# Product teardown – Splitwise

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## About Splitwise and its current users:

Splitwise, a web and mobile application, streamlines expense sharing for individuals, notably roommates, friends, and families. It efficiently tracks bills and shared expenses, gaining popularity primarily among younger demographics.

The company's strategic direction is enhancing user experience and implementing monetization models. Focusing on the company's strategy, our aim of this assignment is to improve the user experience.

For this case, I have considered the personas below, which I believe resonate closely with the current user base.

1. Persona: College Roommate
   Name: Corner Clark
   Age: 21
   Occupation: College Student
   Location: Boston, MA
   Lifestyle: Lives in a shared apartment with three roommates, is active in campus life, and is budget-conscious.
   Splitwise Usage: Corner tracks shared expenses like rent, utilities, and groceries. He prefers to settle up at the end of each month. Uses Splitwise to keep fin

2. Persona: Young Professional
   Name: Carlos Rivera
   Age: 29
   Occupation: Software Developer
   Location: San Francisco, CA
   Lifestyle: Carlos lives alone but often goes out with friends. He enjoys traveling and dining out.
   Splitwise Usage: Carlos uses the app to split dining and travel expenses with friends. He prefers to pay his share immediately after the expense is logged.

## Existing User Journey:

Users engage with Splitwise through a three-phase journey: Recall, Transaction entry, and Transaction closure, each with distinct user interactions.

1. Recall phase:
    a. This is the phase when the user recollects his memory of adding the transaction onto Splitwise. It might happen immediately during the time of expense or after a certain period (end of the day/month/trip).
2. Transaction entry phase:
    a. Opens the app/website
    b. If it's a group transaction, the user switches to the groups tab and selects the group. Otherwise, the user chooses the transaction partner from the dashboard if it's a non-group expense.
    c. The user then clicks on add new transaction CTA.
    d. The user enters the transaction details.
    e. The user clicks on the Submit CTA.
    f. Members related to the transaction receive a notification of the amount and to whom they owe it.
3. Transaction closure phase:
    a. Members related to the transaction take the money transaction outside the Splitwise platform.
    b. Members related to the transaction make "settle up" on the Splitwise app.

# User Problems:

Throughout the user journey, depending on the transaction stage, there are multiple problems that the user might face.

Recall phase:

This phase is characterized by distinct user behaviors regarding transaction updates on Splitwise:

1. Users who promptly record transactions on the app at the moment of expense.
2. Users who recall and log transactions after a delay (end of the day/week/trip).

In both scenarios, the necessity for users to remember to update Splitwise imposes an additional responsibility, particularly challenging for the latter group.

Transaction creation phase:

This stage represents the most time-intensive segment of the user experience, where creating a transaction on Splitwise demands significant time and effort, often leading users to defer this task until later. This is particularly true for transactions requiring item-level bill splitting, where users find the desktop interface more user-friendly than the mobile app, necessitating manual calculation of individual expenses prior to transaction logging.

Enhancing the user experience and functionality could significantly reduce the time and effort required for transaction creation on Splitwise.

Transaction closure phase:

This phase marks a deviation in the user journey, necessitating actions outside Splitwise for transaction completion, followed by an update within the app. Given the importance of network effects, defensibility, and user retention, maintaining user engagement within the app is critical. Redirecting users outside the platform for transaction completion opens the door to potential competitors.

Strategically, enabling users to conduct their entire journey within the app is imperative, thus minimizing external navigations and bolstering the app's defensibility.

## Areas of Improvement:

Considering all the possible problems that the users might face, here are a few feature suggestions that we could implement to improve Splitwise's product offering:

Recall phase:

1. Like other expense tracker applications, introducing functionality for Splitwise to read bank transactions and prompt users for transaction entry automatically. This feature would serve as a timely reminder for users to log expenses, enhancing usability and app engagement.

