Case Study: Internet Banking Platform

Unique Bank

- Global Presence: Operates across 28 markets, with a strong base in APAC and EMEA regions.
- **Regional Focus**: Strategically positioned to capitalize shifting focus on emerging markets Asia and ME
- Leader in Digital Transformation: Recognized for being forefront of digital transformation in finance sector
- Commitment to Sustainability: Actively support social entrepreneur to develop innovative solution for sustainability challenges.



Our Understanding

Current State Analysis

- ☐ Current system is legacy-based and built on off-the-shelf products
- ☐ Customers are happy with the current system, but new features and modern technology are necessary for competitiveness

Business Goals

- ☐ Build a new best-in class Retail
 Internet Banking platform using
 the latest technologies
- ☐ Custom software solution replacing the existing commercial product
- ☐ Focus on delivering a rich user experience and Responsive design, scalable system, and modern navigation
- ☐ Seamless migration process for existing users

Solution Highlights:

Human Centric design for UI:

A modern engaging and intuitive interface, prioritizing a delightful user experience driven by human centric principles

API first approach:

An API first design philosophy to ensure well structured and interoperable interfaces.

Modular and decoupled by choice:

A modular and decoupled architecture and design to enhance scalability and maintainability

Increased agility:

Greater agility to swiftly adapt to changing demands and market dynamics by implementing agile development methodologies.

Improved auditing exception handling and resilience:

Implement robust auditing, exception handling mechanisms and resilience strategies to minimize service disruptions.

Secure by design:

A security first architecture pioneering prudent principle of least privilege

Accelerated release cycles:

Streamline release cycles using DevOps implementation to facilitate rapid updates, testing and alignment with evolving requirements.

Reduced technical debt and vulnerabilities:

Reduction in technical debts in the new state of the art architecture implemented using cutting edge technologies.

In house tools and accelerators:

Leverage our proven digital expertise, innovative thought leadership, unique partnership and exclusive tools to expediate and optimize digital modernization

Solution Value Proposition:

Why

Business

- Gain Competitive advantage
- * Reliable Data driven insights
- ❖ Trusted partner to support future roadmap

Technology

- ❖ Legacy infrastructure with limited flexibility
- Limited standardization
- ❖ Need for new technology adaption
- ❖ Portal and infra to be able to Scaleup

User

❖ Need for Integrated User Experience for Stakeholders while accessing Web portals and mobile application

Operation

- Cost efficiency challenges
- ❖ Need for SLA with measures
- ❖ Need for deduped data to enable reporting

How (Our Vision)

- ❖ Agile & Flexible Infrastructure
- ❖ Setup VNet in Azure for DEV, Test, Prod & DR
- ❖ Monitor and Manage Infrastructure & Apps (Azure Monitor)
- ❖ ITSM tool integration with Helpdesk (ServiceNow, Azure Service Manager)
- Enhance User Experience
- ❖ Design and Implement a Web portal and Mobile App using suggested front & backend technologies for the use cases aligned to Motor insurance LoB
- ❖ The portal enables Chatbot with Live Agent functionality through Azure native Bot services
- Standardized Data & Improvise Reports
- ❖ Standardize and Migrate historical data and content to Azure native Data store
- ❖ Stable & Secure Operations
- ❖ Co-creation of SLA's. OLA's & KPI
- ❖ Simplified Operating model & Governance with Ownership and accountability
- ❖ 24x7 support for Web-portal & Mobile App catering to L1/2/3 support
- Managed services for Infra & Apps

Who, When, Where, What

- ❖ ABC Inc as your Trusted Partner to support your envisioned Transformational Roadmap Implementing a Scalable state of the art Web -Portal, Mobile App with Chat Bot
- Implementation to conclude in 12 Months and support to run in parallel for 3Y
- Having Integrated Tools across IT Infrastructure, ITSM, Network, Testing, DevSecOps & Monitoring & management
- Streamlined Governance, with Ownership and accountability during the Support Phase
- Enrich business user experience while accessing Web Portal & Mobile App with No disruption to existing services

