**NT – Modernized Web Application to provide real-time transaction settlements for $20B banking institution**

**Business Challenge:**

* Our client – A fortune 500 banking institution manages $1.5 trillion in assets and provides digital financial transaction services to users in 30+ countries
* The digital financial transaction service enables end users and institutions to trade financial instruments such as bonds, securities, forex and more
* The transaction settlement time for each transaction ranged from 4 days – 1 week and resulted in numerous customer complaints and overall subpar customer experience

**Business Requirements:**

* With a dissatisfied user base in 30+ countries utilizing our client’s Digital Financial Transaction platform, our client needed a modern solution that could address this challenge and the pain points of their global customers
* Our client needed a team of consultants who could address the following requirements
  + Design a modern financial transaction settlement application such that it can process the transactions in near real-time
  + Ensure the solution is compliant with the security policies of our client
  + Enable support for userbase that spans across 30+ countries

**Our Approach & Solution:**

* Creospan provided a team of about 15 - 1 Delivery Manager, 2 Sr. Dev Engineers and 12 Dev Engineers to solve this challenge for our client
* 50% of the developers were offshore (India & Ireland) & 50% onshore in Chicago
* We adopted the following approach for this client
  + Conduct and technical and business audit of the existing system
  + Understand pain points of end users, technical and business constraints
  + Redesign the components that are impacting transaction settlement time
  + Incorporate the principles of scalability and reliability using Cloud & Microservices framework
  + Test & launch this solution in an iterative manner
* Within 7 months of our first meeting with the client, we launched the first version (MVP) of this web application reducing the transaction settlement times for forex, bond and security trades from 1 week to 3 days.
* This involved redesigning the transaction settlement engine which is responsible for capturing the trade and finding the next best service to route each transaction to enable timely settlement
* Team had to factor in multiple parameters such as source of each trade, destination, next hop, settlement entities (other banks and financial institutions), and enhance the lifecycle of each transaction
* Within 2 yrs. of our first meeting with the client, we were able to reduce the transaction settlement time to a few seconds (near real-time) from 1 week
* This web application now allows end users and institutions to settle transactions in less than a minute
* This app serves as middleware and captures each trade, analyzes the trade and routes it to appropriate services to minimize the transaction settlement time and cost thereby enhancing business efficiency

**Business Benefits**

* **Significant reduction in transaction settlement time**
  + Enhanced customer experience by reducing the transaction settlement time from 1 week to a few seconds over 2 yrs.
* **Enhanced Customer Satisfaction**
  + Users in 30+ countries can now settle their transactions in near real-time

**Technology Stack:**

* Java, Spring, React, Microservices, Pivotal Cloud Foundry, Concourse CI/CD, GitHub, MarkLogic DB (NoSQL), Oracle

**Consultant interviewed for this case study: Dheeraj Pandey (NT)**