April Yang · Case Study

Designing an Intuitive Transaction Experience for Crypto Wallets

2025

Content

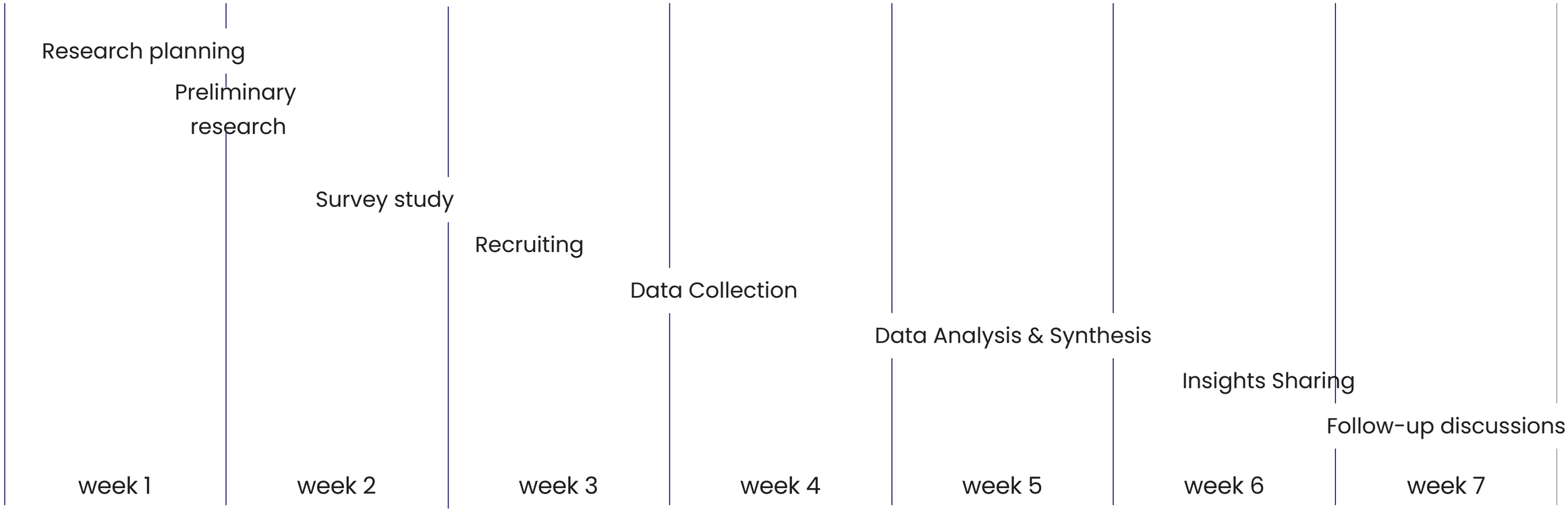
My Role

I was the sole in-house UX Researcher, leading end-to-end on this research project. I collaborated closely with Project Manager, Product Designer, and Blockchain Engineer throughout the process.

