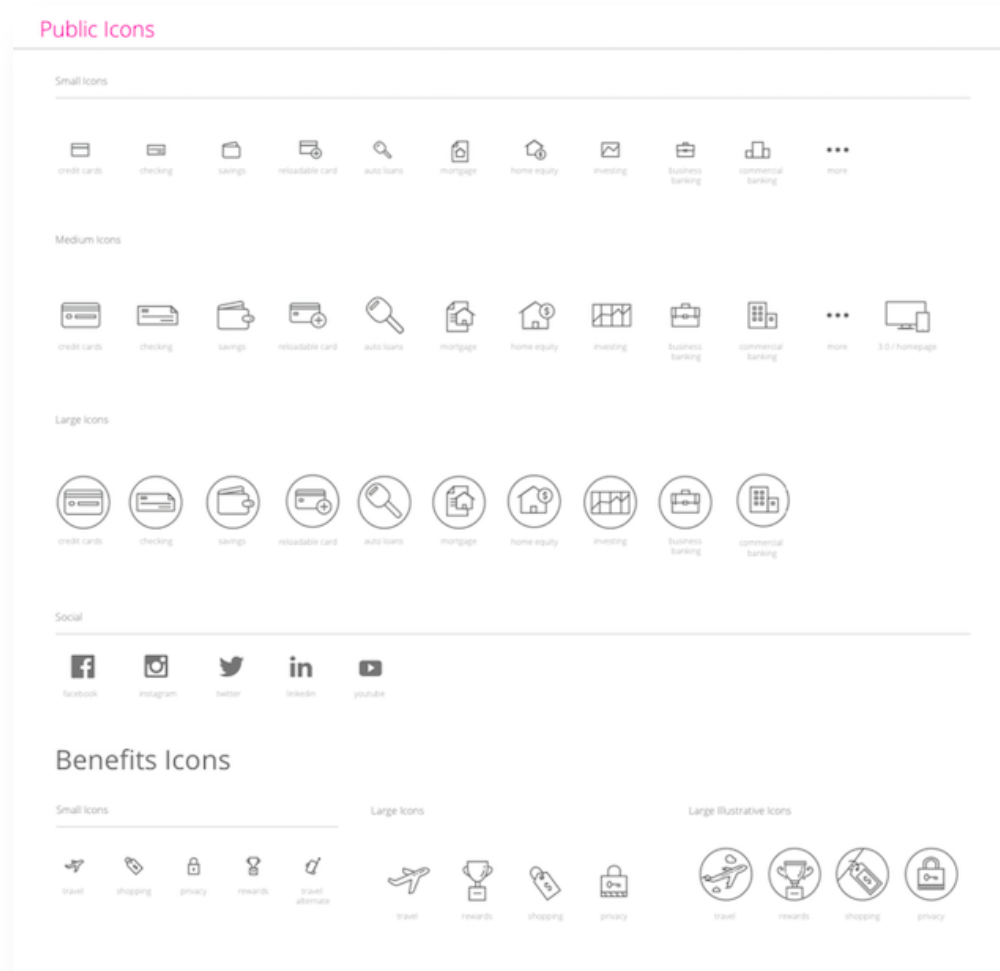
What we learned

There's no "one size fits all."

but

Good design systems have some important things in common:

- Build for an audience:
 - Developers
 - Designers
 - Product Owners
 - Be extensible across products
 - Be extensible across devices
 - Be a toolkit and go-to resource
 - But be special sauce, too



Components and interactions

In the five years I have been with Chase Digital Technology scaled very fast with the design org growing from 75 to 450 as a centralized team.

1. DEFAULT

2. ON CLICK

3. RE-SELECTED

4. RE-SELECTED

Button States

All buttons have 5 px rounded corners; tap area is 44px, and get an animation transition of background color .4s Ease.

Primary Button	Secondary Button
Default Font: Open Sans Semibold Font size: 16px Text color: #FFFFFF Button color: #0A4386	Default Font: Open Sans Semibold Font size: 16px Text color: #626262 Button color: #D6D6D6
Pressed Font: Open sans Semibold Font size: 16px Text color: #FFFFFF Button color: #126BC5	Pressed Font: Open Sans Semibold Font size: 16px Text color: #626262 Button color: #EDEDED
Hover Font: Openans Semibold Font size: 16px Text color: #FFFFFF Button color: #0B6EFD	Hover Font: Open Sans Semibold Font size: 16px Text color: #626262 Button color: #BCBCBC

Radio Buttons

UNCHECKED	☐	Data Label	1. Unchecked: Initial state when form is first loaded.
CHECKED	☒	Data Label	2. Checked: Selected state.
UNCHECKED ERROR	☐	Data Label	3. Unchecked Error: Non-Selection is in error.
CHECKED ERROR	☒	Data Label	4. Checked Error: Selection is in error.
UNCHECKED DISABLED	☐	Data Label	5. Unchecked Disabled: Radio button cannot be selected.
CHECKED DISABLED	☒	Data Label	6. Checked Disabled: Radio button cannot be selected.

