

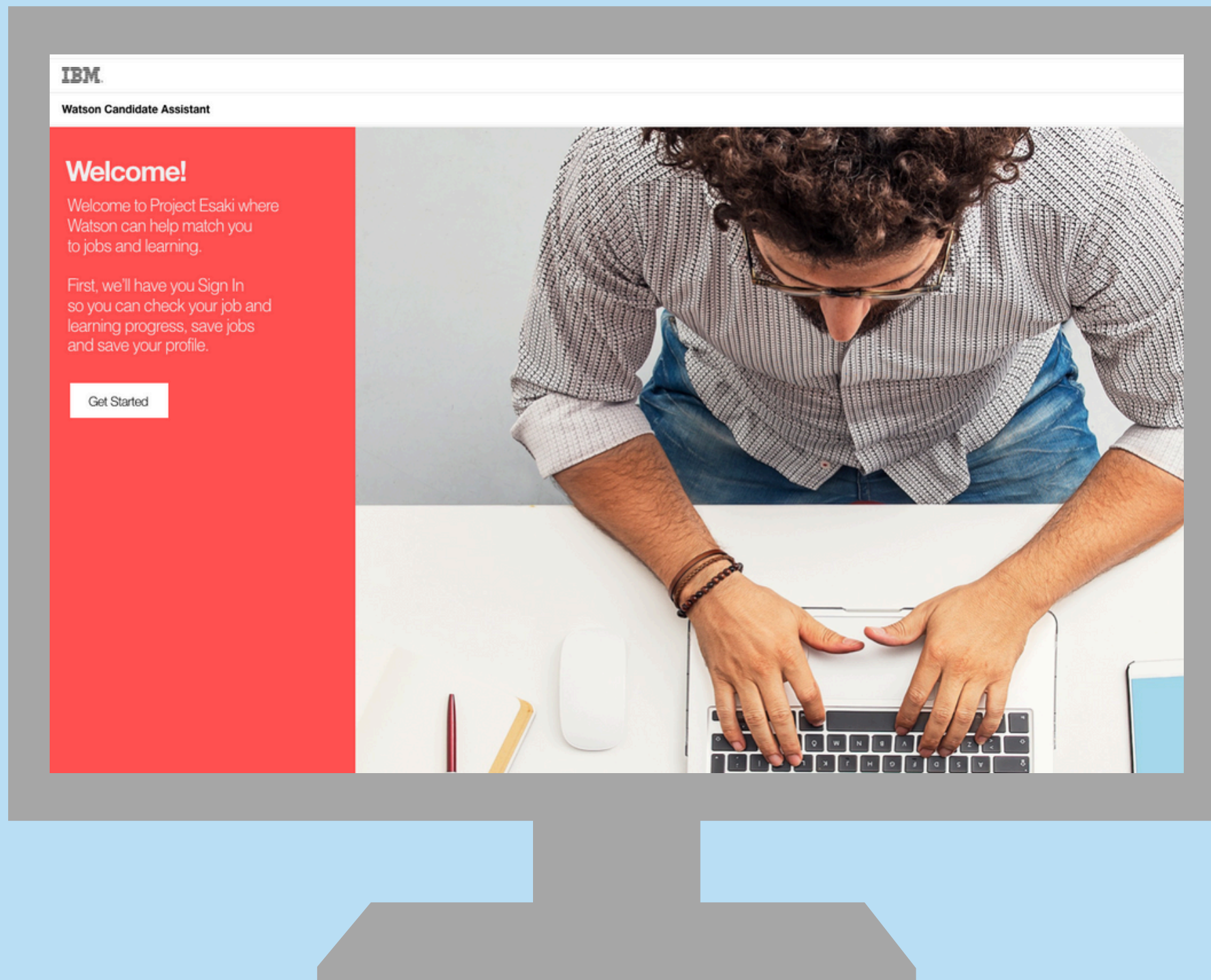
USER-CENTRIC DESIGN SINCE 2000

Fanny Davidson

Selected UX Design Leadership Work

fannychung@gmail.com

AI INNOVATION



IBM WATSON CANDIDATE ASSISTANT

BACKGROUND

IBM Watson Candidate Assistant is an AI and cognitive talent management solution that engages job seekers in deeper conversation about the company and recommends jobs relevant to the candidate's personality, skills and interests. The AI advisor learns about the candidate through a series of natural conversations and responds to candidate's questions just like a recruiter would, tapping into the vast company and job specific corpus.

PROJECT GOALS

- Job seekers chat with a virtual assistant and get job recommendations that match their skills and interests.
- They can also learn more about the company and its culture.
- Resumes are analyzed using IBM Watson to recommend jobs that match job seekers' skills.

COMPANY: IBM

CAREER ADVISOR POWERED BY WATSON/AI CHAT BOT

AI

CHATBOT

HR

RESPONSIVE

MY ROLES:

- UX Designer
- Conversation Designer

PROJECT TEAM

- Product manager, scrum master, multiple front and back developers

MY RESPONSIBILITIES

- Led Design Thinking workshops
- AI "Intent" analysis
- Chat responses optimization
- UX design
- User testing
- Functional flow and specifications

PROCESS

Design Thinking workshops



As If/To Be
Persona
Goals



Storyboard &
Wireframes



Features
Content Topics
Design
Framework



Prototype user
testing



via video
conferences and
screen share



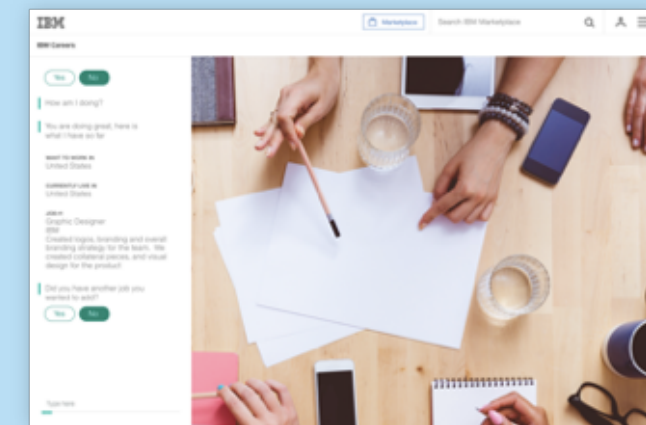
Refined
prototype & more
user testings



in-person
usability testing.
Update design,
intents and
responses



Invitation-only
release, learn from
usage data



review chat log
and analytics.
Continue
updating design
and content



LIVE

CHALLENGES

"I want to find marketing jobs in New York"

DOCUMENTING CONVERSATIONAL UI

Conversation with humans are unpredictable. It can go anywhere. Documenting the logic of how a conversation between a human and a chatbot can go is an interesting task. I used a combination of dialog logic tree and a conventional table for intents. It helps visualizes the user scenarios and possible actions.

NATURAL LANGUAGE VS KEYWORD

From reviewing the user testing and the chat logs, I noticed that many users are more comfortable using keywords to "talk" to the chatbot. For example, a user would enter "UX designer" to search for jobs. However, with a chatbot, we expected the user to enter "I am looking for UX designer jobs". Users are conditioned to how search works more than how to have a conversation with a chatbot.

To address this issue, I added logic that the chatbot would lead questions with examples of expected input. For example, the bot would say "I'm here to help you. Tell me what you are looking for. For example you can tell me "I am looking for UX design jobs in New York."

CURATING THE RESPONSES

We started the project with 12 intents (topics). From the chat log, we soon realized we needed a lot more content. I had to work with HR subject matter experts, copy writers and the developers to fine tune the intents and craft the responses. The challenge was to have enough meaningful responses but not too much that any intents could have overlapping content that could confuse the bot to answer with the most relevant intent. When the system was launched, it had 65 intents.

TARGET USER PROFILE

The product was initially designed for young career seekers who could benefit from advisory assistance to find jobs that matches their skills and interests. The AI is designed to analyze the candidate's resume for matching. However, I soon found the matching AI won't work for this audience because most young job seekers do not have a lot of data in their resume. I then focused on the conversational UI to help gather insights from the young candidates to enrich the data needed for the matching to work.

"I want to learn more about IBM diversity policy"

UX STRATEGIES

UNDERSTAND

The chat interface allows job seekers to ask questions in natural language and delivers responses.

REASONS

It provides best-fit jobs based on information shared by the job seeker.

LEARNS

It continues to improve the chat experience and refine job search results based on every interaction.



User Persona

Persona I-A: Early Professional

Eric Cohen, 25
Stony Brook SUNY 2014
Computer Information Systems degree
Working as a tester since graduation

CHALLENGES

- Looking for satisfying career that fits him.
- No professional experience except testing
- Not sure what career is good for him
- Doesn't know who to ask
- Not sure where he'd like to move to
- Busy with current job, no time for job searching
- Wants company with strong culture
- Wants office job

HOW ESAKI CAN HELP

- Find jobs that fit Eric beyond his existing experience
- Help Eric learn what it is like to work for IBM (cultural fit)
- Easy-to-use experience so that he doesn't need to spend time researching

HILLS

- An early professional can find a job that fits him/her a lot faster
- effective and enjoyable with Watson technology instead of using the traditional search tool
- an early professional can feel comfortable and trustworthy asking Watson any questions related to working at IBM



To Be Story

Eric is tired of his current job. He works from home, but now is reconsidering and wants to interact with people in an office

He knows IBM is a good company to work for but he isn't sure if the experience he has is enough. He might even want to start a new career.

He doesn't even know if IBM is the right cultural fit for him. He decides to learn more about IBM and goes to IBM.com. He lands up on IBM.com/careers page where there is link called "IBM Attractive" which promises to help provide more info about IBM. Once he clicks it he sees an application that looks like a chat interface which greets him as Watson and invites him to ask questions. Eric then decides to explore and finds out that he is able to browse jobs, find jobs that fit him and learn about IBM all from one interface. He asks a variety of questions pertaining to his interest and receives information which he is looking for.

HILLS

- An early professional can find a job that fits him/her a lot faster
- effective and enjoyable with Watson technology instead of using the traditional search tool
- an early professional can feel comfortable and trustworthy asking Watson any questions related to working at IBM

He saves the links in his profile for future perusal and decides find jobs that fit his current experience.

Attractive has matched Eric to a few job categories based on his resume and interests based on analysis of his personality and social network. He decides to explore each one. For each job category Eric is able to see a detailed description that is easy to follow and also view videos about people working in those jobs to get a better understanding. He switches between different categories and once he is satisfied decides to find jobs that are closest to him. The application process is very easy as he can use the resume he had uploaded for Watson's analysis is now pushed through to complete the application very quickly.

Eric feels very content with the time he spent learning about IBM and makes a note to come back and look for more openings in a week.

IBM WATSON CANDIDATE ASSISTANT

IBM
Project Esaki

Hi Eric

What types of jobs are you looking for?

Here are a few examples of what I can help you search for:

- Jobs in marketing
- Find development jobs in Austin
- Find development internships

I can also recommend jobs that fit you. You can either:

- Upload resume or Answer questions about yourself

What would you like to do?

type here and hit enter

IBM
Project Esaki

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Here are a few examples of what I can help you search for:

- Jobs in marketing
- Find development jobs in Austin
- Find development internships

I can also recommend jobs that fit you. You can either:

- Upload resume or Answer questions about yourself

What would you like to do?

jobs in engineering

type here and hit enter

Categories

RECOMMENDED CATEGORIES

Software Dev & Support Day in the Life	IT Architect Day in the Life	Data Science Day in the Life
---	---------------------------------	---------------------------------

OTHER CATEGORIES

Any city	IT Architect Day in the Life	Data Science Day in the Life
Ammonk	IT Architect Day in the Life	Data Science Day in the Life
Austin	IT Architect Day in the Life	Data Science Day in the Life
Boston	IT Architect Day in the Life	Data Science Day in the Life
Raleigh	IT Architect Day in the Life	Data Science Day in the Life

IBM
Project Esaki

Hi Eric

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I can also recommend jobs that fit you. You can either:

- Upload resume or Answer questions about yourself

What would you like to do?

jobs in engineering

type here and hit enter

Software Dev and Support Day in the Life

See Jobs

This is an active and hands-on developer position, involving both the creation of new world class features as well as on going maintenance and bug fixes for one of the most popular applications in Apple's App Store and the premier mobile application for the consumer weather category.

The candidate will have the opportunity to help build and shape the #1 weather application on all mobile devices as well as assist in the development, technical design, and architecture for upcoming new products for both iPhone, iPad, Apple Watch, and Apple TV as well as other emerging technologies including cognitive applications for the mobile space.

This is an active and hands-on developer position, involving both the creation of new world class features as well as on going maintenance and bug fixes for one of the most popular applications in Apple's App Store and the premier mobile application for the consumer weather category.

The candidate will have the opportunity to help build and shape the #1 weather application on all mobile devices as well as assist in the development, technical design, and architecture for upcoming new products for both iPhone, iPad,

IBM
Project Esaki

Hi Eric

Great. Here are the Engineering jobs we have sorted by city.

Would you like to upload your resume or answer some questions so I can find the best jobs for you?

- Upload Resume and Cover Letter
- Answer some questions
- What else can I do?

type here and hit enter

Software Dev and Support 24 jobs

By City

See Day in the Life

AUSTIN iOS: Emerging Platform Mobile Developer for the Weather Company Full Time, Midlevel	AUSTIN Dev Manager Full Time, Midlevel	AUSTIN Software Developer Cloud Full Time, Midlevel
AUSTIN iOS: Emerging Platform Mobile Developer for the Weather Company Full Time, Midlevel	AUSTIN Dev Manager Full Time, Midlevel	AUSTIN Software Developer Cloud Full Time, Midlevel
AUSTIN iOS: Emerging Platform Mobile Developer for the Weather Company Full Time, Midlevel	AUSTIN iOS: Emerging Platform Mobile Developer for the Weather Company Full Time, Midlevel	AUSTIN Software Developer Cloud Full Time, Midlevel

IBM
Project Esaki

Hi Eric

Great. Here are the Engineering jobs we have sorted by city.

Would you like to upload your resume or answer some questions so I can find the best jobs for you?

Eric Resume.pdf uploaded
Eric CoverLetter.pdf uploaded

We've started your profile here based on your skills from your profile we can determine your matching categories. Add or remove skills that make sense for you.

Here are the Categories that match the skills and personality from your resume.

type here and hit enter

Profile

Skills Map Matching Categories Learning Saved Jobs Info Personality Insights

Software Dev & Support Day in the Life 50% skills match	IT Architect Day in the Life 25% skills match	Data Science Day in the Life 10% skills match
---	---	---

cloud developer html
css javascript communication

IBM
Project Esaki

Hi Eric

Great. Here are the Engineering jobs we have sorted by city.

Would you like to upload your resume or answer some questions so I can find the best jobs for you?

Eric Resume.pdf uploaded
Eric CoverLetter.pdf uploaded

We've started your profile here. Based on your skills from your profile we can determine your matching categories. Add or remove skills that make sense for you.

type here and hit enter

Profile

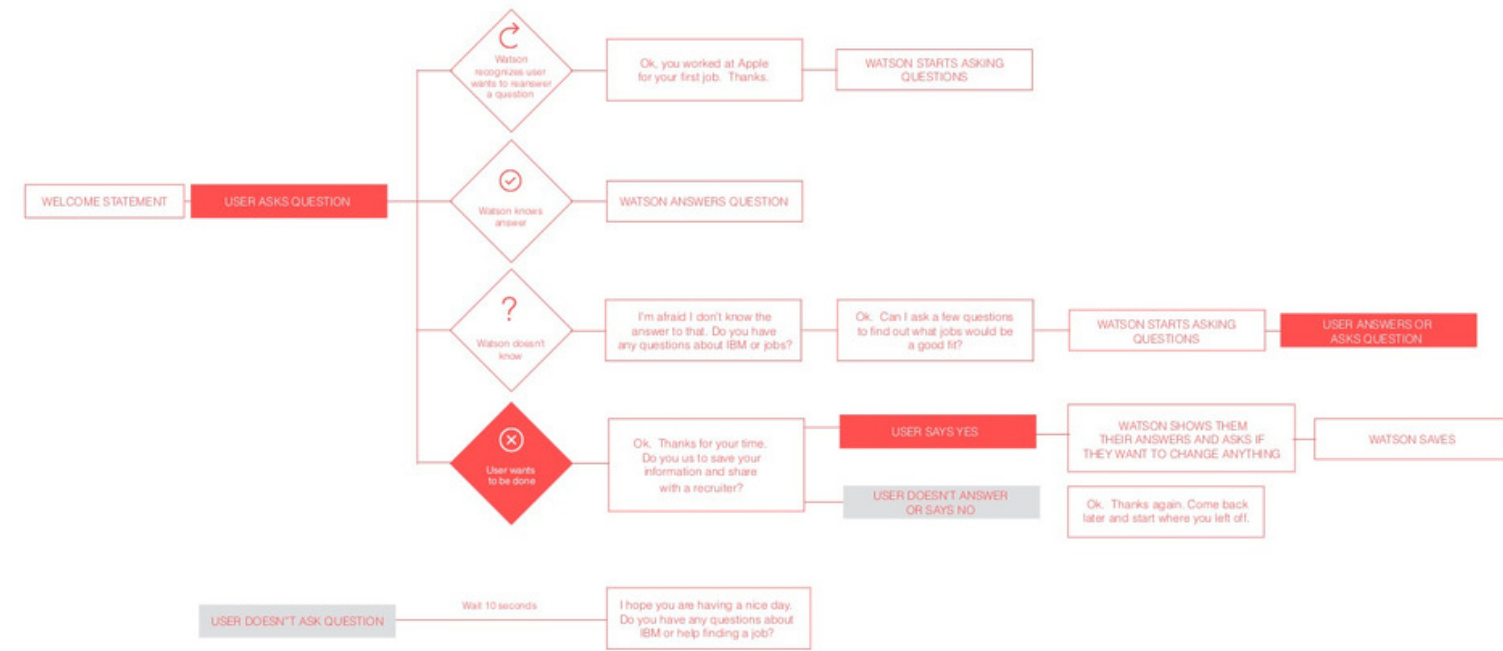
Skills Map Matching Categories Learning Saved Jobs Info Personality Insights

Type Skill Skill Level Skill Type Add skill

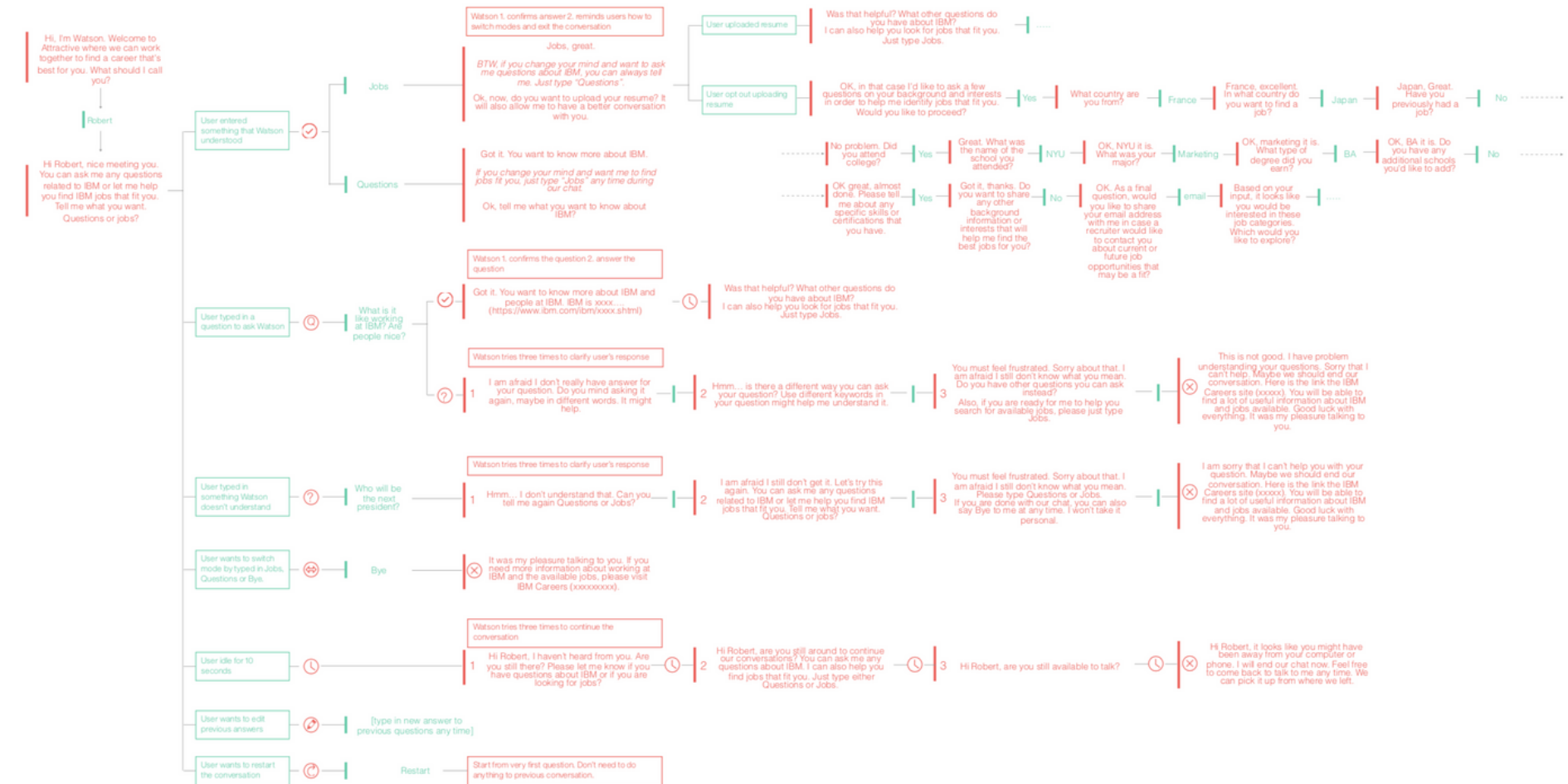
software agile testing
programming java Stack Overflow tennis
GitHub design Docker
communication presentation
automation

IBM WATSON CANDIDATE ASSISTANT

Conversation Flow



Conversation Flow



GLG

AGENTIC AI FOR ENTERPRISE WORKFLOWS



ABOUT GLG

GLG (Gerson Lehrman Group) provides services that match business leaders with experts for professional insights. These experts provide the direct knowledge needed to help solve complex challenges and drive business results.

GOAL

Improving operational efficiency by integrating Agentic AI across various business units, including Legal, Compliance, Finance, IT, and HR .

- Legal Contracts Review Agent
- Compliance Case Review Agent
- Financial Report Agent
- IT Support Agent
- HR Operation Agent

MY ROLE

Sole UX Design Lead

PROJECT TEAM

- Product Manager
- Technical Lead
- Engineers

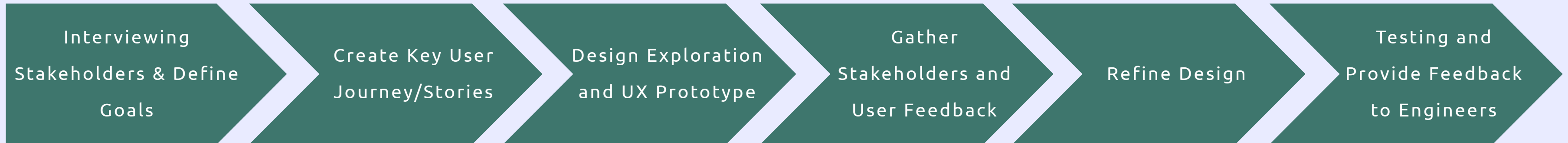
TIME PERIOD:

June 2024 to December 2025

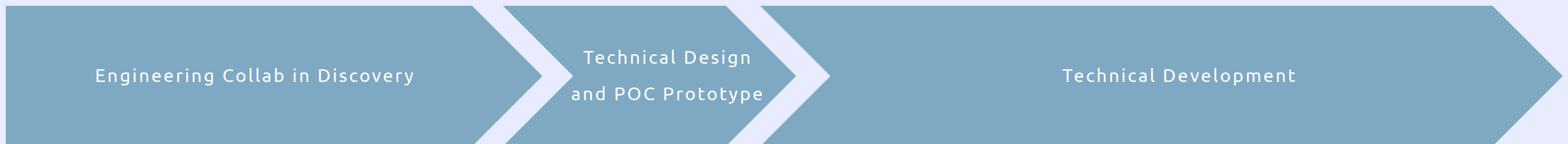
GLG AGENTIC AI FOR ENTERPRISE WORKFLOWS

PROCESS ACROSS PROJECTS

Design



Engineering





PROJECT

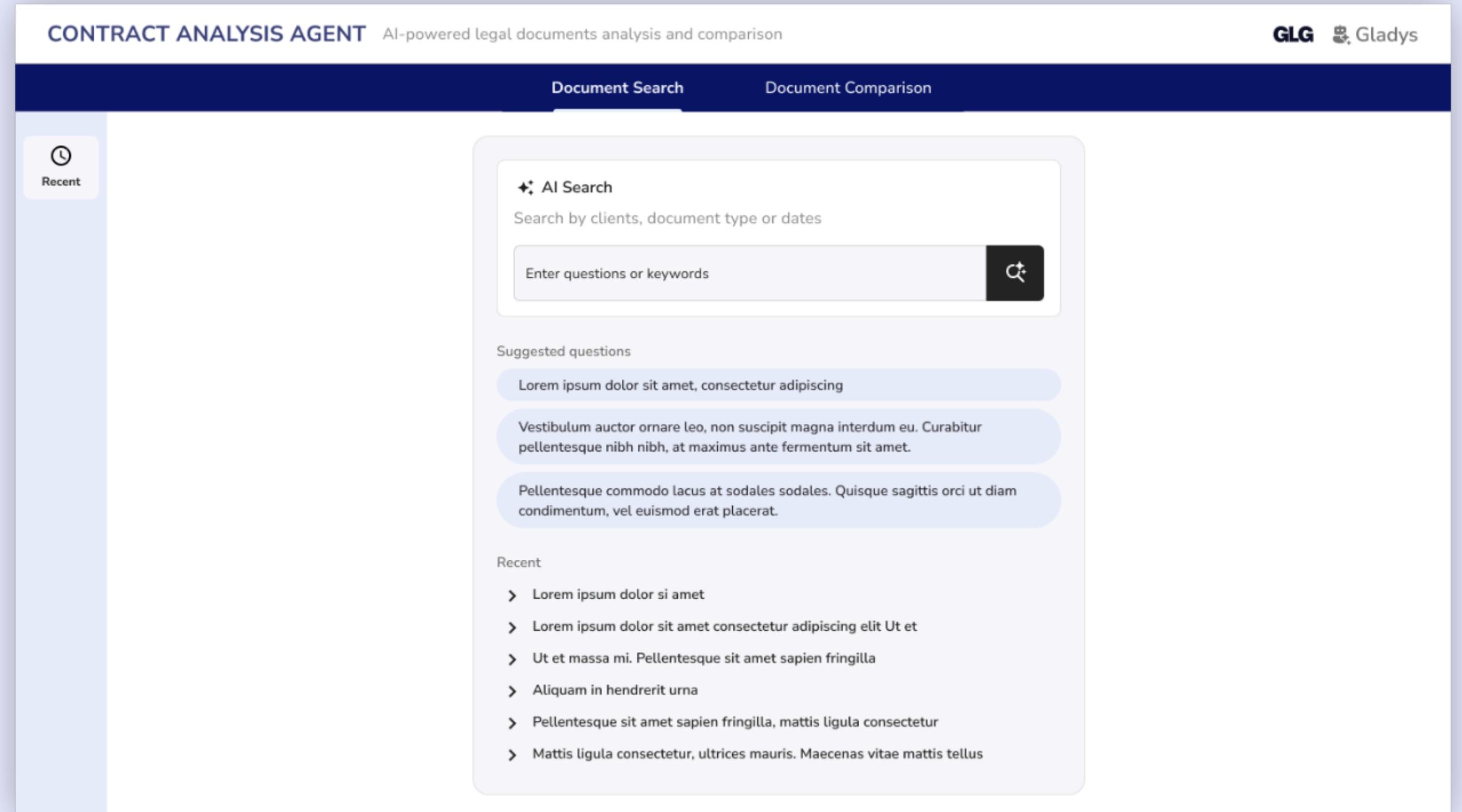
CONTRACT ANALYSIS AGENT

Stakeholders: Corporate Lawyers

PROJECT: CONTRACT ANALYSIS AGENT

Key Features

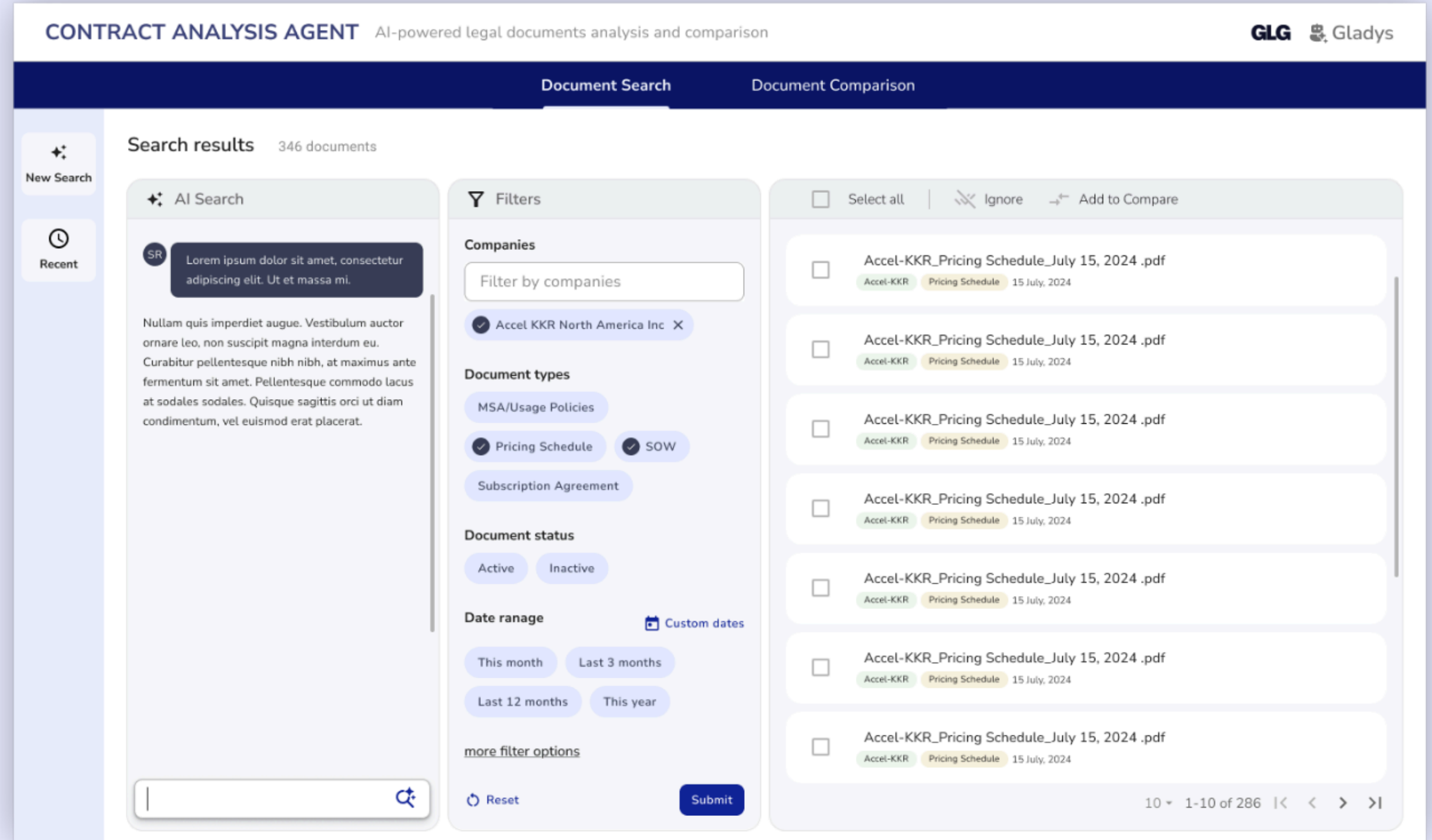
- **AI Chat +Search Integration:** A persistent AI chat area allows users to "deep dive" into legal document searches.
- **Guided Onboarding:** Provides example questions to help users learn prompt styles and system capabilities.
- Recent searches to continue unfinished conversation/search



PROJECT: CONTRACT ANALYSIS AGENT

Document Search Results

- Persist AI chat area for deep diving into the document search
- **Hybrid Search:** Conventional filters to further refine the search leveraging structured meta data



PROJECT: CONTRACT ANALYSIS AGENT


Compare two documents

- Using AI to compare two contracts and generate insights
- Use AI to compare one document with a “guideline playbook” from the library as the baseline to make sure the contract meet the most important guidelines

CONTRACT ANALYSIS AGENT AI-powered legal documents analysis and comparison GLG Gladys

Document Search **Document Comparison**

1 Upload document
This is the document that you would like to compare with the playbooks.

File name
Description 

or choose one from your upload history

Lorem ipsum dolor sit amet file name

Lorem ipsum dolor sit amet file name

Lorem ipsum dolor sit amet file name

2 Choose a playbook or upload a reference document
This is the document that we will use as the baseline to compare and analyze the differences.