Journey 2 value

Current Mode of Operation

- Infrastructure built on Legacy
 Architecture and Standards leading to limited flexibility
- Stability issues due to traffic and transactions
- Challenges to integrate with external systems
- Security & Compliance to adhere to current Global standards
- Limited electronic presence and nonpersona based web-portal & mobile apps
- Interoperability between devices

Journey 2 Value – I2E2













Enable

- Due diligence & Kick off
- StakeholderIdentification
- Detailed system study
- Validation of list of activities, scope, duration for each activity & guiding principles
- Schedule workshop and review & examine AS-IS process documentation
- Submission of detailed project plan, deployment plan document and Change Management document

Conduct stakeholder Interviews

Ideate

- Reaffirm Business & functional requirements
- Analyse proposed archite cture against requirements
- Detail SRS
 Document, USE cases and
 Activity diagram
- Create HLD & LLD for the proposed architecture
- Define key integrations points, system requirements and close architectural gaps

- Setup Vnet in Azure for DEV, Test, Prod
- Setup Monitoring tools for Infra & Apps
- Setup of ITSM and integrate with Monitoring tools and enable workflows
- Setup API gateway & BPM tool to manage API's and workflows
- Enable Network services to support Migration and implement Security for application

- Develop the Web portal using Angular, React, node js
- Build Chatbot with Live agent functionality and integrated with Portal through API's
- Migrate3 yrs of historicalData to cloudnative data store
- Establish 24x7
 HD support for L1/2/3

Future Mode of Operation

- Agile & Flexible Infrastructure with 24x7 support
- Enhanced User Experience through Portal and Mobile App built with Chatbot & Live Agent interfaces
- Standardized historical data to support Web Analytics & Business needs
- Managed Services for Infra & Apps starting from Phase 1 - Go-LIVE

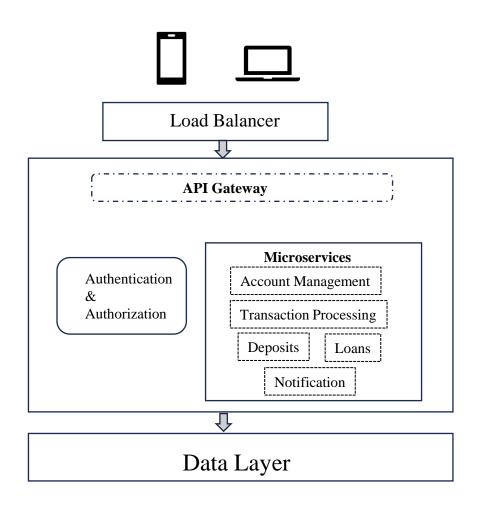
Human Centric Design Approach (UX)

Applying human-centred approach towards design that addresses user needs aligning with industry trends, strategy and prototyping to craft simple, best in class and remarkable digital experience. Clickable Prototype & Detailed Build ready Assessment Design & assets Empathy Validation Gap Analysis Design &specs conceptualization Support Concept Designs for dashboard and key flows ◆ Iterative Prototyping & Validation ◆ Understanding ❖ Build Pilot Learn Detailed Concept sketches Business and User | wireframes, Visual Improve for key flows Needs templates aligning to SMBC standards & Navigation Prototypes

Human centred research approach providing design that aligns with industry trends. Solution provides best in class user experience within technology framework achieving.

- ✓ Improved Navigation
- ✓ Better decision making
- ✓ Simplified interactions enhancing productivity
- ✓ Best in class interactions
- ✓ Consistent UX align with branding standards.