Design & Research Process

Research Timeline

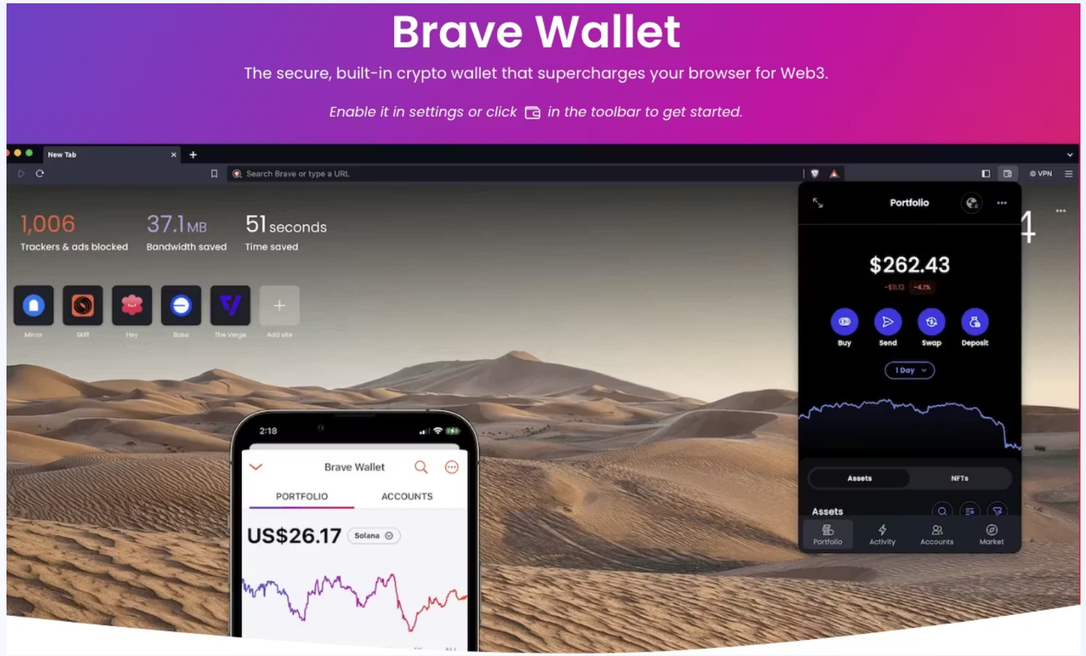
The generative research took 6-7 weeks



Research Background

The early version of Brave Wallet showed low transaction engagement, prompting the team to consider whether adding advanced features might drive usage. Instead, this research set out to deeply understand the user journey of making transactions in self-custody wallets, with the goal of uncovering barriers and opportunities to improve transaction activity.

With the constraints of limited time and resources, the teams and I began the discussions and explorations.



Brave Wallet is a self-custody crypto wallet where you can store and transact cryptocurrencies directly on-chains.

Process

Before defining the research objectives, I grounded the research in both stakeholder alignment and landscape understanding. This ensured the study addressed real product needs while staying informed by broader user behavior and industry context.

1. Stakeholder syncups — understanding goals and concerns

I met with the PM, designers, and engineers to align on product goals, known pain points, and success metrics. These conversations clarified where research could provide the most value and revealed gaps in team assumptions about user needs.

Product Manager: "Users are not transacting much, can we find out more about how they make transactions to improve our transaction flow?"

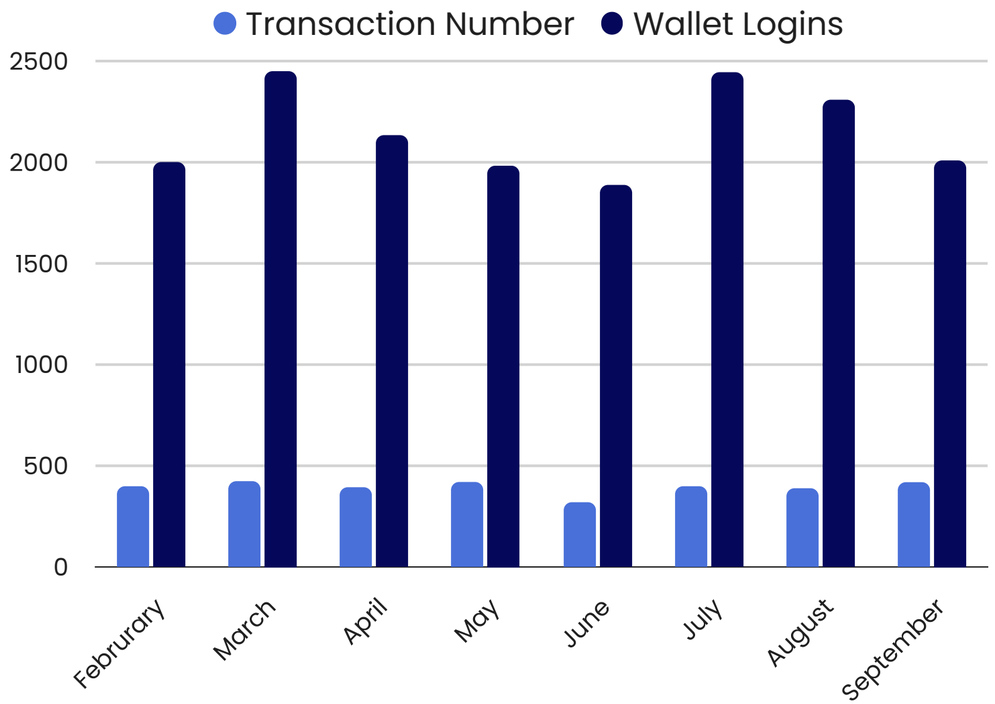
Product Designer: "Our transaction design is pretty basic in this early version, what are the opportunities for us to 'flesh it out' more?"

Blockchain Engineer: "Should we build more advanced Web3 features to be competitive? Such as multi-chain support?"

Process

2. Analytics & landscape review — gaining context of the problem space

I reviewed the product analytics to understand large-scale behavioral patterns. I also reviewed papers and publications on self-custody wallets to contextualize our product within the wider ecosystem and adoption challenges.



Research Objectives

1. Uncover user flow and user journey of conducting transactions inside crypto wallet
2. Identify key user needs, goals, and motivation when making transactions
3. Uncover unmet needs and pain points in their current user flow for opportunities

Research Methods

Dual Purpose Survey Design

To increase efficiency, we utilized a "dual-purpose" survey design to

1. understand the types of users/behaviors exist and identify segments
2. screen for participants for the next phase of research

Semi-structured Interview + Observational Study

We chose these two methods combined to deep dive on the rich qualitative user attitude and motivation and to observe the organic flow and interaction between participants and wallet applications.