All Playbook Category Playbook Category

Lorem ipsum dolor sit amet playbook name
Ut et massa mi. Aliquam in hendrerit urna. Lorem ipsum pellentesque sit amet sapien fringilla.
Category name


Lorem ipsum dolor sit amet playbook name
Ut et massa mi. Aliquam in hendrerit urna. Lorem ipsum pellentesque sit amet sapien fringilla.
Category name

Lorem ipsum dolor sit amet playbook name
Ut et massa mi. Aliquam in hendrerit urna. Lorem ipsum pellentesque sit amet sapien fringilla.
Category name


or choose one from what you added from search results

Lorem ipsum dolor sit amet file name

or upload a reference document

 Drag and Drop File Here or [Choose File to Upload](#)

3 Ready!

Compare Now 

PROJECT: CONTRACT ANALYSIS AGENT

Comparison Results

- Persist AI chat area for deep diving into the comparison insights
- **Visual Flagging:** Summary of the red/yellow/green flags
- Jump links from the summary to the corresponding section in the main document
- Future feature: accepting/rejecting suggested changes and ability to edit the document.

The screenshot displays the 'CONTRACT ANALYSIS AGENT' interface, which is AI-powered for legal document analysis and comparison. The top navigation bar includes 'Document Search' and 'Document Comparison'. The main content area is titled 'Comparison results' and is divided into three columns:

- Left Column:** Contains a sidebar with 'New Comparison', 'Playbooks', and 'Recent' options. The main area features an 'AI Search' section with a search bar and a text area containing placeholder text: 'Nullam quis imperdiet augue. Vestibulum auctor ornare leo, non suscipit magna interdum eu. Curabitur pellentesque nibh nibh, at maximus ante fermentum sit amet. Pellentesque commodo lacus at sodales sodales. Quisque sagittis orci ut diam condimentum, vel euismod erat placerat.'
- Middle Column:** Shows a 'Document uploaded' status and a 'Document file name'. Below this is a section titled 'Lorem ipsum dolor sit amet' with a large block of placeholder text. A search bar is located at the bottom of this column.
- Right Column:** Displays a 'Playbook selected' status and a 'Playbook name'. Below this is a summary of comparison results: 2 missing items (red), 1 review suggested item (yellow), and 2 matched items (green). Each item is accompanied by a brief description and a link to the corresponding section in the main document.



COMPLIANCE ISSUE RESOLUTION AGENT

Stakeholders: Compliance and Risk Management Team

MEMBER ISSUE RESOLUTION AGENT

Stakeholders: Expert Member Support Team

SIMILAR TICKETING WORKFLOW

Compliance Issue Resolution Agent



Member Issue Resolution Agent



Design Framework:

These tools utilize a consistent information architecture to handle similar ticketing workflows. The wireframes include:

- **Analysis & Scores:** A high-level rating (e.g., 3.2/5) based on findings related to identity, work history, and negative news .
- **Recommended Actions:** Streamlined buttons for "Approve & Notify," "Reject & Notify," or "Request More Info".
- **Deep Context:** Supporting data such as tenure, work history, and historical rate changes for individual members.

MIRA Member Issue Resolution Agent GLG Gladys

MIRA Analysis & Recommendation

Source
ZenDesk Ticket 2325 | Member Dianne Murphy | Category Rate Negotiation | Date/Time 2:34am, Jan 15, 2025

Analysis
Expert Dianne Murphy in New York requests for a rate increase from \$500 to \$650. She is an Elite Expert lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

MIRA recommended rate: **\$650.00**
Member requested rate: **\$650.00**
Current rate: **\$500**
Increase by: **23%**

- Excellent project participation history
- 10+ years of work history
- 2+ years since last rate increase

Recommended Action
Approving the request will automatically update the rate system and inform the expert lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.

Other actions

Other actions
Reject & Notify | More Analysis | Send to Compliance

EXPERT360

Dianne Murphy
ID 2325 | Location Shanghai | Org Acme Inc. | Title Managing Director

Summary

Location: **New York** since May 20, 2022 | Calls/Invited: **3/5** total 3.5 hours | GLG tenure: **3.4 years** since Jan 15, 2022 | Work tenure: **11 years** since Jan 15, 2012

Compliance Highlight | Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Expertise Summary | Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Communication Preferences | Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Rate History

Last Request	Requested	Recommended	Status
Jan 15, 2023	\$500	\$350	Accepted-Phone
Mar 15, 2023	\$500	\$200	Rejected-Email

Projects

Summary | Completed: 3 No show: 1
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Title	Started	Duration	Client	Client Contact	RM	Product
Lorem ipsum dolor sit amet, consect adipiscing	Jan 15, 2025	60 min	ABC Corp.	Madison Johnson	Jonathan Smith	Consultation

CIRA Compliance Issue Resolution Agent GLG Gladys

CIRA Analysis & Recommendation

Source
Salesforce Ticket 2325 | Member Dianne Murphy | Category Lorem Ipsum | Date/Time 2:34am, Jan 15, 2025

Analysis

3.2/5
Overall score

Overall findings:
Identity: **3 issues** >
Work History: **2 issues** >
Negative News: **2 issues** >

Top priority issues

- Lorem ipsum dolor sit amet
- Consectetur adipiscing elit, sed do eiusmod tempor
- Incidunt ut labore et dolore magna aliqua
- Ut enim ad minim veniam

Recommended Action: Request more info

Send to
 Jenny Kim project RM
 jsmith@company.com

Other actions
Request more info | Approve | Disapprove

EXPERT360

Dianne Murphy
ID 2325 | Location Shanghai | Org Acme Inc. | Title Managing Director

Summary

Location: **New York** since May 20, 2022 | Calls/Invited: **3/5** total 3.5 hours | GLG tenure: **3.4 years** since Jan 15, 2022 | Work tenure: **11 years** since Jan 15, 2012

Compliance Highlight | Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Expertise Summary | Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Communication Preferences | Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Rate History

Projects

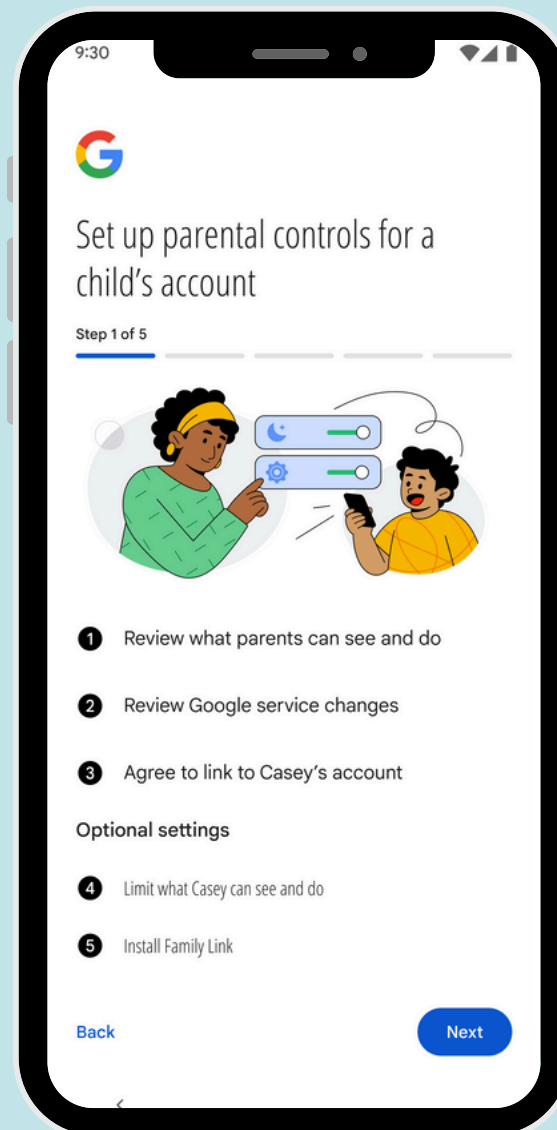
Summary | Completed: 3 No show: 1
Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Title	Started	Duration	Client	Client Contact	RM	Product
Lorem ipsum dolor sit amet, consect adipiscing	Jan 15, 2025	60 min	ABC Corp.	Madison Johnson	Jonathan Smith	Consultation

**DESIGN EXCELLENCE:
SIMPLIFY COMPLEX UX**



GOOGLE KIDS & FAMILY PLATFORM



PROJECT

To assist users in converting adult accounts into proper minor accounts when the Google system detects that the adult accounts are being used by minors or when a country updates the legal age .

BACKGROUND

Children under the legally required age (e.g., 13 in the U.S.) can only have a special minor's account with Google to ensure their data and experience are protected while using Google products.

However, many children either use their parent's adult accounts or have an adult account created for them.

MY ROLE:

Lead Interaction Designer

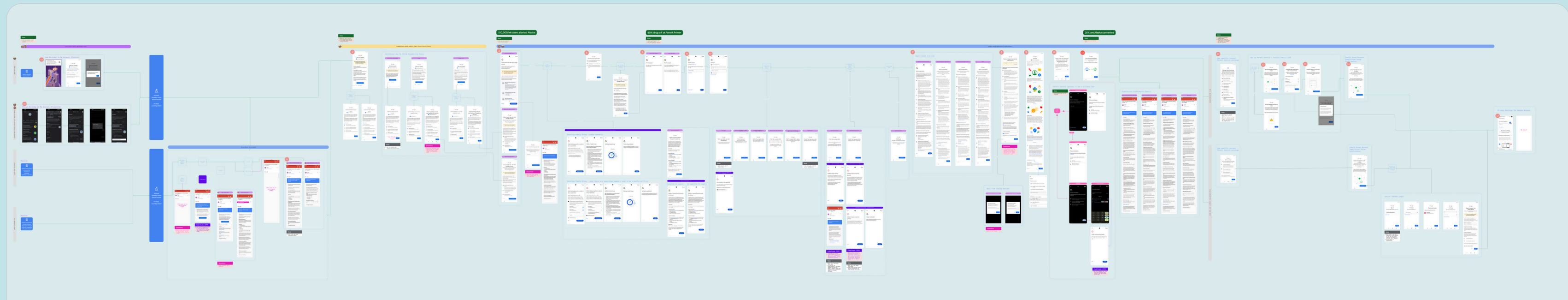
TIME PERIOD:

July 2023 to November 2023

CROSS-FUNCTIONAL TEAMS

- **UX:** UX researcher, UX designers, UX managers/leadership, illustrators
- **Product:** multiple product managers and leadership
- **Design System:** UX designers, CMS engineers
- **Other:** Lawyers

EXISTING COMPLEX WORKFLOW



CHALLENGES

- Educating parents through the most intuitive experience possible, while still meeting all compliance requirements.
- Wide range of user entry points due to the complex Google user account ecosystem.
- Outdated legacy workflow, systems, and components.
- Complex and varying legal/policy requirements across different countries.
- Balancing the need for shared workflow and UX patterns with platform-specific requirements.
- Collaboration across multiple cross-functional teams.

WHAT I DID

- Mapped out the end-to-end user flow, disregarding team ownership.
- Researched conversion statistics.
- Met with product managers, UX researchers, UX designers, and engineers across teams to understand history and future plans.
- Prioritized areas for improvement based on findings, requirements, and complexity of change.

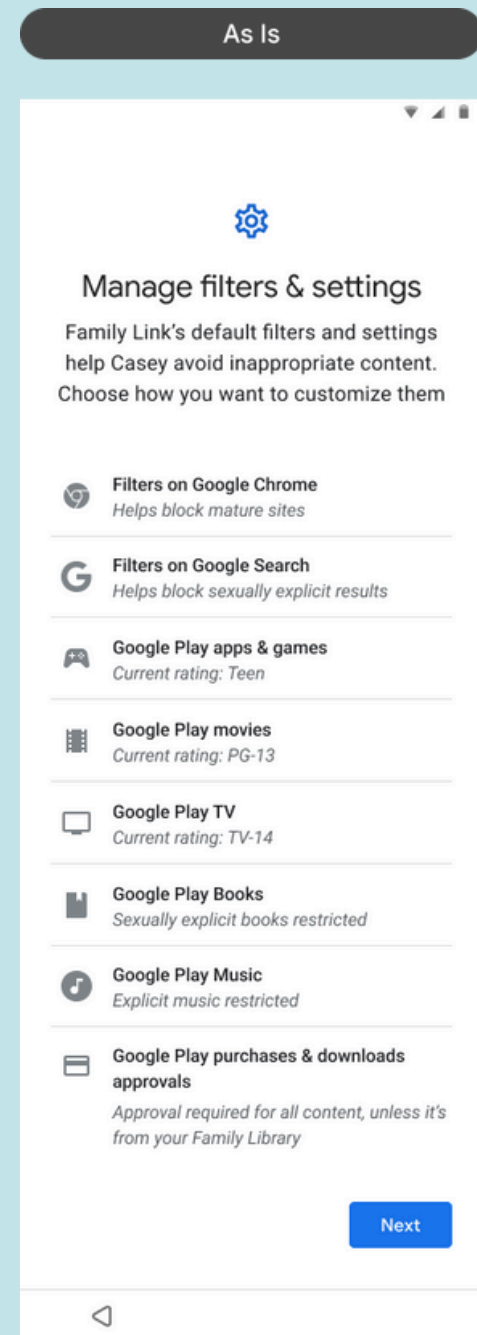
AN EXAMPLE FOR PHASED IMPROVEMENT PROPOSAL

Improve conversion of parents setting up app/content filters

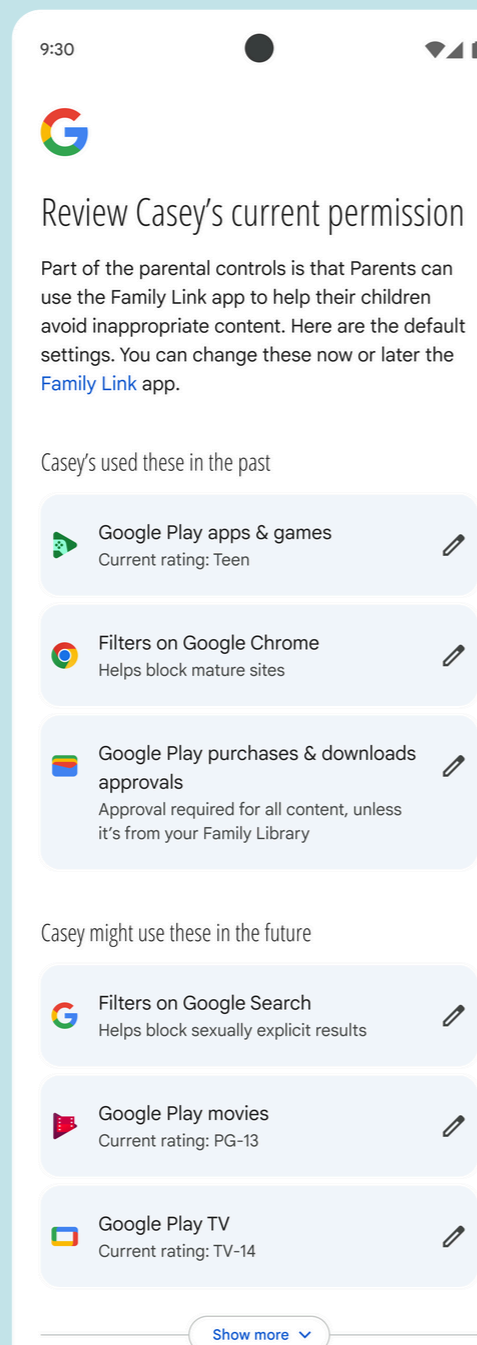
A screen with low conversion rates shows that most users are skipping the step to filter the app and content for their children.

Improvement Hypothesis:

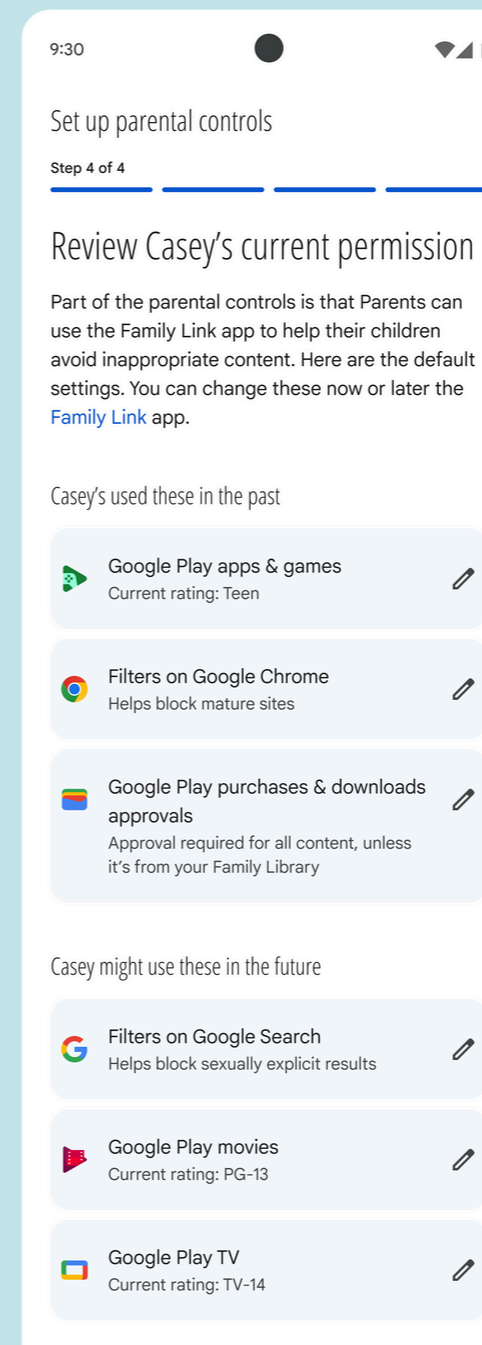
- **Improve Instructional Copy:** Enhance the instructional text to clearly explain the actions users can take on this screen.
- **Add Visual Indicators:** Incorporate visual cues, such as hover effects or underlines, to indicate that the cards are clickable.
- **Improve Visual Hierarchy:** Optimize the layout and design to make options more easily scannable and understandable.



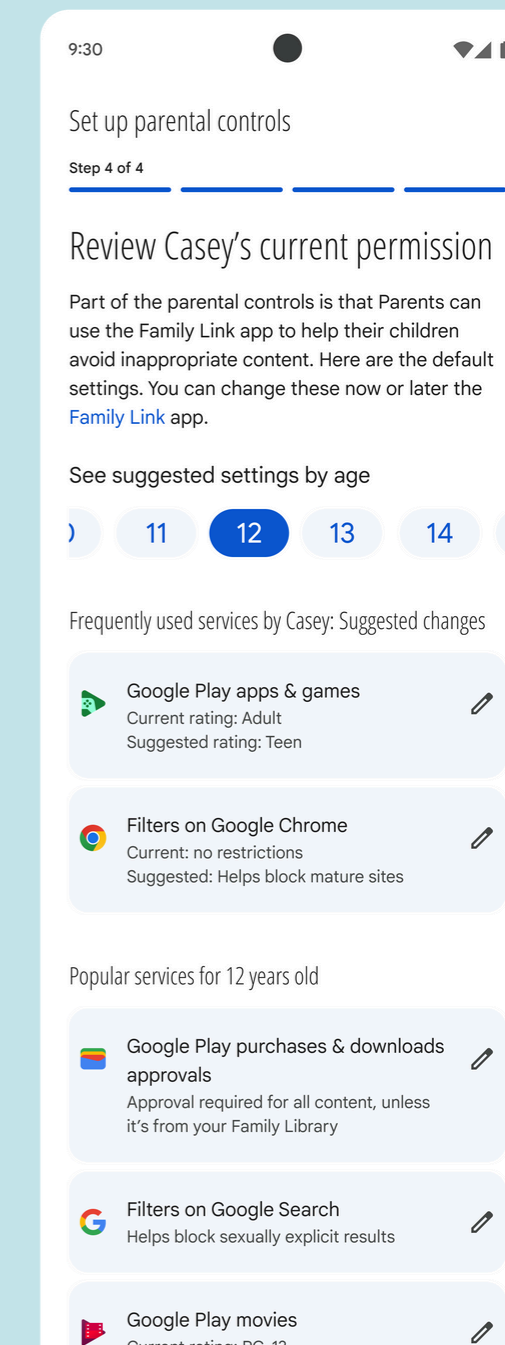
Phase I UI and Usability update



Phase II Workflow update - add in-page progress status



Phase III New feature to enhance UX - Age-slider for personalized suggestions

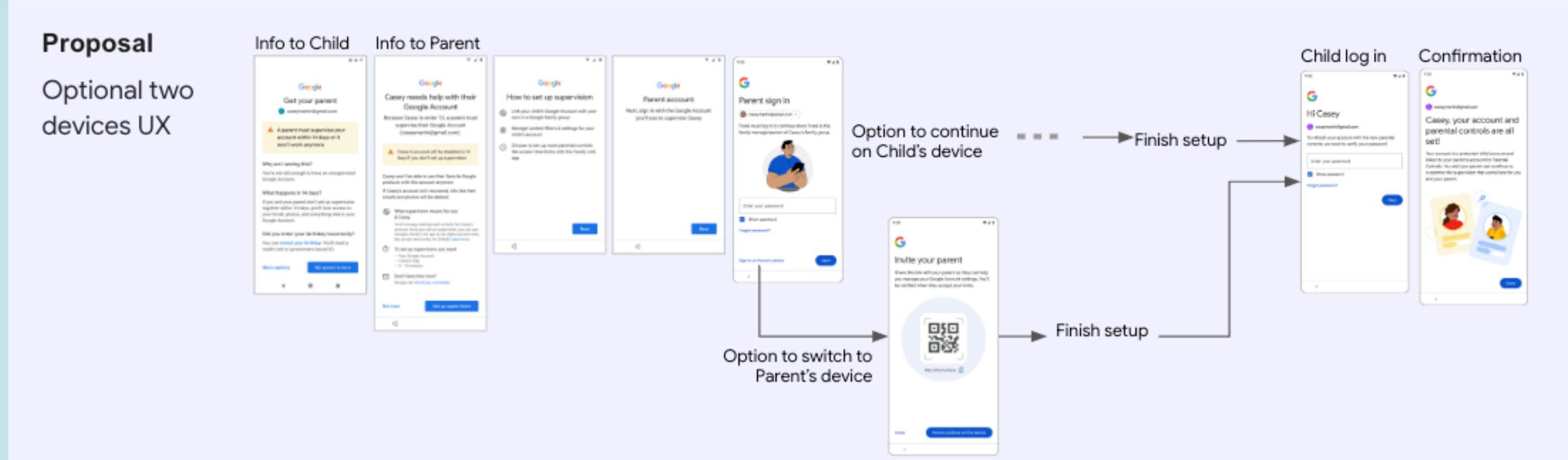
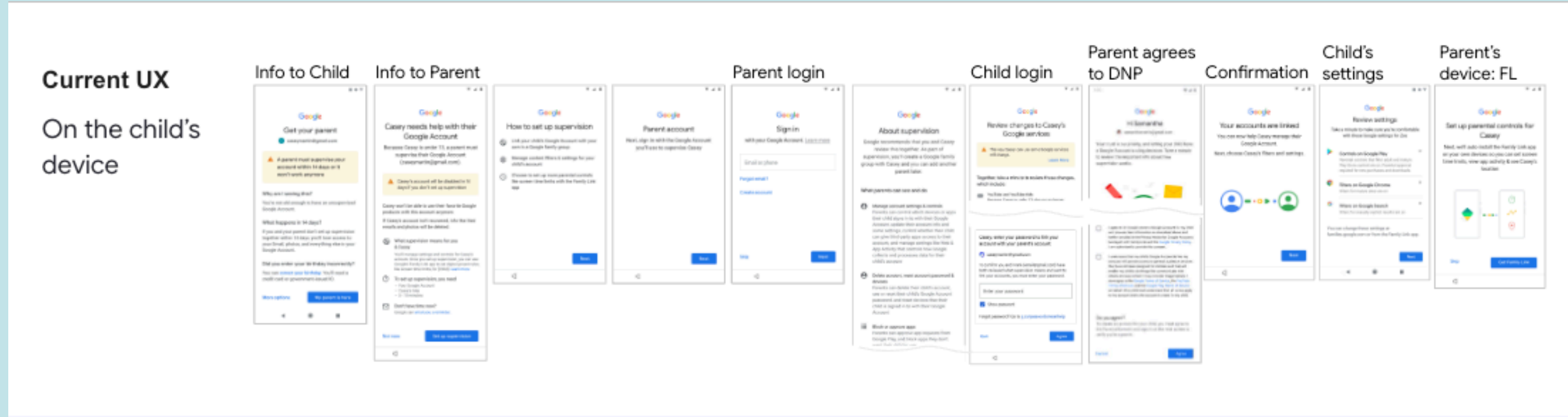


AN EXAMPLE OF UX FLOW IMPROVEMENT PROPOSAL

Allowing parents to login and approve supervision on their own device

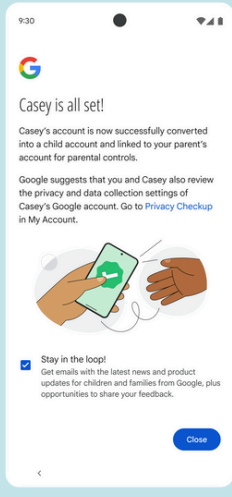
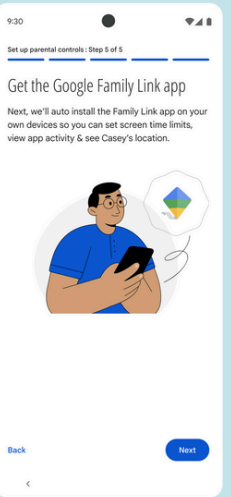
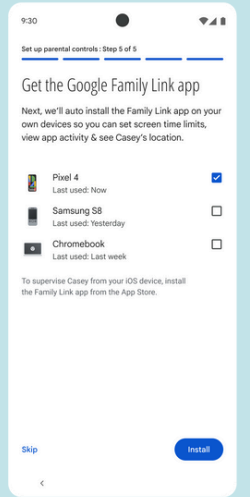
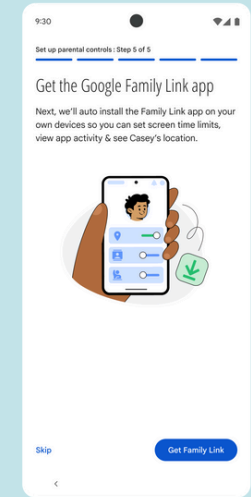
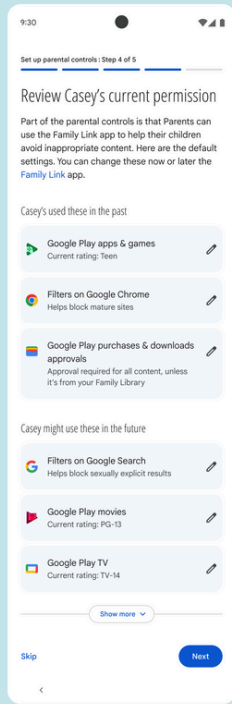
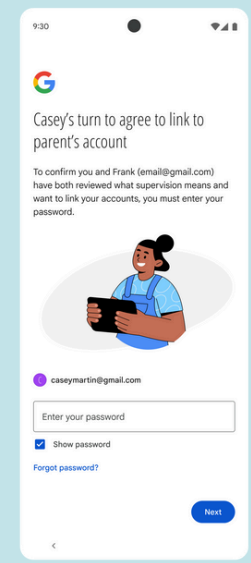
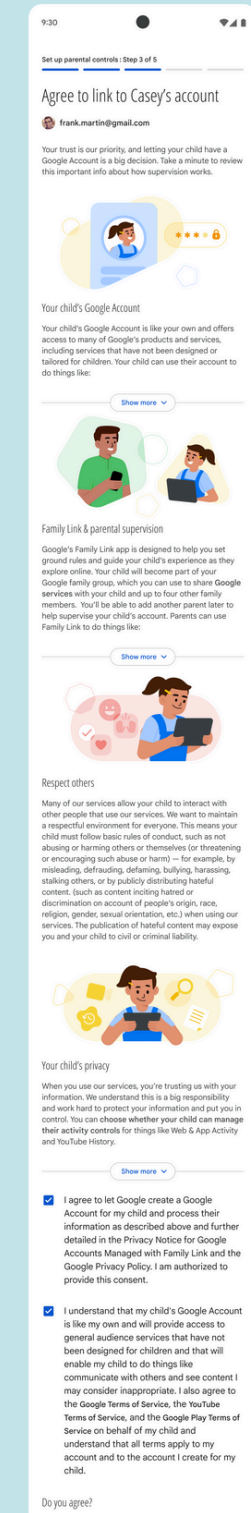
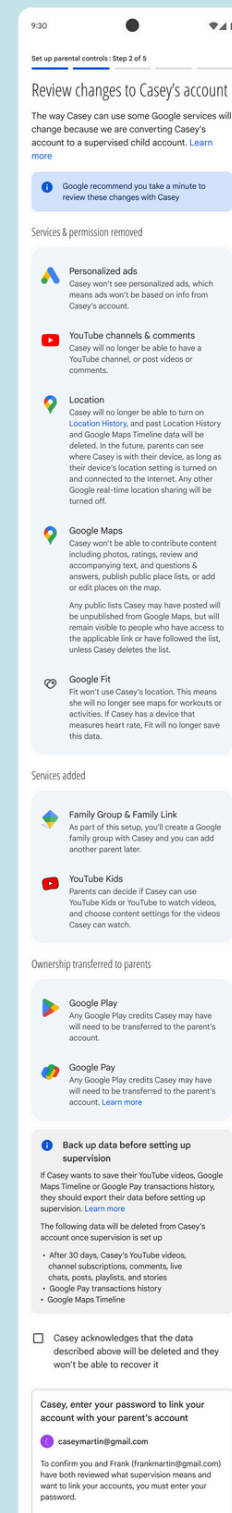
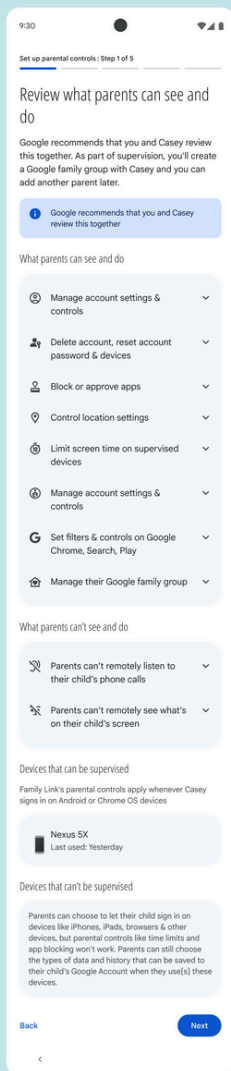
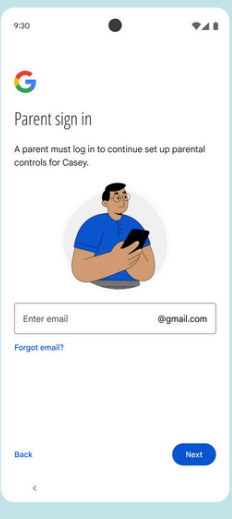
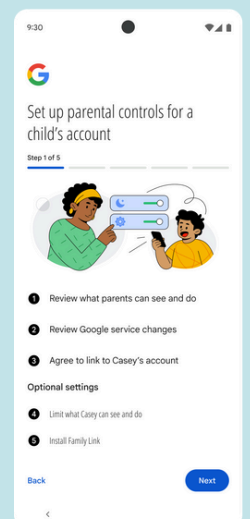
One of the biggest drop-offs in the workflow of converting to a child account with parent supervision is the "parent log-in" step. Previous research has shown that entering a password from a child's device is one of the barriers.

Improvement hypothesis
Providing options to switch the workflow to the parent's device, where they have easier access to their password, might help improve the conversion rate.



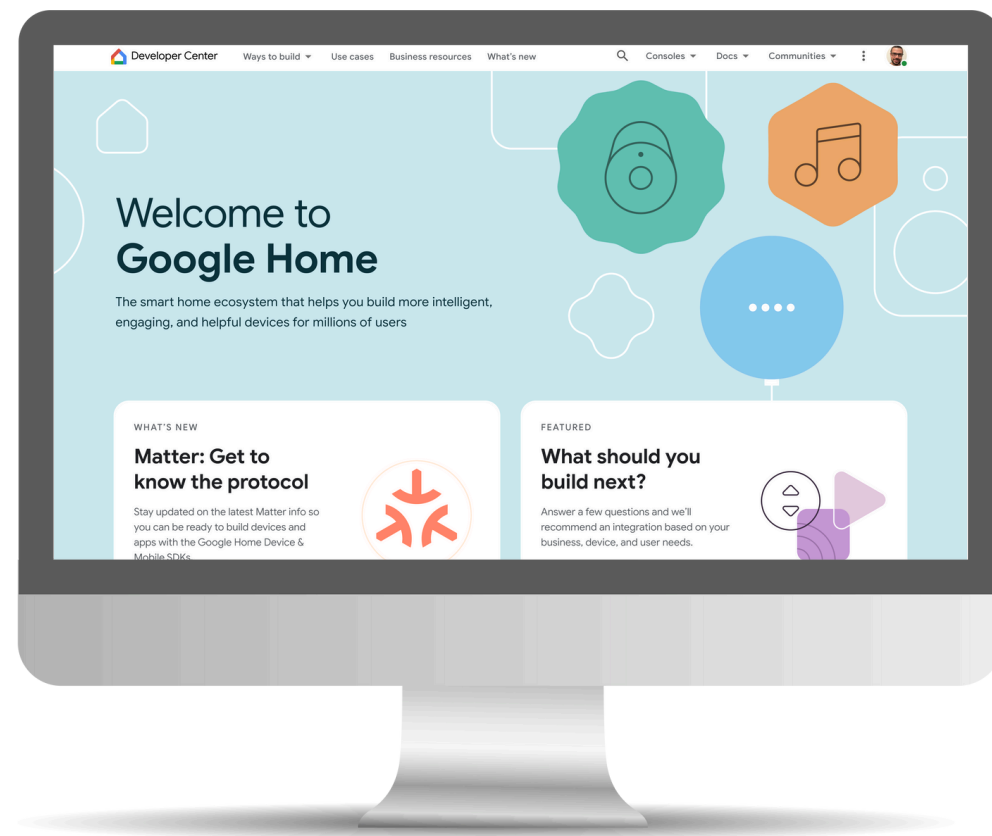
END-TO-END SIMPLIFIED UX PROPOSAL AT A GLANCE

- Overview
- Parent login
- About supervision
- Service changes
- T&C
- Child log in
- Review settings
- Install Family Link app
- Done



DESIGN PROCESS

SMART HOME DEVELOPER CENTER (WEBSITE)



BACKGROUND

The dev center website aims to provide all information required for all developer-types to develop all types of smart home integrations with Google.

