

Business Intelligence & Business Analytics  
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PROJECT SPECIFICATION REPORT

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## 1. Abstract

This project is about a neo-bank, which is a virtual bank known as Quantum Pay, which provides users with an easy and friendly access interface to their customers while giving priority to data privacy as well as the security of the customer's details. It provides various facilities, like a 10-minute account opening setup and high interest on savings, a digital wallet. This research includes how Quantum Pay meets customer requirements and maintains new standards for personalized and secure banking.

**Keywords:** QuantumPay, Digital banking, User-friendly experience, Data security, High-interest savings.

## 2. Background

**a) Founding Story:** Quantum Pay Neo Bank started when three smart people who knew a lot about money and technology got together. They saw that traditional banks were slow and did not keep up with how people like to use technology. So, these founders had an idea to create a bank that was more modern and easier to use. The founders noticed that traditional banks had lots of rules and did not adapt quickly to innovative technologies. They saw this as a chance to build a bank that was more in line with people's needs, one that could seamlessly blend finance and technology. They wanted to build a bank that didn't look like an antiquated one. They wanted it to be as simple and convenient as using your favourite apps on your phone. They observed how people wanted faster, simpler, and more adaptable ways to manage their money, especially via computers and phones.

**b) The Birth of Quantum Pay:** Quantum Pay was founded in 2022 by combining their expertise because they all believed in the possibility of digital disruption. The founders saw the need for a digital bank that would break free from the limitations of traditional banking and offer customers a modern, hassle-free banking experience. Together, they made a cool app and a website for Quantum Pay.

**c) The Quantum Pay Experience:** Quantum Pay's debut into the financial sphere swiftly captured the market's attention, earning acclaim for its intuitive interface, unparalleled convenience, and commitment to customer satisfaction. By the end of 2023, Quantum Pay boasted an impressive user base, having onboarded over 40,000 customers within a short span, a testament to its rapid growth and unwavering dedication to redefining modern banking.

## 3. Marketplace

Quantum Pay operates online or via devices without physical branches. Its platform offers a range of services and products to its customers. Quantum Pay strives to provide an effortless and user-friendly online experience presenting banking options within its platform.

The marketplace offered by Quantum Pay displays the following features: -

1. **Banking Services;** Quantum Pay provides banking services like savings accounts, checking accounts, and convenient money transfers through their internet platform or smartphone app.

2. **Money Transfers;** Quantum Pay facilitates quick and hassle-free payment methods, including money transfers, peer-to-peer transfers, and bill payments. They leverage technologies to ensure transactions.

3. **Debit/Credit Cards;** Quantum Pay issues debit and credit cards that are linked to customers' accounts and can be managed using their app.

4. Budgeting and Financial Management: Quantum Pay offers budgeting tools and financial management resources that provide insights into spending patterns categorize transactions and assist users in saving money

5. Investment Opportunities; With Quantum Pay users can explore investment options such as robot services for automated investing as well as access to various other investment products.

## 4. Fit Gap Analysis

Quantum Pay Fit Gap Analysis		
Current State	Desired State	Action
<p><b>Bibliography</b></p> <p><b>There are no sources in the current document.</b></p> <p>Users are not funded in the account. The Savings Account is being opened but not funded. The balance of the users is 0 for most users.</p>	<p>Increase the funding rate into the account. Make users transact through our bank.</p>	<ul style="list-style-type: none"> <li>• Provide offers for the new user and incentivize transactions in the initial stages to increase the adoption rate and increase retention rate.</li> </ul>
<p>CSAT and NPS are poor for customer support and app, respectively.</p>	<p>Increasing the CSAT and NPS to the market standards to above 85% and 80 scores, respectively.</p>	<ul style="list-style-type: none"> <li>• For CSAT, increase in response and resolution time for the queries.</li> <li>• Train customer support to handle complex banking queries. Increase of containment rate of AI (Artificial Intelligence) chatbot.</li> <li>• Regular customer surveys and feedback of the app to monitor the NPS and work on the feedback.</li> </ul>
<p>The user's engagement is poor on the app. DAU/WAU is gradually dropping.</p>	<p>Need to have highly engaging users on the app, that is high transactions, insights check, exploration of the app and daily check of their financial spends on the app.</p>	<ul style="list-style-type: none"> <li>• Checking the funnel of the user's engagement on where they are dropping. Setting up the dashboard of the funnels on various stages of the app.</li> <li>• Offers, emails and push notifications to distinct sets of cohorts to improve engagement.</li> </ul>

## 5. Scope of Processes

Quantum Pay's scope of processes includes a wide range of activities linked to its digital banking operations. Quantum Pay, as a digital-first financial institution, uses technology to create a streamlined and innovative banking experience. Here is an overview of the essential scope of the processes.