The image displays two side-by-side screenshots of a mobile application interface, illustrating different states of a dropdown menu. Both screenshots feature a header bar with the text "Text here" and a dropdown arrow. Below the header, a list of options is shown, including "Account ...1234", "Selected State", "Option", "Hover State", "Option", "Option", "Tap State", "Option", "Nested Select", "Option", "Focus State", "Option", "Disable State", "Option", "Option", and "Add Option". The "Selected State" is highlighted in blue in both screenshots. In the left screenshot, the "Hover State" is highlighted in light gray, and the "Tap State" is highlighted in dark blue. In the right screenshot, the "Hover State" is highlighted in light gray, and the "Tap State" is highlighted in dark blue. The "Focus State" is highlighted in light gray in both screenshots. The "Nested Select" option has a right-pointing arrow. The "Disable State" is disabled, indicated by a grayed-out text color. The "Option" and "Add Option" are also visible at the bottom of the list.

Field States

The image displays a grid of 12 input field states, organized into three rows and four columns. Each state is labeled with 'Data label' and 'Data label' (one in blue, one in red, and one in grey). The states are:

- Row 1: Default (blue border), Invalid (red border), Disabled (grey border).
- Row 2: Focus (blue border), Invalid (red border), Disabled (grey border).
- Row 3: Focus (blue border), Invalid (red border), Disabled (grey border).

Each field contains the text 'Lorem ipsum' and a dropdown arrow. The design specification for the field is as follows:

- Text Field: Open Sans Regular
- 16px #BBBBBB
- 16px
- 12px
- 16px
- Drop shadow: Opacity: 20%, Y-Offset: 1px, X Offset: 2px, Blur: 1px #000000
- Background: #FFFFFFF

1. DEFAULT

Date Range Calendar

1. DEFAULT

Date Last 4 hours 32px Stroke: 1px #CCCCCC

2. ON CLICK

Last 4 hours 12px 12px 12px Selection State: 32px | Border: 2px #0A4386

Last 4 hours 48px 16px

Last 24 hours

Last week

Last 30 days

Last 60 days TAB 1px

Custom Date Range

Selected state: height: 32px Width: 6px Color: #0092FF

Open sans Semibold: 16px #414042

Hover State: 32px #F9F9F3

Stroke: 1px #CCCCCC

Drop shadow: Opacity: 28% Y Offset: 2px Blur: 1px #000000

3. ON SELECTION

Last 4 hours

Last 4 hours

Last 24 hours

Last week

Last 30 days

Last 60 days

Custom Date Range

To From Open Sans Regular: 14px #F7F7F7

mm/dd/yyyy mm/dd/yyyy 16px Stroke: 1px #CCCCCC

Open Sans Regular: 14px #0A4386

Selected state: height: 32px Border: 2px #0A4386 Font: Open Sans Regular: 16px #0A4386