- Target all developer and partner types
- Launching when as the new industry standardized protocol, Matter, was introduced
- Announced at Google I/O

MY ROLE:

Lead Interaction Designer

TIME PERIOD:

Nov 2021 to May 2022 (6 months)

CROSS-FUNCTIONAL TEAMS

- **UX:** UX researcher, UX writer, UX managers/leadership, UX operation manager, illustration vendor
- **Product:** multiple product managers and leadership
- **Tech:** technical writers, CMS engineers
- **Other:** Marketing, Legal, Event Communications

DEV CENTER WEBSITE

ANALYSIS

REQUIREMENTS & RESEARCH INSIGHTS



Business requirements & strategy

- Business opportunities
- Product goals
- Targeted audiences
- High-level roadmap
- Content and feature ideas
- Constraints
- KPIs



Past industry and UX researches

- Current state
- Business goals
- Targeted audiences
- High-level roadmap
- Content and feature ideas
- Constraints
- KPIs



Related live system usage and workflow review

- Various tech documentation websites
- Other Google developer website
- Google Smart Home website



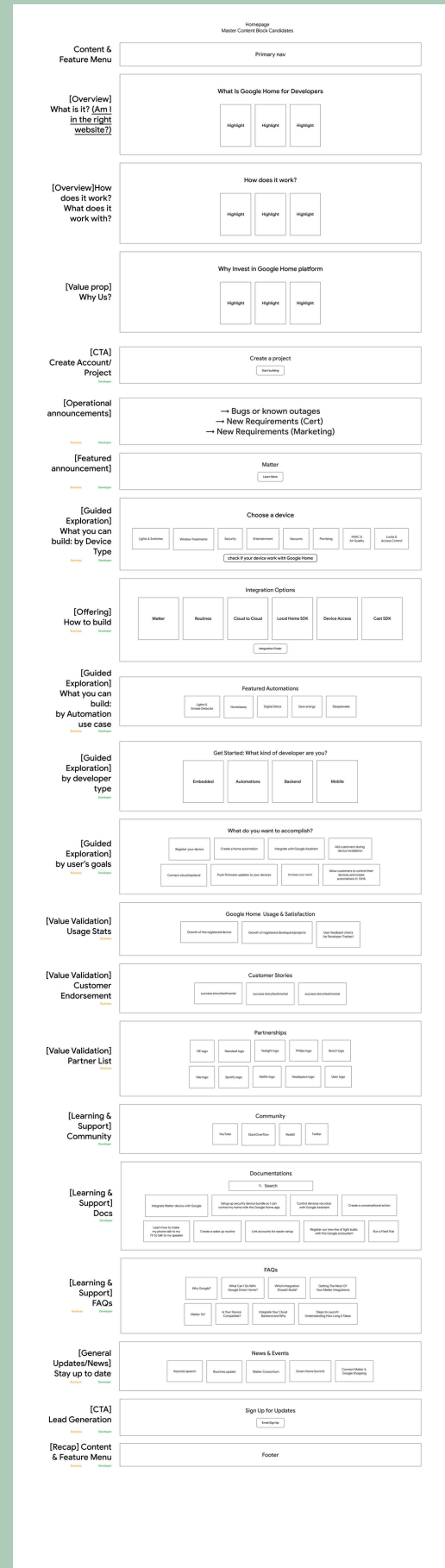
Current user behavior and competitor analysis

- User social and support forums
- Related competitor systems
- Related workflow systems

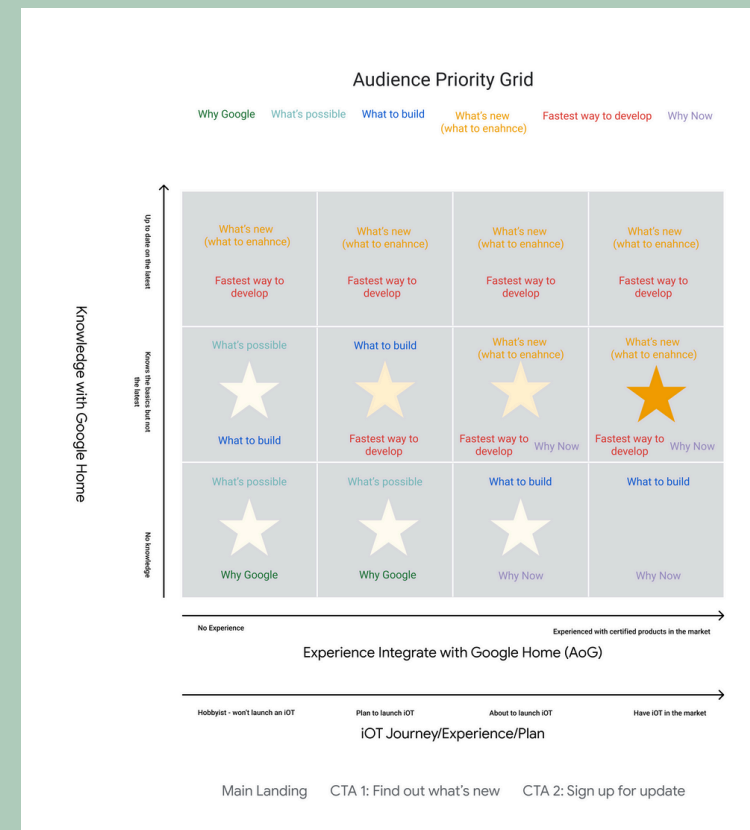
EARLY STAGE PROCESS ARTIFACT EXAMPLES



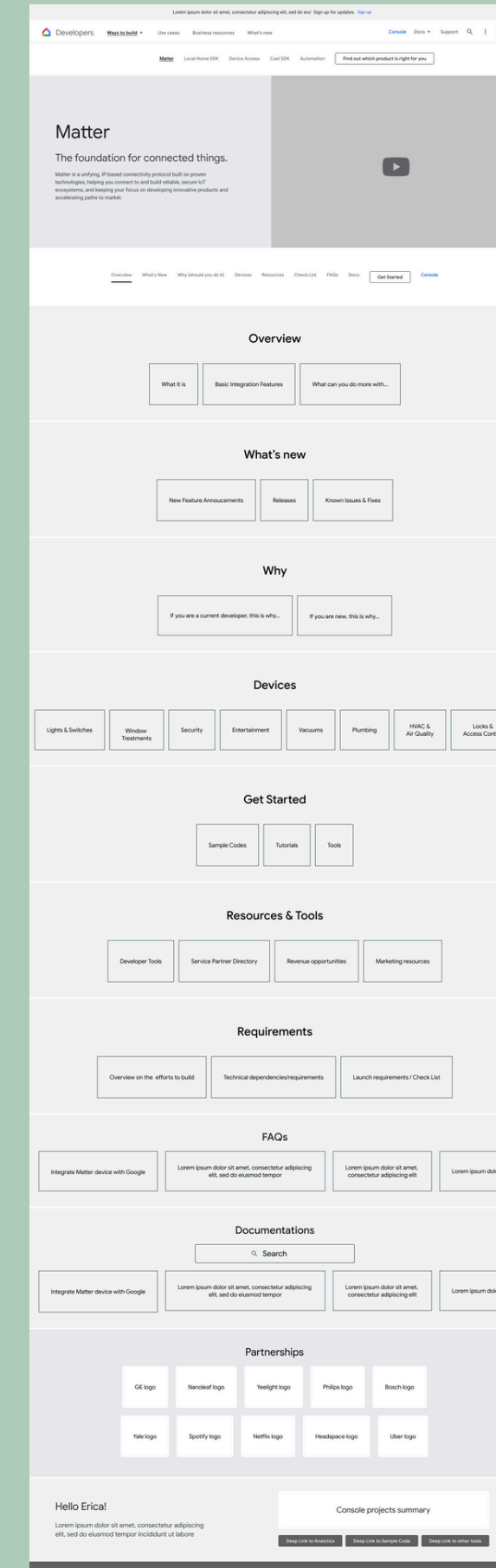
User empathy map



Content inventory

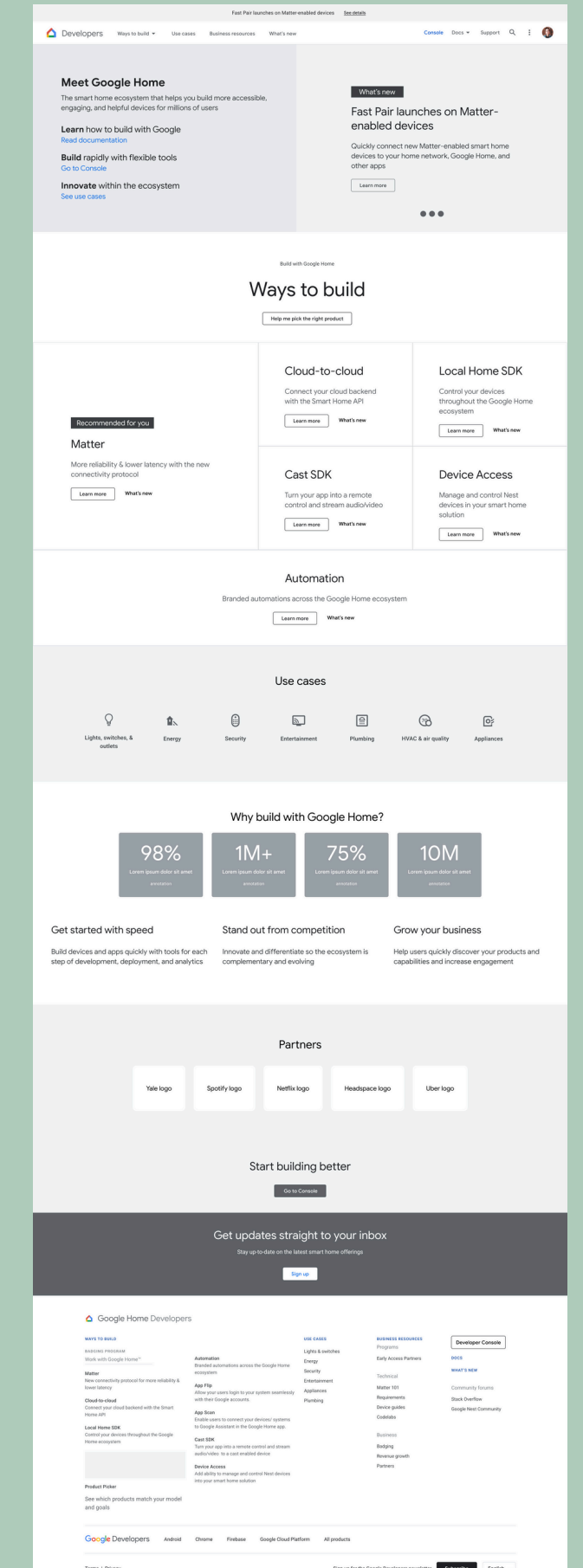


Content priority grid



Wireframe iterations

DEV CENTER WEBSITE



Wireframe iterations

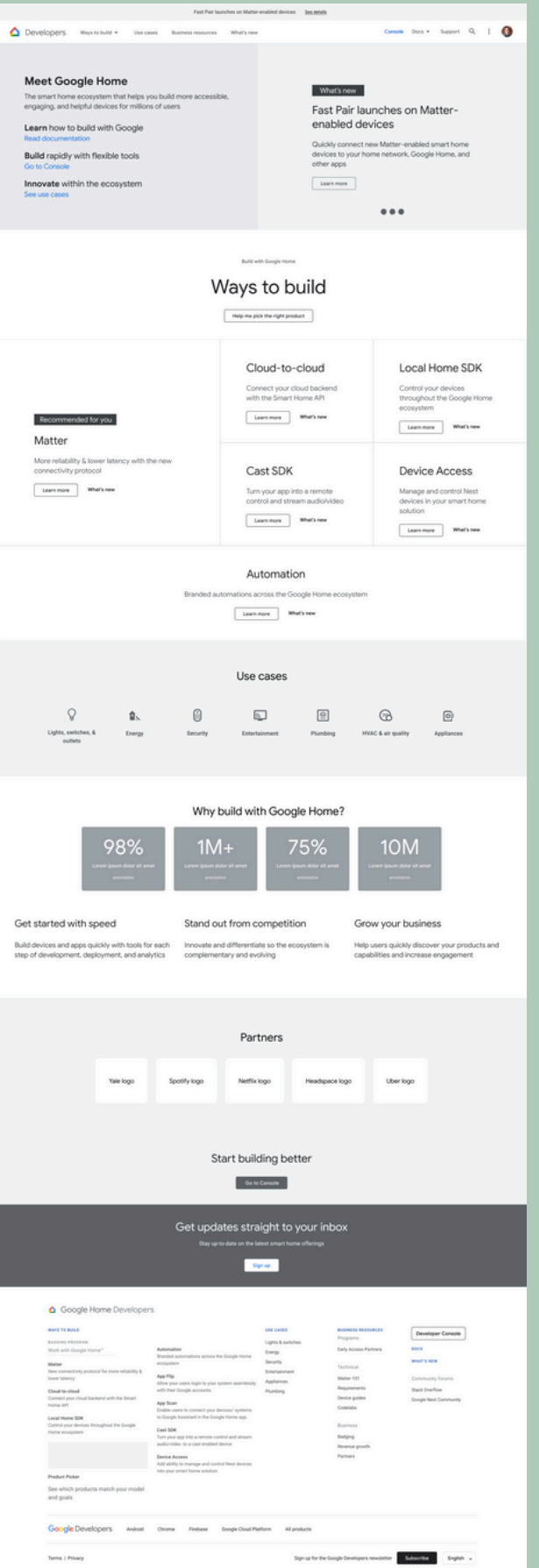
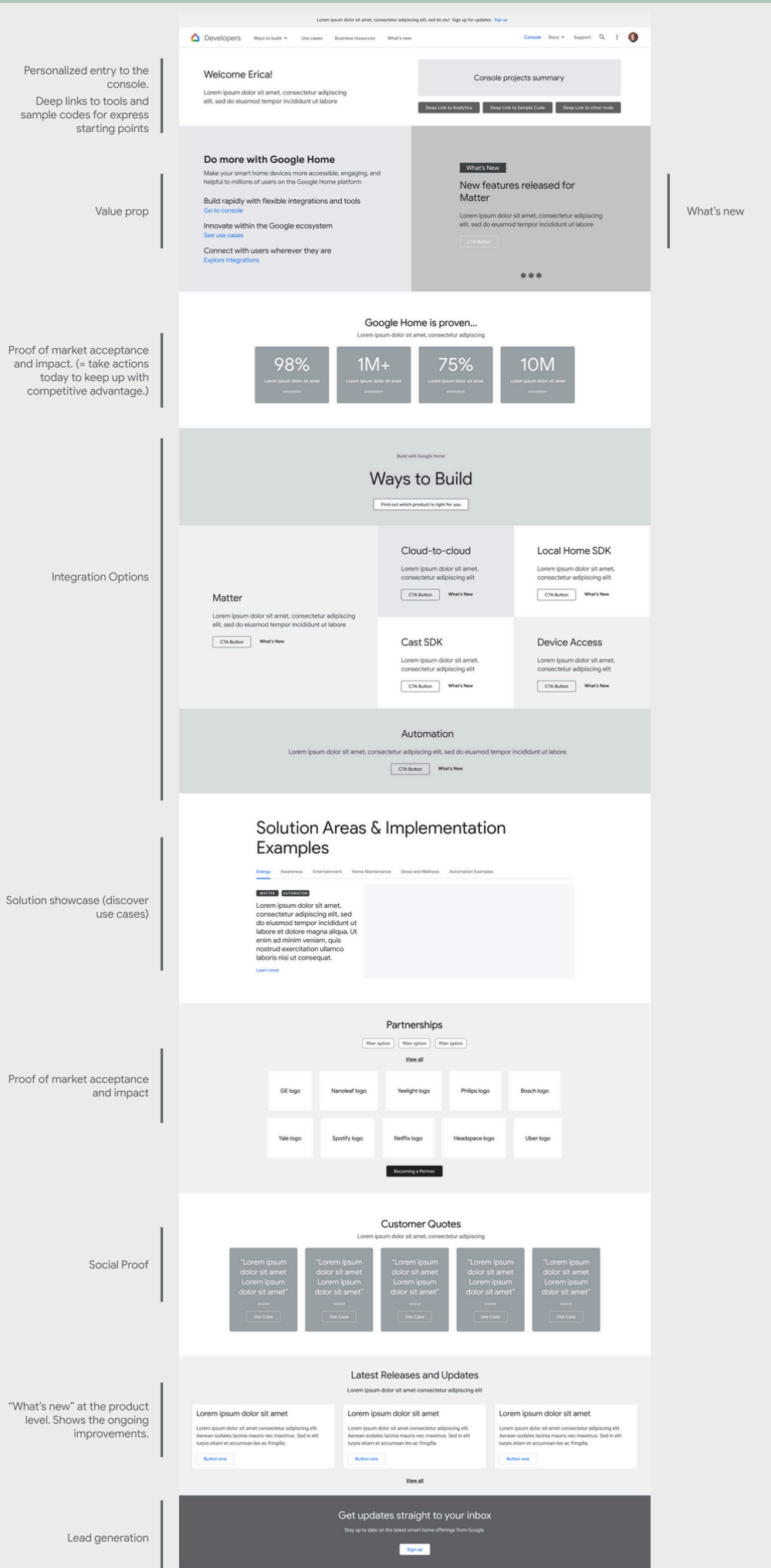
DEV CENTER WEBSITE

WIREFRAMES

Homepage Wireframe

- Due to limited available content and constantly changing integration options and supported devices, maintaining a flexible structure was necessary.

A comprehensive wireframe encompassing the full strategic vision, followed by a refined MVP version for implementation.



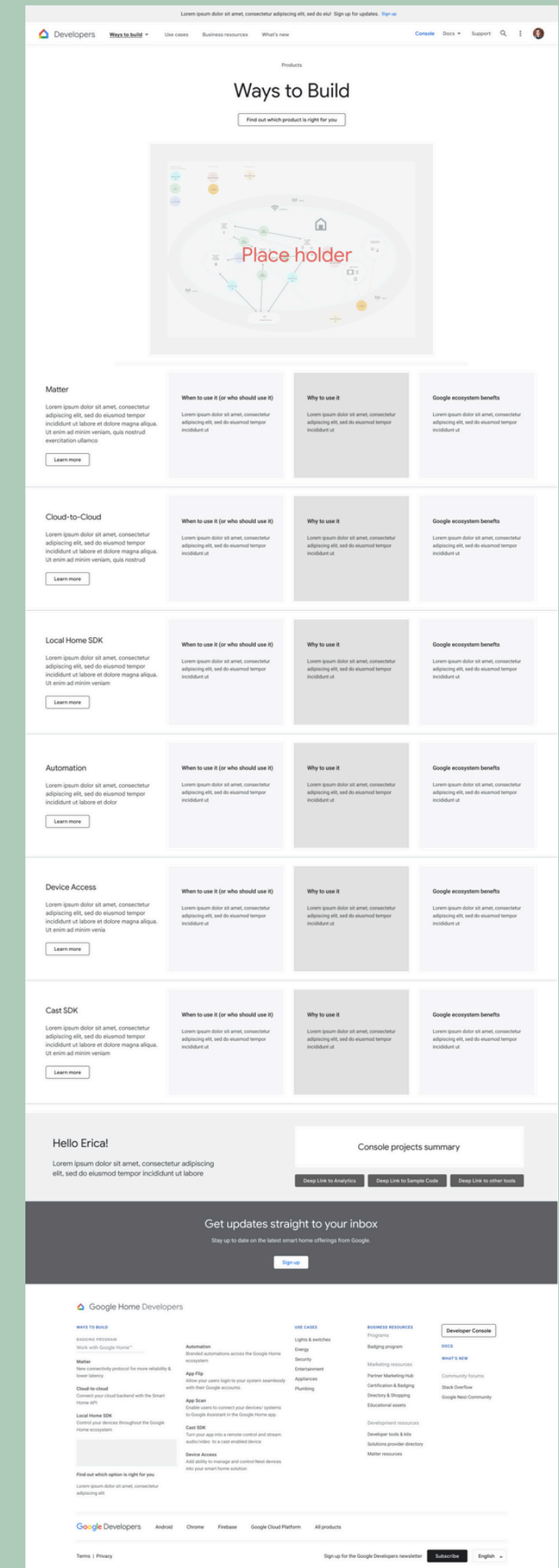
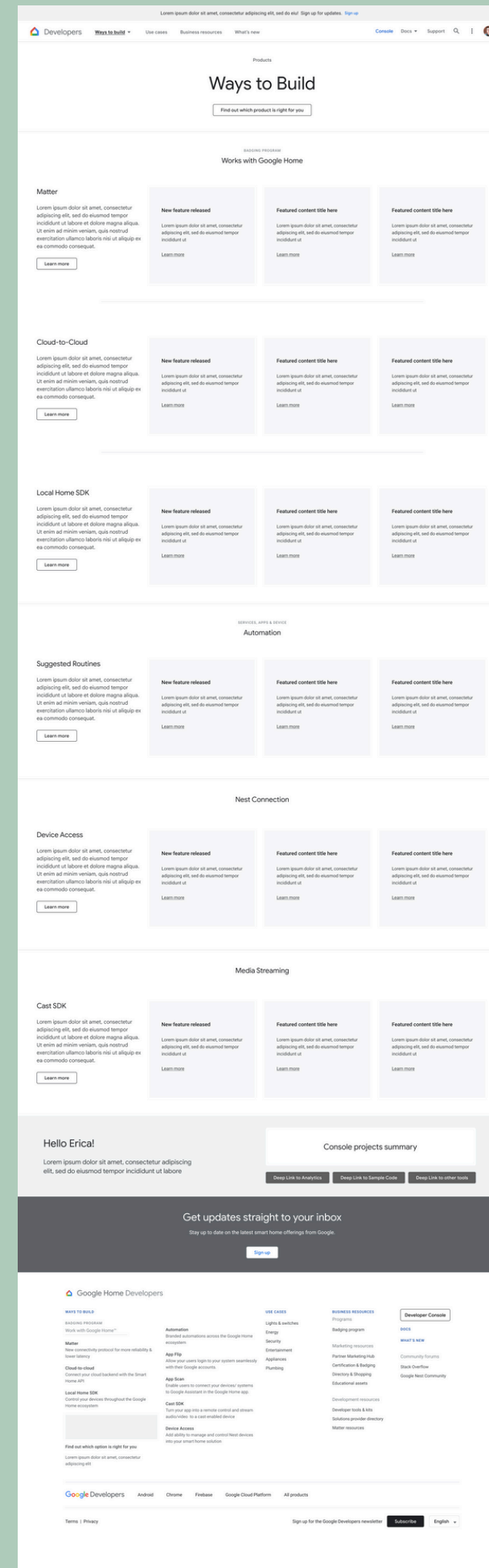
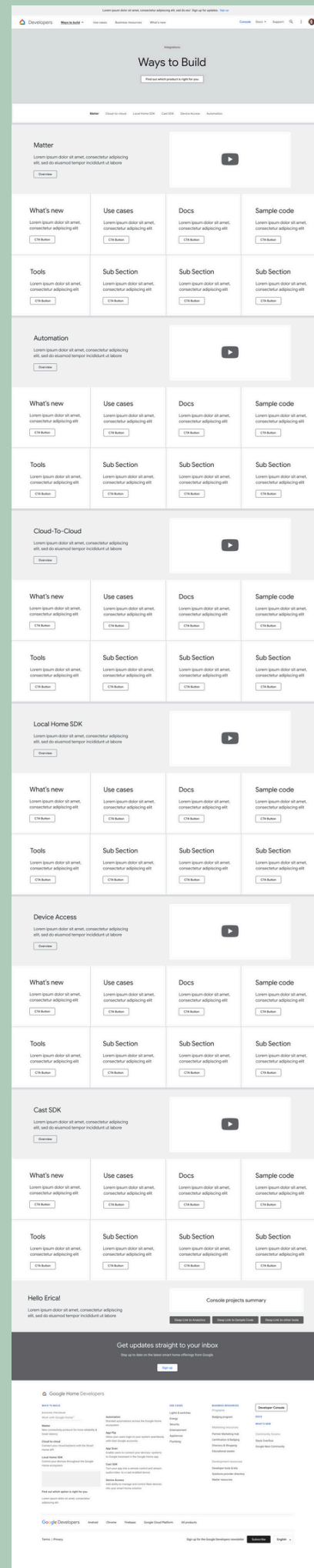
Final approved wireframe

DEV CENTER WEBSITE | WIREFRAMES

Integrations/Products Landing Page

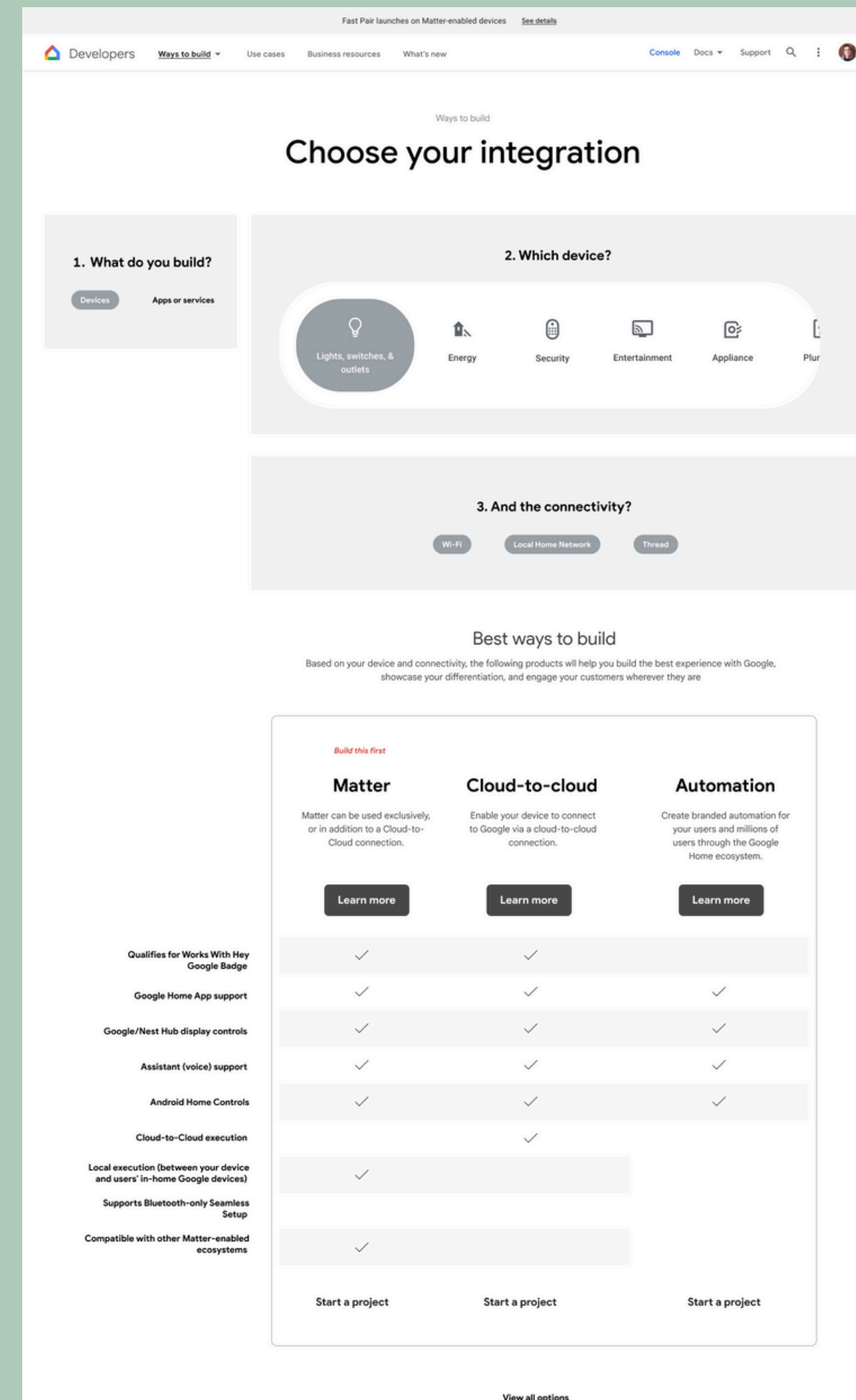
- To minimize CMS customizations, the initial explorations were to focus on using existing components

Balancing design, technology, resources, and timeline is part of the job.



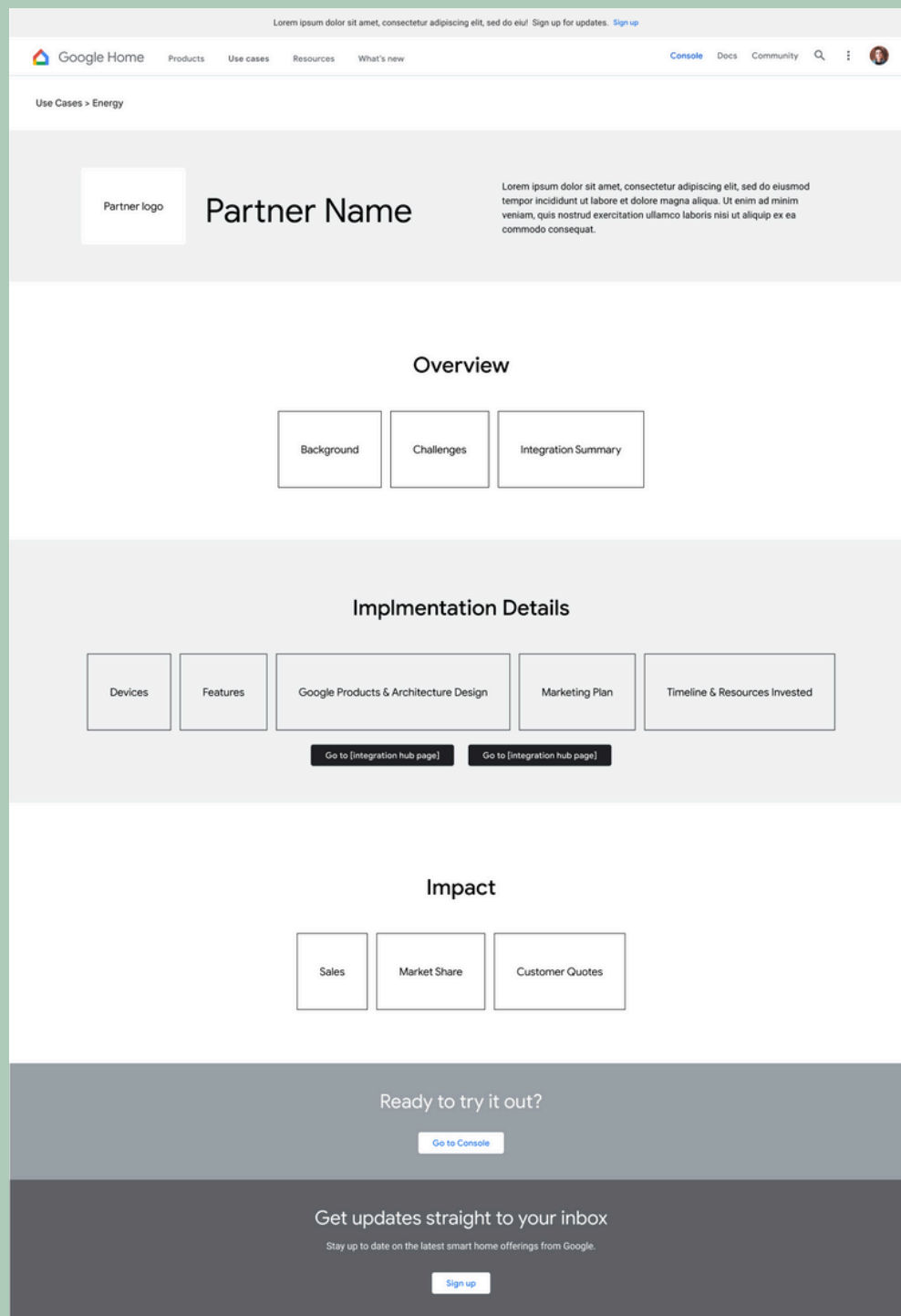
Interactive integration finder

- The interactive tool proposal presented to leadership, outlining as part of future vision, was well received and resulted in securing additional resources to build the feature for the launch.
- I built a prototype to help articulate the interactions.

