**NT – Enabled Seamless Investment Management Experience for a leading banking institution managing** **$1.5 trillion in assets.**

**Business Challenge:**

* A fortune 500 banking institution managing $1.5 trillion in assets provides a web application (private passport) to high-net-worth individuals (<$10M) for investment management
* This web application allows these individuals to transfer funds, view account balances, make deposits, see how current market activity is affecting their investment portfolio, and much more.
* **80,000 users** were dissatisfied with the user interface and often complained about the performance of this web application – Software bugs, Log-in issues, Legacy UI & backend, software update errors, transaction errors, device-compatibility issues, and more
* Client observed a spike in customer complaints and needed an immediate solution to minimize customer termination rates and to prevent revenue loss

**Our Approach & Solution:**

* **Consulting Session**
  + Our team conducted a consulting session to understand gaps in the system architecture and we realized there was a need to rearchitect system components to minimize transaction failures, bugs and UI issues reported by end users
  + Deficiencies observed in the legacy system
    - **Legacy system was built 6 yrs. ago**
    - **Tech Stack was not upgraded for a while – React v1.x**
    - **Complex UI meant lot of manual work for end users**
    - **Legacy logging solution resulted in inefficient debugging process and outages**
* **Strategy** 
  + After evaluating their needs and the web application, our team developed the following strategy to enhance the system performance
    - **Refactor Code & simplify UI**
    - **Upgrade Tech Stack and ensure scalability and reliability**
    - **Optimize Cache and minimize latency issues**
    - **Address device-compatibility issues**
    - **Expand software monitoring capabilities**
* **Execution**
  + We orchestrated a team of 3 software consultants (3 from Creospan and 3 offshore) and integrated this team with the existing offshore developers (3)
  + Over a period of 9 months, we redesigned and rolled out newly redesigned software system (refactored)
    - **Restructured code & simplified UI to enhance user experience**
    - **Enabled microservices thereby adding scalability, reliability, reusability, and fault isolation features in the code**
    - **Removed the application cache ( Marklogic) that was not integrated coherently into the system and minimized transaction failures**
    - **Optimized DB queries and reduced the burden on the database**
  + Expanded the software monitoring capabilities by deploying a new tool – Dyna Trace to our client’s infrastructure to accelerate the identification, analysis, and resolution of software bugs in the system

**Business Benefits:**

* **Minimized Transaction Failures**
  + After rolling out the newly designed solution, our clients observed significant reduction for **70,000+ monthly transactions** that are processed by this app
* **Expanded Software Monitoring Capabilities & Minimized System Downtime**
  + We expanded the software monitoring capabilities of our client by deploying a **new tool – Dyna Trace** thus accelerating the identification, analysis, and resolution of software bugs in the system
* **Enhanced Application Responsiveness** 
  + The newly added layer of cache allowed the users of this application to retrieve account information, transaction history, and other statistics in real time
* **Enhanced Customer Satisfaction**
  + This resulted in significant reduction in customer complaints by the users of this app in the following quarter

**Technology Stack:** ReactJS, TypeScript, Java, Spring Boot, Microservices, Bambu – Ci/CD migrating to GitHub actions, Oracle database, Dynatrace for monitoring

**Project Timeline:** 6/2022 – Present

**Industry:** Banking | **Domian:** Banking – Account Management

**Consultant Interviewed for this case study: Sunil Kashetty (Architect)**

**Application Snapshot: NT Private Passport**