### 5.1 Customer Acquisition

- **Digital Account Opening:** The bank provides a seamless digital account opening process, allowing customers to open accounts online via a mobile app or website.
- **Identity Verification:** The use of biometrics or digital identity verification tools to implement secure and efficient identity verification processes.

### 5.2 Digital Banking Operations

- **Account Management:** This will allow users to manage their accounts by checking balances, examining transactions, and updating account information.
- **Payments and Transfers:** Facilitating digital transactions such as peer-to-peer transfers, bill payments, and overseas transfers.

### 5.3 Customer Support

- **Online Support:** Providing customer service using digital channels such as chat, email, or in-app messaging. A human support system is available 24/7 to our customers.
- **Chatbots:** Using the chatbots to handle routine customer concerns and deliver timely responses. This will increase the response time for the customers as basic queries should be resolved quickly.

### 5.4 Business Analytics

- **Customer Insights:** Analyzing customer data to gain insights into spending behaviour, financial activities, and preferences.
- **Risk Management:** The use of data analytics for risk assessment and management.

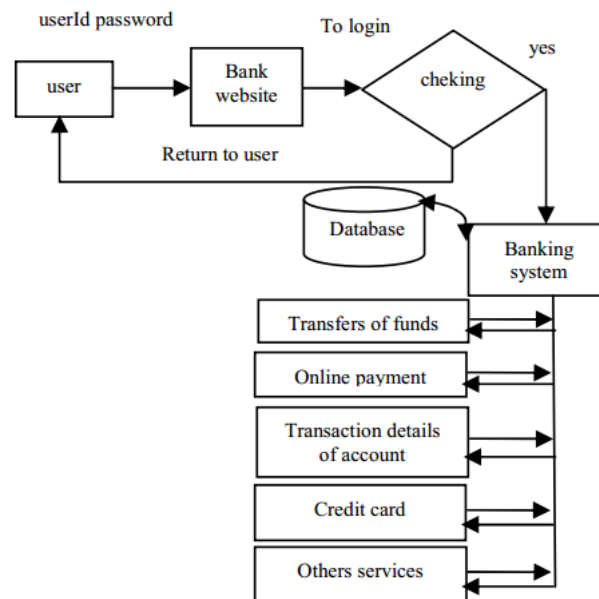
### 5.5 Innovation and Continuous Improvement

- **Fostering a Culture of Innovation:** Actively pursuing and using technical improvements to improve the consumer banking experience.
- **Continuous Improvement:** Repeating procedures in response to customer feedback and changing market conditions.

### 5.6 Marketing and User Engagement

- **Digital Marketing:** In the world of digitalization, the use of digital marketing methods is used to attract and keep customers using banking services.
- **User Engagement:** Creation of features and promotions to keep the users engaged with the bank's platform. An increase in User Engagement leads to customer retention.

## 6. System Design



Quantum Pay, the user can log in to the phone or online banking system. Access to online banking processing includes checking balances, transferring money, paying bills online, paying taxes, fees, and interest that has accumulated. It also provides transaction details for individual accounts, credit card and home loan balances, and the ability to open deposits directly from the terminal. Finally, the transaction information is kept in the database [1].

### 6.1 Data Capture Points

1. **Account Opening:** Quantum Pay simplifies the process of entering customer data for account opening, reducing errors, and saving time. Improving user experience by enabling rapid automation of different account kinds. [2] [3]
2. **Instant Online Applications:** Allows for immediate responses to online credit applications, assuring a smooth procedure. Ensures that the application is complete and eligible for immediate consumer feedback. [3]
3. **Invoice Payment Automation:** Extends data capture to automate invoice payments from unstructured sources. Extracts critical payment information, which simplifies and expedites the payment process. The transaction information is finally stored in the database. [3]
4. **Surveys and Ratings:** Frequent surveys and customer ratings are being taken via email and on the app. This will help the analytics team to understand the user experience of the app.

### 6.2 Dashboard Reporting

Key Performance Indicators (KPIs) are listed down and tracked on the dashboard across pods.