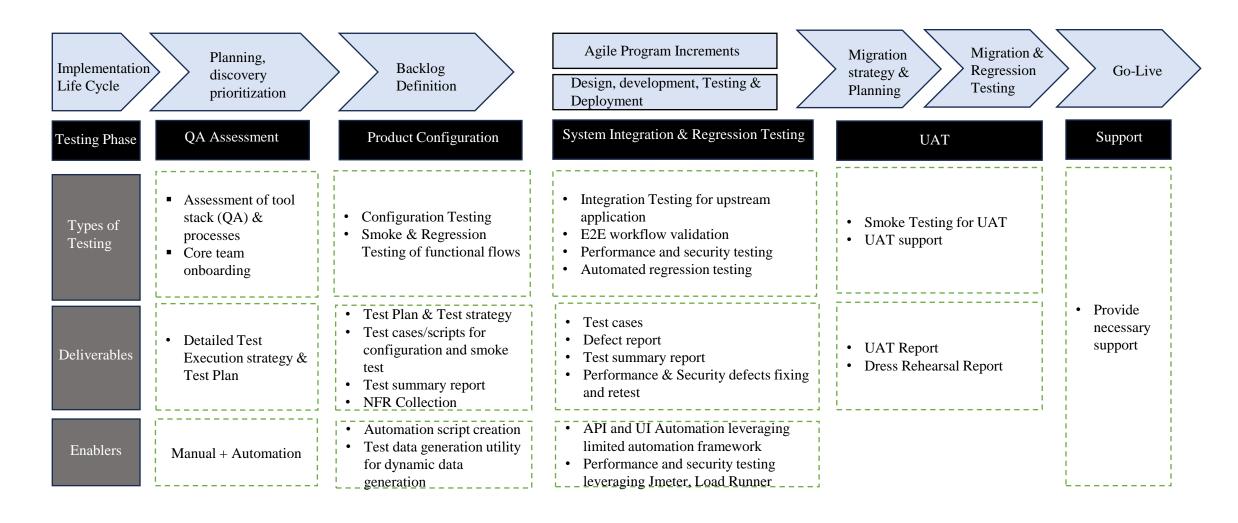
Solution Architecture



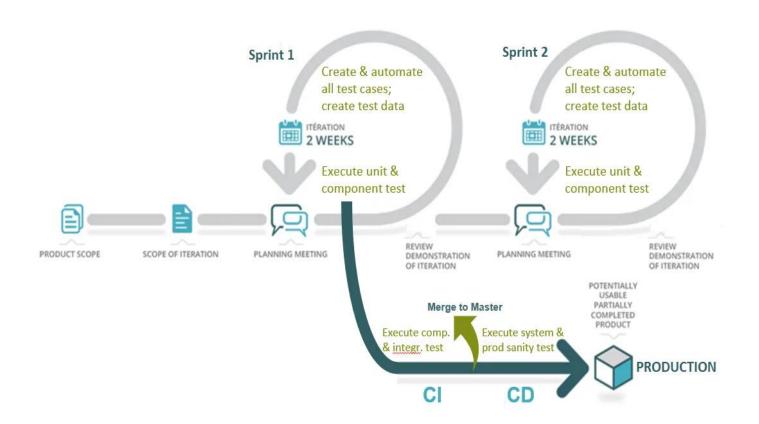
Key Highlight

- Azure Kubernetes Service (AKS) for hosting containerized microservices, experience APIs, and integration APIs built on Spring Boot.
- Angular App and Drupal CMS on AKS for web applications and content management.
- Polyglot persistence using Azure SQL Database (PostgreSQL)
 / Azure Cosmos DB / Azure Blob Storage for flexible and scalable data storage solutions.
- Azure API Management for securing, publishing, and analyzing APIs.
- API Management Gateway for internal and external services integration.
- Azure Notification Hubs for push notifications.
- Azure Cache for Redis for caching data and improving performance.
- Azure Key Vault for secrets and key management.
- Web and mobile app integration with Azure Application Insights for performance monitoring and analytics, and with third-party services.
- Azure Monitor and Azure Log Analytics (part of Azure Monitor) for application performance management (APM) and cloud resource monitoring.

