Consultative Transformation: Facilitating Transition to Service-Oriented Architecture

About client

A Fintech company in the ASEAN region provides online payment solutions, connecting businesses, customers and banks. With a network of more than 17 offices in several countries, the client processes a high volume of digital transactions under various brand names.

Challenge

Client's core system - a massive monolithic architecture built in Java over 20 years ago - had become a complex, costly and slow platform. The existing architecture was causing several problems:

- **Costly maintenance:** Supporting the monolith required significant time and resources. The complexity of the code base, combined with insufficient in-house expertise, increased costs.
- **Limited scalability:** During high-traffic events (e.g. Black Friday sales), Client's system would often crash under the load, impacting transaction processing and resulting in a poor user experience.
- **Slow feature rollout:** Client struggled to adapt quickly to new market demands due to its legacy monolithic structure, resulting in missed opportunities in new markets.

Previous attempts to address these issues, including consulting engagements and plans to move to AWS, did not provide a clear path forward, prompting Client to seek additional guidance on moving to a more scalable service-oriented architecture (SOA).

Company NDA

About company

A fintech company with a strong presence in the ASEAN region offers payment solutions that facilitate online transactions.

Industry

Fintech

Team

Project Manager	1
Architect	1
Analyst	1
Backend	1
Frontend	1
DBA	1

Duration

6 months

Technologies

- Java
- React

Solution

Our solution was divided into two main phases: Discovery and Redesign.

1. Discovery Phase

We began by examining Client's existing monolithic architecture, analyzing their API interactions, infrastructure, source code, database structure and software development lifecycle (SDLC). This initial phase included an onsite engagement, where our team spent a week at Client's offices to understand the intricate details of their architecture and processes. The key deliverable from this phase was an Inventory List which highlighted Client's system bottlenecks and outlined potential areas for improvement.

2. Redesign Phase

Following our analysis, we produced four key deliverables that provided a comprehensive roadmap for transition:

- Architecture Redesign Plan: Recommendations for breaking down the monolith into SOA, highlighting the proposed services, database adaptations, required technology stack and a step-by-step approach for migration.
- Infrastructure Redesign Plan: Guidance on the required infrastructure, including cloud configurations, Kubernetes cluster, load balancing and monitoring tools.
- Rollout Plan: A proposed approach for phasing the migration, detailing the timeline, sequence of tasks, resource requirements, and the roles and skills required for the development team.
- Timeline and Budget Estimates: Cost projections for the migration phases, team roles, software licenses and cloud capacity, providing a clear view of the investment required.

In addition, we conducted introductory and follow-up webinars for Client's development and management teams to explain the benefits of SOA and walk through the redesign and rollout plans.

Results

Our consulting work provided Client with:

- A detailed roadmap: A practical, step-by-step guide to decomposing their monolithic system, taking into account resource constraints.
- Team and Infrastructure Recommendations: Specific guidance on the team structure, infrastructure setup and technical stack required for the new architecture.
- Cost and Time Clarity: A budget and schedule estimate that enabled the Client to plan effectively and reduce unexpected costs.

These deliverables now serve as the foundation for Client's 1.5 to 2 year transformation journey, addressing their immediate challenges and setting the stage for future growth in transaction volumes and markets.

Our consultative approach demonstrated the possibilities of this transformation and helped transitioning from a legacy system to a responsive and resilient platform equipped for modern needs.

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