4. TO SELECTION

Last 4 hours

Last 4 hours

Last 24 hours

Last week

Last 30 days

Last 60 days

Custom Date Range

To From

mm/dd/yyyy mm/dd/yyyy 16px

December 2017

S M T W T F S

29 30 1 2 3 4 5

6 7 8 9 10 11 12

13 14 15 16 17 18 19

20 21 22 23 24 25 26

27 28 29 30 31 1 2

Submit

310px

Font: Open Sans Regular

Font size: 16px

Text color: #FFFFFF

Button color: #

5. FROM SELECTION

Last 4 hours

Last 4 hours

Last 24 hours

Last week

Last 30 days

Last 60 days

Custom Date Range

To From

12/10/2017 12/17/2017 16px

December 2017

S M T W T F S

29 30 1 2 3 4 5

6 7 8 9 10 11 12

13 14 15 16 17 18 19

20 21 22 23 24 25 26

27 28 29 30 31 1 2

Submit

Font: Open Sans Regular

Font size: 16px

Text color: #FFFFFF

Button color: #0A4386

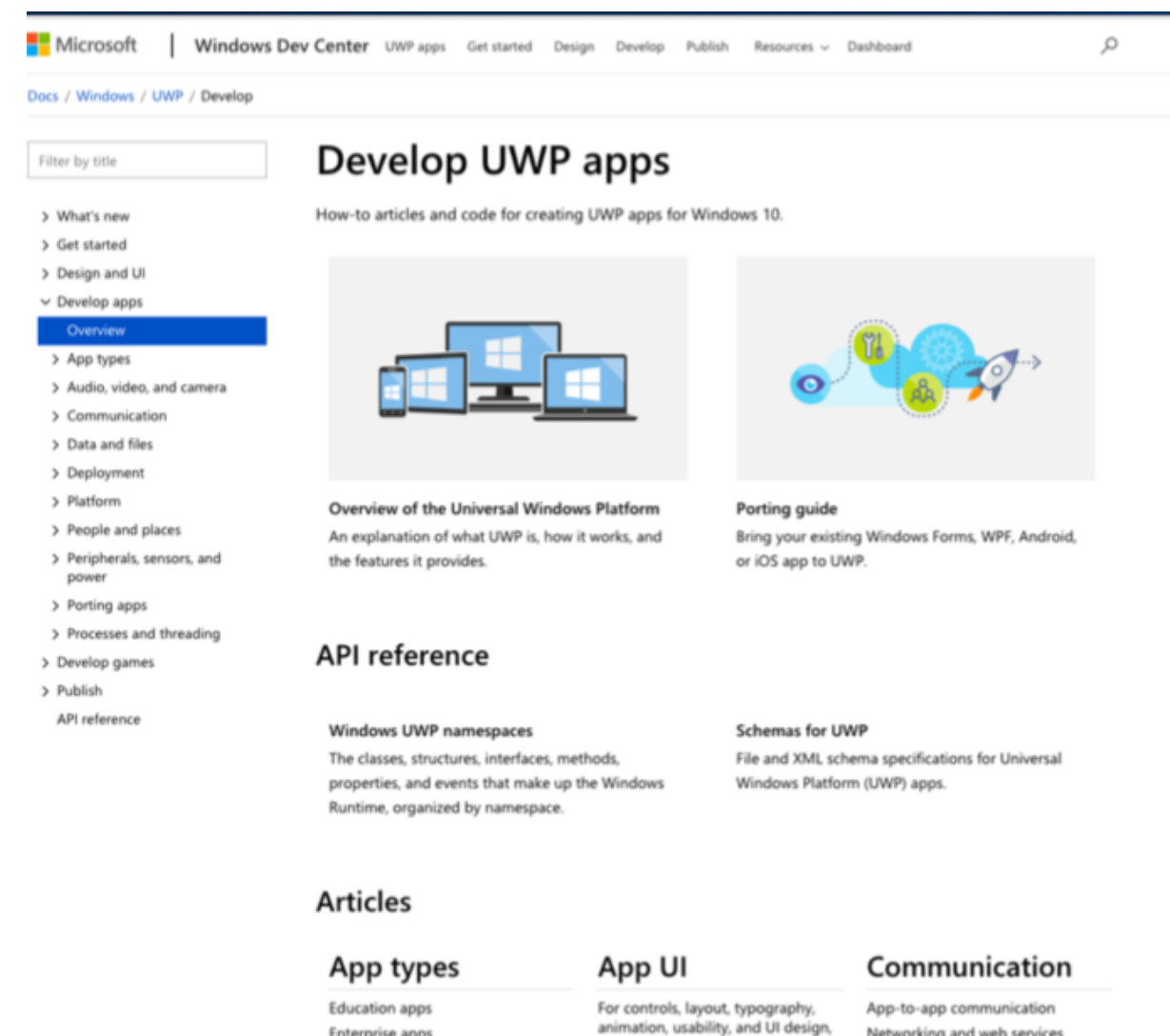
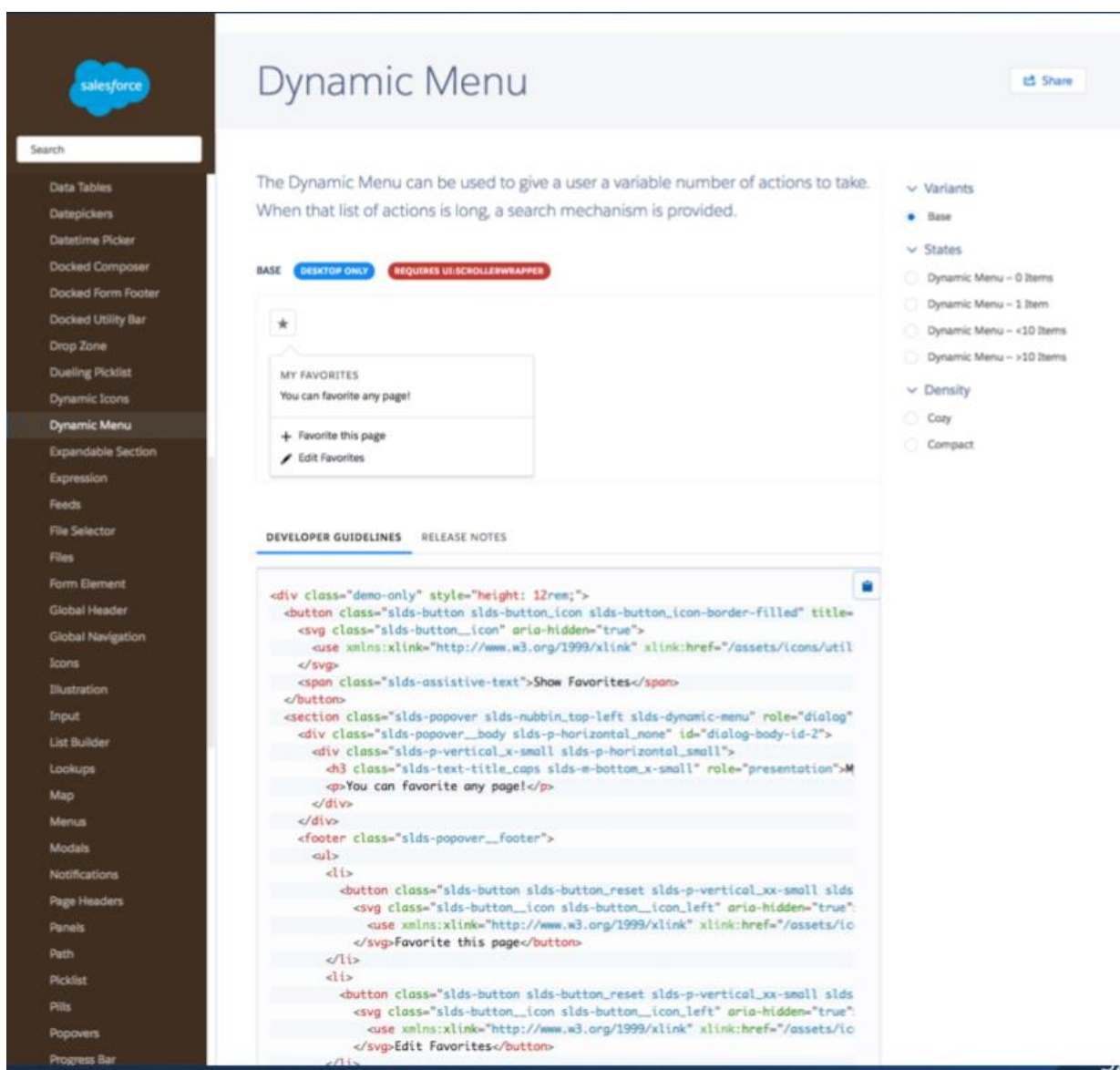
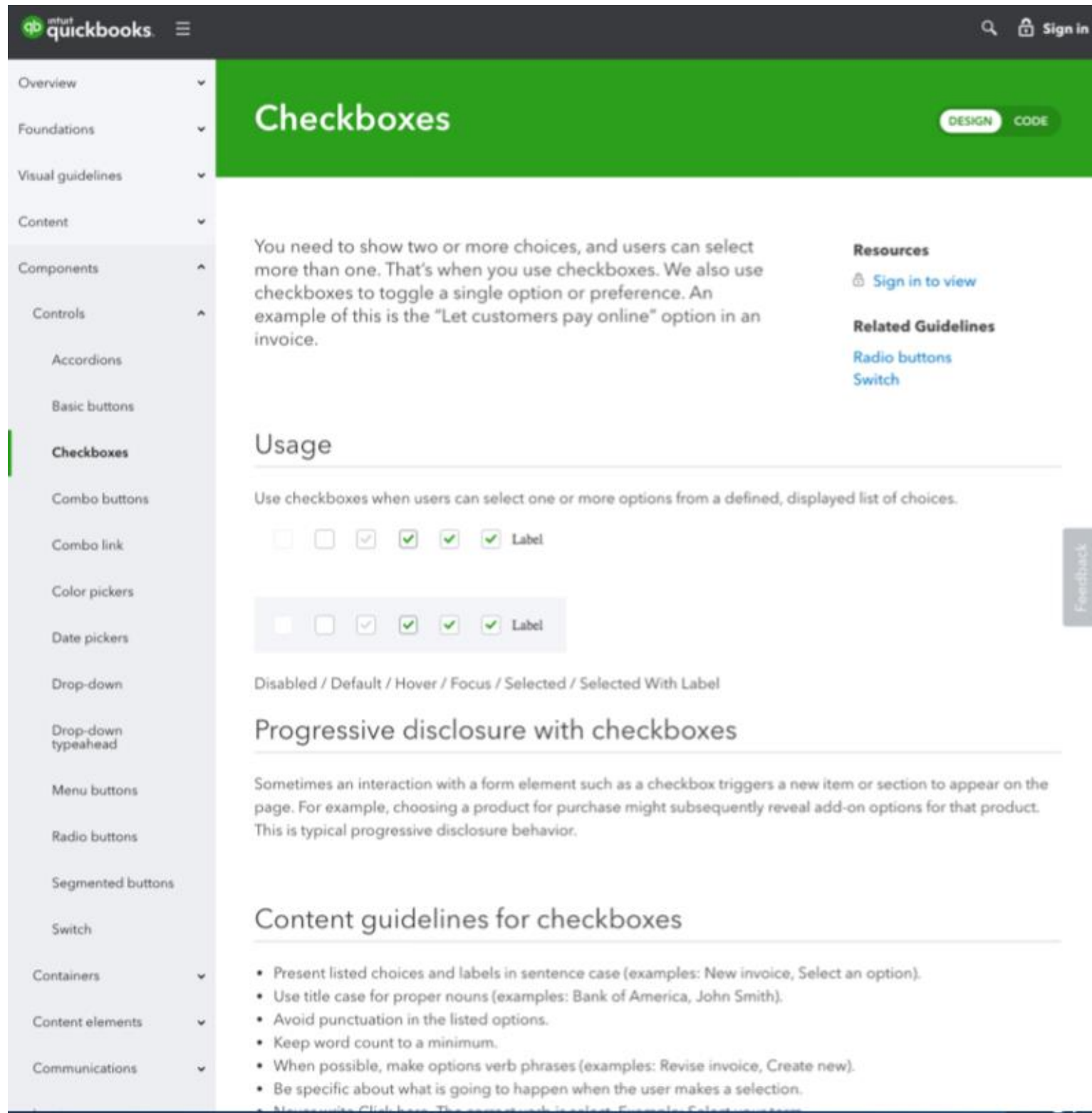
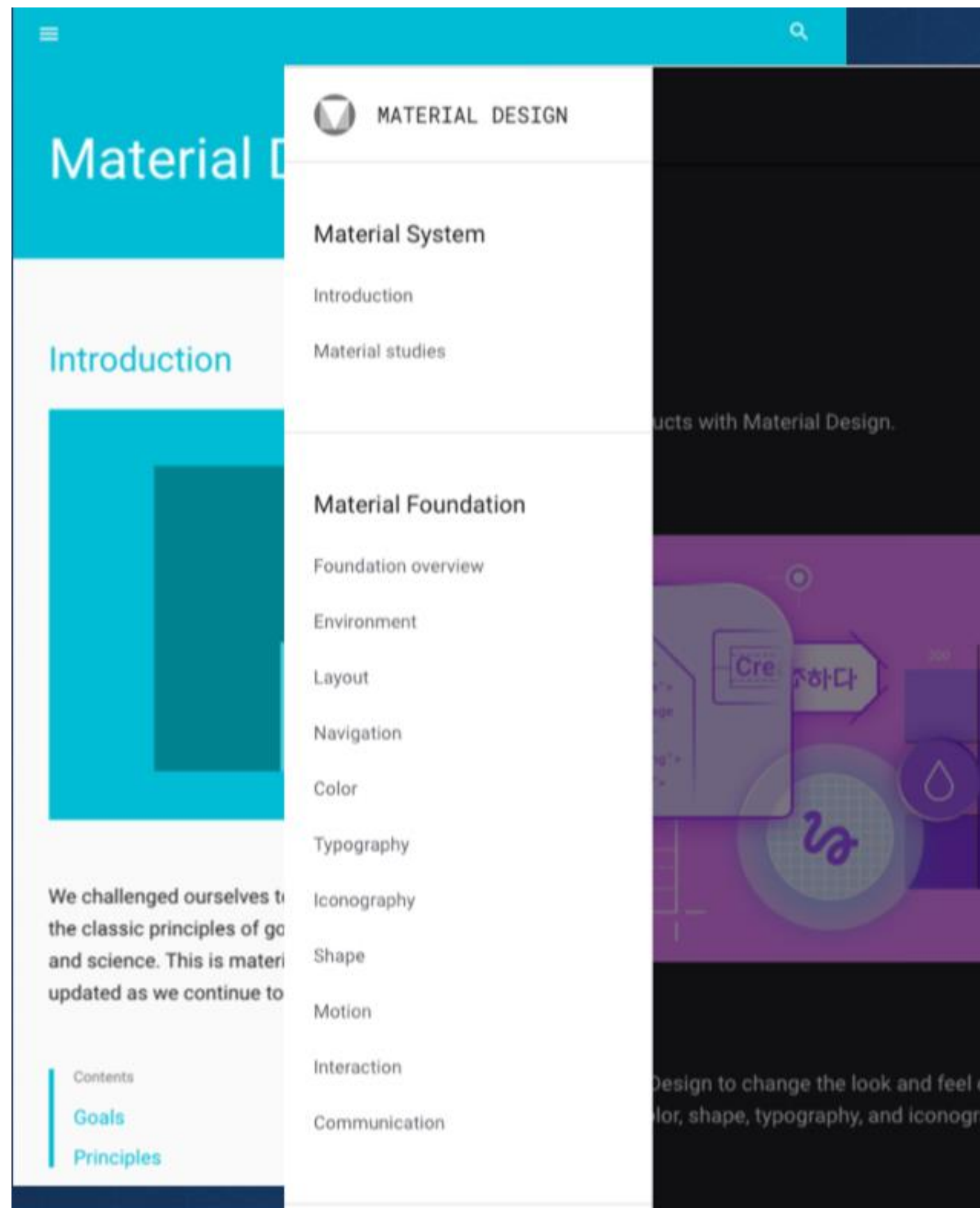
DATE RANGE CLOSE-UP