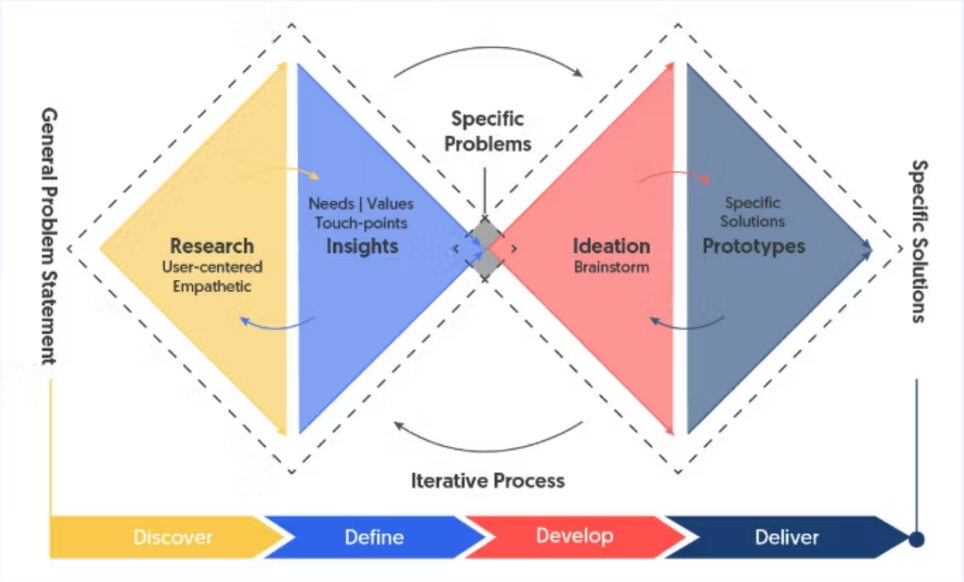
Follow-up Evaluative Study and Comparative Analysis

We aimed to evaluate design solutions iterated based on the insights uncovered before handing it over to be built.

Once the new version was shipped, we aimed to compare transaction volumes before and after to measure the effect of the new design.

We followed the Design Thinking framework in our product development process:

define → iterate → test → repeat



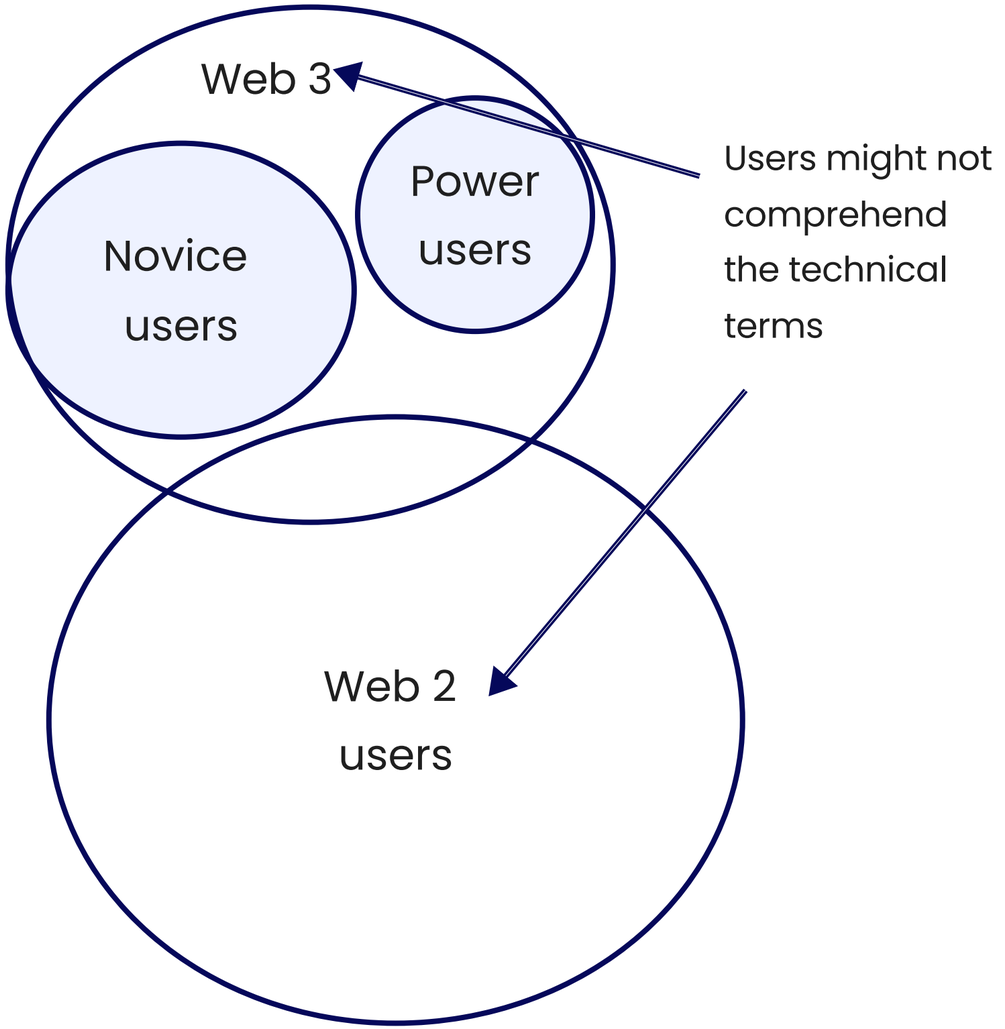
Recruiting Strategy

Criteria

- Self-custody wallet users
- Have done transactions in self-custody wallets in the past

To not ignore the possible differences in transaction needs between novice users and power users, we decided to segment users and recruit both.

Yet, due to the complex cryptocurrency concepts, systems, and its diverse services, we had to consider the chaos for effective user segmentation.



Recruiting Strategy

Challenge: how do we effectively segment novice users vs. power users?

To address this challenge, we did a quick round of informal interviews with internal employees who are active crypto users to familiarize ourselves with the breadth of commonly used services and terminology.

The learnings informed the design of our segmentation survey, ensuring we used precise, feature-level terms to minimize ambiguity and reduce room for interpretation.

- self-custody wallet
- brokerage wallet
- Web 3 users
- Web 2 users

- recovery phrase
- private key
- swaps

Research Design - Survey Design

Sample and Tools

Sample size n=1200
Targeted diverse sample crypto users across a spectrum of experience.

Survey platform
Block Survey & SurveyMonkey fielded both in product and on external platforms

Analysis tools
Google Sheet and Python for analysis, Dovetail for collaboration and feedback.

Survey Outline

1. **Screening & Segmentation.** Behavior and comprehension recognition, usage frequency, preferred crypto wallets, experience level, etc.
2. **Feature Familiarity.** Rating common wallet tasks, Likert-scale ranking of importance of ease of use, security, advanced features, etc.
3. **Adoption & Friction Points.** Key challenges in managing and transacting assets.
4. **Open-ended Exploration.** "If any is possible, what would you change about the current wallet experience?"
5. **Opt-in for Qualitative Studies.** Obtaining consent to be contacted for next phase of research.

Research Design - Semi-structured Interview + Observational Study

Sample and Tools

Sample size n=16
We recruited a mix of power users and novice users to cover the breadth of user needs and pain points.

Interview Tools
Sessions are remote on Brave Talk or Zoom

Analysis Tools
FigJam board for infinity mapping and journey mapping, Dovetail for thematic coding.

Qualitative Sessions Outline

1. **Warm-up & Context.** Background questions, experience level, typical usage pattern, motivations.
2. **Task Walkthrough.** Observing participants in their normal transaction flow while verbalizing their thoughts.
3. **Semi-structured.** Explore decision-making process, expectations, and unmet needs during transaction flow.
4. **Journey Exploration.** Mapping the end-to-end flow, decision-making, and needs at touch points.
5. **Reflection & Wrap-up.** Confirming observed behaviors and motivation, freeform talk.