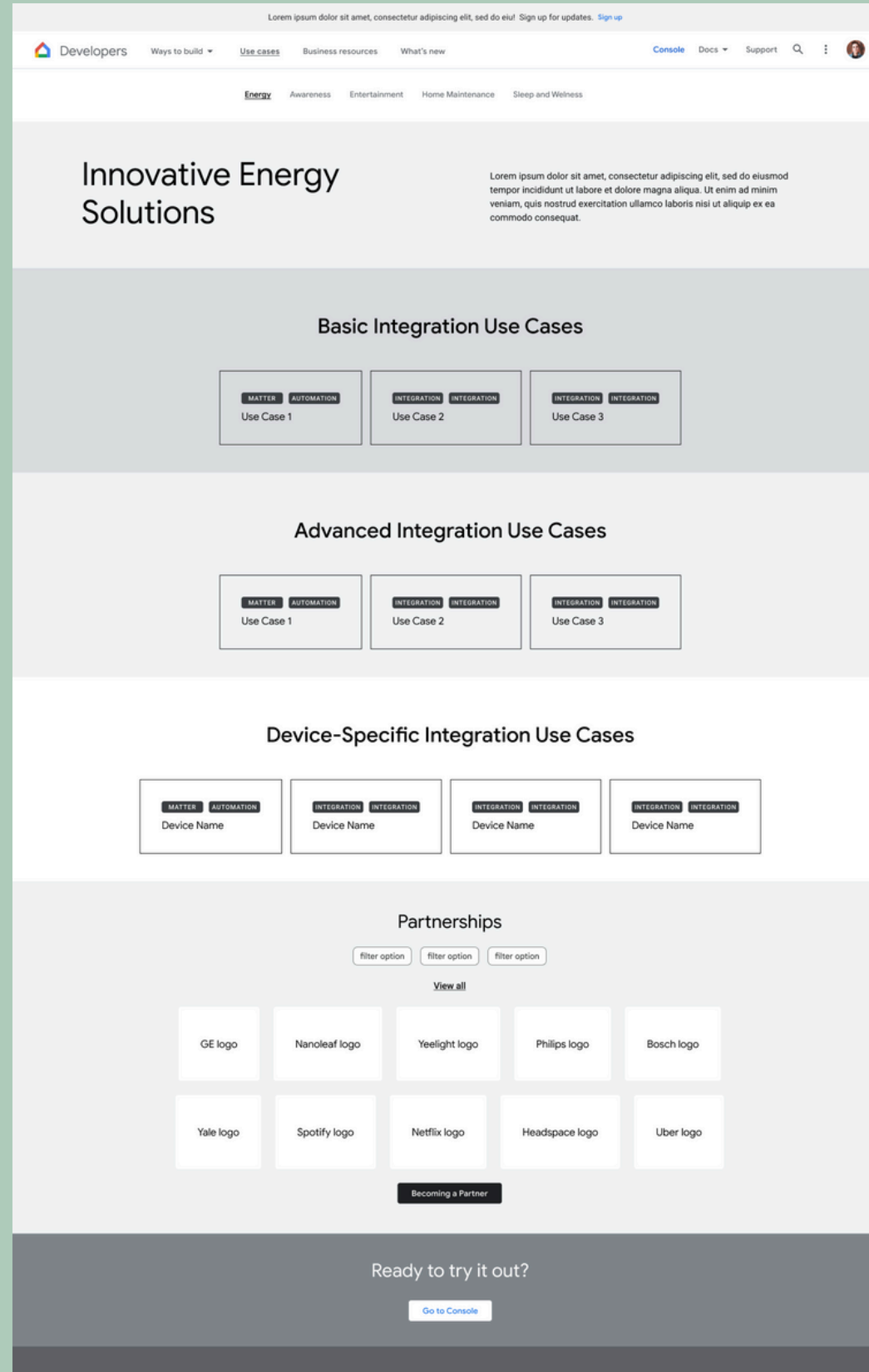


Case Studies

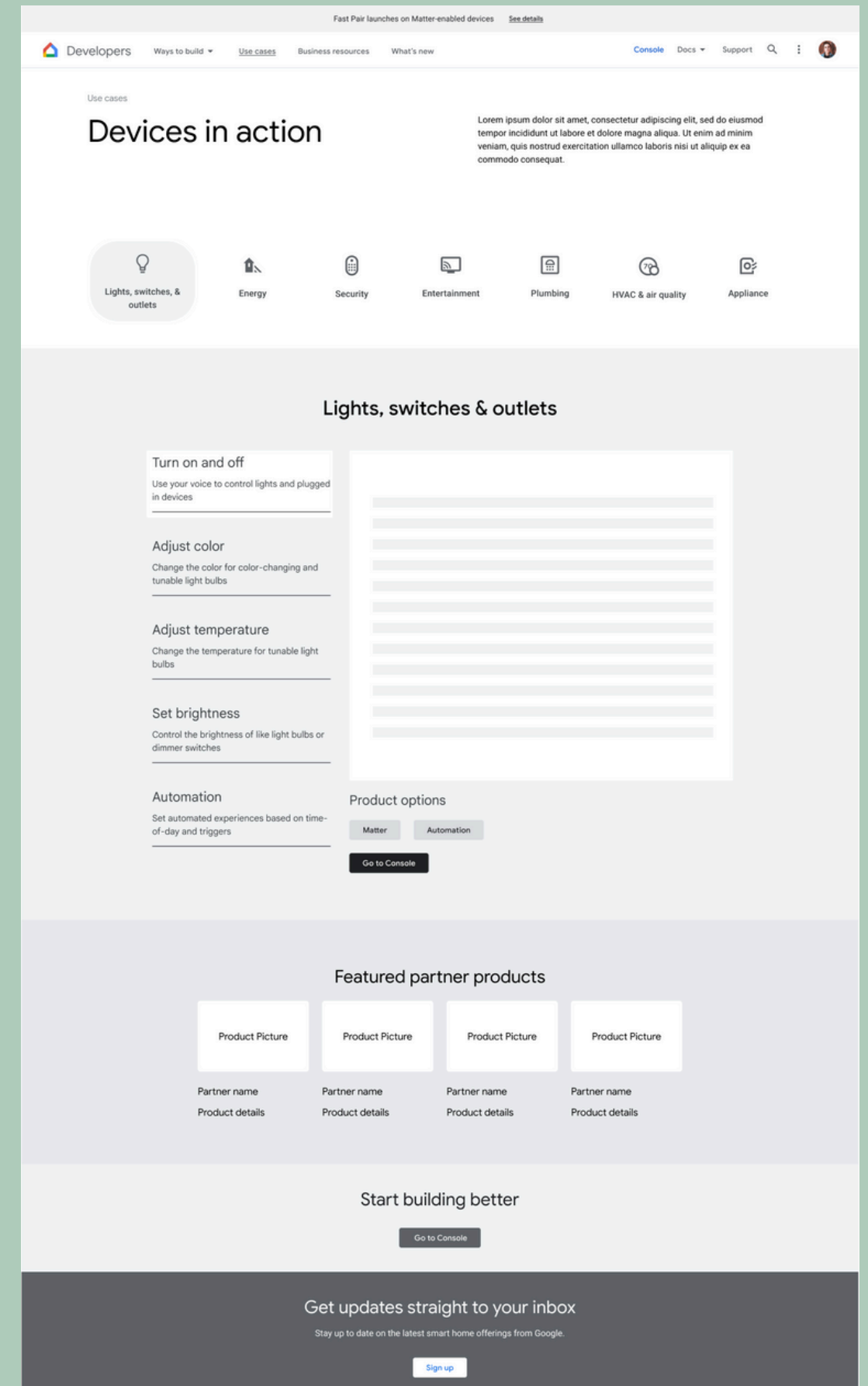
Iteration 1: success stories



Iteration 2: Solution-driven inspirations



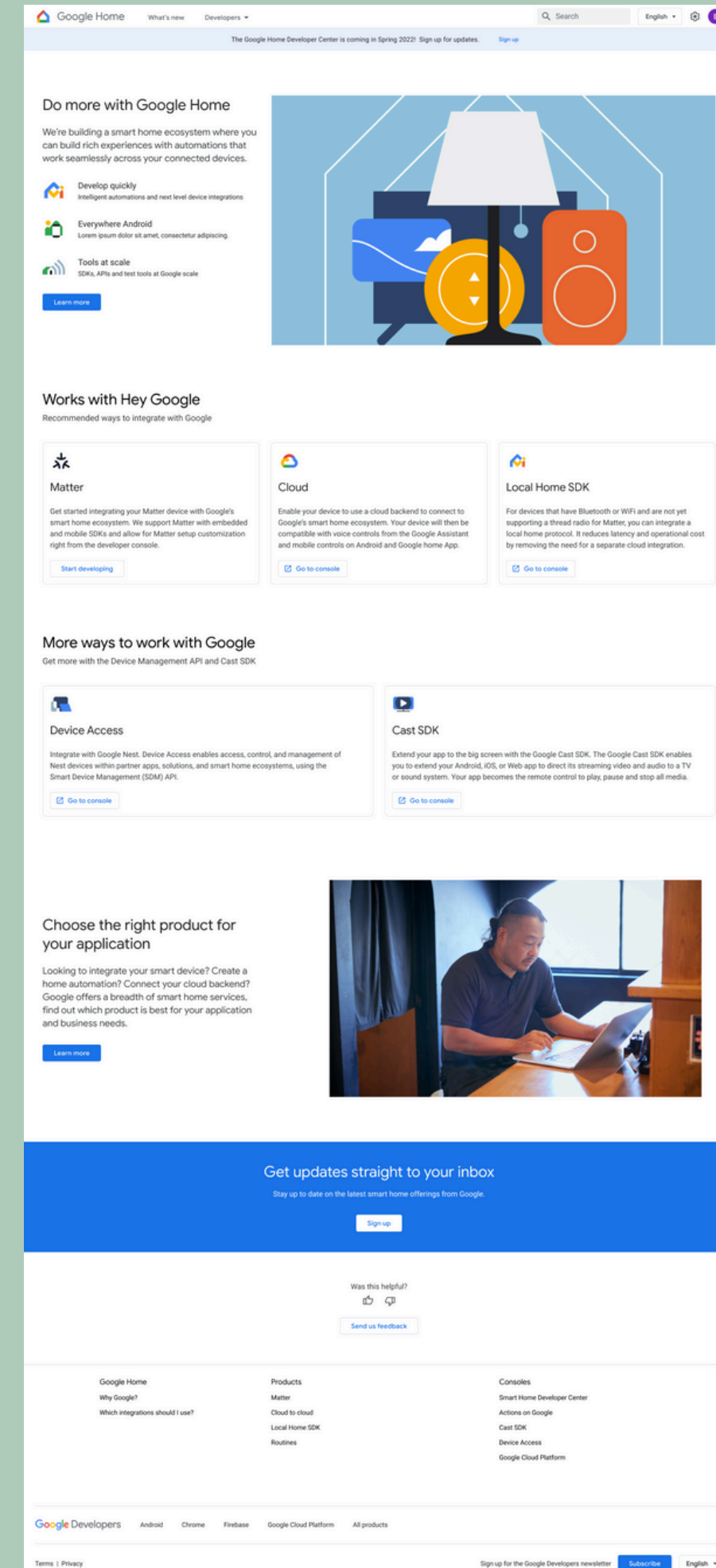
Iteration 3: Device-driven use cases



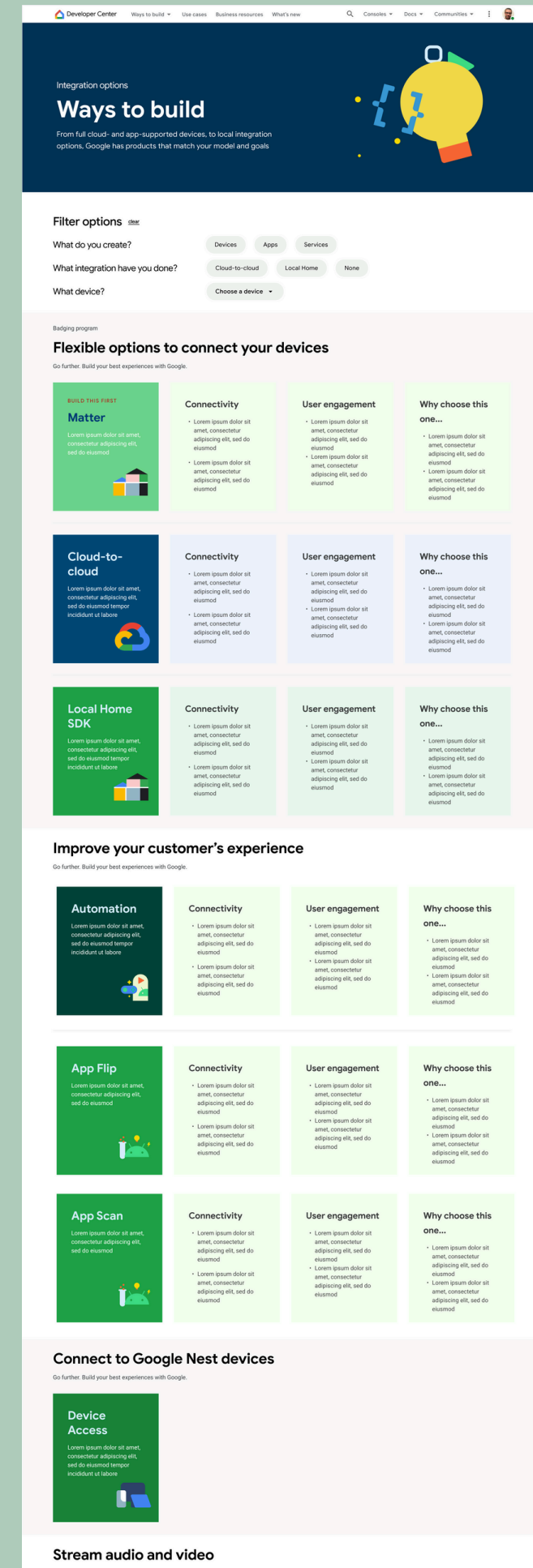
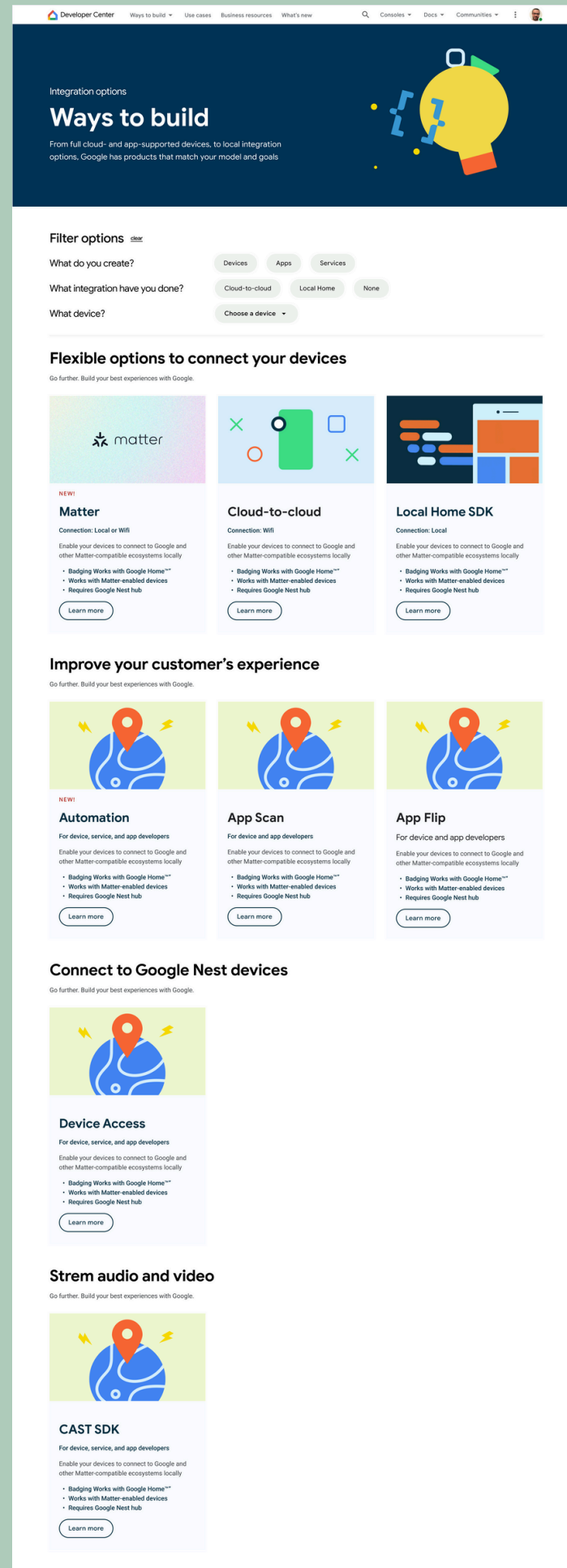
DEV CENTER WEBSITE

COLORS & STYLES

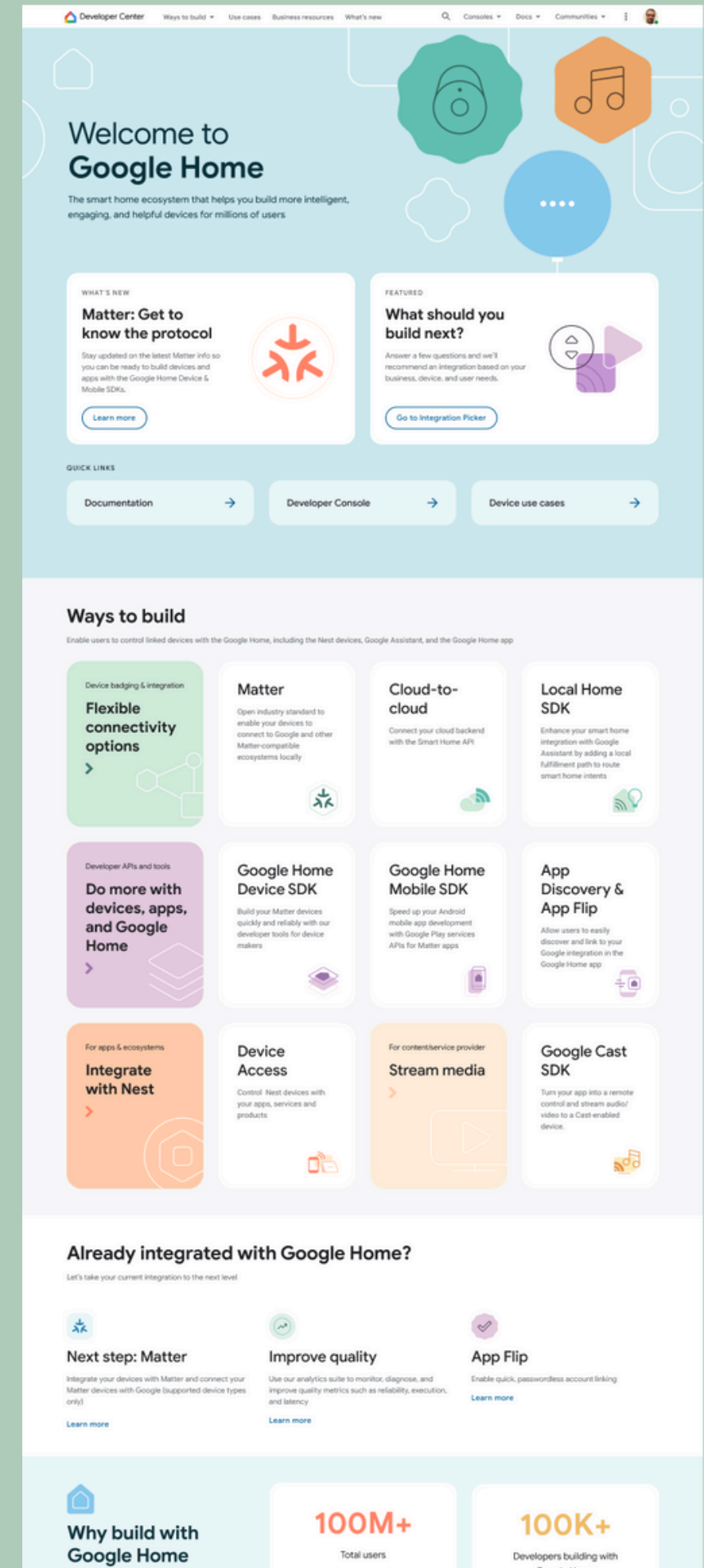
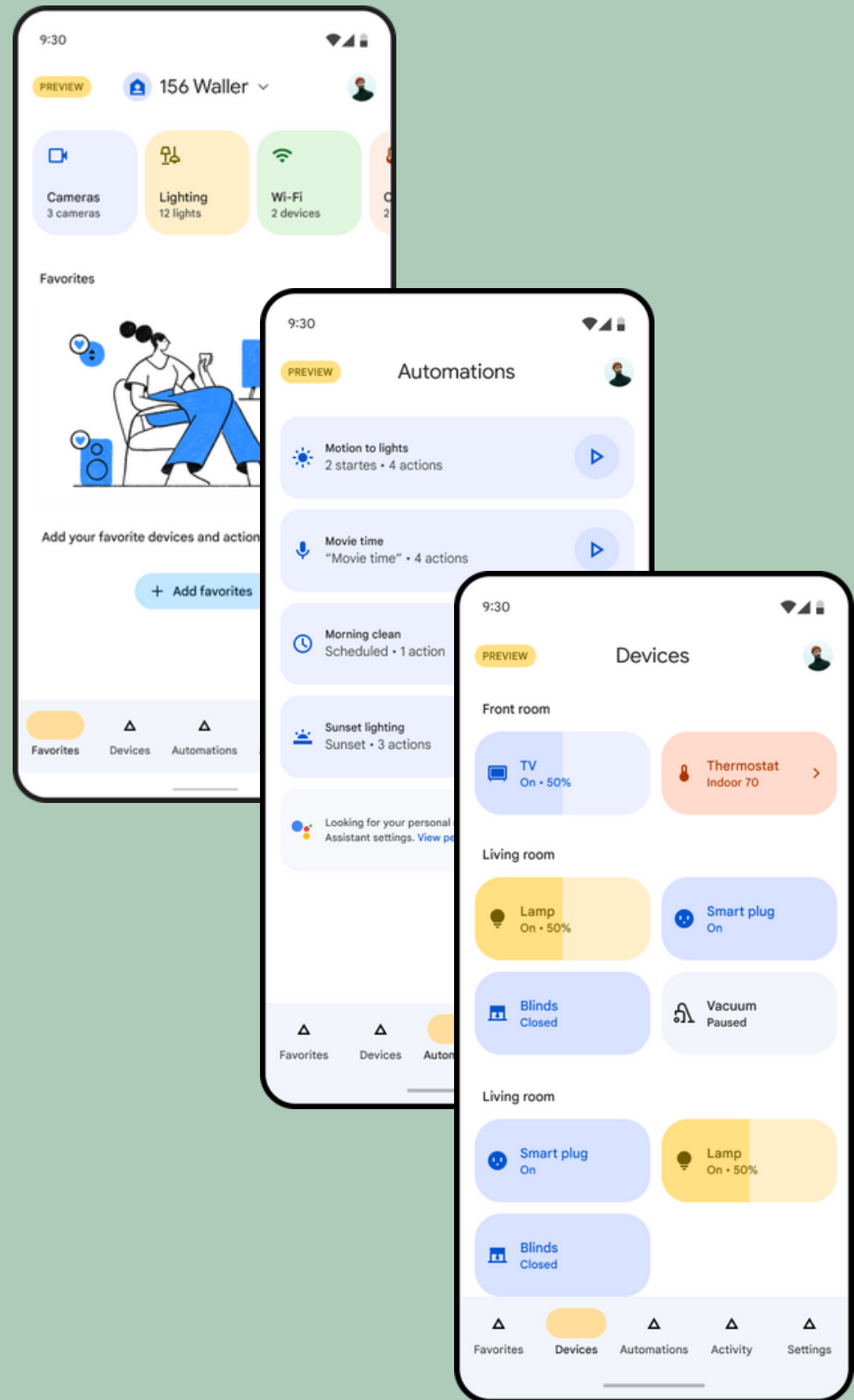
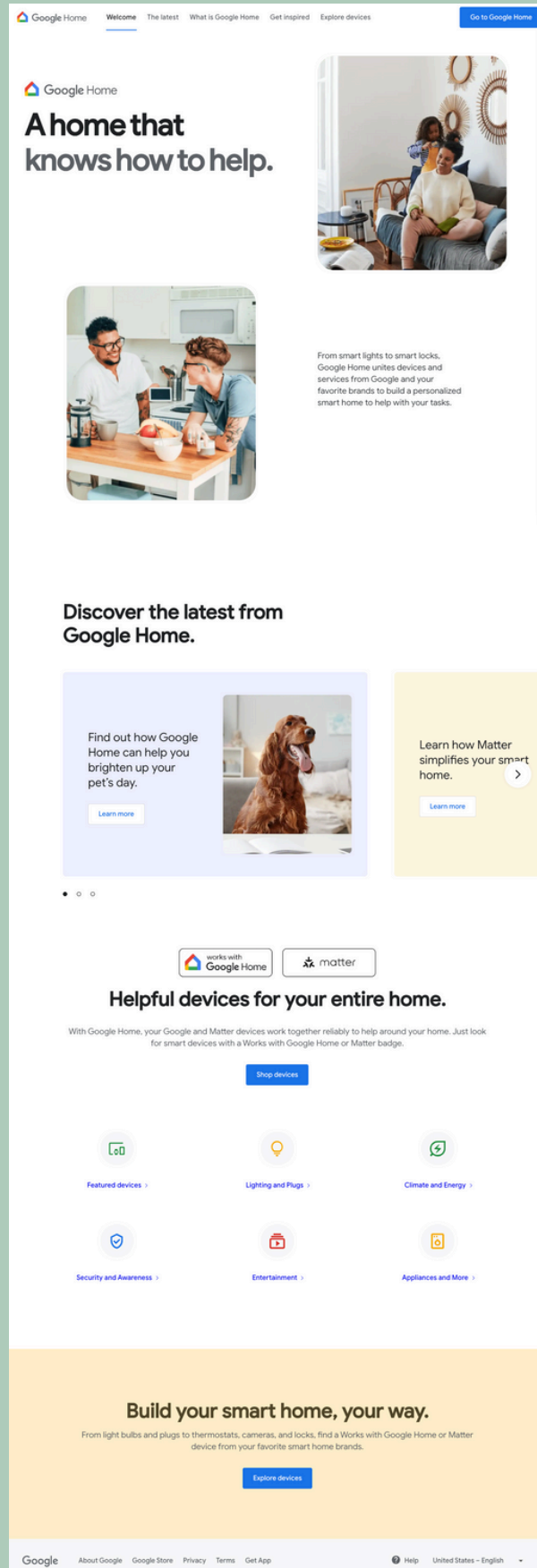
CMS OUT OF BOX MODULES AND MAIN GOOGLE PALETTES AS BACKUP



LEVERAGING ANDROID DEVELOPER SITE TEMPLATES TO REDUCE DEVELOPMENT TIME



LEVERAGE GOOGLE HOME STYLES AND COLOR PALETTES



DEV CENTER WEBSITE

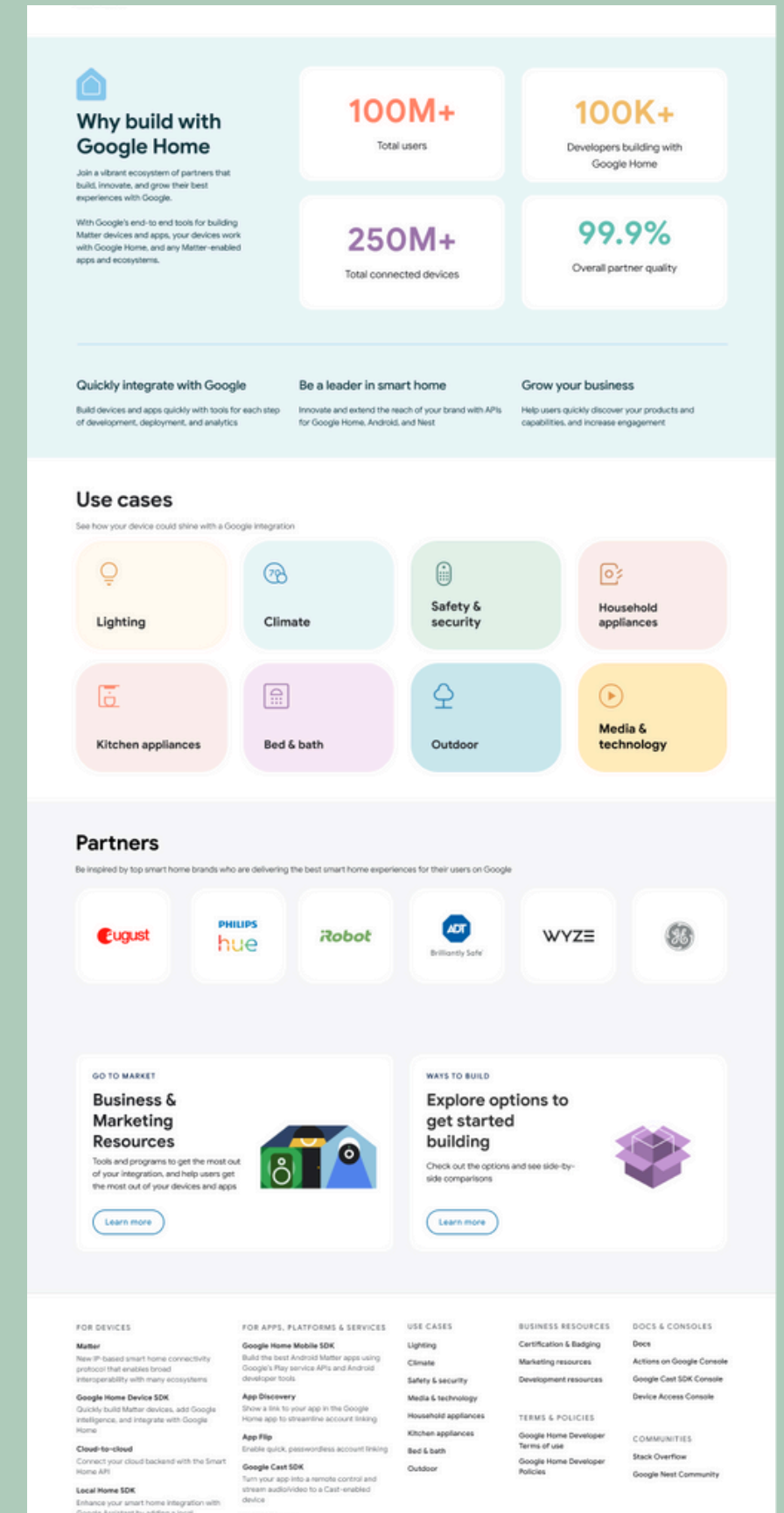
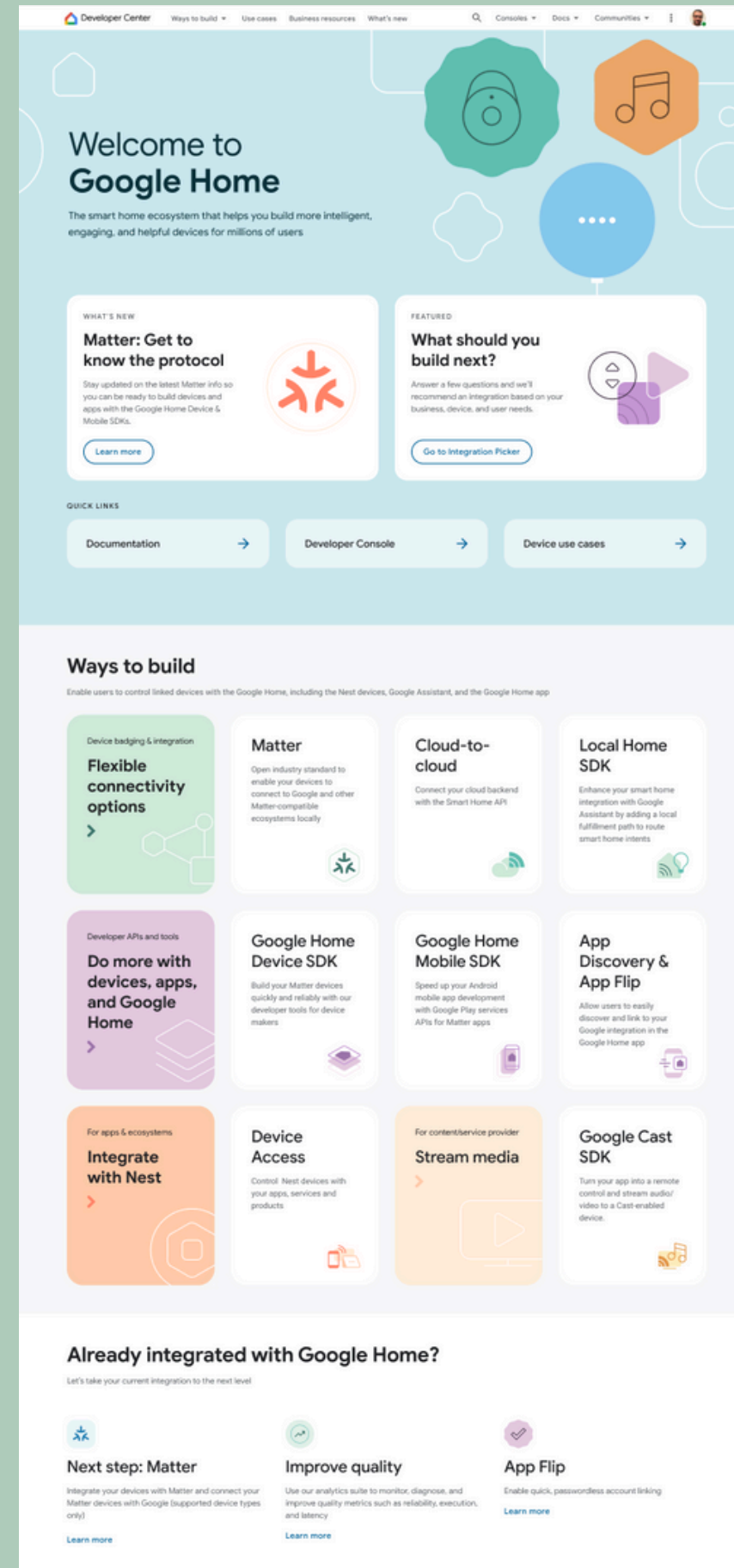
FINAL DESIGN

DEV CENTER WEBSITE

HOMEPAGE

- Featuring latest and most important announcements across integration types
- Organized entry points by
 - User's familiarity of the integration ecosystem
 - Device-based use cases since most developers are device makers
- Stats and partner logos to help emphasize on "why build with Google"
- Established clear visual cues with a color schema differentiates integration types and device types

developers.home.google.com



DEV CENTER WEBSITE

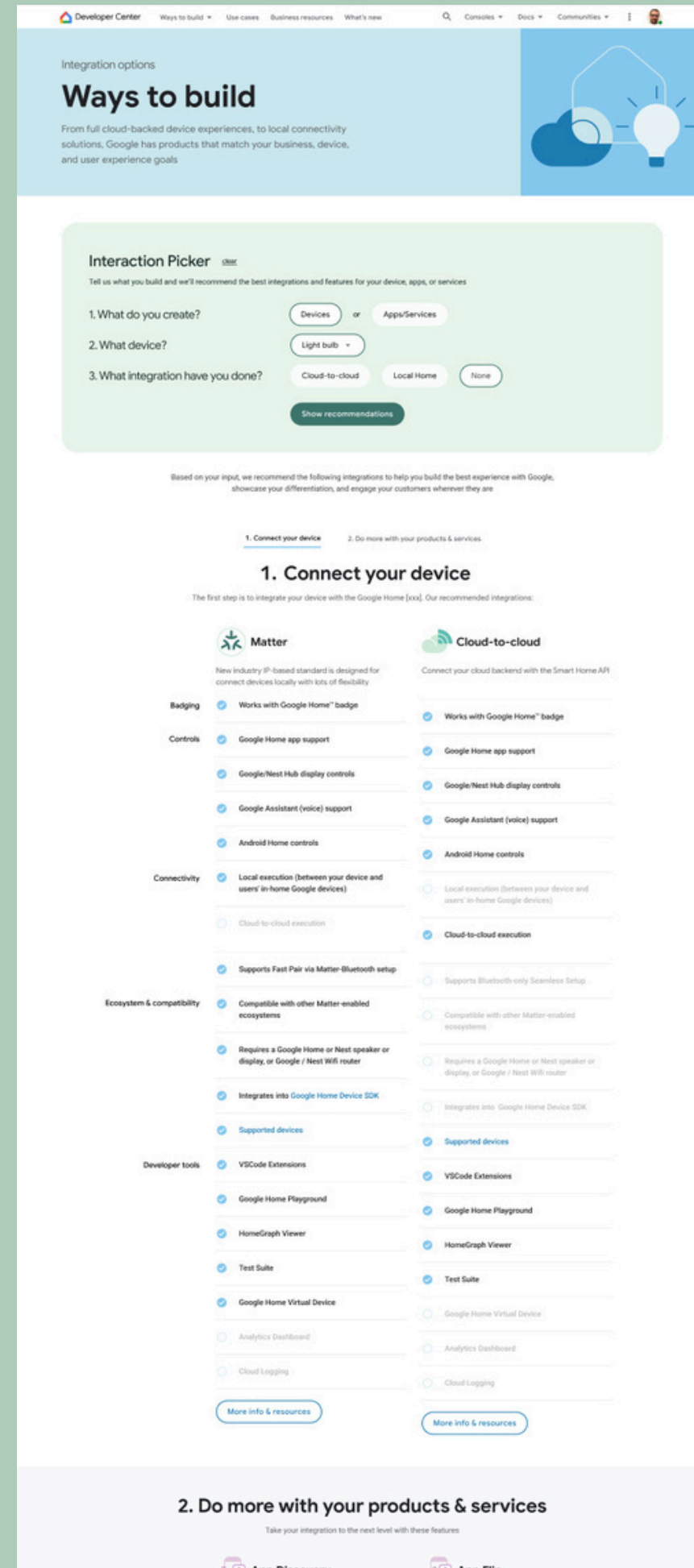
INTERACTIVE INTEGRATION FINDER

Custom-built data-driven module to help users find integrations that fit their situations easily.