Transaction creation phase:

1. Implement image processing technology to allow users to capture bill images, thereby automating the population of transaction details. This solution aims to minimize the time required for transaction entry, enhancing user convenience.

2. Extend the "Itemized Expenses" feature, currently available on the web platform, to the mobile application. This modification would enable mobile users to input detailed expense information directly, eliminating the need to retain physical or digital bill copies for later entry via a desktop interface.

Transaction closure phase:

1. Embed a payment gateway within the Splitwise app, enabling direct monetary transfers among users. This integration seeks to keep all transactional activities within the platform, increasing user retention and reducing the likelihood of users turning to alternative services.

Further discussion will elaborate on these proposed features.

## Idea 1 (Recall phase)

Like other expense tracker applications, we can enable Splitwise to automatically read bank transactions, prompting users to log these transactions within the app.

A common challenge users encounter is forgetting to record their expenses on Splitwise. This oversight can occur for various reasons, such as distractions while with friends or being occupied with other work or others.
Consequently, users may find themselves retrospectively combing through bank statements to identify and add transactions onto Splitwise, a process that is inconvenient.

Integrating Splitwise with bank statements, akin to other financial tracking tools, would enable immediate push notifications for users to confirm and update transactions on Splitwise as they occur. This functionality would alleviate the issue of unrecorded transactions by allowing for the automatic pre-filling of transaction values, significantly streamlining the transaction entry process and enhancing user convenience during the transaction creation phase.

Also, the transaction values can be pre-filled to make it even more convenient for the user during the transaction creation phase.

Risks:

- Privacy and Security Concerns: Handling bank transactions requires stringent data protection measures. Users may have concerns about privacy and the security of their financial information, potentially impacting trust in the app.
- Regulatory Compliance: Compliance with financial regulations such as GDPR in Europe or CCPA in California, and financial industry standards like PCI DSS becomes critical. Non-compliance could lead to legal and financial repercussions.
- Accuracy and Reliability: Ensuring the accuracy of transaction data and the reliability of prompts to users is essential. Misinterpretations or delays in transaction reading could degrade user experience.

Trade-offs:

- Feature Complexity vs. User Experience: Enhancing functionality to read bank transactions may complicate the user interface and onboarding process. Striking a balance between advanced features and maintaining an intuitive user experience is crucial.

Metrics to monitor:

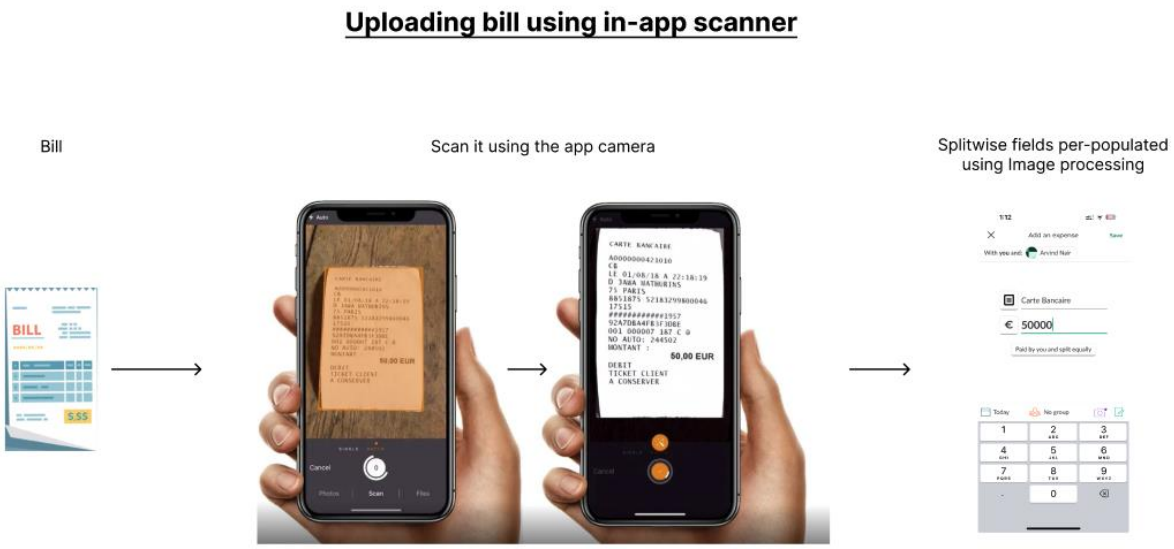
- User Adoption Rate: Track how many users opt-in to link their bank accounts and use the transaction prompt feature, which indicates the feature's perceived value.
- Privacy Concerns and Opt-out Rates: Track the rate at which users disable the feature or express privacy concerns, which could signal the need for better communication of security measures.
- Transaction Accuracy: Monitor the accuracy of transaction prompts and user corrections to ensure the feature’s reliability.