To From

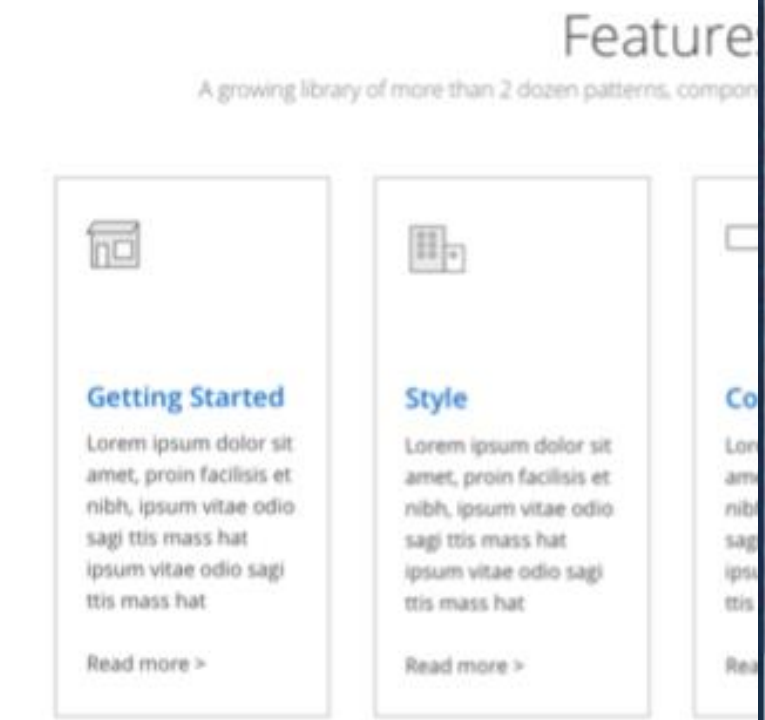
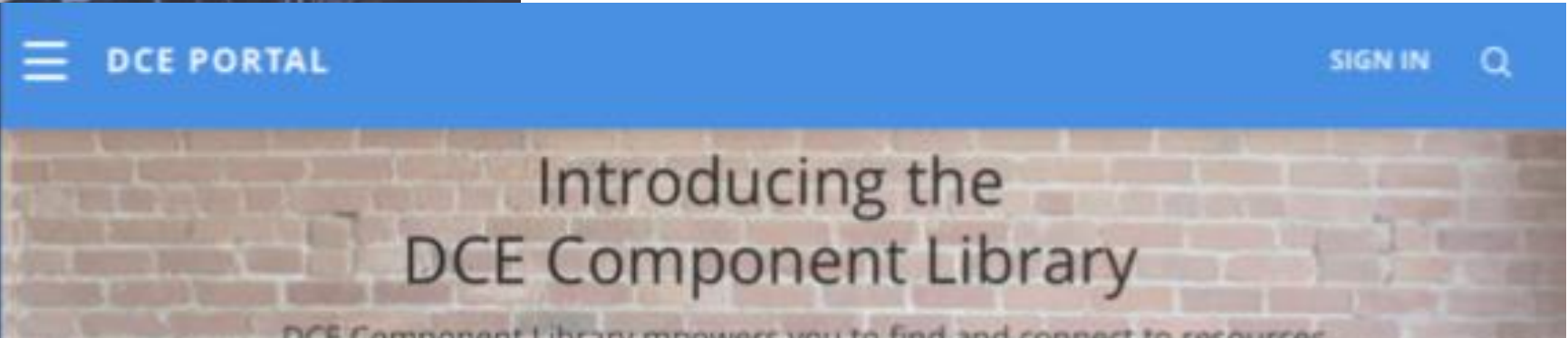
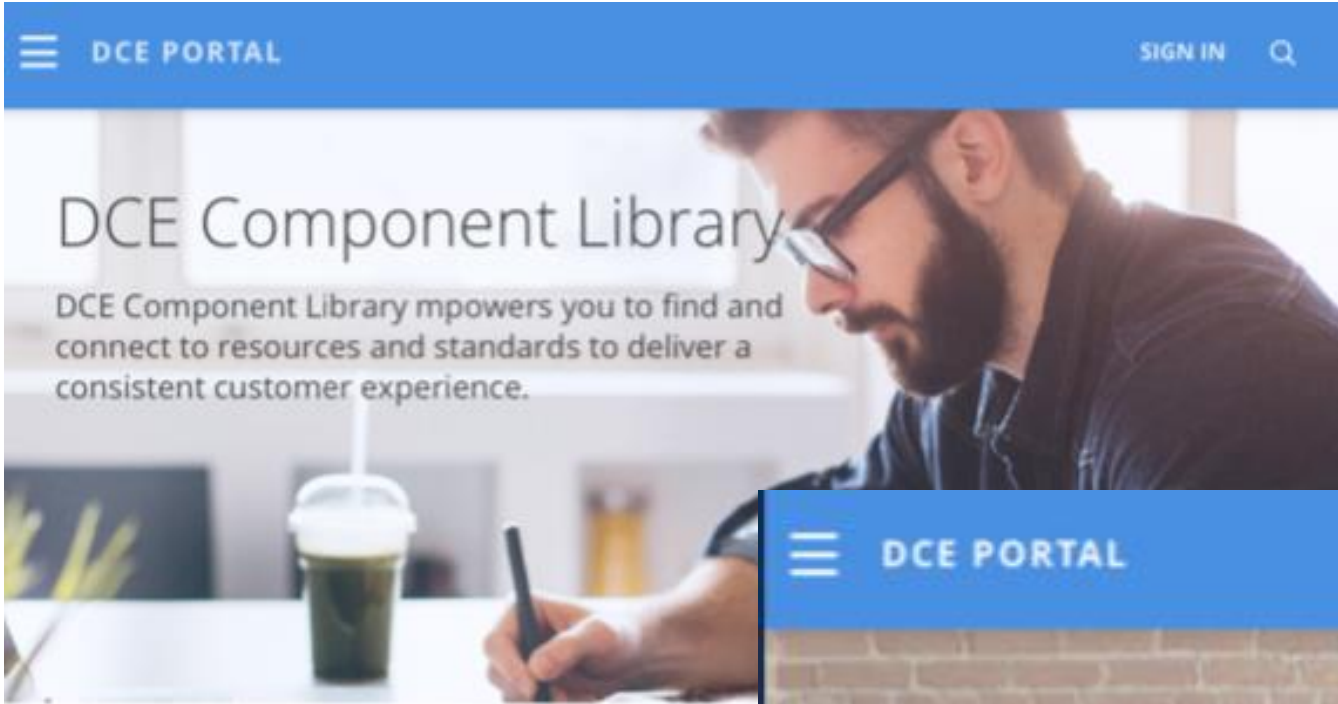
mm/dd/yyyy mm/dd/yyyy 16px 12px 16px

Background: #FFFFFF

Competitive Analysis



Proposal Concepts





Component Library



Design Language and Components

Designer vs. Developer Experience

Live Components and Consumable Code

Details and Documentation

GETTING STARTED ▾

WHAT'S NEW ▾

GUIDELINES ▾

STYLE ▾

COMPONENTS ▾

OVERVIEW

ACCORDIAN

BREADCRUMBS

BUTTONS

CHECKBOXES

CODE SNIPPETS

DATA TABLE

DROPDOWN

FILE UPLOADER

FORM

INLINE MODAL

LINKS

LIST

LOADING

MODAL

NOTIFICATION

NUMBER INPUT

OVERFLOW MENU

PAGINATION

PROGRESS INDICATOR

RADIO BUTTON

SEARCH

SLIDER

TAG

TEXT INPUT

TOGGLE

TOOLTIP

DATA VISUALIZATION ▾

UTILITIES ▾

COMPONENT STATUS

RESOURCES

UI KIT

WORK ON

Accordion

Code Usage

Accordion enable users to expand and collapse sections of content.