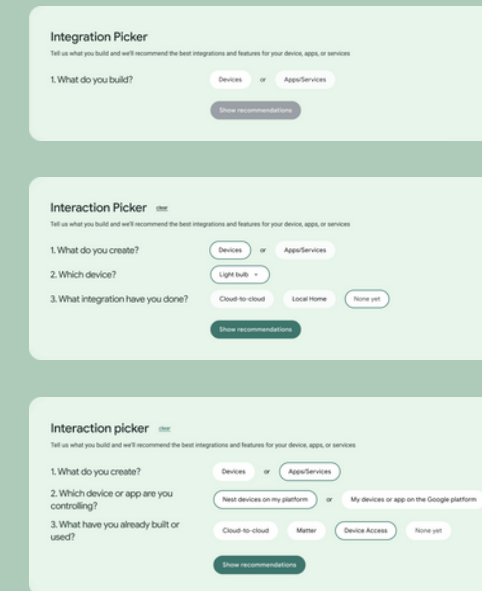
It also helps Google upsell features that developers might not be aware that they should invest in building with Google.

developers.home.google.com

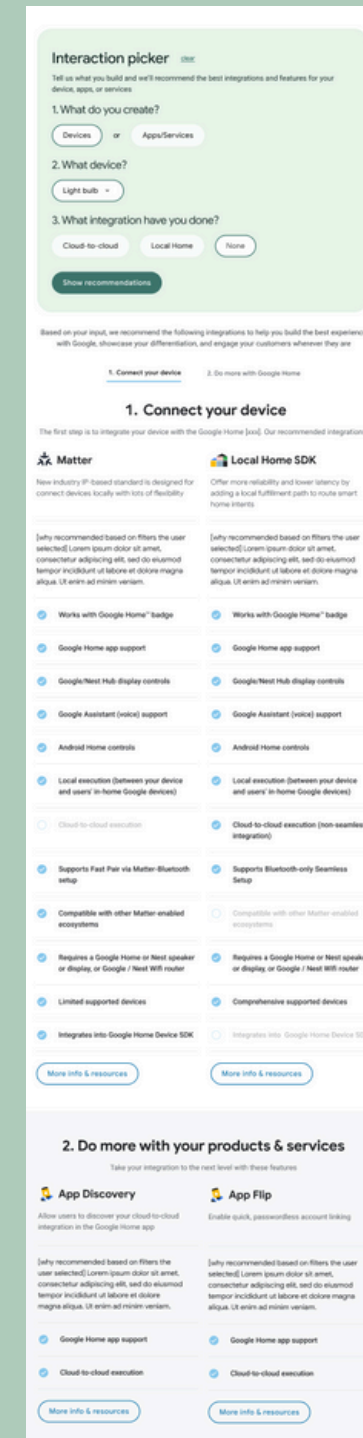
Large-size screen



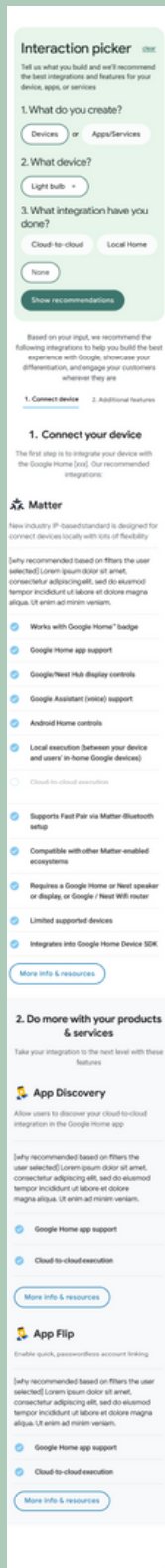
Data-driven interactions



Mid-size screen



Small screen



DEV CENTER WEBSITE

TEMPLATIZE INTEGRATION PAGE

Each integration page shares the same template so that the user can quickly find the information they need.

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The screenshot shows the 'Matter' integration page on the Developer Center website. The page is titled 'Ways to build Matter' and features a large green header with the Matter logo. Below the header, there are four 'Get started' cards for different developer roles: Device Developers (Create an integration, Compatibility), and App Developers (Setup checklist, Matter Sample app). A central diagram illustrates the integration process from Google Assistant to a smart home device. The page also includes sections for 'Why build Matter with Google?' (Build fast, Innovate, Grow), 'Supported devices' (Lighting, Climate, Safety & security, Media & technology, Household appliances, Kitchen appliances, Bed & bath, Outdoor), and 'Building with Google Home' (Experiment, Recertify, Launch, Certify, Run a Field Trial, Create project, Develop, Test). At the bottom, there are 'Developer tools' (Google Home Test Suite, Google Home virtual device (EAP), Google Home Graph Viewer) and 'Build your Matter app' (Google Home Test Suite, VSCoDe Extension for VSCode, Google Home Playground).

The screenshot shows the 'Cloud-to-cloud' integration page on the Developer Center website. The page is titled 'Ways to build Cloud-to-cloud' and features a large green header with a cloud icon. Below the header, there are four 'Get started' cards for different developer roles: Device Developers (Create a smart home Action, Account linking), and App Developers (Intent fulfillment, Launch checklist). A central diagram illustrates the integration process from Google Assistant to a smart home device. The page also includes sections for 'Overview' (Supports 80+ device types, Great for users of all types, Best of both worlds), 'Supported devices' (Lighting, Climate, Safety & security, Media & technology, Household appliances, Kitchen appliances, Bed & bath, Outdoor), and 'Building with Google Home' (Experiment, Recertify, Launch, Certify, Run a Field Trial, Create project, Develop, Test). At the bottom, there are 'Developer tools' (App Discovery, App FIP) and 'Build your Matter app' (Google Home Test Suite, VSCoDe Extension for VSCode, Google Home Playground).

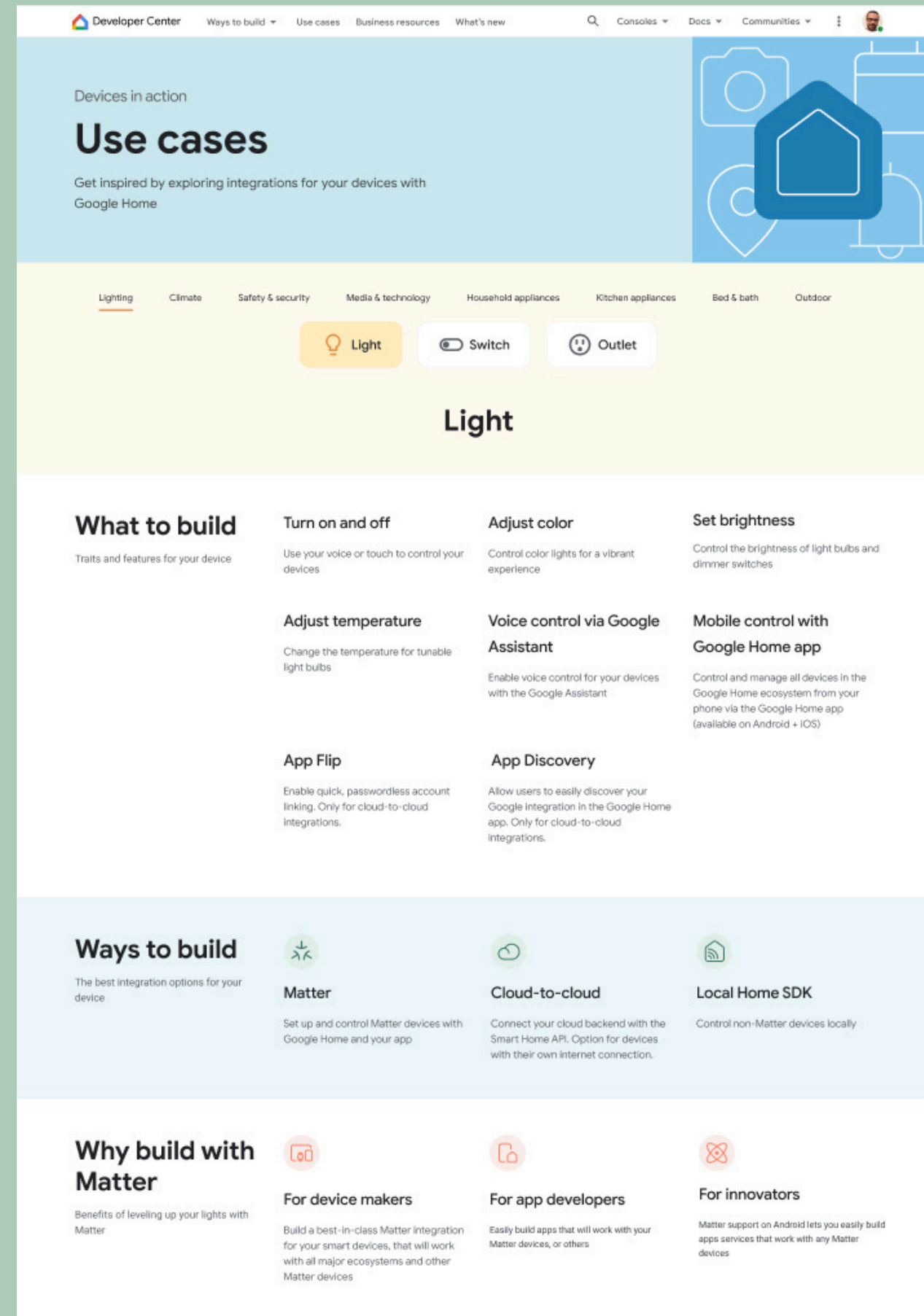
The screenshot shows the 'Local Home SDK' integration page on the Developer Center website. The page is titled 'Ways to build Local Home SDK' and features a large green header with a lightbulb icon. Below the header, there are four 'Overview' cards: Local communication, Improved performance, and Broad support. A central diagram illustrates the integration process from Google Assistant to a smart home device. The page also includes sections for 'Supported devices' (Light, Plug, Switch, Sensor, Thermostat, Blinds), 'Building with Google Home' (Experiment, Recertify, Launch, Certify, Run a Field Trial, Create project, Develop, Test), and 'Developer tools' (Google Home Test Suite, Google Home Extension for VSCode, Google Home Graph Viewer). At the bottom, there are 'Tutorials' (How local fulfillment works, Add local fulfillment) and 'FOR DEVICES' (Matter, Google Home virtual device (EAP), Local Home SDK).

DEV CENTER WEBSITE

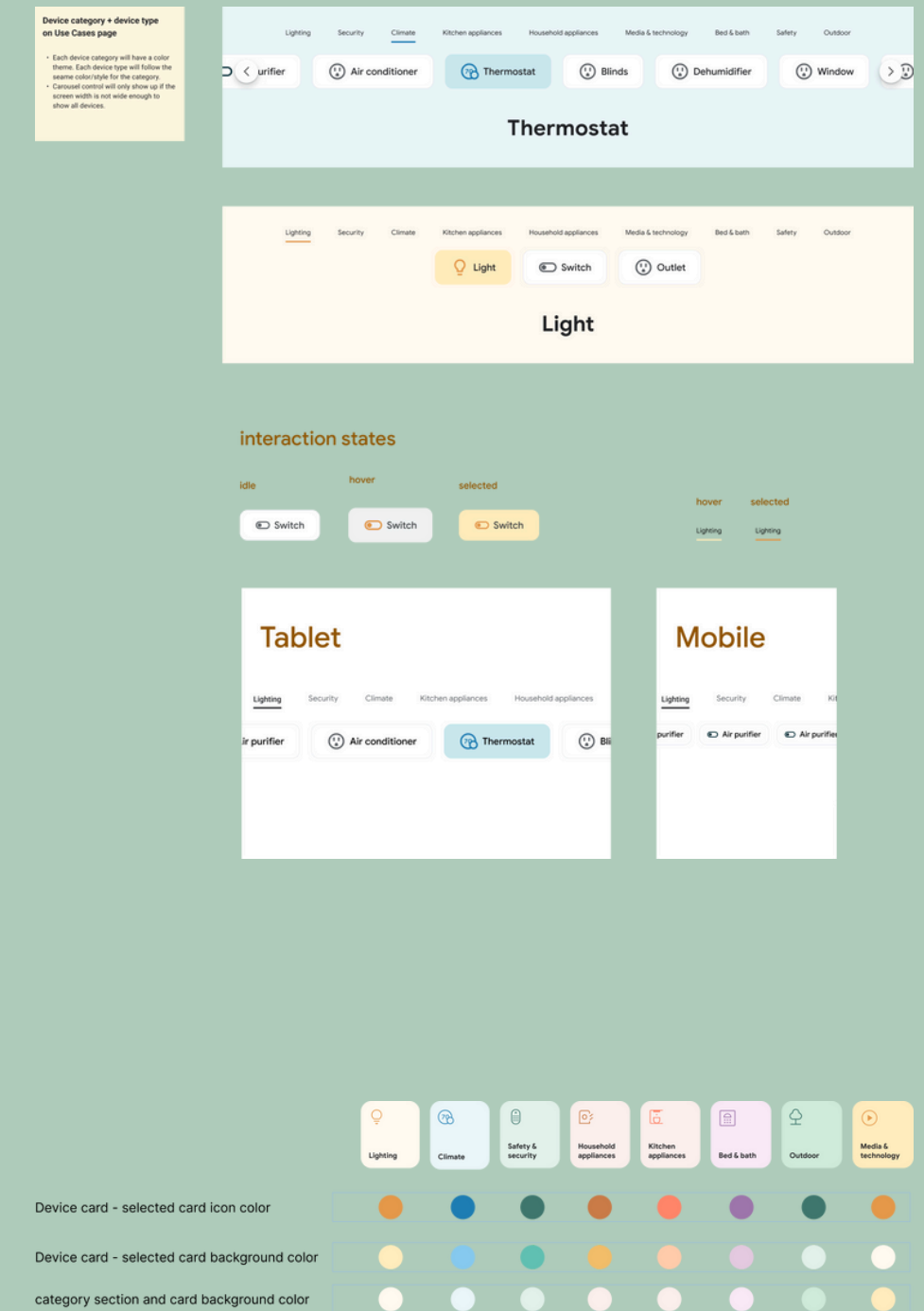
DYNAMIC USE CASE NAVIGATION

Each integration page shares the same template so that the user can quickly find the information they need.

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Spec for eng



DEV CENTER WEBSITE

COMPONENT & STYLE GUIDE

The website is built on a content management system. All pages and components are specified for styles and user interaction states.

The style guide and component library leads to more consistent and efficient site updates. It also minimized the dependency on any specific designers to continue work on the site.

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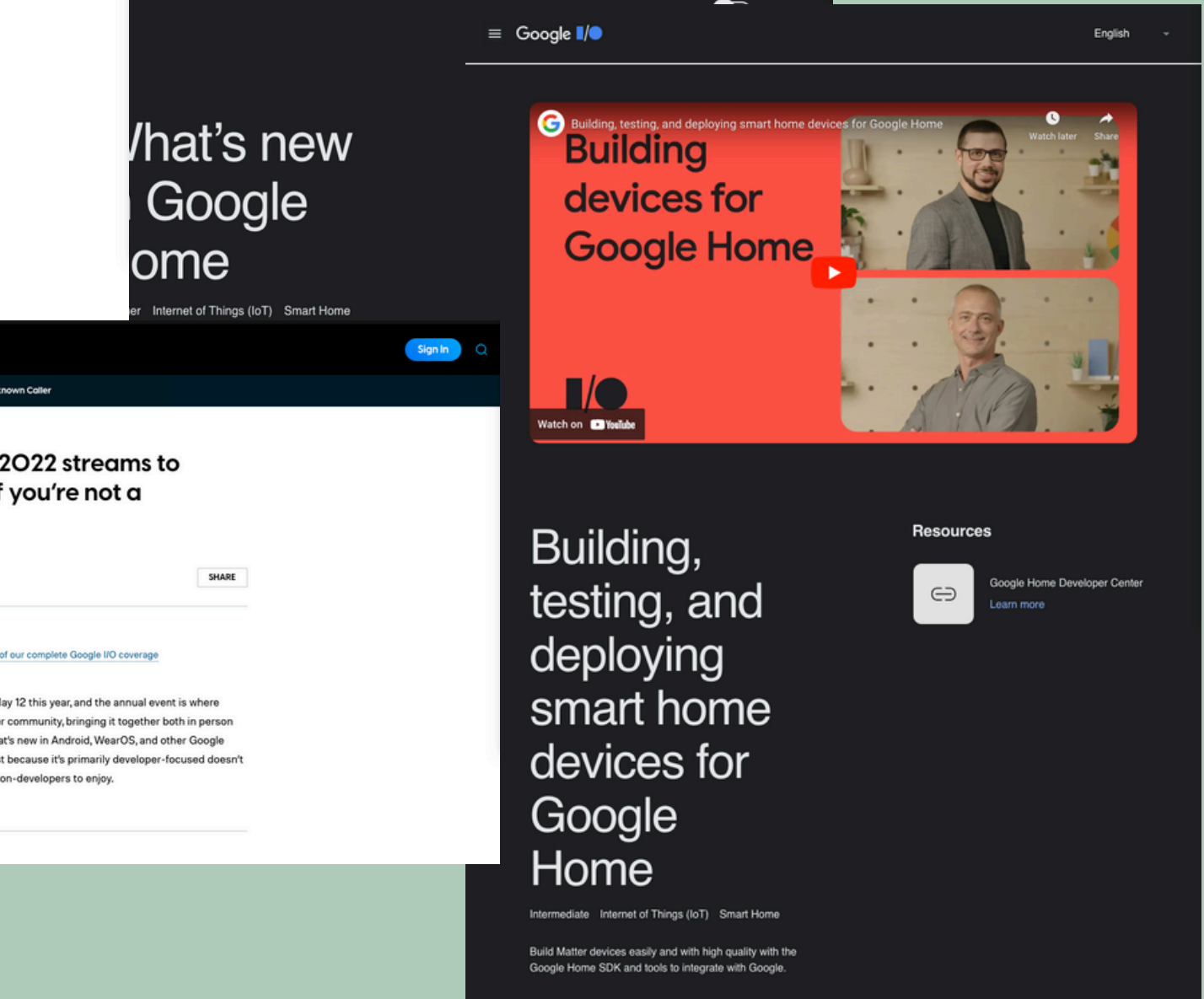
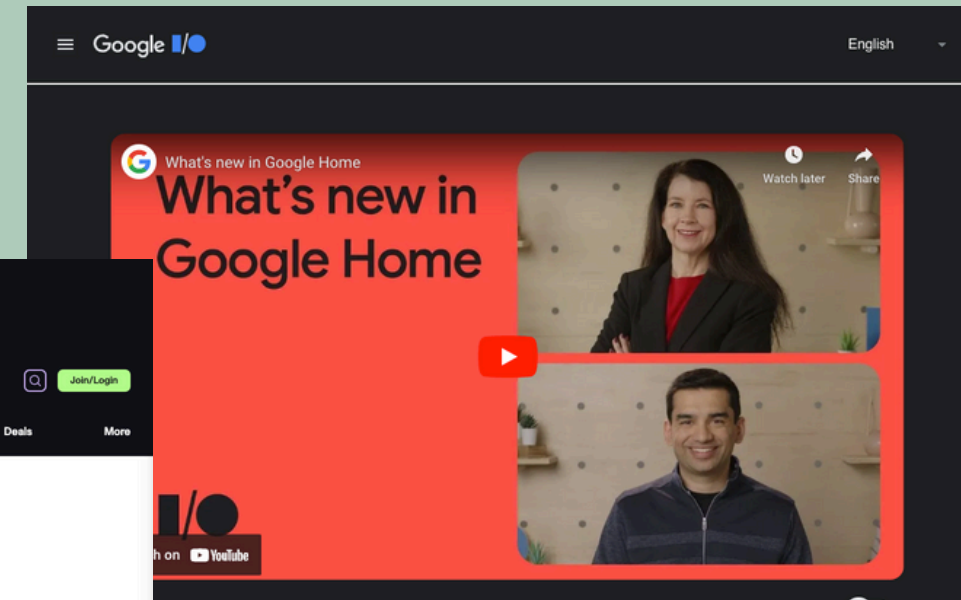
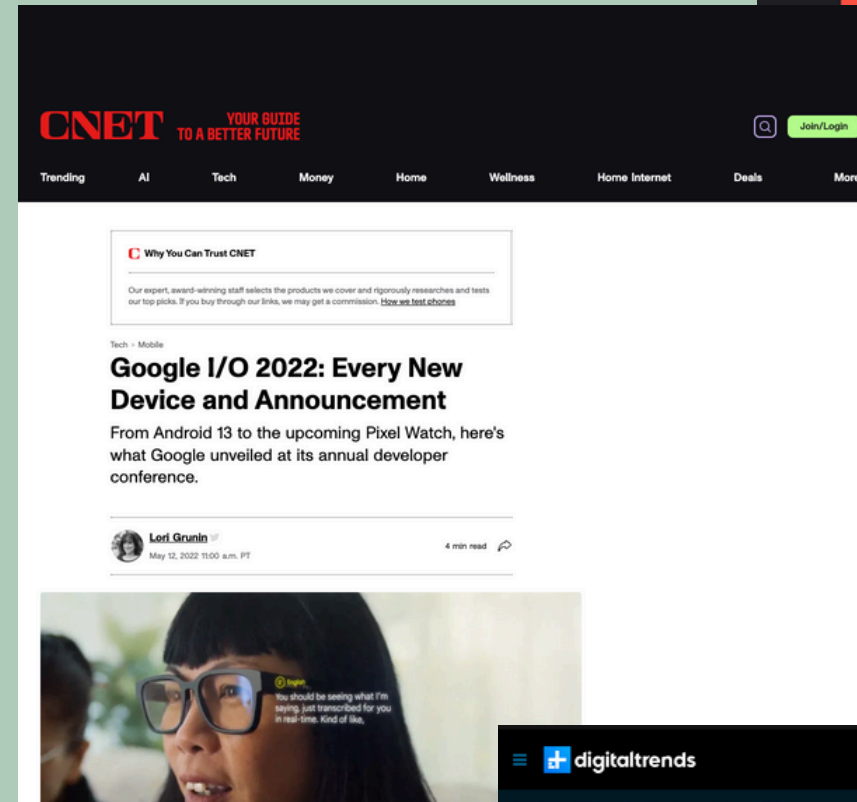


DEV CENTER WEBSITE

LAUNCH RESULTS

- **Successful Launch:** The website launched on time for Google I/O 2022.
- **Positive Reception:** Both press and developer partners received the website well.
- **Increased Engagement:** Website analytics show growth in visitors and views.
- **Future-Proof Design:** The scalable framework allows for continuous content updates and expansion to address evolving products, services, and success stories.

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BUSINESS

Ambiguity due to an evolving industry standard (Matter), a vast potential scope with numerous integrations, and the need to design before a solidified business strategy.

- **First industry standard protocol, Matter, redefines the industry**
- **Hundreds of smart devices and services to be included**
- **Working with Ambiguity when business and product strategy is under development**

USER PERSONA

The highly diverse user base with varying roles, motivations, and technical expertise across partner companies made it challenging in simplifying the experience.

- **A wide range of device maker and service provider partners**
- **Diversified developer profiles:** range from large international corporations to individual hobby developers.
- **Various roles within a partner's company:** include business and technical sides of executives, managers, and marketers, and engineers.

PROJECT

Complex cross-functional team dynamics, diverse product offerings within a large company, shifting leadership, and high-profile project demands.

- **Large Cross-functional Team**
- **Cross-Google Product Teams**
- **Leadership changes:** three different PMs in 6 months
- **High-Profile Launch:** Alignment with marketing, legal, and event teams added complexity for a major announcement at Google I/O.

DESIGN PROCESS

Complex process due to the domain knowledge, limited UXR, unclear KPI, a restrictive CMS, alignment with content creation and with multiple design ecosystems.

- **Complex Domain:** blends hardware, software, & networking
- **Challenging accessing international and diversified users for research**
- **Unclear Success Metrics**
- **Limited content management system**
- **Lack of content**
- **Multiple Design Systems Alignment**

MEASURABLE DESIGN



PAYMENT SELF-RESOLUTION TOOL FOR ADVERTISERS

DATA-DRIVEN WORKFLOW

RESPONSIVE WEB

DESIGN EXPERIMENTS

BACKGROUND

- Failed payment issues are one of the top reasons that advertiser accounts are blocked
- Advertisers create payment-related support tickets, despite often being self-resolvable.
- Working with support team is expensive to the company and time-consuming to the advertisers.

PROJECT HYPOTHESIS

The payment self-resolution tool can:

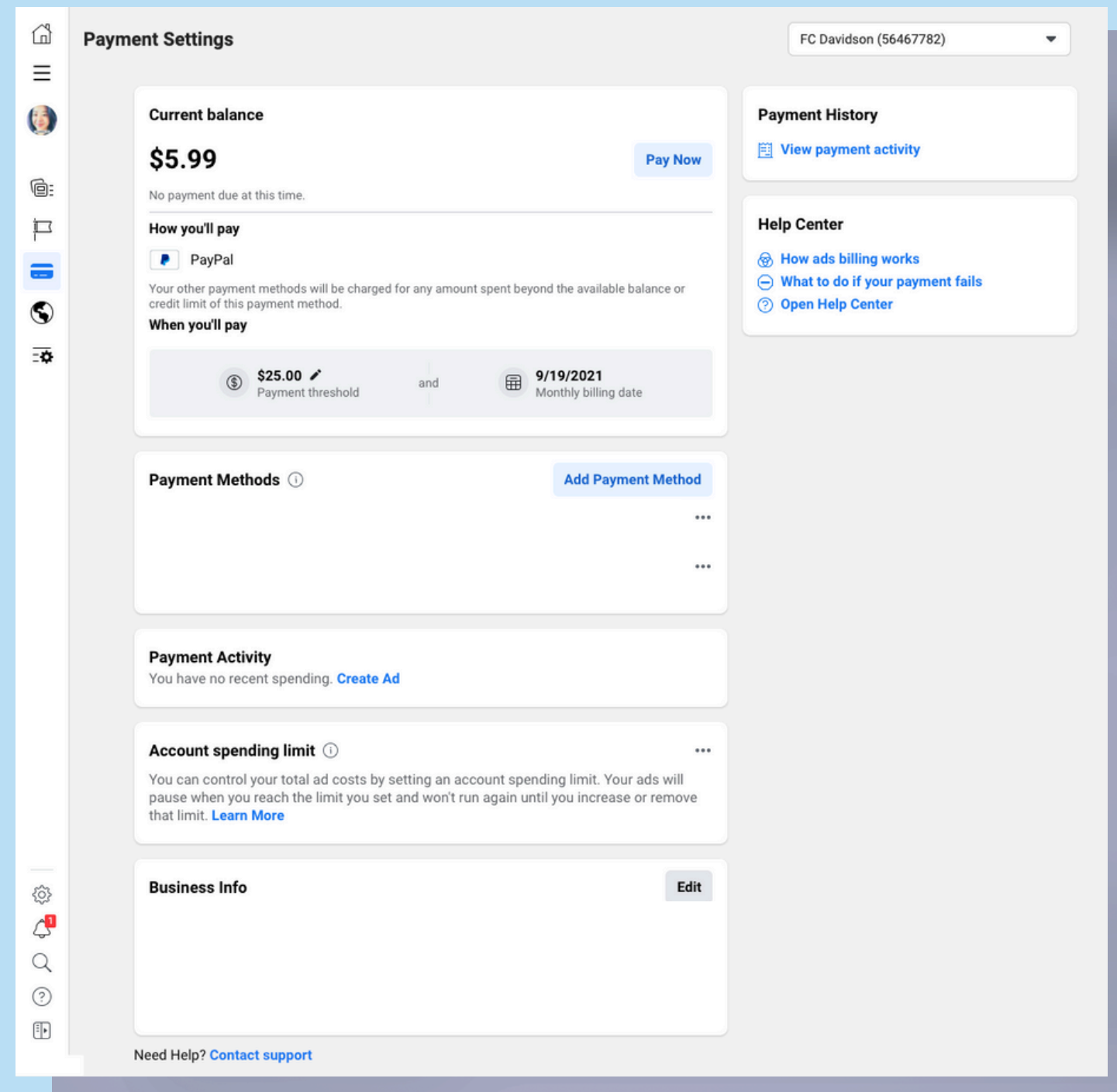
- Unblock ad accounts
- Decrease payment-related support cases
- Increase ad spends

MY ROLES:

- UX Strategist & Designer

PROJECT TEAM

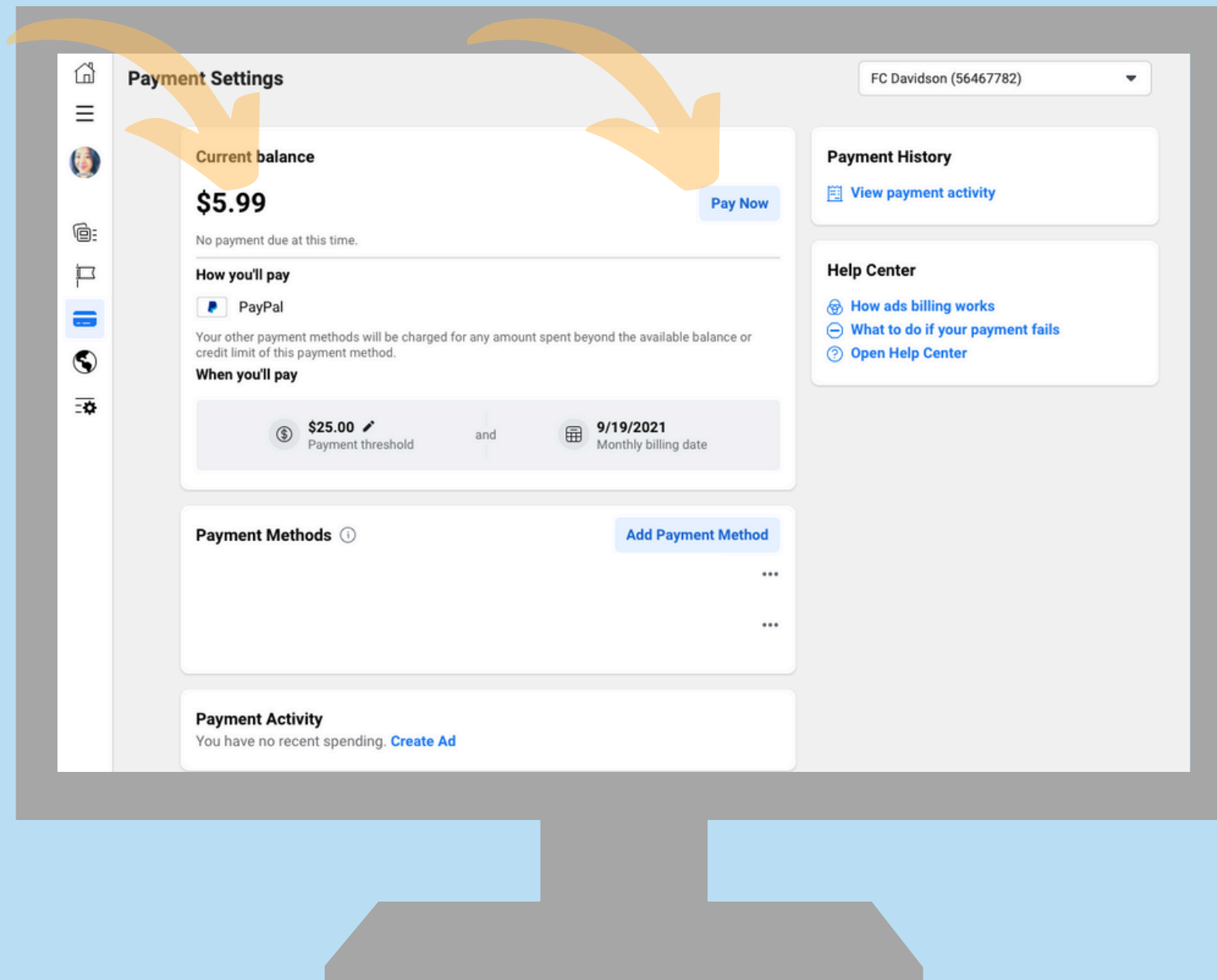
- Product/platform manager, project managers, customer experience strategist, content strategist, data scientist, multiple front and back developers across functional teams



UNDERSTANDING THE PAYMENT ISSUES & UX CONTEXT

*Meetings and discussions with **data scientist**, **customer service strategist** and **project/platform managers** to gather data and deep dive into validating assumptions of the issues.*

- Most common causes for failed payments are credit limits and credit card expiration. Both are resolvable by the advertiser
- Many advertisers have recurring payment issues
- Many advertisers with payment issues don't ever contact support and leave their account unsettled
- It's common that a user has multiple ad accounts but only one of them is unsettled
- Advertisers could be an individual, a small business owner, an influencer, a publisher, an agency managing multiple client accounts or a mix of above



INVESTIGATING THE TECH FRAMEWORK

*Ongoing discussions with cross functional teams including **engineers** on the payment workflow and evaluating integration options*

- The system tries to process any outstanding payment every 4 days automatically. If a user adds a new payment method or fixes the old one, the issue will be resolved automatically in 4 days.
- There were multiple payment workflow integration options but the most the ideal one was still under development.