## Idea 2 (Transaction creation phase)

Enhance user experience by integrating image processing capabilities, allowing for the scanning of bills to fill transaction fields automatically.

This feature eliminates the need to manually enter each item on a bill, streamlining the process and saving users time and effort. The process would be as follows:

1. Launch the Splitwise application.
2. Select the appropriate group or individual for the transaction.
3. Activate the camera by tapping the Image icon.
4. Capture the bill through the camera.
5. Review and adjust the auto-filled transaction details as necessary.
6. Confirm the transaction by selecting 'Done'.



Risks:

- Accuracy and Reliability: The accuracy of text recognition and interpretation of bill details are paramount. Misinterpretations can lead to user frustration and reduced trust in the app.
- Technological Complexity: Developing a robust image processing system that works across various bill formats and lighting conditions is technically challenging and resource-intensive.

Trade-offs:

- User convenience vs. storage required: As the number of users using the feature increases because of the convenience the feature provides, the server required to process the image and the storage needed to store the image files would increase drastically, costing the company.

Metrics to monitor:

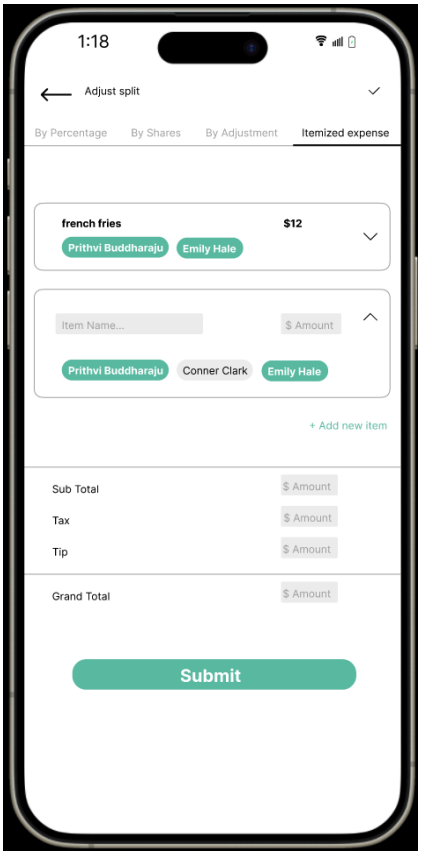
- Image processing time: The time the server takes to process the image to capture the required information and send the data back to the mobile/web application.
- Adoption Rate: The percentage of transactions created using the bill scanning feature versus manual entry, indicating the feature's popularity and perceived value.
- Accuracy Rate: The rate at which scanned bills require no corrections, measuring the feature's reliability and effectiveness.

## Idea 3 (Transaction creation phase)

The "Itemized Expense" functionality within the Splitwise web application is a testament to its ability to enhance user convenience by facilitating item-level bill division among groups. However, its absence on the mobile platform represents a missed opportunity for user engagement and convenience. Currently, users are compelled to retain physical bills until they can access the web application to update transactions or undertake the cumbersome process of manually calculating each individual's share before logging in on Splitwise. Integrating this feature into the mobile app would significantly diminish user effort and elevate their experience.