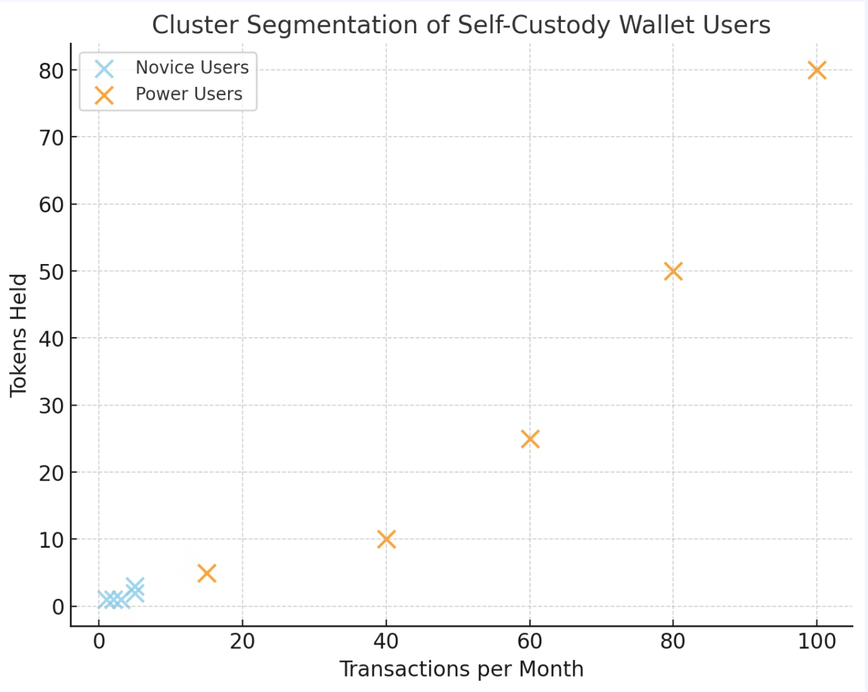
Analysis & Synthesis

Cluster analysis

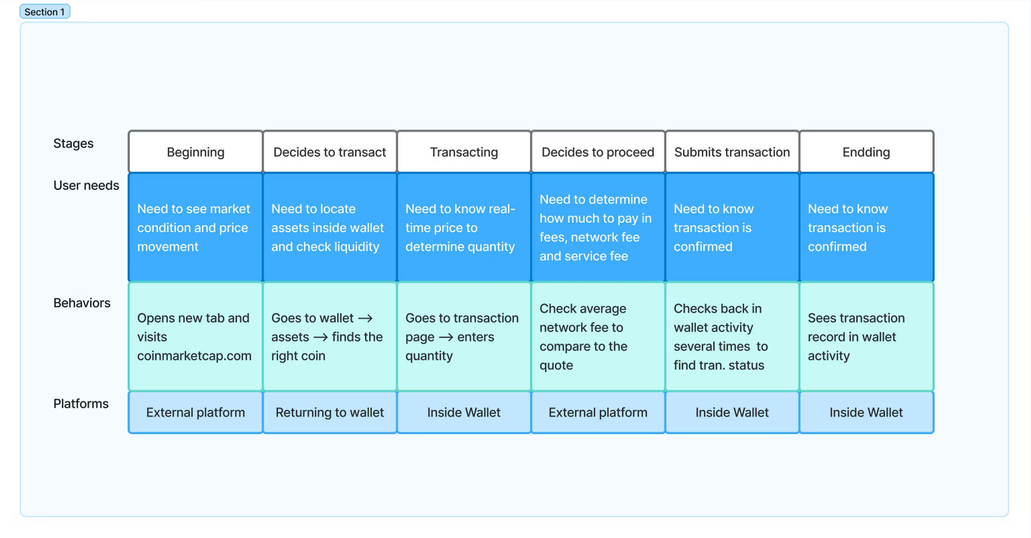
Groups respondents based on similar patterns in behaviors, characteristics, and motivation.

Thematic coding

Groups similar codes into broader themes to make sense of qualitative data. e.g. common motivational factors, platforms, etc.



Analysis & Synthesis



Affinity Mapping

Discovers emergent trends in qualitative data. e.g. pain points

Journey Mapping

Maps out user journey of conducting transactions in self-custody wallets. Key elements include user tasks, touchpoint goals, tools, and emotions.

Key Insights

1. **Fragmented Journey**

   User journey begins with checking market prices and coin movements on other platforms.

   Opportunity: How might we reduce context switching for users? e.g. integrating market data into wallet

2. **Gas Fee Clarity**

   Gas fee is an important factor in decision-making. Users lack context to know if it's high or low, they leave wallet to compare with external sources before making a decision.

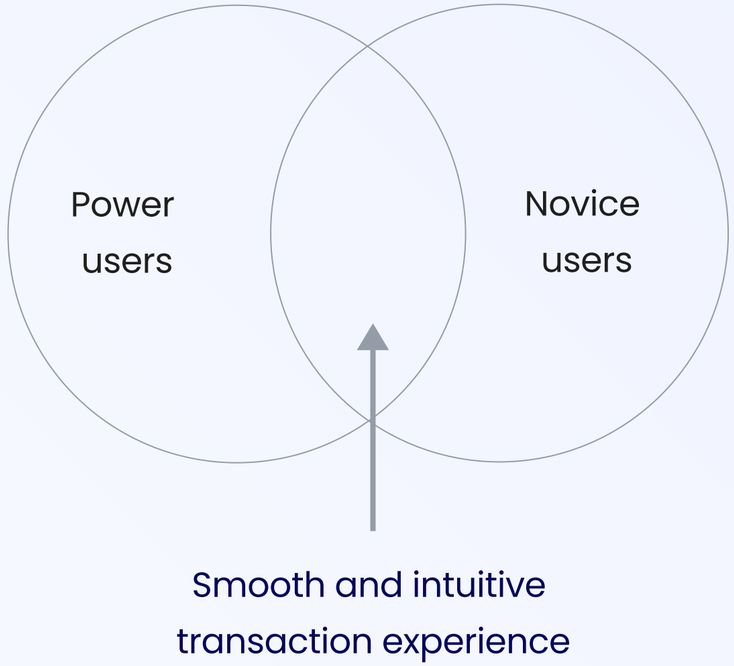
   Opportunity: How might we enhance the information structure by providing fee context (e.g. "higher than normal") directly in the wallet to support confident decision-making?