SOLUTION CONSIDERATIONS

WHO SHOULD SEE THE PAYMENT SELF-RESOLUTION FEATURE?

- What user account signals do we have for the Business Help Center visitors that we can leverage?
- Should we show the tool to any advertisers with an outstanding balance? Or should we only show it to the users with blocked accounts?
- Should we only show it to active advertisers?
- Should we exclude agency users?

WHAT DESIGN STYLE IS APPROPRIATE?

- Should it be consistent with the style of the advertising tool?
- Should it be consistent with the style of Business Help Center?
- What are other corporate branding standards?

WHERE SHOULD THE FEATURE BE PLACED?

- What's most accessible to the users but not "annoying" if the user is not interested in the feature?
- What is easiest to implement?
- Should it be a banner or an in-page module?
- Should it be on every page or selected pages? What are the pages that are most relevant?
- What are the technical constraints, if any?

HOW DO WE SCALE IT?

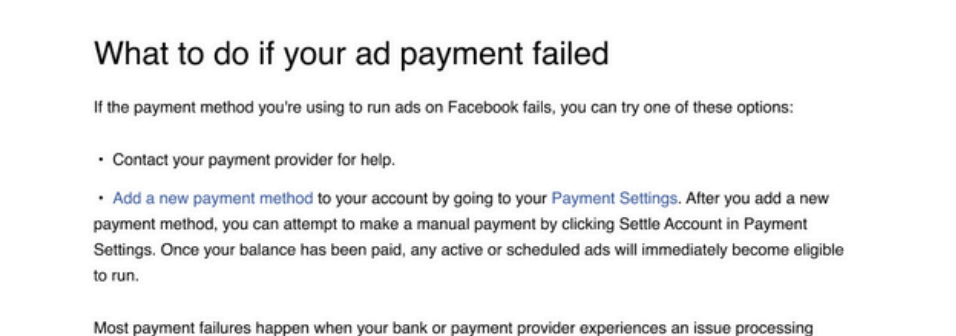
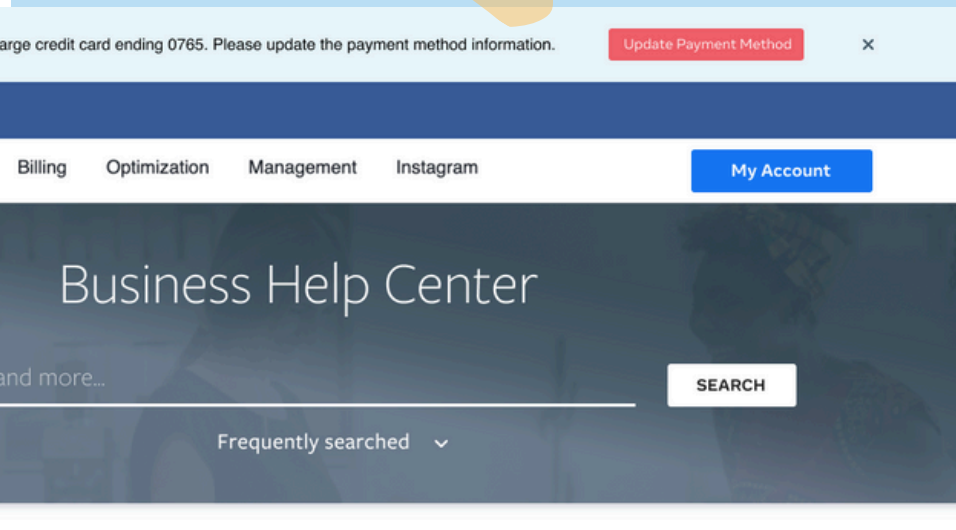
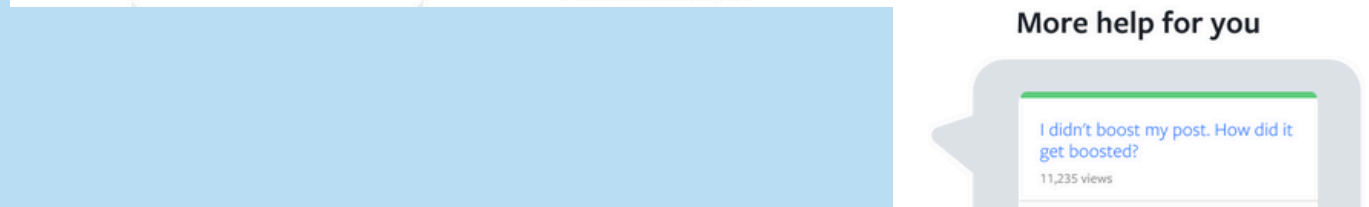
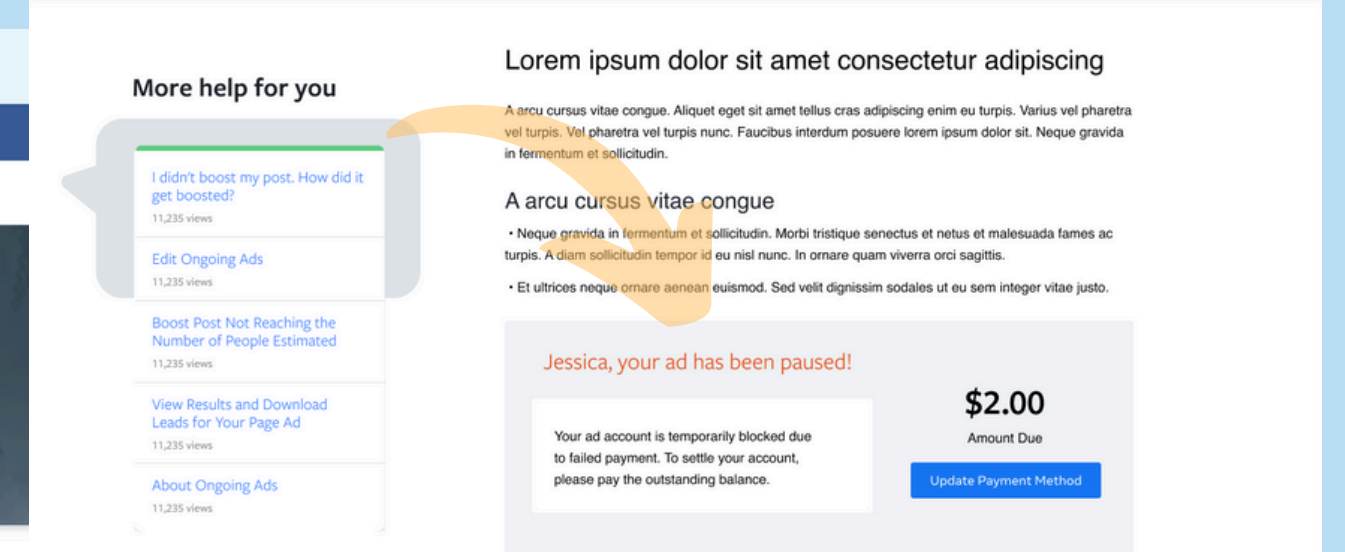
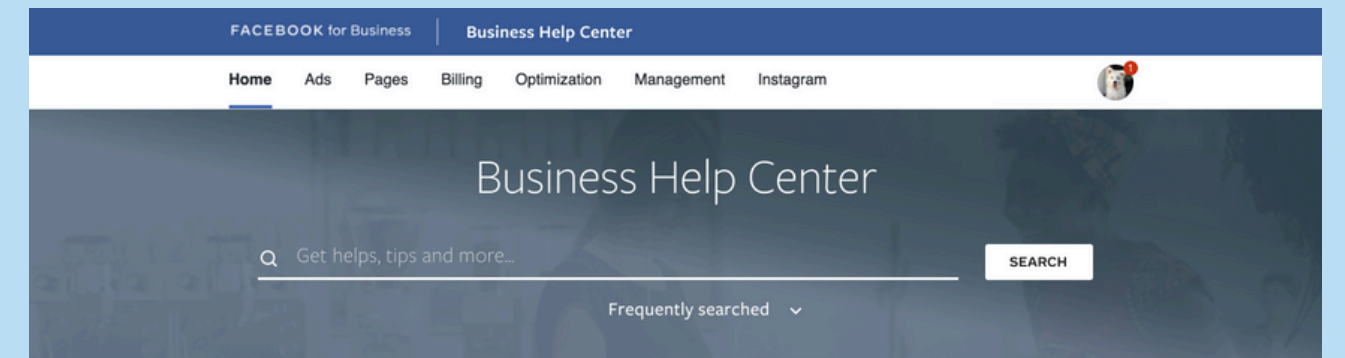
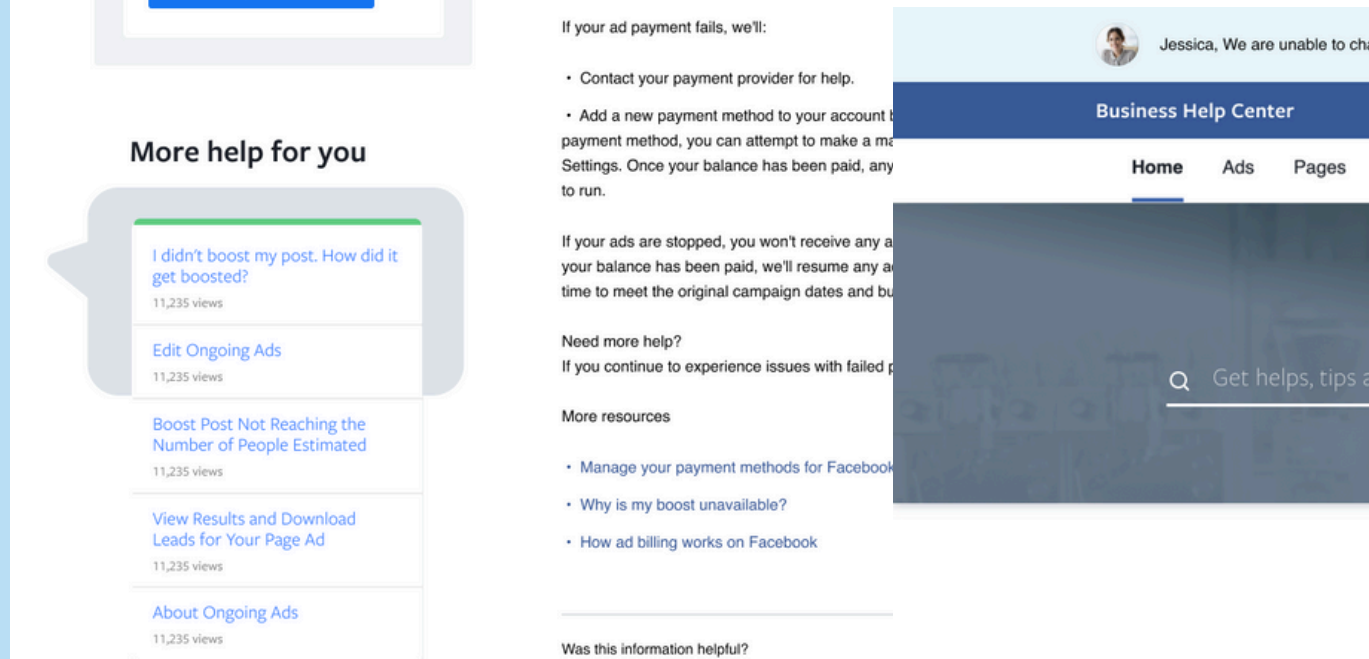
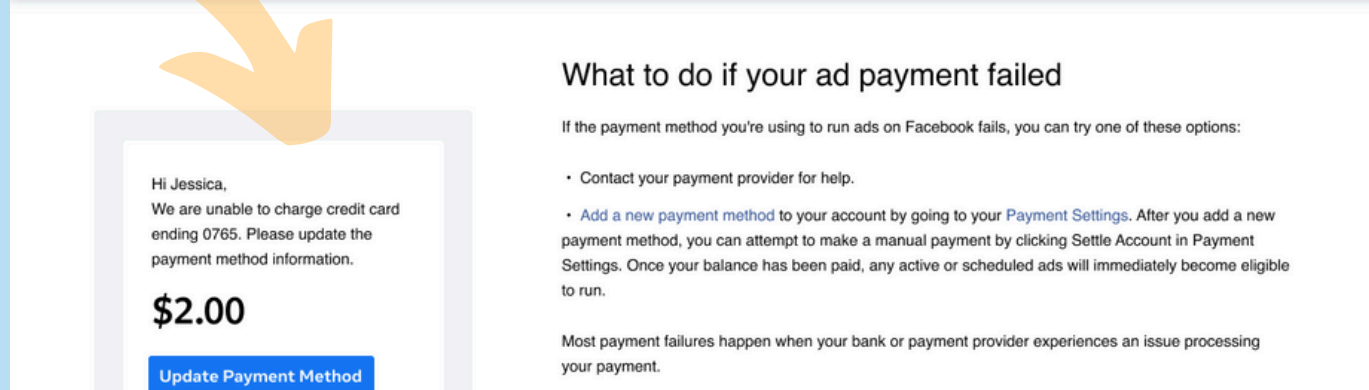
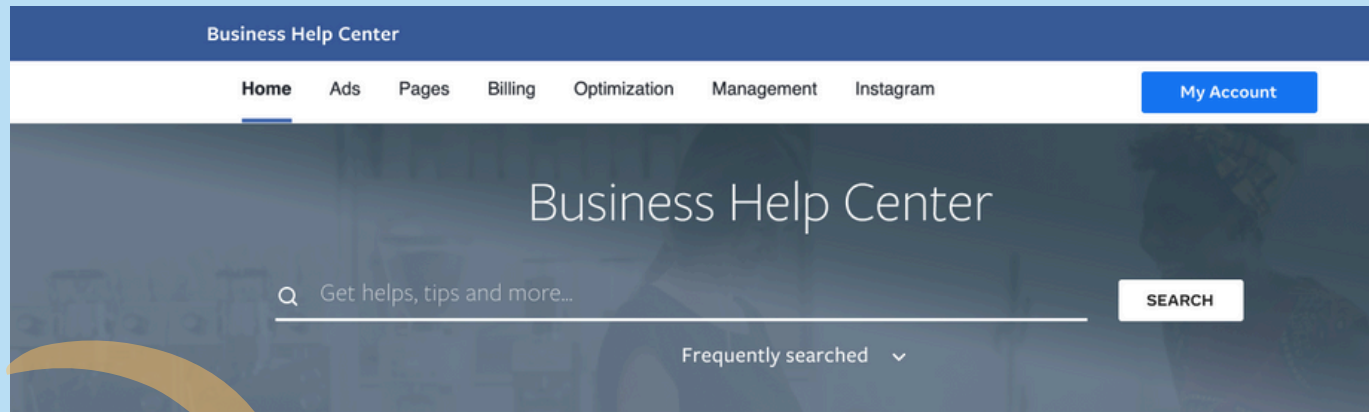
- Will the solution be applicable to global users?
- Any language and currency constraints?
- Any privacy policy concerns?
- Payment feature placement options are limited because most elements are CMS driven. There are many thousands of articles. The solution needs to be scalable.

META PAYMENT SELF-HELP TOOL

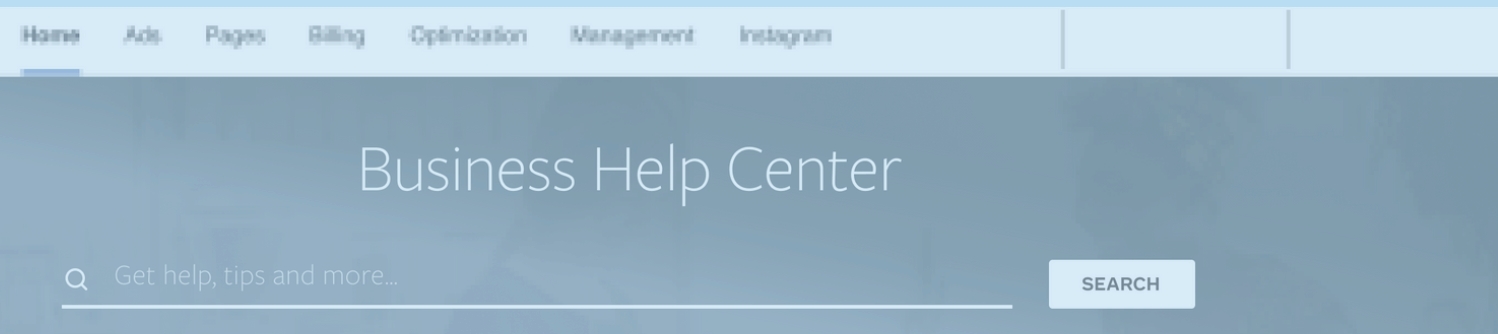
SOLUTION PROPOSAL

USE VISUALS TO FACILITATE COMMUNICATION & DECISION

Explore options and facilitate discussion across cross-functional teams.



FIRST ITERATION



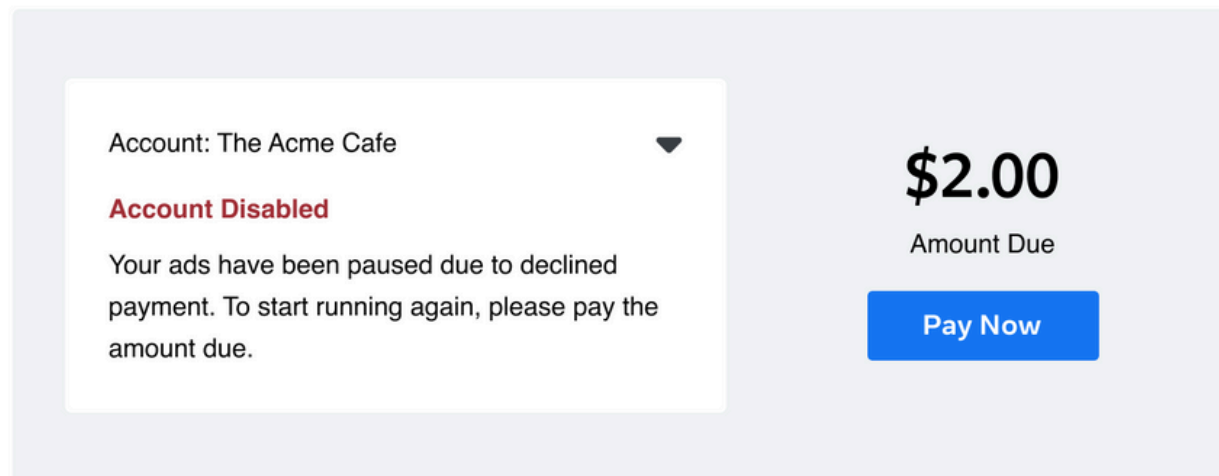
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- Neque gravida in fermentum et sollicitudin. Morbi tristique senectus et netus et malesuada fames ac turpis. A diam sollicitudin tempor id eu nisl nunc. In ornare quam viverra orci sagittis.

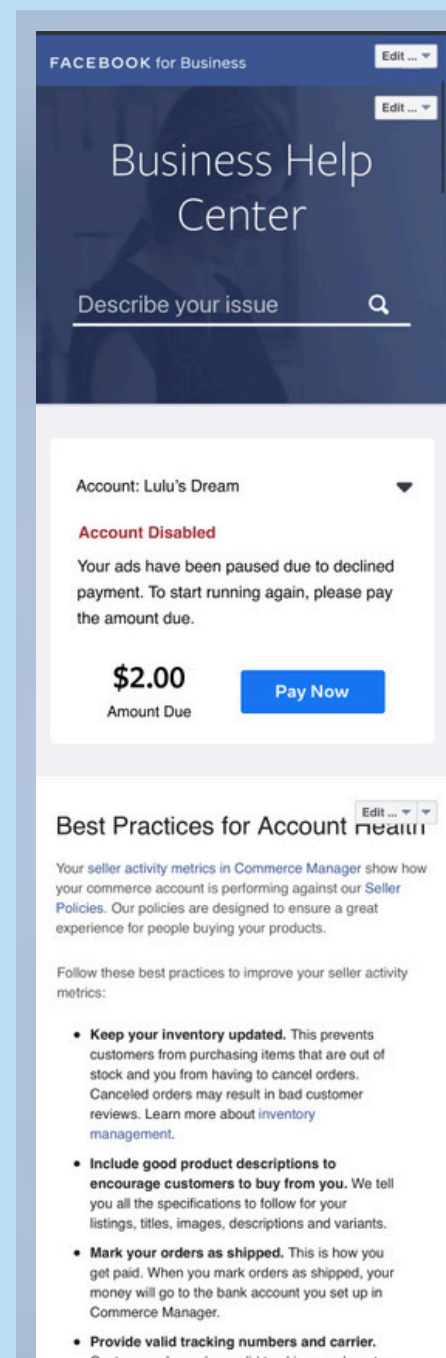
- Et ultrices neque ornare aenean euismod. Sed velit dignissim sodales ut eu sem integer vitae justo.



Nulla pharetra diam sit amet nisl suscipit

- Neque gravida in fermentum et sollicitudin. Morbi tristique senectus et netus et malesuada fames ac turpis. A diam sollicitudin tempor id eu nisl nunc. In ornare quam viverra orci sagittis.

- Et ultrices neque ornare aenean euismod. Sed velit dignissim sodales ut eu sem integer vitae justo.



After cross-functional discussions and design reviews...

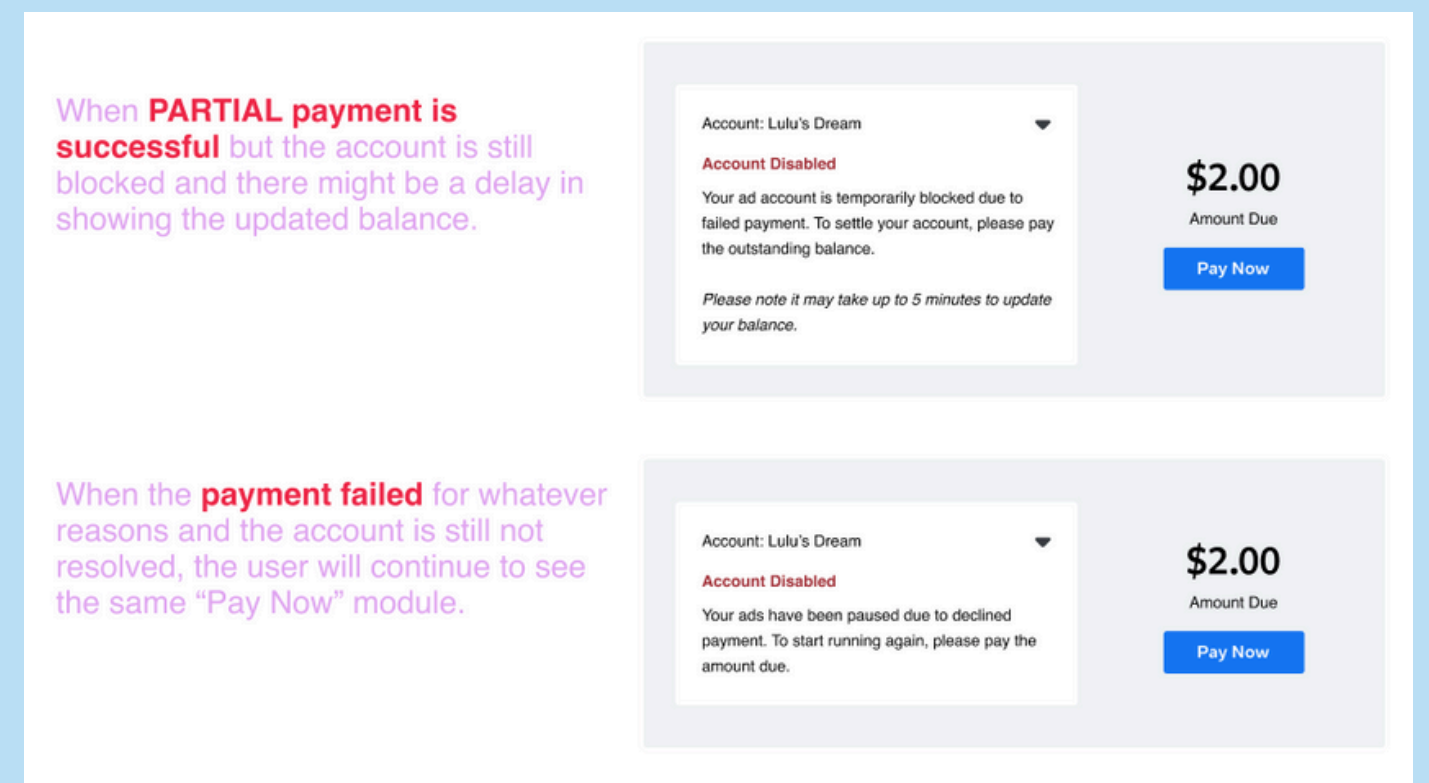
APPROACH

- CLARITY
- TRANSPARENCY
- CONSISTENCY
- EXPECTED
- CONTROL

- A self-serve payment module in the Business Help Center: three selected payment-related articles, the homepage and the contact support page
- The style, copy and workflow stays consistent with the payment feature in the advertising tool

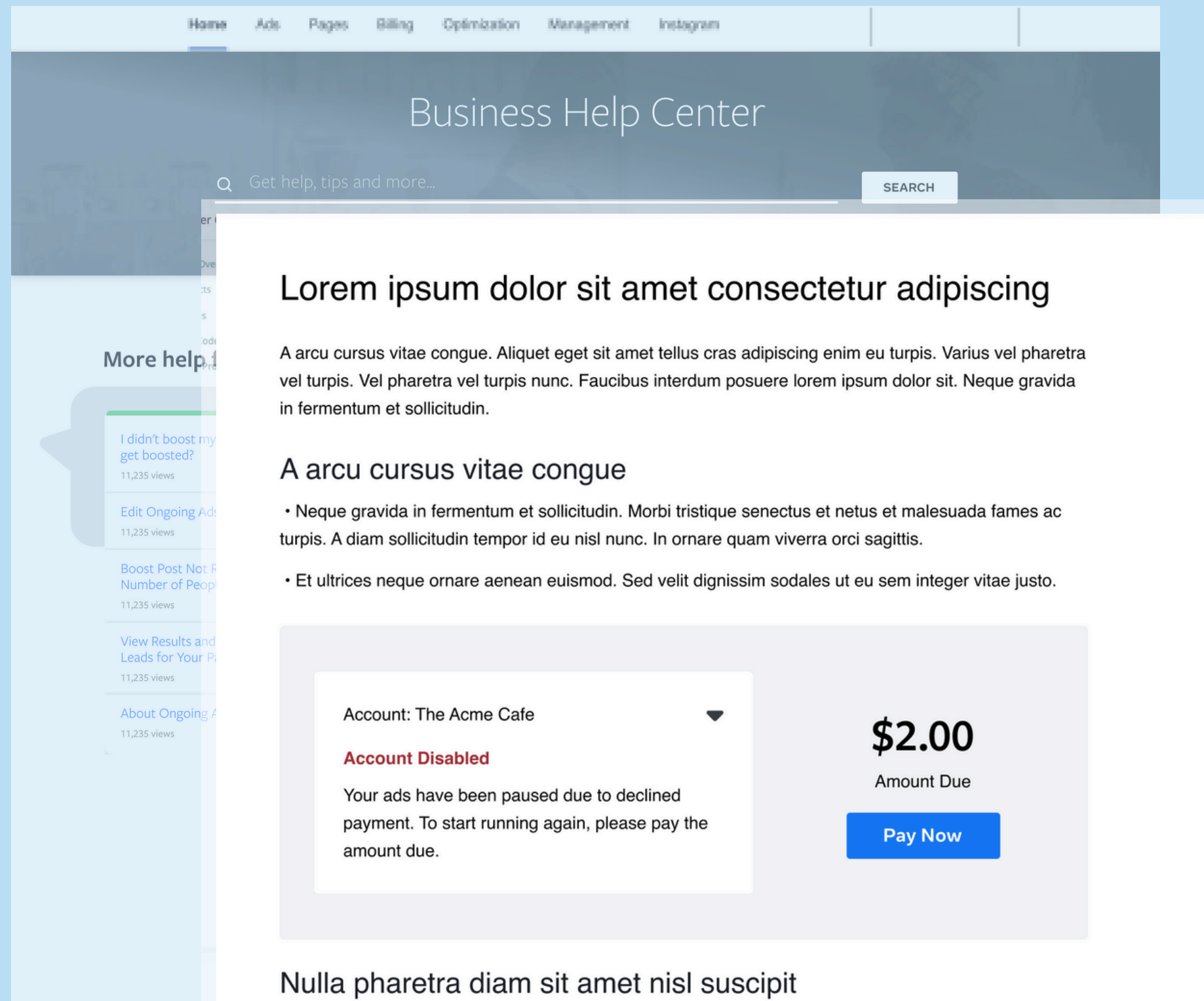
TARGET

Global users who have unsettled ad account(s) and an outstanding balance.



documenting scenarios and display rules

FIRST ITERATION



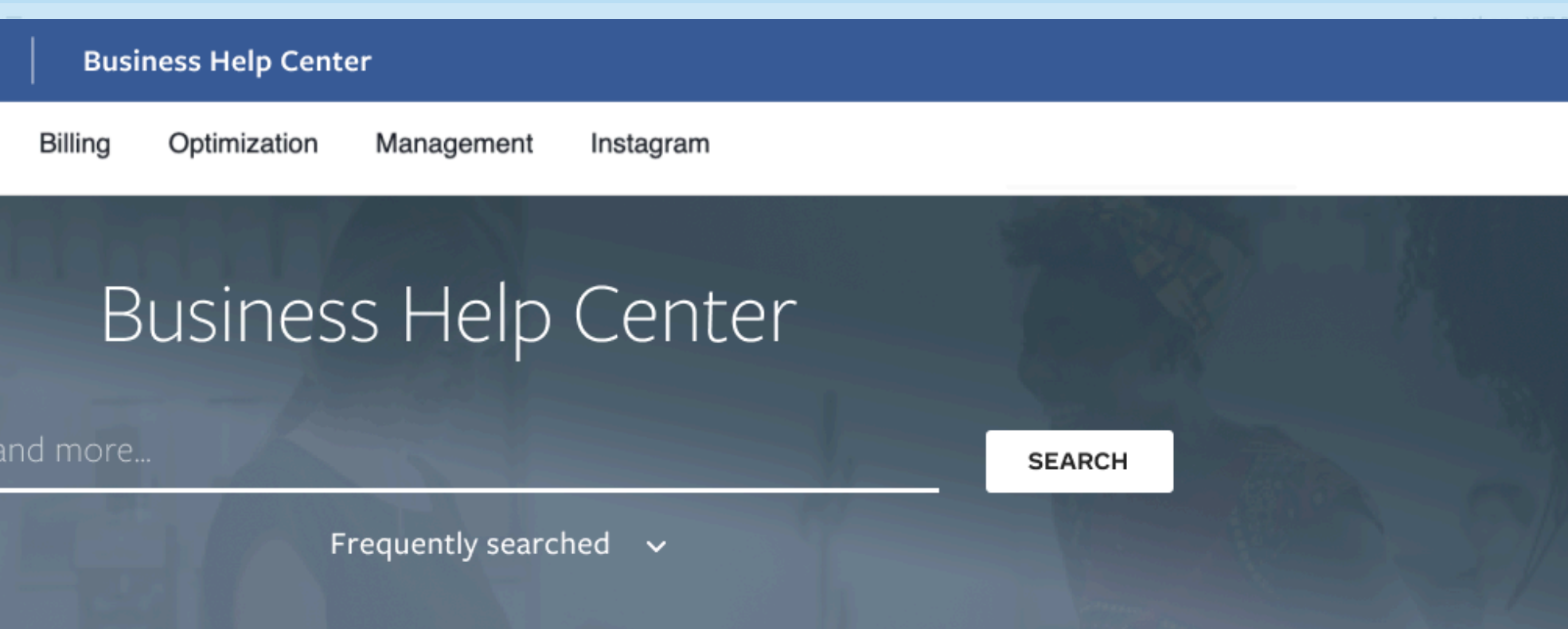
RESULTS

- Increased account unblock rate by +6.8%
- However, no stat significant difference in payment-related support case volumes nor in ads revenue

QUESTION TO BE ANSWERED

- Why are many users with blocked accounts and outstanding balances not interested in solving the payment issues themselves?"
- *Maybe the unsettled account is not the user's top priority at the moment?"*
- *Maybe the user didn't see there is a way to switch to other accounts that matter more?*
- *Maybe the user does not have the permission to make the payment?*
- *Maybe the unsettled account is abandoned and no longer active?*

SECOND ITERATION



Lorem ipsum dolor sit amet consectetur adipiscing

Lulu's Dream (23141111) ▼

Account Disabled

Your ad account is temporarily blocked due to failed payment. To settle your account, please pay the outstanding balance.

