

Catalyst<sup>UX</sup>

# Guide to Designing Data-Intensive FinTech Applications



# Intro

When designing Fintech software—or any data-intensive applications—it can be difficult to know where to begin. With experience in over 700 projects, we at Catalyst UX have dealt with the challenges of designing data-intensive applications and know the best practices to overcome them. We will review the most common data-intensive application design challenges, guiding design strategies to keep in mind when planning your solution, and best practices for when you finally begin the design process.

## Challenges

Starting to design a data-intensive application can be daunting. It's important to know the frequent challenges that arise before you even begin so you can take extra precautions to avoid them. Here are the five most common challenges when designing any financial solution applications.



# 01

## Data density

When designing data-intensive applications there is obviously going to be lots of data to present to the user. Typically, the hardest decision designers are faced with is how to present data without overwhelming the user. Finding the right visual format and striking the perfect balance between access to information and user overload can be difficult. However, through research and discussion, the right data visualization method can be found.

## 02

### Security

Security is important with any application, however when dealing with sensitive information—like a user’s personal financial data—security becomes critical. Ensuring your user has full and secure control of their bank accounts and credit/debit cards is essential to their experience with your solution and allows the user to have peace of mind.

## 03

### Mobile appropriate functionality

Over the past decade, there has been a huge consumer preference shift to mobile devices. In fact, mobile banking became the number one way to bank in 2015, surpassing branches and online banking ([BBA](#)). With this rise in mobile banking it is important to remember where your user will be accessing your solution. Using mobile appropriate functionality will provide a more fluid experience for your user.

## 04

### Clear presentation of tasks

Some financial application solutions can be extremely difficult to navigate which creates a stressful and time-consuming experience for the user. A major objective in UX design for financial solutions is to help customers achieve their goals as quickly and effortlessly as possible. Many times users only use one-third of all functionality available, which is why having a clear presentation of tasks is so crucial.

# Guiding design strategies

Now that we've given an overview of challenges, let's discuss key strategies. Before you start designing your financial application solution, thorough discussion is necessary to determine the best approach for your team and your end-user. Here are a few guiding design strategies to consider.

## 01

### Data navigation vs. data search

While many people debate having the option of search in their applications, at Catalyst UX we believe that giving users the option to search is integral to their experience. Research shows that people often use search functionality on their mobile devices. Since most users access financial applications from their mobile devices, having a search function is especially important.

## 02

### Accessible support

Financial companies frequently hide contact information or provide only one contact option to avoid incoming message overload. However this approach limits the user's ability to include image attachments or chat in real time.

Additionally, many financial services support staff are so busy that the user has to wait to reach support. All of this results in a negative experience for the user and adverse feelings toward the company.

Providing quick and easy access to a live person at the other end increases reliability and a feeling of reassurance for the user. With accessible support, the ability to contact the bank is always available and the user can receive immediate assistance whenever a problem arises.

## 03

### Easy filter and search

With financial applications, there is a plethora of data accessible to the user. By providing easy filter and search options, this excess of data becomes much more manageable for the user. For example, when users are looking at their transaction overviews, it's important that incoming and outgoing transactions are visually differentiated and a filter or search option is available. Having these options for the user increases their level of trust in the financial solution.

## 04

### Get the visualization right

When creating a dashboard it is important to keep the end-user in mind and create visualization with their data that will be easy for them to digest. Different data sets need their own appropriate visualization method. For example, a monthly report should use a line graph so the user can easily identify spikes in expenditure at one glance. Similarly, expense categories should be shown in a color coded pie-chart, so it's easier to identify which category had the highest spending.

## 05

### Simplify, do more with less

Simplicity helps UX designers do more with less. It reduces the cognitive load on users and encourages user's attention to the most relevant details. For example, when looking at a transaction list, the incoming and outgoing transactions don't both have to be in specific colors. Since typically there are far more outgoing transactions than incoming ones, the outgoing ones can be in the application's default colors, while the incoming ones should stand out.

# Best practices

After reviewing our challenges and guiding design strategies, you will feel much more prepared to begin designing your data-intensive solution. But, when it finally comes time to start designing, it's important to keep a few key things in mind. Here is a list of best practices to help inform your design process.

## 01

### Detailed user research and persona (development)

First, you will need to identify the different user personas that might be utilizing your financial solution. With these personas in mind, create workflows and journeys that will chart out their unique needs. Some deciding factors to consider are the user's primary and secondary tasks, their metrics of successes/failures while interacting with the system, how requirements will vary for different users, and what the users will be using the data for.

## 02

### Modeling of key user scenarios and tasks

When designing a data-intensive solution, the project can be a huge workload and overwhelming for any team. To make things easier, it is important to simplify your overall experience by focusing on and identifying key work areas and user scenarios. By modeling these user scenarios and tasks early on in the project the design process will flow much more smoothly and create distinct sections of work for your team.

## 03



### Ongoing user validation

Throughout the entire design process you should always be keeping your end-user in mind. However, another way to incorporate the user in your process is ongoing user validation. This means involving the user at every step of the design process and taking notes/suggestions as they are presented by the user. This ensures the final user experience will be one made specifically with users in mind.

## 04



### Implement as a single code base

No team wants to have to maintain feature parity across multiple code bases. This approach is not only inefficient and expensive, but also provides a poor experience for your users. When designing your solution, be sure to take this into account and work to define a technology strategy that will deliver your solution across multiple devices.

## 05



### Performance

With any technology solution, solid, compelling performance is critical, and this is especially true when it comes to data-intensive solutions. With the amount of data being evaluated, having high performance can be more difficult. Ensure that your team is designing your solution to only send data that is necessary for the software to display. This will help cut down load time and create a better, faster experience for your user.

Are you grappling with designing a data intensive application?  
Schedule a no-cost, 30-minute web meeting to see examples of these strategies in motion and how to apply guiding principles to your own solution.