When synergized with the proposed image processing feature (Idea 2), the itemized expense capability could be revolutionized, allowing users to input item costs effortlessly by simply photographing the bill. This would enable users to assign individual shares to names with minimal effort, streamlining the entire process and greatly enhancing user satisfaction.

A sample screen of the "Itemized expense" would look like this:




Figma Link (Click on the link)

Risks:

- Complexity in User Interface (UI): Adding itemized expenses to the mobile app, especially given the restricted real estate area on a mobile application, could complicate the UI, potentially overwhelming users.

Trade-offs:

- Mobile vs Web users: There would also be a decrease in the number of users using the “Itemized expense” feature on the web app once the feature is launched in the mobile version.

Metrics to monitor:

- Feature Adoption Rate: The percentage of users who utilize the itemized expense feature on the mobile app, indicating its perceived value and ease of use.
- User Engagement and Retention: Changes in user engagement with the app and retention rates post-feature implementation to assess if the new functionalities improve overall satisfaction and stickiness.

## Idea 4 (Transaction closure phase)

Integrating payment gateways directly within Splitwise enables users to execute financial transactions on the platform, circumventing the need to utilize external services such as Zelle or cash transactions. This integration streamlines the settlement process, enhancing user convenience by allowing in-app transaction completion and reconciliation.

From a strategic perspective, incorporating in-app payment capabilities is crucial for reinforcing network effects, bolstering platform defensibility, and increasing user retention. By offering a comprehensive suite of services that address user needs within a single ecosystem, Splitwise can significantly reduce user attrition and fortify barriers against market entry by potential competitors.

Moreover, this feature presents a valuable revenue generation opportunity. By directing a substantial volume of transactions to partnered payment gateways, Splitwise can negotiate a share of the transaction fees, creating a new profit stream under a mutually beneficial business arrangement.

Risks:

- Technical Complexity and Integration Challenges: Integrating payment gateways involves complex technical development and maintenance, requiring seamless integration with existing app functionalities without compromising performance.
- Regulatory Compliance and Security: Introducing payment capabilities necessitates adherence to stringent financial regulations (e.g., PCI DSS) and implementing robust security measures to protect user data and prevent fraud.

Trade-offs:

- User experience vs Operation overhead: Although the feature can elevate user experience by providing an in-app payment portal, Splitwise would still be responsible for the transactions. This would burden the company with complex operational issues such as dispute resolution, refunds, and customer support.

Metrics to monitor:

- Adoption Rate: The percentage of transactions completed using the in-app payment feature, indicating its acceptance and utility to users.
- Transaction Volume and Value: Monitoring the volume and value of transactions processed in-app can provide insights into revenue potential and user reliance on the feature.
- Customer Support Queries: The nature and volume of customer support inquiries related to payments can highlight areas for improvement and user concerns.
- Security Incidents: Tracking incidents related to security breaches or fraud within the payment system is crucial for maintaining user trust and regulatory compliance.

## Prioritization:

Given all the 4 ideas above, I would now prioritize them based on various factors such as efforts needed to implement the concept, customer reach of the feature, the impact the feature has on user experience, and the company's confidence to execute the feature.

| | **Efforts Needed** | **Customer Reach** | **Customer Impact** | **Confidence in feature execution** |
|---|---|---|---|---|
| Expense tracker linked to bank | High | High | Medium | Low |
| Bill image scanner | Medium | Medium | Medium | High |
| Mobile itemized expenses | Low | Medium | High | High |
| In-app Payment portal | High | High | High | Medium |

Based on the above prioritization, I would prioritize the features in the following order:

1. Itemized expense feature on the mobile app.
2. Payment portal on the app.
3. Scan the bill to pre-populate the transaction.
4. Expense tracker linked to bank statement.