Key Insights

3. Transaction Status Anxiety

Users repeatedly check the wallet to confirm if a transaction went through, creating stress and anxiety.

Opportunity: How might we reduce anxiety associated with transaction status



Key Takeaway

Across all user segments — from novices to power users — the strongest need is for a **smooth, intuitive transaction experience.** Users want clarity, confidence, and ease-of-use at every step. This foundation should be prioritized above advanced or niche features.

Insights Sharing & Reporting

I presented insights to the key stakeholders. To avoid static report, I followed up with several other steps.

Design Thinking Workshop

I facilitated a cross-functional workshop with the PM, Product Designer, Blockchain Engineer, and other stakeholders to brainstorm and iterate solutions.

Executive Summary Deck

For leadership and broader stakeholders, I prepared a "TL;DR" insight version with summarized bullet points and "How Might We" opportunities.

Research Repository

To keep things top of mind, I stored the relative artifacts including the user journey map to the research repository, teams could reference during design sprints.

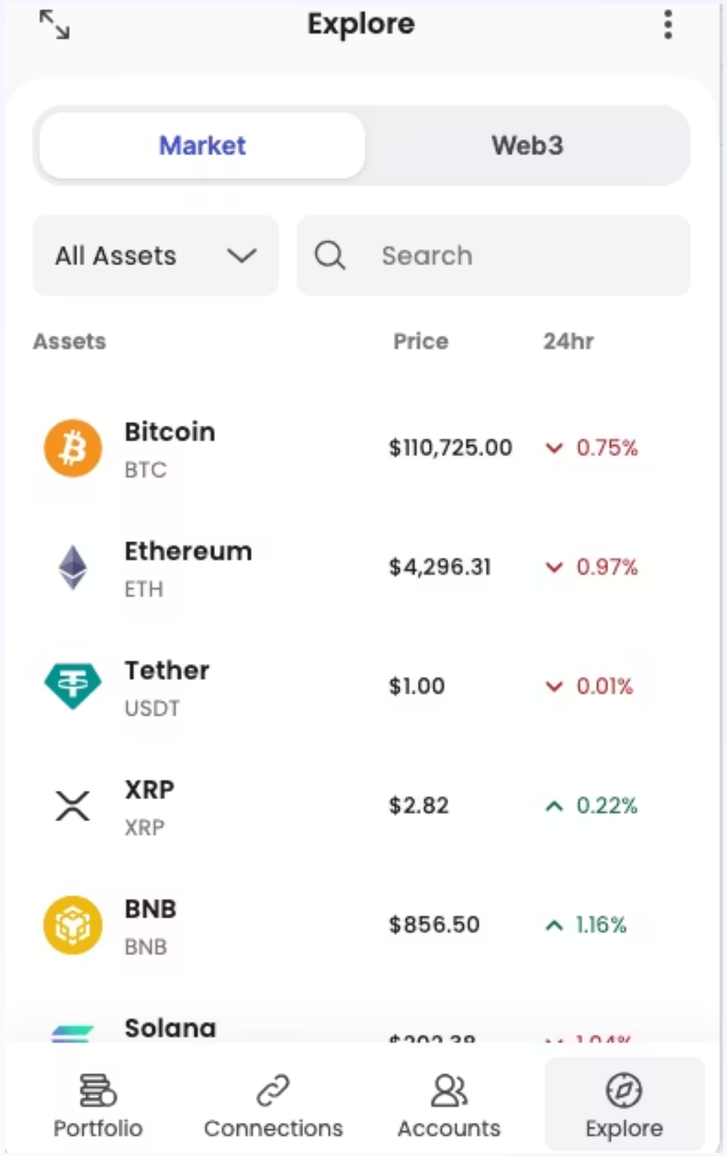
Ongoing Check-ins

Insights were revisited in sprint planning to ensure they directly informed roadmap priorities and design iterations.