Accordion

Accordion Code

Accordion Code

Accordion Code

Accordion Code

```
1<div class="accordion">
2  <div class="accordion-item">
3    <div class="accordion-header">
4      <h3>Section 1</h3>
5    </div>
6    <div class="accordion-body">
7      <p>Content for section 1</p>
8    </div>
9  </div>
10 </div>
```

Documentation

Introduction

Use this accordion with the accordion class.

Default States	Description
no-accordion, no-state	The accordion is in a closed state.

JavaScript

Name	Event	Description
toggle		Toggle the accordion

Options

Option	Default Value	Description
expanded	no-accordion	Toggle to the expanded state
expandedOnLoad	no-accordion	Toggle to the expanded state on load
expandedOnScroll	no-accordion	Toggle to the expanded state on scroll
expandedOnClick	no-accordion	Toggle to the expanded state on click

Events

Name	Description
on-accordion, on-state	The accordion is in a closed state.

Content management support



How can you contribute to MDS?

Proposal

- **Make a design proposal**
- **Get feedback from other teams**

Governance

- **Evaluate based on scope of request**
- **Give feedback or direction as needed**

Component Spec

- **Create a complete component spec**
- **Join a design crit to give feedback on other specs**

Documentation

- **Add to the use cases in documentation**
- **Add symbols and examples to the UIKit**

Design system briefs



Problem - Solution

Manhattan Design System - Design Enhancement Proposal | Template revision Nov. 21, 2019

Note: Please adjust the height / placement of the sections to fit your content.

Problem & Solution Brief

1. Design problem being addressed

Today, our messaging shifts the data points and causes misalignment within the account blades

▼ My credit cards

CHASE FREEDOM UNLIMITED (...5545) >

\$345.67

Current balance

\$20,000.00

Available credit

You have 2 items for \$150.00 on hold.

Your payment due date is in 3 day(s).

OVERDRAFT LINE (...5537) >

\$0.00

Current balance

\$20,000.00

Available credit

You don't have a payment due right now.

Your next statement period ends on Aug 28, 2019.

\$0.00

Last statement balance

Dec 9, 2019

Next payment due

\$0.00

Minimum payment due

Pay card

...

See your score

Rewards

Everyone provides to the systems

2. Proposed design solution

By creating a dedicated space for messaging, data points will never misalign.

- Informational messages will be dismissible
- Smart Data/Bespoke will determine when/if a message needs to be resurfaced once dismissed.
- Critical alert messaging takes precedence over others
- Messages should not appear permanently

▼ My credit cards

CHASE FREEDOM UNLIMITED (...5545) >

\$345.67

Current balance

\$20,000.00

Available credit

Multiple suspected transactions.

Your payment due date is in 3 day(s).

\$0.00

Last statement balance

Dec 9, 2019

Next payment due

\$0.00

Minimum payment due

Pay card

...

See your score

Rewards

Alternatives

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Alternatives Explored

Show other alternative solutions evaluated and explain why they were

1. Alt 1

▼ My credit cards

CHASE FREEDOM UNLIMITED (...5545) >

\$345.67

Current balance

\$20,000.00

Available credit

You have 2 items for \$150.00 on hold.

Your payment due date is in 3 day(s).

CHASE FREEDOM UNLIMITED (...9901) >

\$0.00

Current balance

\$20,000.00

Available credit

You don't have a payment due right now.

Your next statement period ends on Dec 28, 2019.

\$0.00

Last statement balance

Dec 28, 2019

Next payment due

\$0.00

Minimum payment due

Pay card

...

See your score

#. Alt 2

▼ My credit cards

CHASE FREEDOM UNLIMITED (...5545) >

\$345.67

Current balance

\$20,000.00

Available credit

You have 2 items for \$150.00 on hold.

Your payment due date is in 3 day(s).

CHASE FREEDOM UNLIMITED (...9901) >

\$0.00

Current balance

\$20,000.00

Available credit

You don't have a payment due right now.

Your next statement period ends on Dec 28, 2019.

\$0.00

Last statement balance

Dec 28, 2019

Next payment due

\$0.00

Minimum payment due

Pay card

...

See your score



Manhattan
Design System

Q Search

Get Started

Release Notes

Introduction

Fundamentals

Components

Patterns

Process

Resources

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Design Checker

Catalog App

Contract Manager

Reference Apps

Glossary

CHASE

Change

Governance

The MDS Governance Board reviews proposals submitted to the design system.

OVERVIEW

PROCESS

Overview

Governance for MDS is owned collectively by product teams that use MDS to deliver customer experiences. It is a place for different teams to come together and decide what components and patterns go into MDS to create a cohesive design vision for JPMorgan Chase.

Sections

[Overview](#)

[Get
involved](#)

[Learn
more](#)



Results – Organizations that adopted our systems