Our Quality Assurance Approach



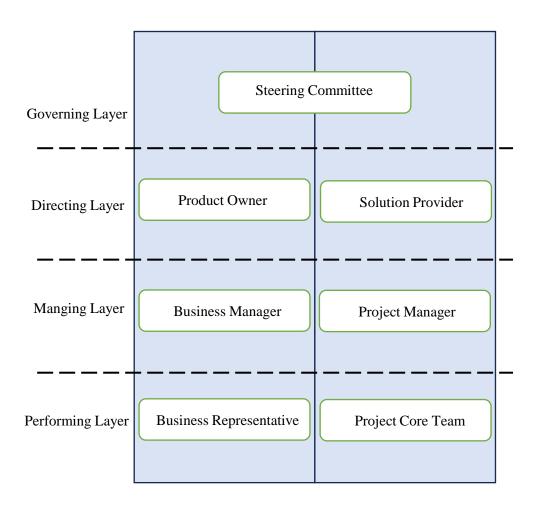
Deployment Methodology – Iterative/ Incremental



DevOps Tech Stack

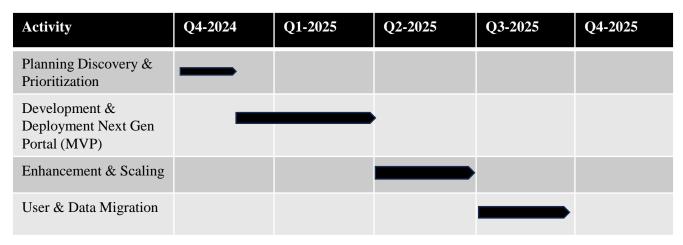
- ☐ CI/CD: Jenkins for continuous integration and deployment.
- ☐ Version Control: Git for source code management.
- ☐ Containerization: Docker for containerization of microservices.
- Orchestration: Kubernetes for container orchestration.
- ☐ Monitoring: Prometheus and Grafana for monitoring and visualization.
- ☐ Infrastructure as Code: Terraform for provisioning infrastructure.
- Application Security tool like Sonar, OWSP ZAP to verify that the applications are secure before release.

Governance Mechanism



KPI **Velocity** Quality Team's productivity and predictability Degree of excellence of the pod's output Burnup/burndown Defects# Velocity Coverage Lead Time Defect distribution Build Stability Throughput **Product Impact Autonomy** Business Value and impact generated Mature of the team's operations Reduced technical debt Core team ratio and vulnerabilities Technical Debt Improved exception Scope delta ratio handling and resilience Process Suggestion Improved agility and faster release cycles

Timeline & Key Assumptions



Project Manager • Project Manager • Project Manager • Project Manager Business Analyst • Business Analyst • Business Analyst • Business Analyst Solution Architect • Solution Architect• Solution Architect * Solution Architect Test Manager Test Manager Data Team UI/UX Manager • UI/UX Manager • UI/UX Manager Test Manager Dev Lead Dev Lead Dev Lead Developer Developer Developer Tester Tester DevOps Engg DevOps Engg DevOps Engg SRE Engg SRE Engg SRE Engg

Key Assumptions

- Scope limited to functional and business capabilities for Retail Banking only
- Unique Bank to identity key stakeholders and provide relevant documentation at least 1 week prior to kick-off
- It is assumed that the key stakeholders in Core team will be able to spend the required time for interviews and workshops.
- Any deviation in the plan, will have an impact on the overall timelines.
- Existing branding and style guidelines will be used and provided at the start of the engagement that includes fonts, colours, logos, and imagery including usage guidelines.
- QA team will execute testcases on 4 desktop browsers and on 2 browsers on mobile devices - IOS & Android
- Web Ul (7- End to End Flows) and API(15 APIs) are considered in scope for Performance testing.
- Web application DAST/Pen-Testing, SAST and Web Services DAST will be executed as part of security testing.