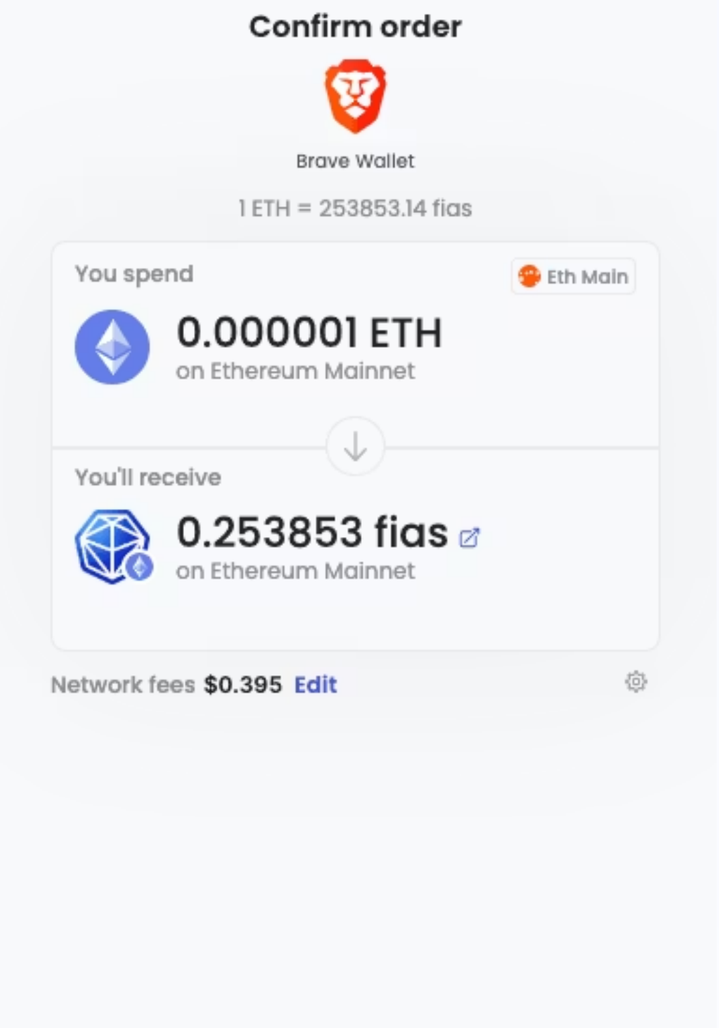
Design Iterations

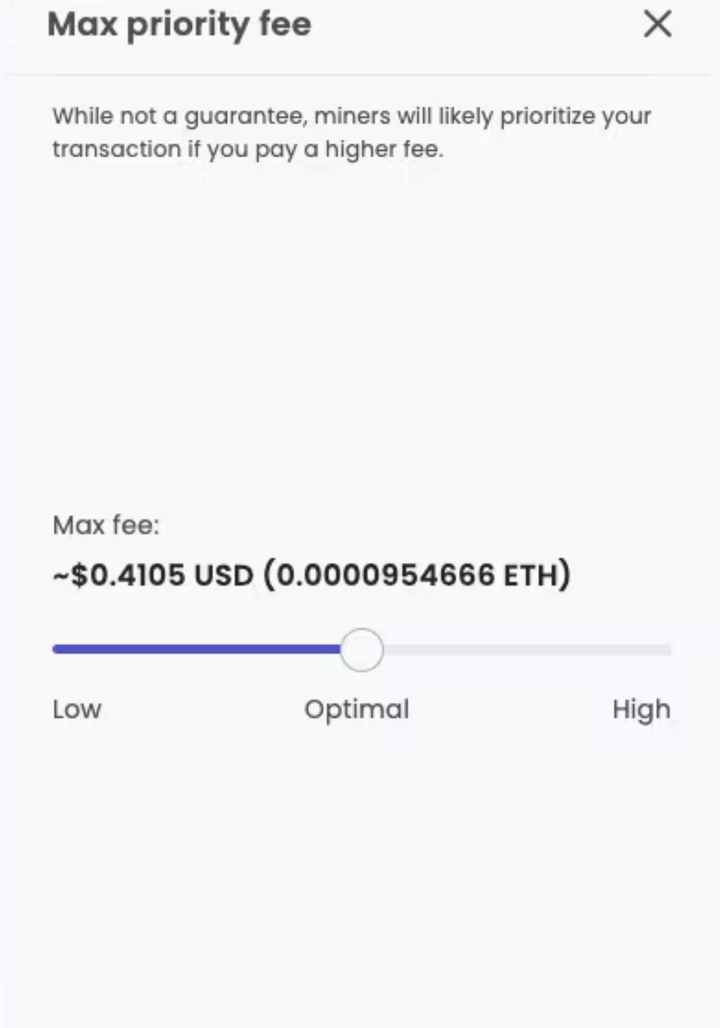
Market data integration

We added the Explore tab in the wallet panel for users to quickly explore market data and build personalized watchlists.



Design Iterations





Network fee context

We introduced a reference scale in the new design, enabling users to adjust network fees with confidence.