Hide this reminder

\$2.00
Amount Due

Pay Now

A arcu cursus vitae congue. Aliquet eget sit amet tellus cras adipiscing enim eu turpis. Varius vel pharetra vel turpis. Vel pharetra vel turpis nunc. Faucibus interdum posuere lorem ipsum dolor sit. Neque gravida

CHANGES

CLARITY TRANSPARENCY CONSISTENCY EXPECTED CONTROL

- Make the account dropdown more prominent
- An "opt out" feature that the user can dismiss the module > shows the user is not interested in resolving the issue.
- Update audience targeting
 - Limit to users who have the admin role which includes the permission to make payments
 - Exclude agency audience. Focus on small business users only.
 - Limit to users with less than 5 ad accounts
- Add additional module placements
 - Based on analysis of payment-related tickets, expanded help articles that don't seem related to payment but could result in payment tickets.

RESULTS

- Increased account unblock rate by **+14.9%**
- Decreased payment-related support cases by **8.9%**
- Ad revenue by unblocked users increased by **+5.4%**

STRATEGIC UX LEADERSHIP

META BUSINESS ELEARNING

PLATFORM REDESIGN

BACKGROUND

- Content includes:
 - Training courses for digital marketing skills and how to maximize results with Facebook marketing tools
 - Audience-specific educational programs such as Educators, Media Agencies, Content Publishers, Community Leaders etc.
- Powered by multiple content authoring tools
- Traffic: 5 million monthly visitors

MY ENGAGEMENT

- UX strategy and vision proposal
- Implementation roadmap
- Design & delivery

MY ROLES:

- UX strategist & Designer

DURATION: ONE YEAR

CROSS-FUNCTIONAL TEAM

- Platform manager, curriculum designers, content strategists, content architects, data scientist, engineering, marketing, UXR vendor

▶ GOALS & HYPOTHESIS

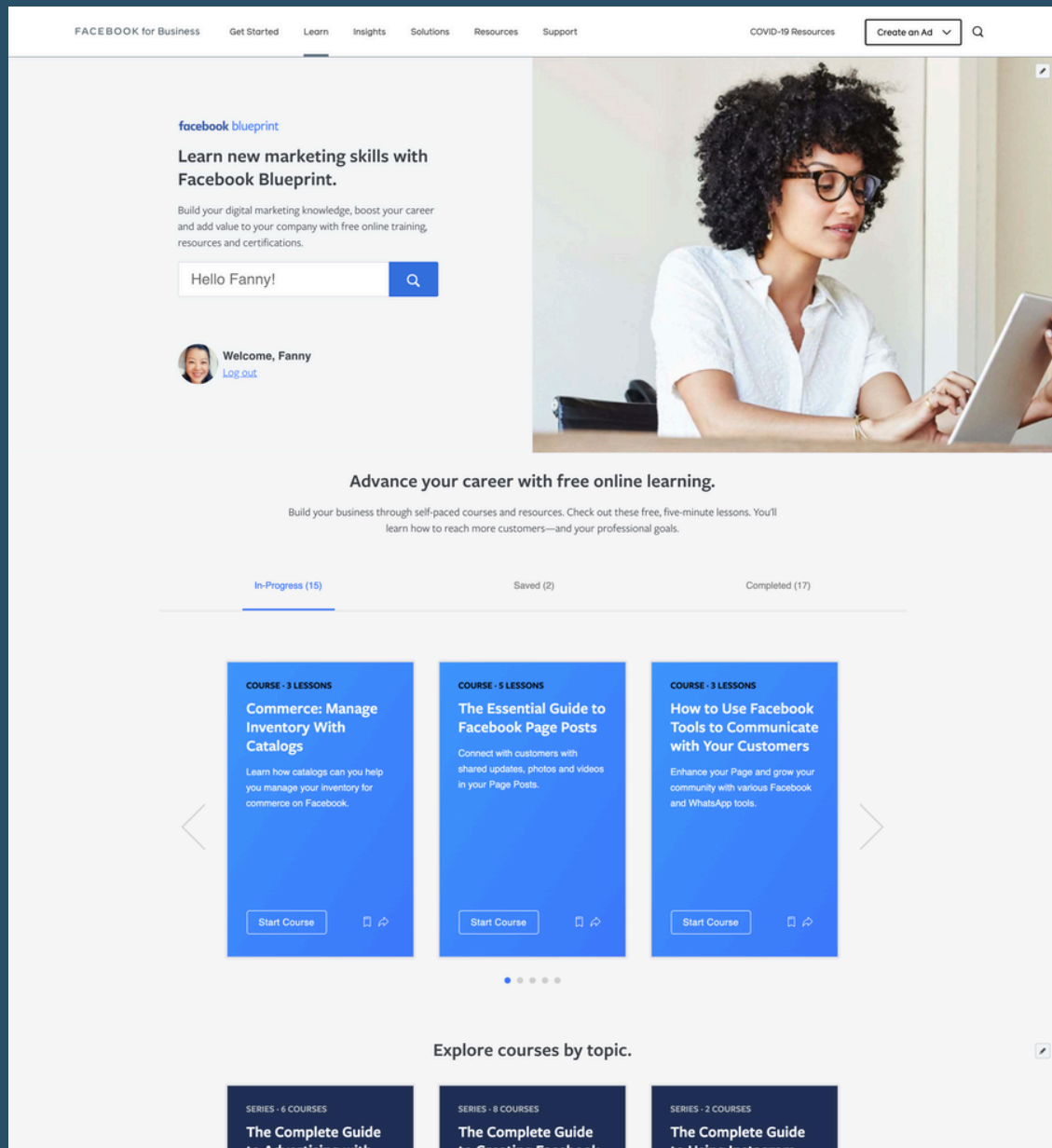
REDESIGN GOALS

- **Scalability:** empower the content and marketing team to easily promote and update content to align with active campaigns
- **Personalization:** develop UX strategy and components to integrate machine learning models to deliver an optimized & personalized experience
- **Findability:** establish a user-friendly navigation and search UX that powered by a scalable information architecture, tagging mechanism
- **User engagement:** make the platform the go-to destination for marketers to continuously learn the most important skills they need to grow their business

HYPOTHESIS & KPIS

By redesigning the website to be more scalable, personalized, findable, and engaging, we will see increases for the following measurements:

- **User satisfaction:** by comparing before and after user surveys
- **Time spent** on specific content pages: as indicator that users find the content they are looking for
- **Repeat visits:** to proof that the platform became preferred destination for marketers to learn and grow their skills.
- **Ad revenue:** A/B test users who have access to the redesigned platform leads to more ad spend to proof the new skills can help them use the product to grow business.

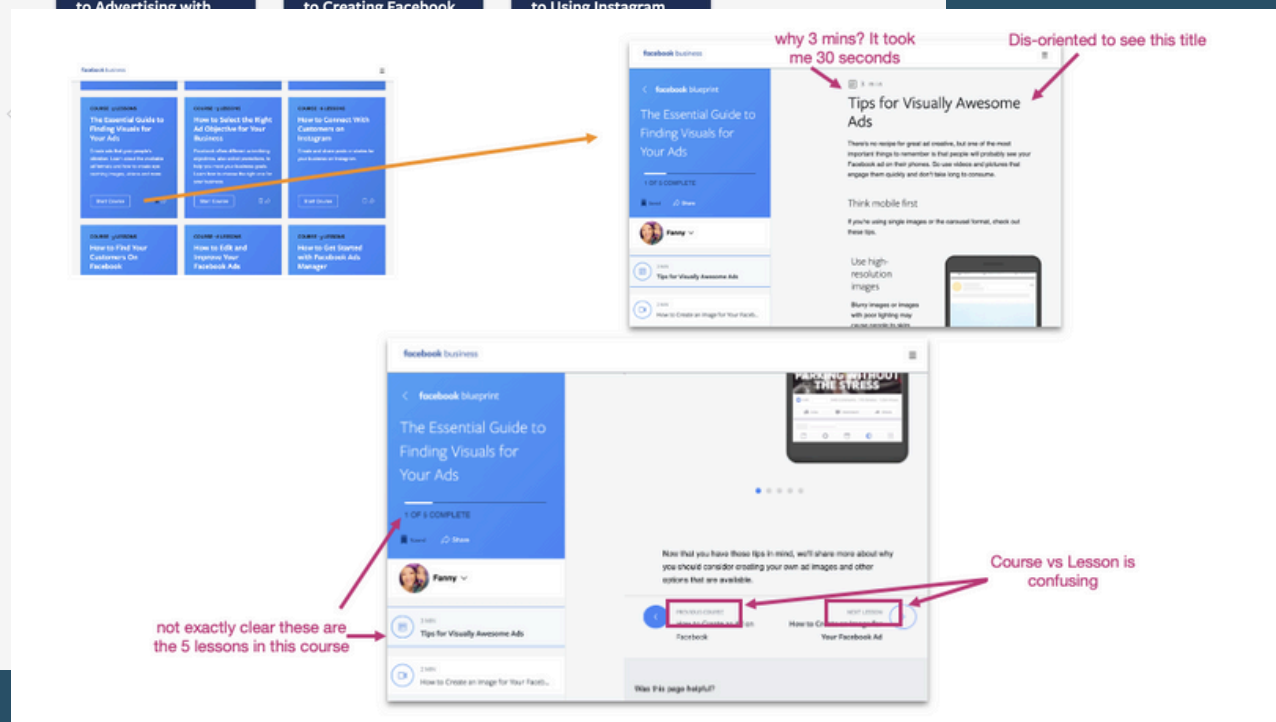


META BUSINESS ELEARNING REDESIGN

► HEURISTIC UX REVIEW

REVIEWED THE RESEARCH, STRATEGY, DESIGN DONE BY THE TEAM AND EXTERNAL VENDOR

- User persona
- Marketing strategy and plan
- Content strategy and plan
- Design iterations and the final MVP design
- Competitive analysis: leading blogs and e-learning sites
- SEO analysis
- Site usage analytics
- Comments on Small Business Owner FB Groups
- Meetings with cross-functional teams on their perspectives on what's working and what's not working



▶ ESTABLISHING A NEW UX STRATEGY

A PLATFORM ENABLING STREET-SMART LEARNERS

WARM PROSPECT PERSONA


- Super busy and always multi-tasking.
- Smart, ambitious, resourceful, fast learner, comfortable with tech but not savvy.
- Most likely on their smartphone a lot even if they have a laptop where they do a lot of work from.
- Great passion in the products and services they provide and have great connections with their customers.
- Their business is likely at a slow and healthy growth pace for a couple of years. They are just making enough money to justify the time invested. They have been thinking about expanding but are a bit overwhelmed on the options and where to start.
- Watch a lot of Shark Tank.

WARM PROSPECT LEARNING STYLE

- Many of them are street smart instead of book smart (doesn't mean they are not educated)
- Learn best with first hand experience or from doing the task
- Social learners (inspired from how others do it)
- Video over reading (doesn't mean they don't read)

▶ PRESENTED DESIGN EXPLORATIONS TO SHOW THE UPDATED VISION

Pick a profile that is most like you



Pet Shop Owner
Penelope


in business since 2022
Business stage: Growth
Facebook marketing since 2016
Instagram followers: 321,0345
Business Page followers: 321,0345

Business Experience

Marketing Experience

Facebook Ads Experience

[See Recommendations](#)



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Business Experience

Marketing Experience

Facebook Ads Experience

[See Recommendations](#)

Example Design Exploration

Recommended courses by small business like you! Similar to the play lists on Spotify. Users get inspired by content that are endorsed by other users.

▶ LED WORKSHOP WITH CROSS-FUNCTIONAL TEAM



CROSS-FUNCTIONAL TEAM

- Global Business Marketing:
 - Team lead, marketing program managers, marketing platform managers, content strategist, designer
- Business Education Content Team
 - Team lead, instructional (curriculum) designers, content strategists, content architects, designer
- Business Education Platform Team:
 - Platform program managers, content architects, CMS developers, UX designer
- External content authoring tool vendor

GOALS

- Align on business objectives, target audience and UX strategy
- How to best situate/present our content
- Actionable next steps from UX and content perspective

▶ SUPERVISED A UX RESEARCH COMPANY FOR CONTENT GAP ANALYSIS AND NAVIGATION DESIGN RESEARCH

RESEARCH GOALS

- Identify users' content needs
- Identify the most relevant content and why
- Identify high-level content gaps
- Identify how users group content and why
- Identify any confusing language/content items
- Define potential content structure
- Evaluate A/B content structures
- Recommend "best" content structure
- Identify what content formats are preferred
- Identify how users tag content
- Validate users' interest in key content

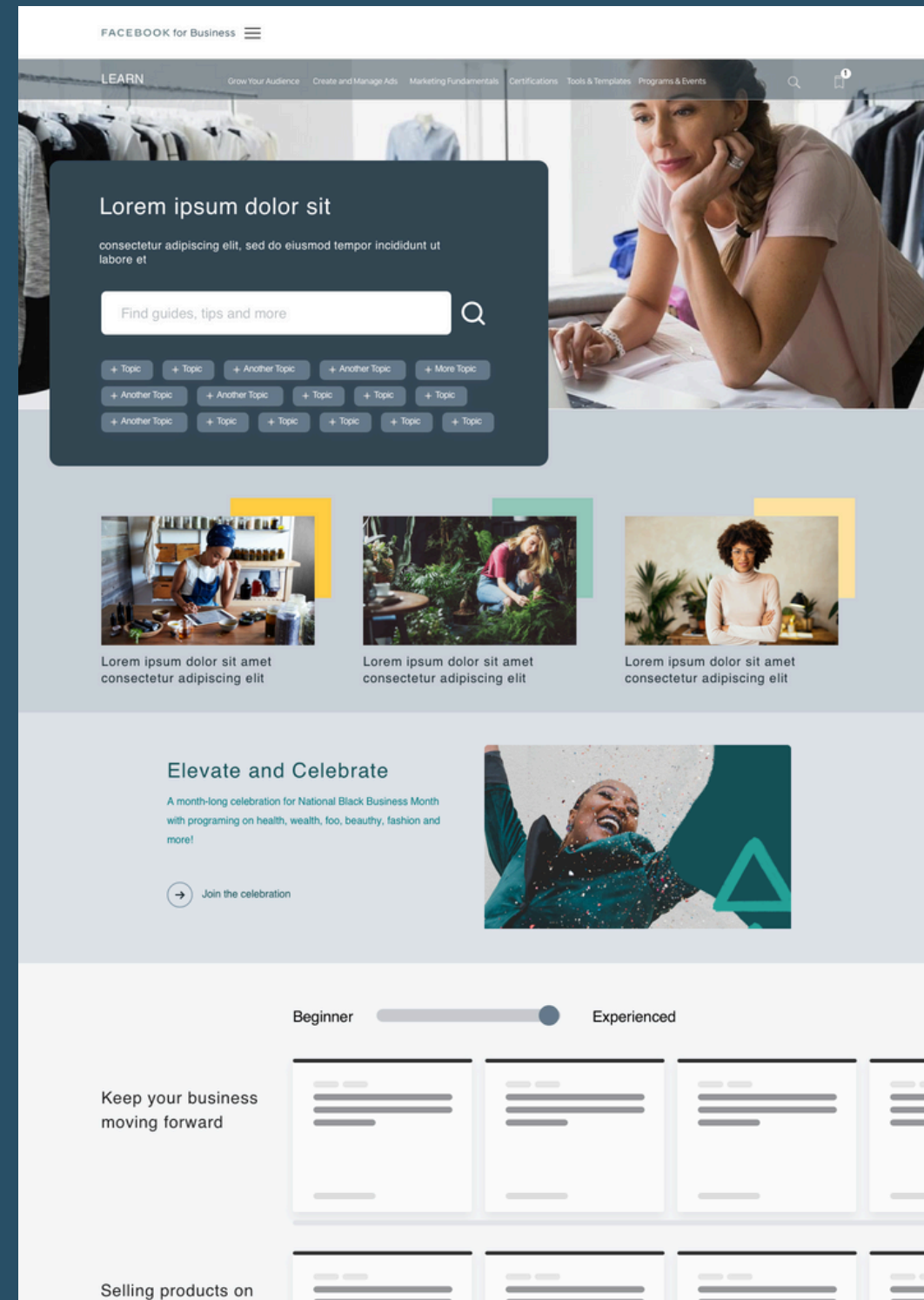
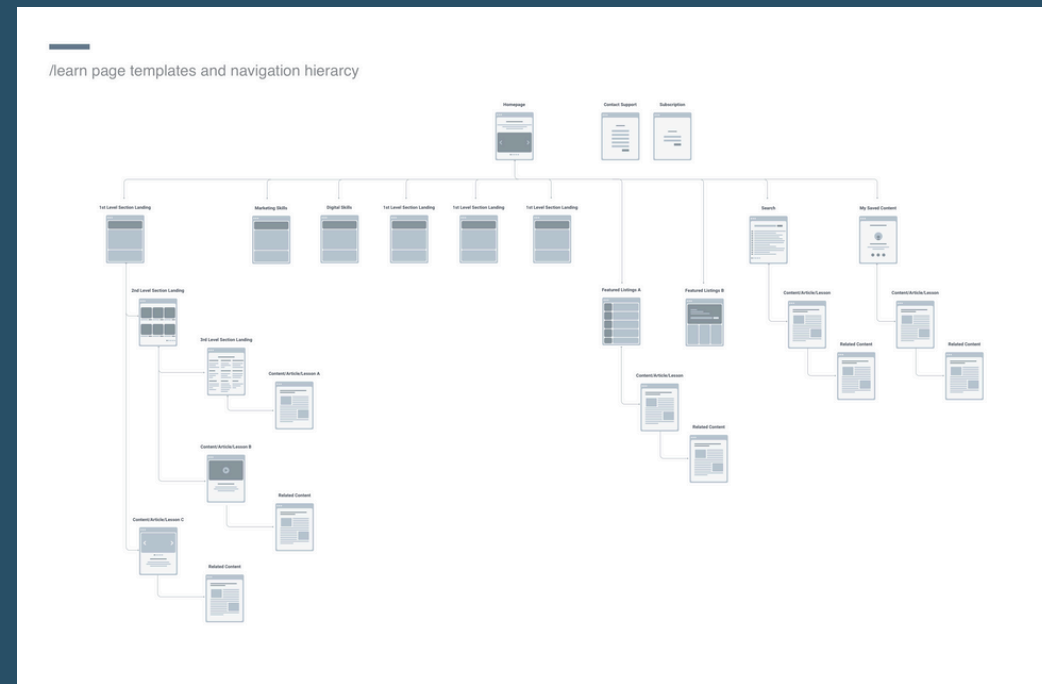
TESTS

- Test 1: Open card sort to explore how users group FB's educational content and to identify any key gaps.
- Test 2: Closed card sort to validate A/B options for groupings and headings of educational content. (Option A: Test 1 outputs; Option B: FB Internal hypothesis)
- Test 3: 1:1 interviews to explore users' content needs; their preferred format; and how they segment information.
- Test 4: Questionnaire to validate users' level of interest in each of the key content areas defined in test 1.

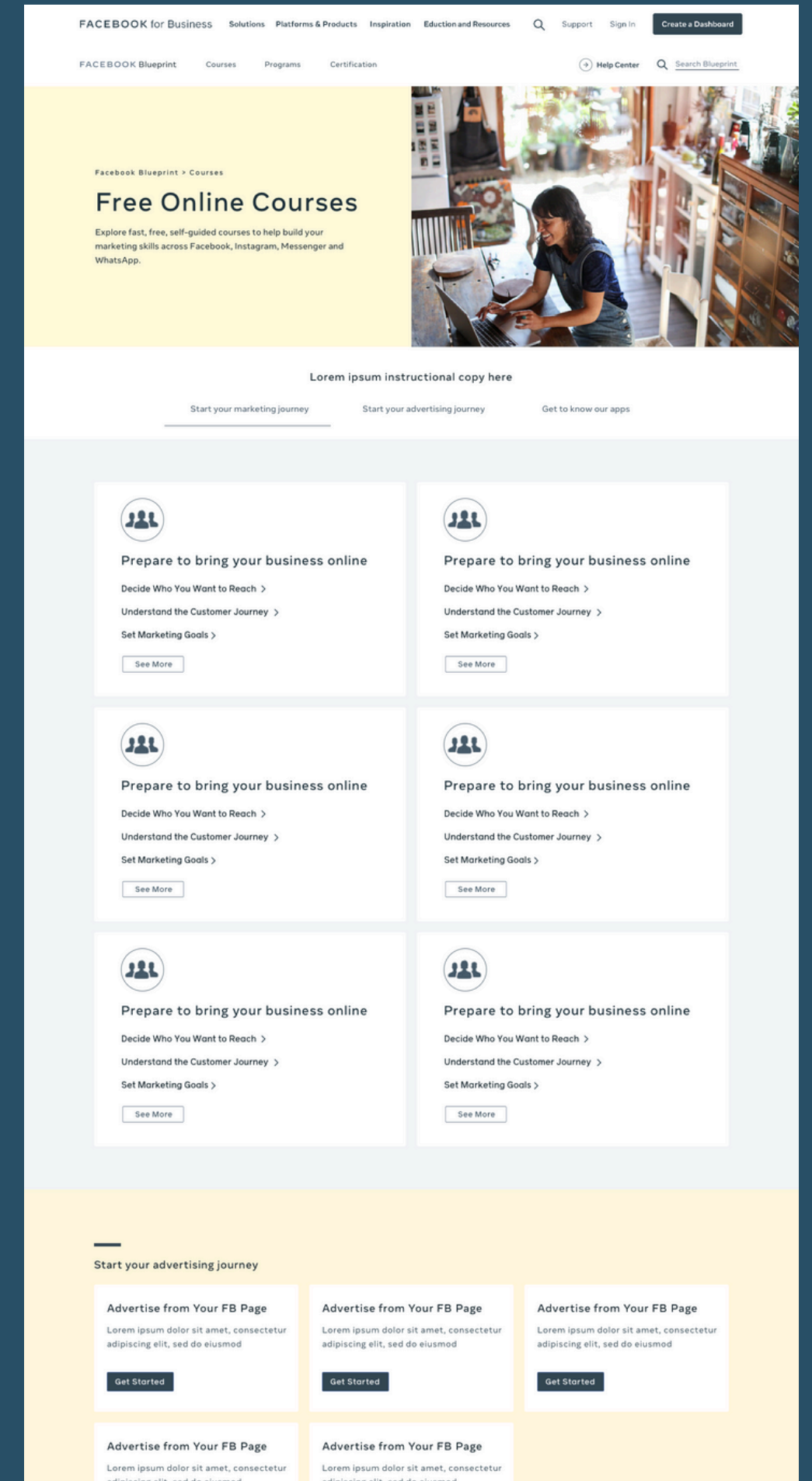
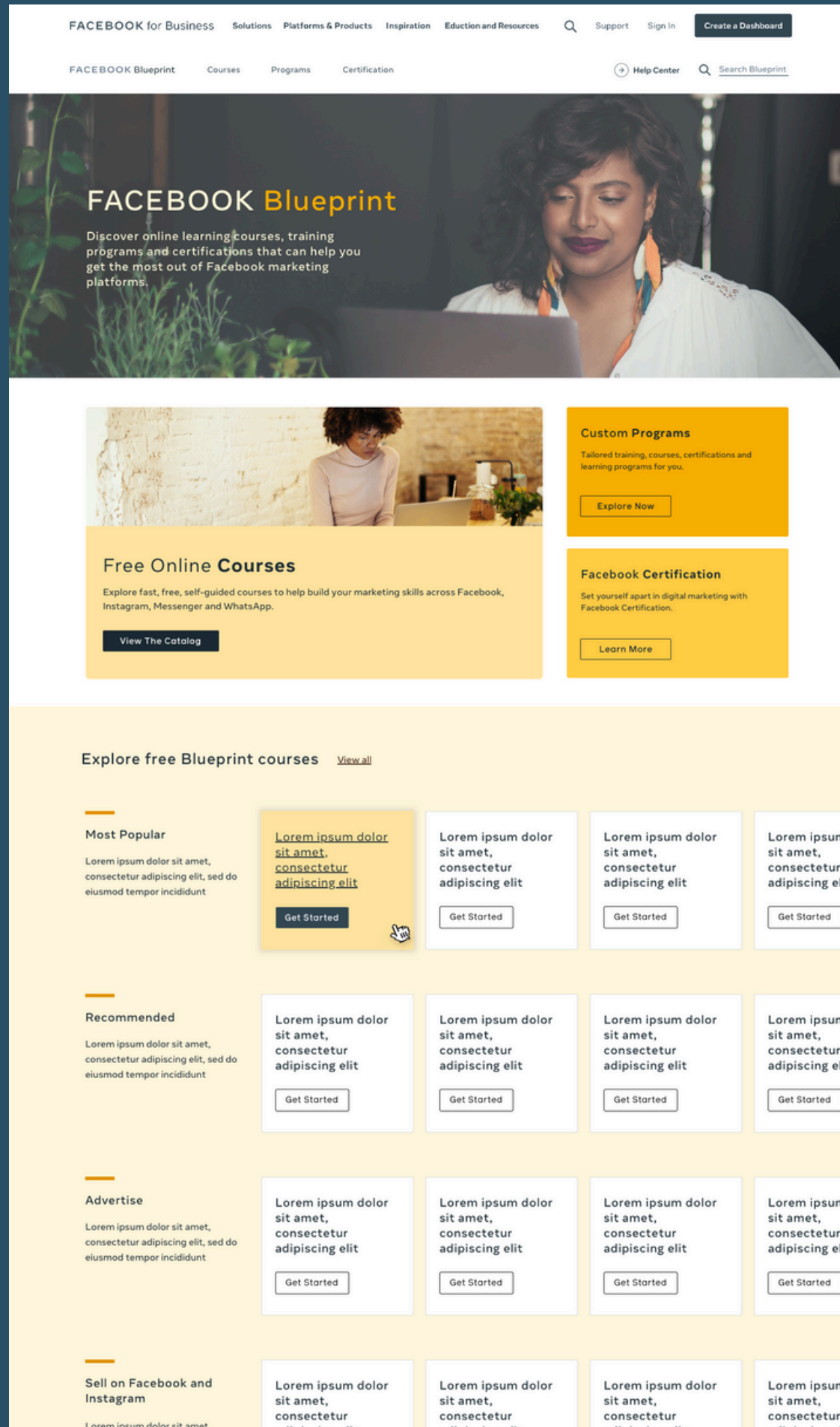
I guided the research vendor on:

- Recruitment criteria
- Questionnaire design
- Discussion guide
- Analysis
- Final Report

► DESIGN EXPLORATIONS BASED ON EXISTING CONTENT INVENTORY WITH THE UPDADTED UX VISION



▶ **WORKED WITH DATA SCIENTIST TO RELEASE MULTIPLE EXPERIMENTS FOR CONTENT RECOMMENDATION MACHINE LEARNING MODELS (WITH EXISTING DESIGN SYSTEM)**

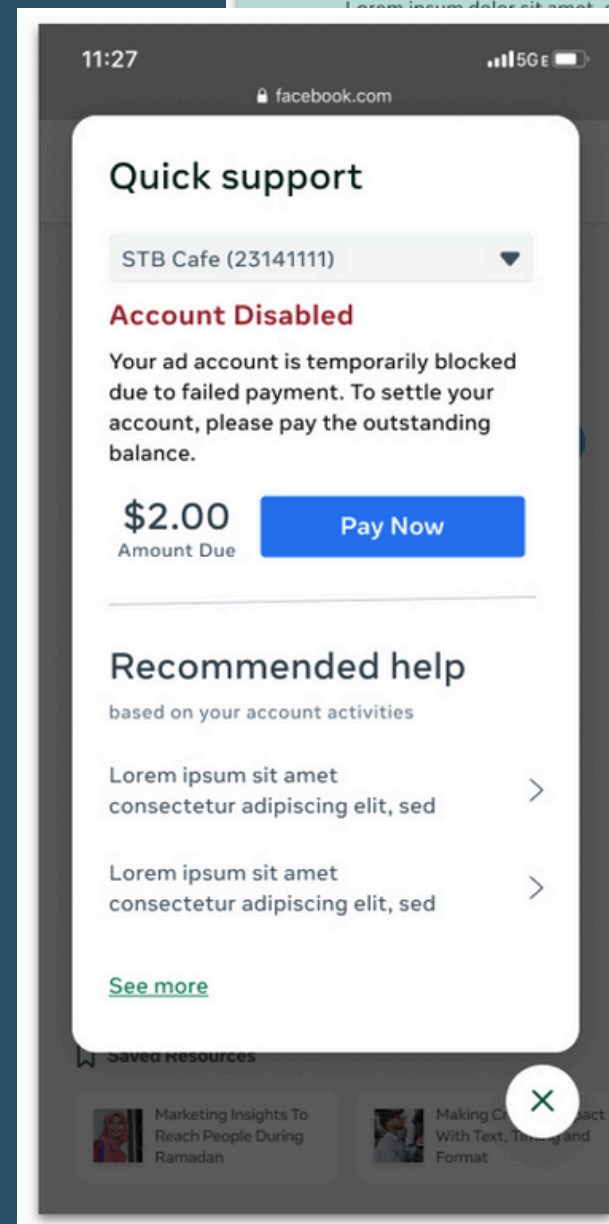
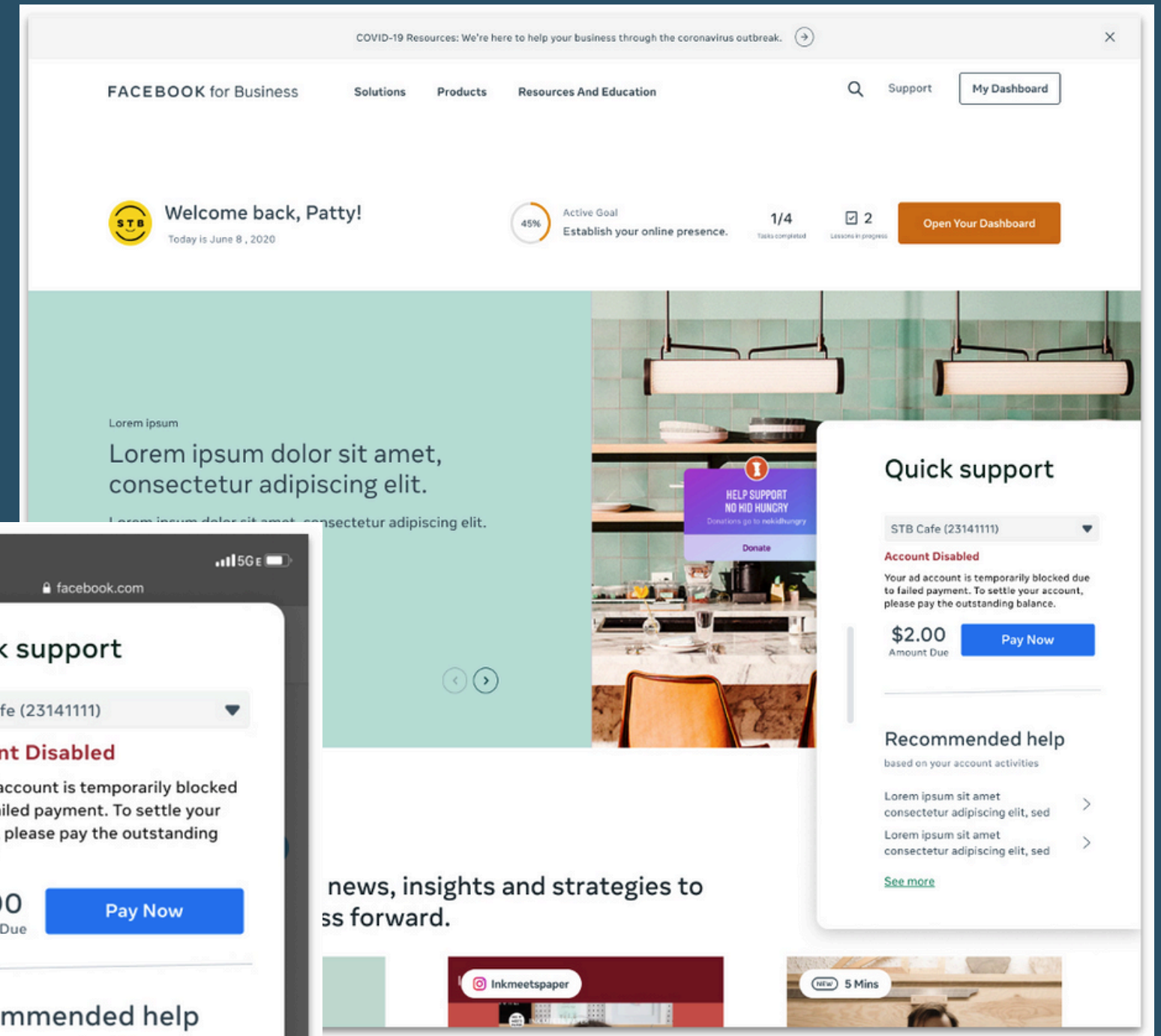


▶ THE RESULTS

With the updated design and ML-powered content recommendation modules

- 14.6% increase in repeat visits
- 5.8% increase in ad spending

▶ **INTEGRATED WITH A
NEW DESIGN SYSTEM
AND
PERSONALIZATION
MODULES ACROSS
THE BUSINESS
EDUCATION PLATFORM**



DESIGN INNOVATION



DEVELOPER CONSOLE

PLATFORM GOALS

Empower smart home device maker or service provider to create a thriving ecosystem of innovative smart home products and services that seamlessly leverage or integrate with Google's products & services, ultimately improving the lives of users and shaping the future of the smart home.