1. Onboarding
  - Number of Accounts Opened
  - Number of Accounts Funded
2. Transaction

- Overall Transactions Count
  - Debit Transactions Count
  - Credit Transactions Count
  - Overall Transactions Amount
  - Debit Transactions Amount
  - Credit Transactions Amount
3. Balance
    - End of the day balance
    - Average / Median day-end balance
    - Number of Accounts with balance > 0
  4. Customer Support and Customer Experience
    - CSAT
    - NPS
  5. Customer Profiling
    - All the above-listed KPIs vs Customer Demographics (Age, Gender, Occupation)
    - For example, Age vs Transactions to understand which age group is transacting high.

### 6.3 Integration of Customer

Smooth onboarding process for the users, with efficient and quick risk checks to enable them to open a savings account in an instant. AI chatbot for quick fixes on any issues, 24/7 human support for any transaction-related issues and other issues.

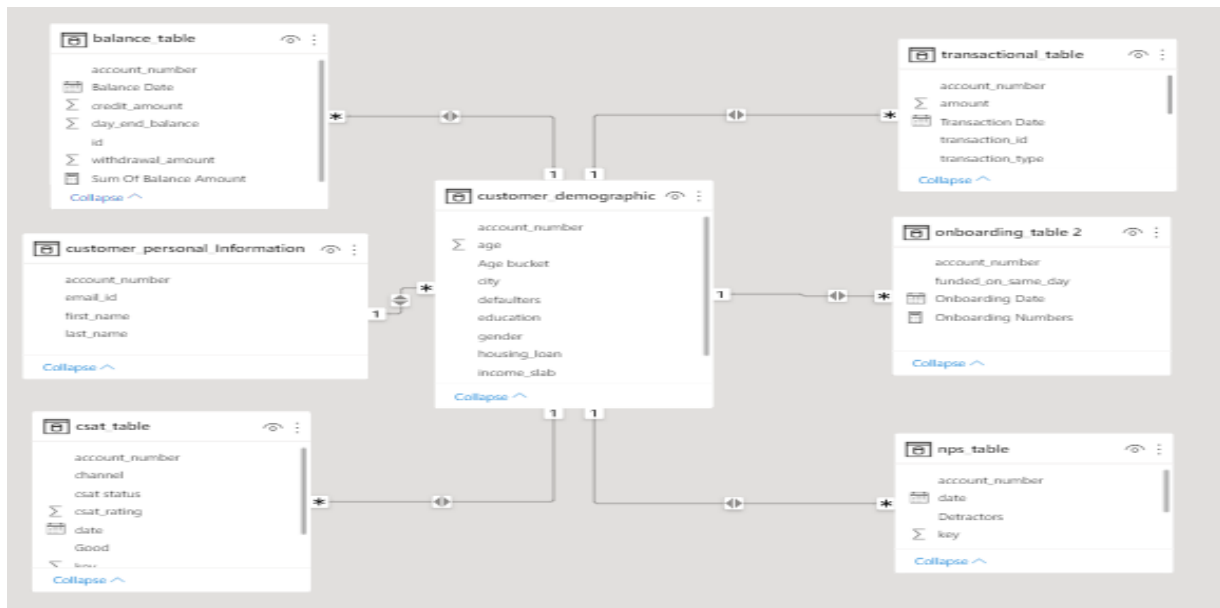
Customer support rating application surveys and feedback are taken regularly to understand user experience. Users can drop in any complaints directly via the link of the forms.

## 7. Database Design

The Entity Relationship Diagram is presented below for Quantum Pay. Entity Relationship Diagram displays the schema consisting of tables with their unique key fields and features. It visualizes the relationship between the tables.

The key feature in the diagram is the *account\_number* and *transaction\_id*. With these features, we can extract any feature from any table from the schema.

### 7.1 Entity Relationship Diagram



## 7.2 Overview of the Database

1. **Onboarding:** This table consists of the customers onboarded on our app i.e., opened a savings account. Onboarding date, customer details including *full\_name*, *email*, and *contact*. This data is confidential and hence is redacted.
2. **Customer Demographics:** This table consists of user demographics including *age*, *gender*, *income\_slab*, and *occupation* of the users.
3. **Transaction:** This table consists of all the transaction-related data. All the credit and debit transactions are stored with unique *transaction\_id*, respective to *account\_number*, *amount*, and *transaction\_date*.
4. **Balance:** This table includes the day-end balance of the users.
5. **Customer Support (CSAT):** This table consists of ratings and reviews of the users for the customer support team.
6. **NPS:** Consists of NPS rating across the banking products and services. This will enable us to understand the customer experience of the application.

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