The redesign enabled the crypto wallet to own more of the end-to-end transaction experience, reduces reliance on external platforms, and supports faster and easier decision-making for users.

Follow Up Research (Evaluative Study)

To validate our proposed solutions, we conducted **evaluative usability testing** on the interactive design prototype. The goal was to ensure that the new features not only functioned as intended but were also intuitive and easy to understand for users across experience levels.

Method: We ran moderated usability sessions with both novice and power wallet users, focusing on core transaction flows and newly introduced features such as the gas fee reference scale and the Explore tab.

Outcome: Findings confirmed improved transaction experience. This evaluative research gave us confidence that the design refinements directly addressed the pain points identified in the initial study.

Follow Up Research (Pre-Post Comparative Analysis)

We also tracked the transaction data for 3 months after shipping the new design and conducted pre-post comparative analysis on the 2 sets of numbers to measure the impact of the new design.

Method: We compared transaction activity over two time periods:

- **Baseline:** Three months prior to launch.
- **Post-launch:** Three months after the new design shipped.

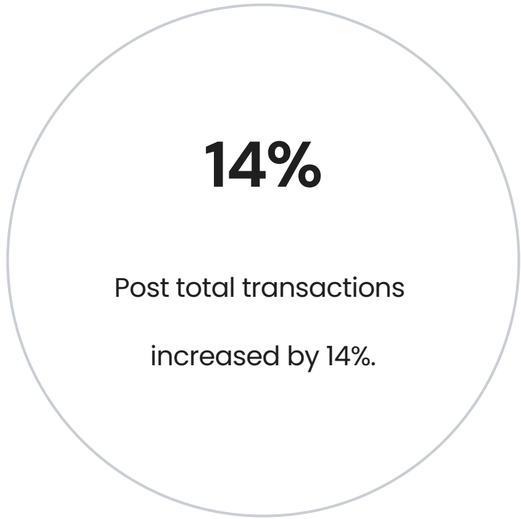
Analysis:

- **Descriptive statistics** to summarize total transactions.
- **T test** to check if differences between pre- and post-launch numbers were statistically significant.

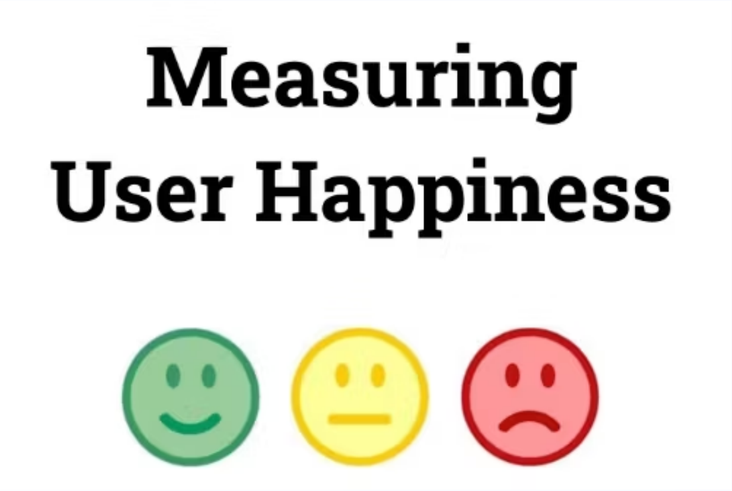
Findings:

1. Total number of transactions (3 months) increased by 14% post-launch
2. The t-test suggested an upward trend, but the difference is only marginally significant — with a slightly larger sample or longer observation window we might be able to confirm statistical significance.

Total transaction volume increase



What's Next



To further assess the impact of the new transaction design on user attitudes, I collaborated with the PM to implement a feature-specific **user happiness metric.** This metric tracks ongoing product perception and feature-level feedback, while also guiding future research priorities and design focus.

We also continued tracking transaction engagement which, combined with other streams of data, informed future research studies.

Reflection

User trust and perceived security

Looking back on this project, one area I would expand on with more time and resources is the measurement of key user attitudes such as *trust*, *perceived security, and perceived ease-of-use*. While our research captured usability, comprehension, and overall satisfaction, these deeper dimensions are especially critical for a self-custody wallet, where confidence in security and reliability directly influence adoption and long-term engagement.

A/B test

Another improvement I would make with additional resources is to run a proper A/B test on transaction volumes. A true A/B test would allow for a more controlled comparison and isolate the impact of the new design from other external factors (e.g., market fluctuations, seasonal activity).

The biggest barrier to self-custody wallet adoption is the complexity of all these new, unfamiliar concepts. If we can make those concepts intuitive, we lower the barrier and give users the confidence they need to stick around. For me, clarity and usability in the core experience come before advanced features—that's the real foundation for trust and long-term engagement.

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Pitch

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