UX GOALS

- Simplify Development
- Foster Innovation
- Increase Partner & Consumer Adoption
- Support Partner's Business Growth

CHALLENGES

- **Ambiguity:** Stemming from the rapidly evolving industry, shifting priorities, and changing technology.
- **Complexity:** Due to the vast array of integration options, with some being phased out while others are continually introduced.
- **Consistency Challenges:** Maintaining consistency across diverse integration types, ranging from hardware to software and beyond.

BUILDING AUTOMATION TEMPLATES

PRODUCT BACKGROUND

A new automation gallery/marketplace where consumers can explore automation templates and easily set it up for their own home.

- Google can help the consumers adopting smart home automation with an automation template marketplace/gallery.
- Google can help the developer partners getting more consumer engagement with the devices & upsell devices as well.

MY PROJECT

Enable developers to innovate and build the automation template inventory

- Create and test automation templates
- Certify and publish the automation templates to the marketplace/gallery
- Monitor the consumer adoption and improve the templates
- Stay inspired and be able to leverage the latest capabilities

MY ROLE:

- Lead UX Strategist/Designer

DURATION:

- 9 months

CROSS-FUNCTIONAL TEAMS

- **UX:** UX researcher, UX writer, UX managers/leadership, market place designers
- **Product:** multiple product managers and leadership
- **Partner management:** business partners, partner engineers
- **Tech:** technical writer, front and back engineers, data scientists, project managers

DEVELOPER CONSOLE - AUTOMATIONS

BETA RELEASE

KEY GOALS

- Get feedback on the scripting capability including the YAML syntax and the intelligence.
- Gather feedback for the end-to-end UX of developing and publishing automation templates.
- Build up automation templates inventory and taxonomy.

AUTOMATION TEMPLATE DEVELOPMENT

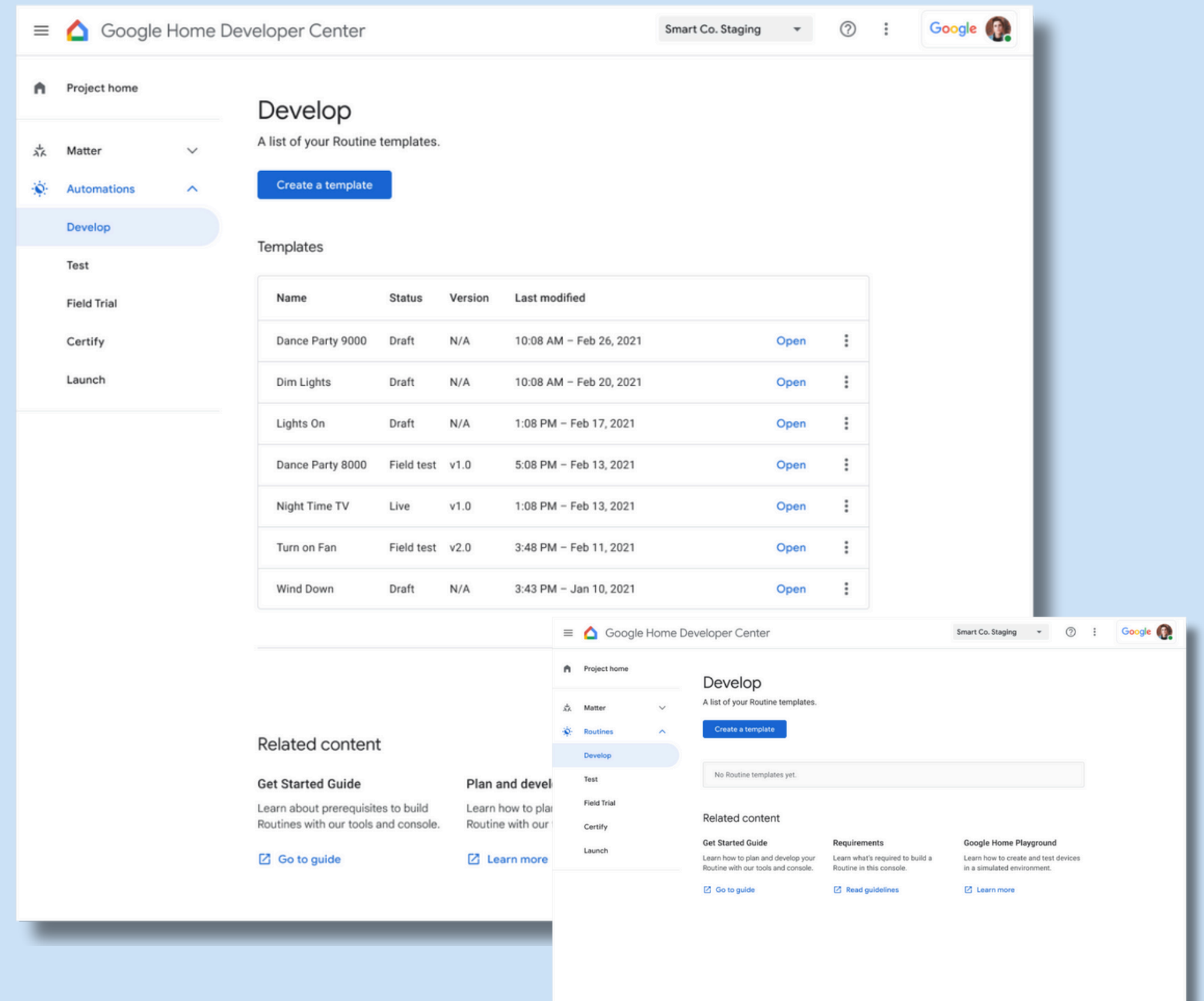
TEMPLATE LISTINGS PAGE

Key User Journey:

- Get started with a new template
- Open/edit an existing template script
- Check out template status

Challenges:

- Consistent UX pattern across integration types on the Console when the integration types have very different UX needs.
- Gaining deeper understanding legacy tech stacks and data definitions across script attributes and status
- Constant changing scope of the beta release.



default state with no templates created yet

DEVELOPER CONSOLE - AUTOMATIONS | BETA RELEASE

AUTOMATION TEMPLATE DEVELOPMENT

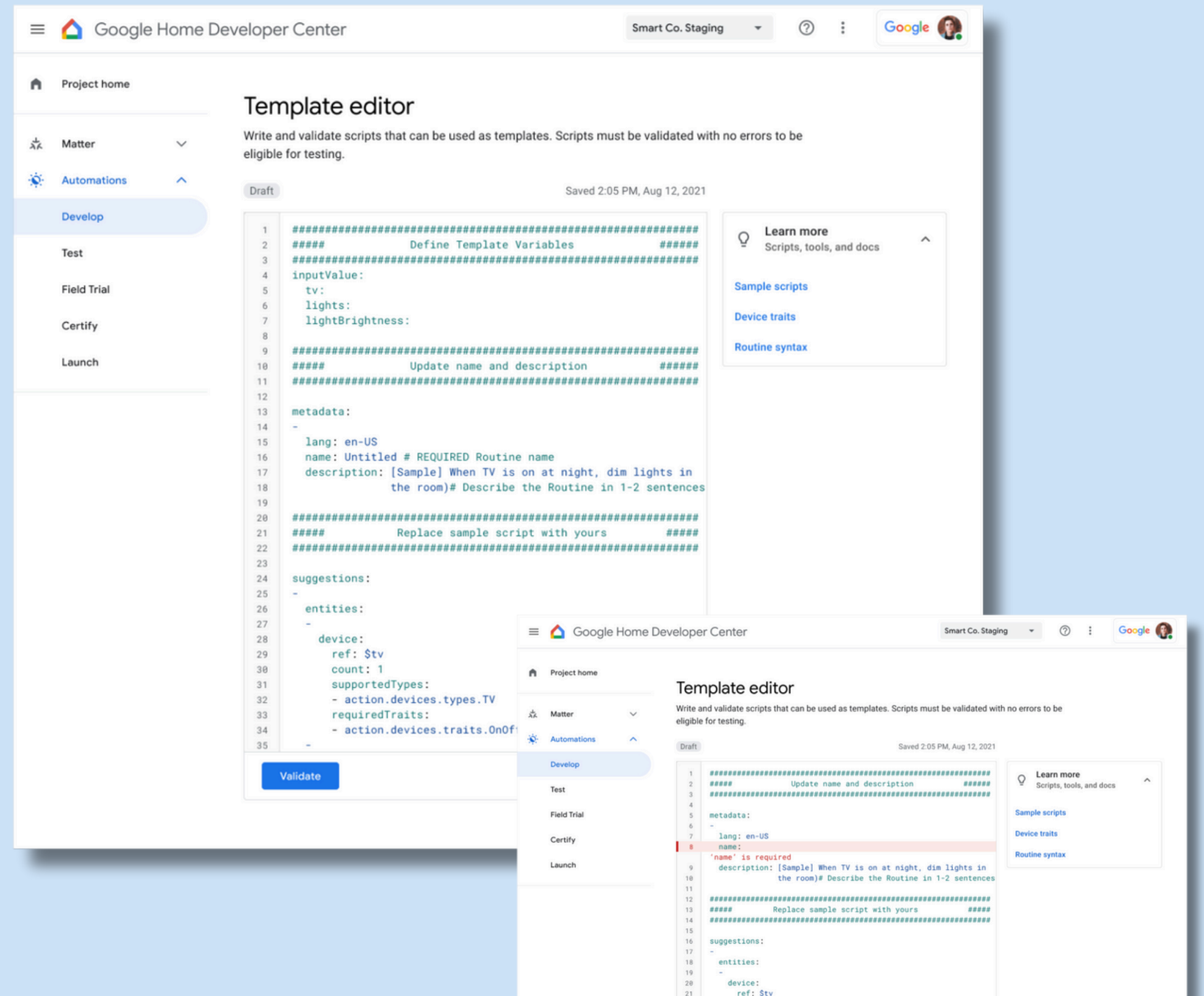
SCRIPT EDITOR

Key User Journey:

- Explore capability with the sample scripts
- Start a new template script
- Editing, error fixing and finishing up a script

Challenges:

- Constraint by the framework used
Codemirror 6 Editor + YAML
- Maintain a familiar coding experience across common code editor tools
- Constant changing supported devices and capabilities
- Maintain an MVP yet scalable framework
- Providing inspirational references while the capabilities are limited



error state

DEVELOPER CONSOLE - AUTOMATIONS | BETA RELEASE

AUTOMATION TEMPLATE DEVELOPMENT

TEST CONFIGURATION

Key User Journey:

- Choose a smart home to test
- Choose specific devices and other variables to run the test

Challenges:

- A lot of possible instances could be generated from a template and needs to have easy way to configure for testing.
- Simplify the experience even if the configurations could be very complex.
- Scalable as the features getting more robust.

The screenshot displays the Google Home Developer Center interface for testing configurations. The top navigation bar includes the Google Home Developer Center logo, a 'Smart Co. Staging' dropdown, and a Google profile icon. The left sidebar shows navigation options: Project Home, Matter, Automations, Develop, Test (highlighted), Field Trial, Certify, and Launch. The main content area is titled 'Test configuration' and includes a sub-header 'Create a Routine to test by selecting a template, a home to test against, devices, and other variables.' Below this, there are sections for 'Templates' (with a dropdown menu showing 'Dance Party 9000, draft') and 'Homes' (listing 'Downtown apartment' and 'Beach home' with their respective room and device details). A 'Related content' section is visible at the bottom left, featuring a 'Test your Routine' link. The bottom right section shows a 'Test configuration' form with a 'Template' dropdown and an 'inputValue' field containing a JSON object: {"tv": "Living room", "lights": [- "Living room", - "Potio light"]}. The form also has 'Cancel test' and 'Activate test' buttons.

DEVELOPER CONSOLE - AUTOMATIONS | BETA RELEASE

AUTOMATION TEMPLATE TESTING

TEST RESULTS & LOGS

Key User Journey:

- Monitor test progress
- Review logs
- Save test results

Challenges:

- Need to support various intentions of testing.
- Need to allow virtual testing capacity so that users don't need to depend on real available devices or conditions to test.
- Make the experience valuable and intuitive with lots of technical limitations.

The screenshot shows the Google Home Developer Center interface. The top navigation bar includes the Google Home logo, the text 'Google Home Developer Center', a dropdown menu for 'Smart Co. Staging', and a search icon. The left sidebar contains a navigation menu with items: 'Project Home', 'Matter', 'Automations', 'Develop', 'Test' (highlighted), 'Field Trial', 'Certify', and 'Launch'. The main content area is titled 'Test' and displays the following information:

- Template: Dance Party 9000, draft
- Home: Downtown apartment
- Status: Activated

A progress bar indicates 'In progress (04:01)'. Below the progress bar, there is a text prompt: 'Enter the devices (#add value) to test in this Routine before activating.' This is followed by an 'inputValue' section containing a list of devices:

```
1  inputValue:
2     tv: Living room
3     lights:
4     - Living room
5     - Patio light
```

Below the 'inputValue' section is a 'Template' dropdown menu. At the bottom of the main content area, there are three buttons: 'Save results', 'Change inputValue', and 'Deactivate test'. The bottom section of the interface is titled 'Logs' and contains the following log entries:

```
08:11:11 [INFO] Found 2 eligible devices for $tv: Living Room TV; Bedroom TV
08:11:26 [INFO] Found 4 eligible devices for $lights: Living Room Light A;
Living Room Light B; Bedroom Light A; Bedroom Light B
08:11:49 [DEBUG] Default automation suggestion is generated.
08:11:55 [DEBUG] Creating automation from the suggestion...
08:11:59 [DEBUG] Setting devices to their default states...
08:12:04 [DEBUG] Recording devices states before automation run...
08:12:17 [INFO] Triggering the automation...
08:12:37 [DEBUG] Running automation: Triggering event received.
08:13:21 [INFO] Running automation: Action
ee6b2031-9825-450f-94cd-4e25ed27e620 SUCCESS.
08:13:51 [INFO] Running automation: Action
ee6b2031-9825-450f-94cd-4e25ed27e620 SUCCESS.
08:13:55 [DEBUG] Recording devices states after automation run...
08:14:02 [INFO] Test complete.
```

ANNOTATION EXAMPLES

- When the user clicked on the Activate CTA:
 - Check if it's validated with no errors
 - Save the routine
 - Activate a routine instance against the selected home/structure
 - The CTA becomes "Deactivate"
 - The inputValue section is not editable (grey) until the user clicks on the "Change Inputvalue" button.
- The alert module shows up 5-10 seconds after the routine is activated but no logs loading. It's an indicator/reminder that the starters need to be setup.

- Once the routine instance is activated:
 - The InputValue block will become read only
 - Activate Routine CTA becomes "Deactivate Routine"
 - Cancel test CTA becomes "Change inputValue"

- After clicking on activating but the script failed validation
 - grey out activate CTA
 - add contextual error line
 - add error alert box
 - the script is still saved with the errors.

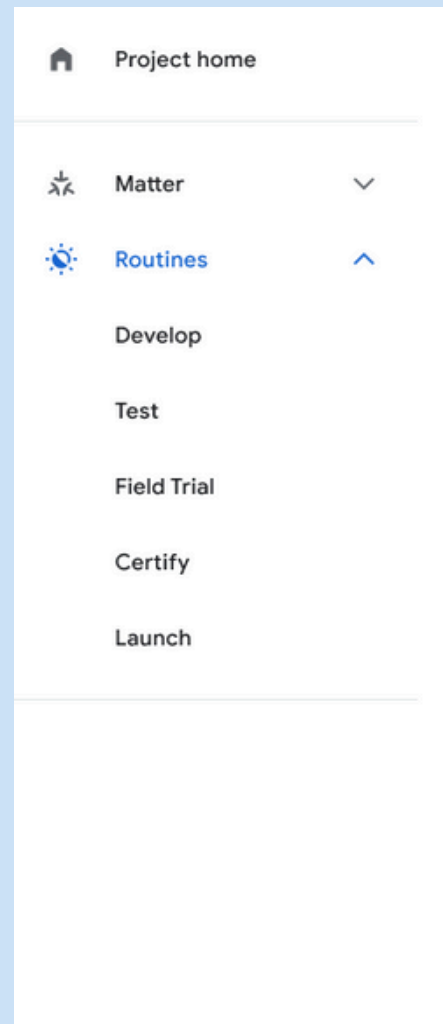
DEVELOPER CONSOLE - AUTOMATIONS

DESIGN EXPLORATIONS BASED ON UXR AND OTHER RESEARCHES

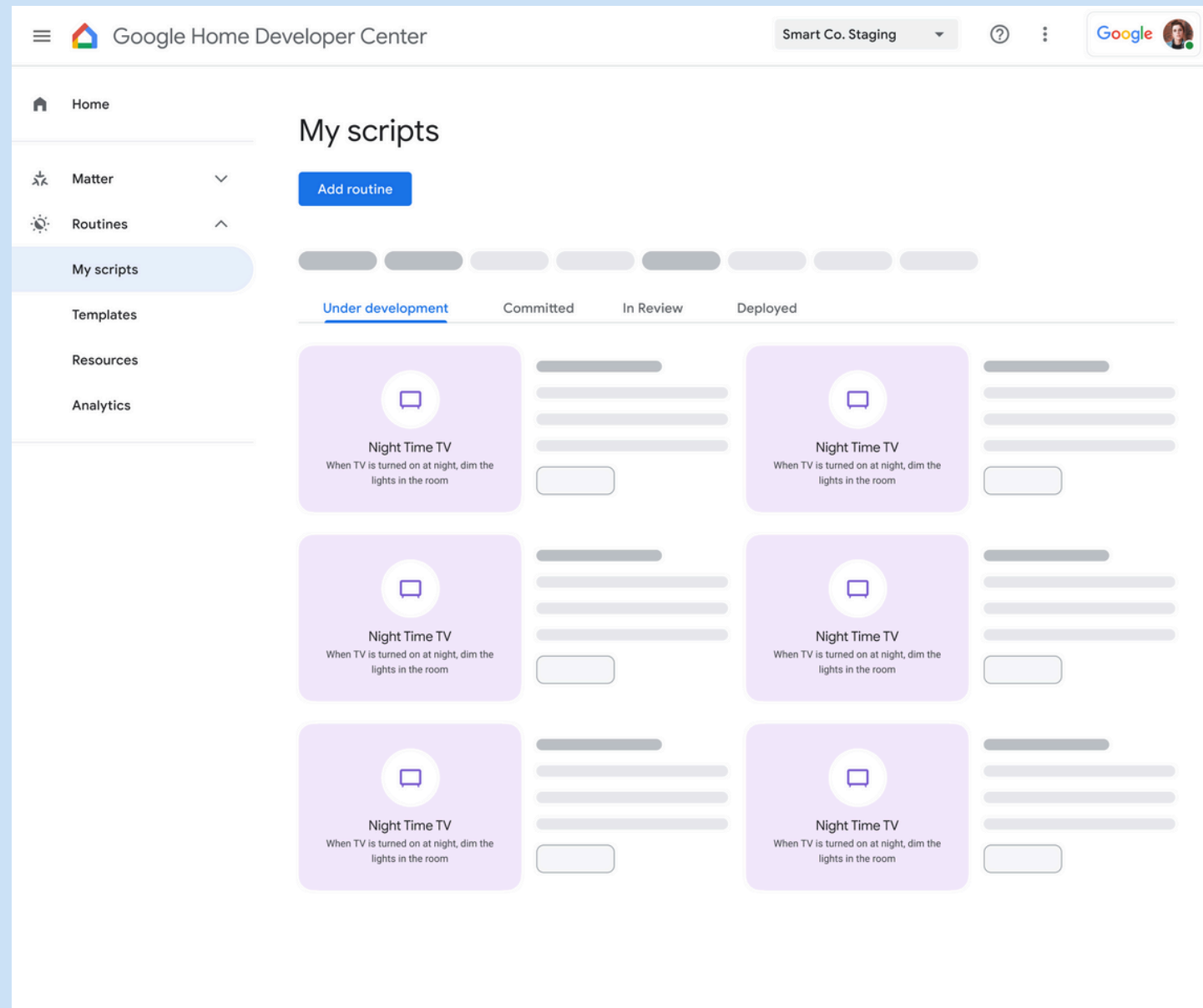
DEVELOPER CONSOLE - AUTOMATIONS | DESIGN EXPLORATIONS

NAVIGATION FRAMEWORK

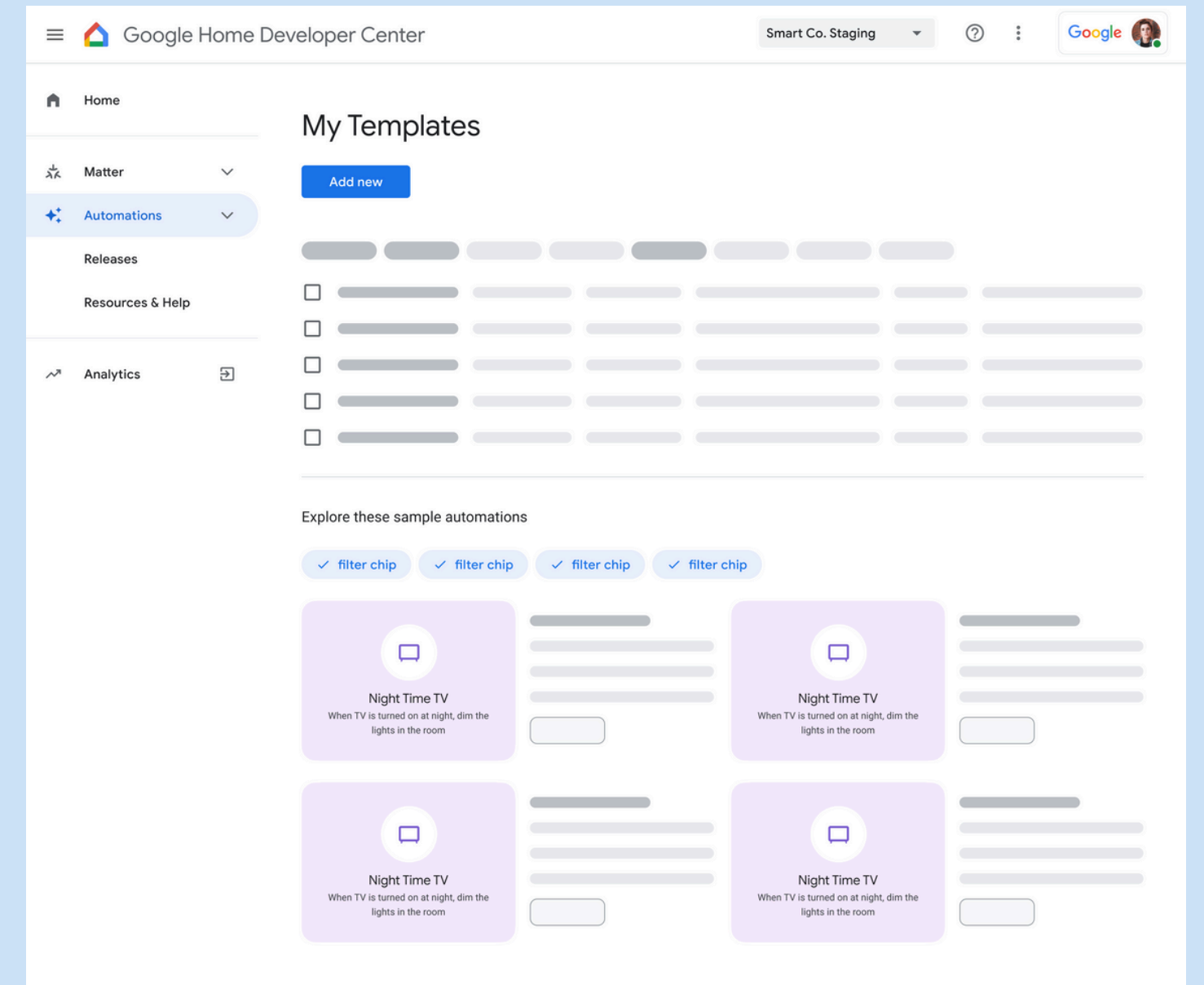
Beta release



Exploration



Exploration



DEVELOPER CONSOLE - AUTOMATIONS | DESIGN EXPLORATIONS

SCRIPT EDITOR AS THE MINI DASHBOARD

The screenshot shows the Google Home Developer Center interface. The top navigation bar includes the Google Home logo, the text "Google Home Developer Center", a "Smart Co. Staging" dropdown menu, a help icon, and a Google profile icon. The left sidebar contains a "Home" button and a "Matter" dropdown menu. The "Routines" menu is expanded, showing "My scripts", "Templates", "Resources", and "Analytics". A "Beta test status" section is visible at the bottom left with a "CTA" button. The main content area is titled "Good morning (rename routine in script)" and includes a subtitle: "This is a template to help you get started. Make sure you update the name and description." Below the subtitle are buttons for "Save script", "Validate code", "Simulated test", "Preview in Google Home", and "Commit". The central part of the screen is a code editor with a line number gutter on the left, containing JSON code for a routine. The code defines two devices: a TV and lights, with associated agents, counts, and traits. It also includes a condition expression and a rule for turning on the TV. To the right of the code editor is a "Routine summary" section with a vertical list of horizontal bars representing different parts of the routine.

```
1 suggestions:
2 -
3   entities:
4   -
5     device:
6       ref: $tv
7       agents:
8       - SELF
9       count: 1
10      type: action.devices.types.TV
11      traits:
12      - action.devices.traits.OnOff
13 -
14   device:
15     ref: $lights
16     agents:
17     - SELF
18     count: 1+
19     type: action.devices.types.LIGHT
20     traits:
21     - action.devices.traits.OnOff
22     - action.devices.traits.Brightness
23   conditionExpression: sameRoom($tv, $lights)
24 rules:
25 -
26   name: turn on TV
27   triggers:
28   -
29     ref: $tv
30     trait: action.devices.traits.OnOff
31     state: on == true
32   conditionExpression: time.between(SUNSET, SUNRISE)
33   actions:
34   -
35     devices:
```

The screenshot shows the Google Home Developer Center interface for testing a script. The top navigation bar is identical to the previous screenshot. The left sidebar shows a "TV Time at Night" routine selected, with a "Run test" button. The main content area is divided into two panels: "Script" and "Logs". The "Script" panel shows the JSON code from the previous screenshot. The "Logs" panel is currently empty. To the right of these panels is a "Triggers/Starters/Conditions" section with three scenarios: "Scenario #1", "Scenario #2", and "Scenario #3". Each scenario has a list of triggers with checkboxes and dropdown menus. The triggers include "[a starter/condition]", "[more starter/condition]", "smokeDetector", and "carbonMonoxideDet...". Below the triggers is an "Actions" section with three actions: "lights", "speaker", and "Communication". Each action has a checkbox and a dropdown menu. At the bottom right is a "Simulated variables" section with two variables: "Detection duration" and "Light blink duration", each with a checkbox and a dropdown menu.

TV Time at Night Run test

Script

History

Staging

Field Trial

Certification

Launch

Triggers/Starters/Conditions

Scenario #1 Scenario #2 Scenario #3

[a starter/condition] [State] • [attributes]

[more starter/condition] [State] • [attributes]

smokeDetector Detected • 5/30 sec (simulated)

carbonMonoxideDet... Not Detected

Actions

lights On • 50%

speaker Off

Communication Email • joesmith@gmail.com

Simulated variables

Detection duration 30 seconds • simulated

Light blink duration 30 seconds • simulated

DEVELOPER CONSOLE - AUTOMATIONS | DESIGN EXPLORATIONS

VIRTUAL TESTING

Google Home Developer Center | Smart Co. Staging

Setup for test [adoption]

- 1. Pick a home**
Virtual Homes: joesmith@smartlight.com
 Beach home (Room and device info here...)
 Downtown apartment (Room and device info here...)
[+ Add virtual home](#)
GHA Homes: joesmith@gmail.com
 88 Main Street (Room and device info here...)
 16 Murray Hill (Room and device info here...)
- 2. Add missing devices**
Devices in the script: Following devices are missing, you can add virtual devices for this test or choose to skip the devices for now.
speaker (Add / skip)
- 3. Setup the template variables**
Schedule: Set the start time and end time. [Select a time](#)
Lights: Select which lights you want to adjust. [Select a device](#)

[NEXT](#)

Google Home Developer Center | Smart Co. Staging

Testing

9:30 | Virtual Home: Beach home

Front room
TV On - 50% | Thermostat Indoor 70

Living room
Lamp On - 50% | Smart plug On
Blinds Closed | Vacuum Paused

Game room
Smart plug On | Lamp On - 50%
Blinds Closed

Triggers/Starters/Conditions
 smokeDetector Detected - 5/30 sec (simulated)
 carbonMonoxideDet... Not Detected

Actions
 lights On - 50%
 speaker Off

Simulated variables
 Detection duration 30 seconds - simulated
 Light blink duration 30 seconds - simulated

Logs

DEVELOPER CONSOLE - AUTOMATIONS | DESIGN EXPLORATIONS

CREATING A SCRIPT WITH AI

The image shows two overlapping screenshots of the Google Home Developer Center interface. The top screenshot shows the 'Create an automation template' page with a sidebar on the left containing 'Automations', 'Develop', 'Test', 'Field Trial', 'Certify', and 'Launch'. A small AI assistant window is overlaid on the right side of the page, displaying the text 'Help me write a script' and 'Internal testing only' above a text input field containing 'at 7am open blinds and turn on TV'. A blue arrow points from this window to a larger, detailed view of the same window in the bottom screenshot. This larger view shows the AI assistant window with a close button (X) in the top right corner. The text input field contains the same text. Below the input field, the AI assistant displays a JSON-like structure for the script:

```
metadata:  
  name: Evening  
routine  
  description: at  
  sunset turn on lights and  
  close blinds  
automations:  
  starters:  
    - type: time.schedule  
      at: SUNSET  
  actions:  
    - type: device.command  
      devices:  
        - light4 - Living
```

At the bottom of the AI assistant window, there are icons for like, comment, copy, refresh, and a menu, along with a blue play button icon.

Selected Work for Design Systems

CREDIT SUISSE

Role: First UX Team Manager in the firm with a 10-person team
Accomplishment: Advocated and led the creation of the first design system and UX process

- Initiated the creation of a standardized UX design process
- Integrated the design process into the software development lifecycle including documentation standards
- Established the design patterns such as navigation, UI components, templates, interactions, and language usage
- Led the creation of a code library for developers across the firm to easily adopt the design patterns
- Built a process to receive feedback and continuously updating the library

IBM

Role: Senior UX Designer, led two junior designers
Accomplishment: Migrated 11 million pages on ibm.com to the new design systems I created

- Analyzed holistically the pages and sub sites under the ibm.com umbrella
- Gathered requirements from stakeholders across product and service verticals
- Prioritized gaps of the old design systems
- Created new design system proposal and received funding
- Led the creation of the new design systems
- Worked with functional teams for migration to the new design system

META

Role: Lead designer, worked with designers from multiple teams
Accomplishment: Guided an agency to create the design system for Meta for Business

- Provided requirements from the product lines for the external design agency
- Guided the agency's design work
- Worked closely with design leadership from multiple teams
- Continued to expand and improve the design system after the agency finished the engagement
- Established Figma components and templates for easy adoption

FACTSET

Role: Lead Interaction Designer, worked with multiple designers
Accomplishment: Built Figma component library to increase consistency and efficiency

- Holistic review and research of existing product experience
- Conducted competitive landscape UX analysis
- Analyzed existing design system and provided design pattern enhancement proposal
- Led UX research strategy on the new patterns
- Worked with designers from multiple product lines to enhance the design system with research results
- Established comprehensive Figma library with design variations to support needs from various product lines

THANK YOU

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