ENABLING SUCCESS FOR UNITED STATES' LARGEST PREPAID PROCESSOR

Customer Context

Our customer is a leading marketer, distributor and technology innovator in the prepaid card industry. Based out of the USA, innovation has been the foundation on which the company has registered strong growth. Today, our customer, has more than 500,000 points of distribution, over 1,000 brand partners with an international presence across USA, Canada, Brazil, Europe, Australia, Japan, and New Zealand. Our customer is also the exclusive distributor for American Express prepaid cards
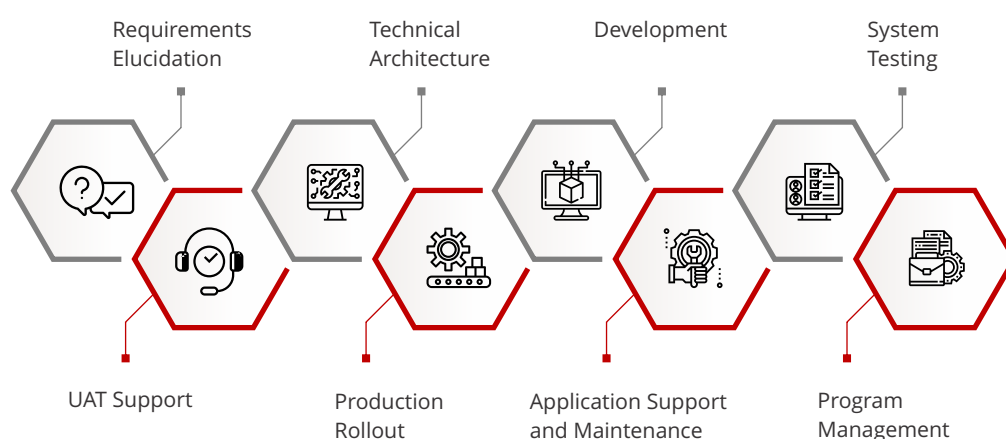
Business Drivers

As part of its efforts to continually innovate to stay ahead of the market, our customer has a robust roadmap for functional and technical enhancements. Further given the scale of its operations, the company has a strong focus on scalability and high availability of their applications and superior customer experience. Post a global assessment to find the best vendor to meet its innovation and performance benchmarks, the company engaged FSS in 2011.

Engagement Details

The engagement started with an implementation of Vanilla Management System (VMS), a card lifecycle management system, for issuance and management of prepaid cards. The system also functions as a host for maintaining cardholder account balances and authorizing transactions.

Currently, FSS is engaged in an end-to-end managed services model for open-loop and closed-loop cards, on a fixed capacity basis across the value chain. Operating out of USA and India, the following activities are covered as part of the engagement.

Requirements Elucidation   Technical Architecture   Development   System Testing

UAT Support   Production Rollout   Application Support and Maintenance   Program Management

FSS operates on a continuous delivery model working on product backlogs using a sprint-based methodology. FSS engages across the spectrum with relevant stakeholders for review at every stage of the SDLC, with requisite demonstration of the developed code where required.
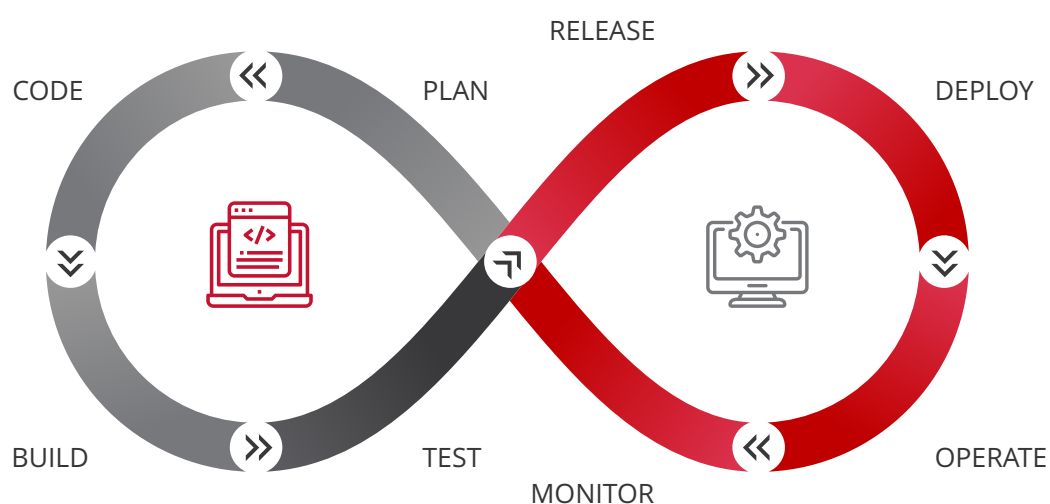
Program Management as a Differentiator

FSS has focused on class-leading program management initiatives to enable smooth operations of a complex and dynamic engagement. Some of the key attributes towards effective program management include:

- **Deep Customer Engagement:** With an onsite and offshore project management approach, FSS has built deep relationships with the customer to address requirements. The onsite teams proactively engage with key stakeholders, the offshore teams enable seamless delivery of requirements.

- **Critical Planning:** FSS program managers engage regularly with the customer to understand the monthly plan for roll-outs basis the product backlog. FSS project managers share detailed plans for active sprints with review dates ahead.

- **Customer Review at Critical Touchpoints:** Program managers schedule reviews with customers at critical touch points of the SDLC such as requirements elucidation, design, demonstration of code for critical components to enable continuous feedback, thereby improving defect density, enhancing throughput and quality of delivery.

- **Trusted Partner:** FSS engages with all parties in the ecosystem (upstream and downstream) including other vendors to effectively review and deliver solutions. Our ability to implement critical transformational programs and its superior delivery, makes us a trusted partner.

Platforms and Innovative Features

- As part of over 9 years collaboration, FSS has delivered a range of platforms and innovative features. This includes:

  - Open-loop Platform - Used for supporting Network branded GPR (General Purpose Reloadable) and Gift Card (Single Load) card programs

  - Toll and Transit Platform – Used to support Toll and Transit clients card programs

  - Closed-loop Platform – Used for supporting single or multi Merchant branded Single load or Reloadable closed loop card program

- The platform is backed by a robust service architecture which supports:

  - Domain-based grouping of smaller services into modules, to improve channel wise scalability

  - Zero downtime for application on deployment

  - Use of caching tools to reduce transaction processing time

  - Horizontal scaling

  - Multi-purse, multi-currency cards

  - Non-currency purses

- Production monitor to trigger proactive alerts for issues in the system using SPLUNK for effective preventive incident management

- Tokenization for American Express, Visa, and Mastercard and branded cards to support Apple Pay and Samsung Pay

- Transaction filter functionality to set on demand authorization rules using single or multiple rule configurations.

Other Key Deliverables

- Technology stack version upgrades

- Acquisition of Amex prepaid card business with minimal impact to existing business

- Card sweep functionality to swap funds from expired cards

- Auto funding of reloadable product cards based on threshold and time

- Certification with China UnionPay

- Template based and multilingual notification module to support system and customer configured alerts for both SMS and Email.

- Support for dynamic CVV

- Template based card personalization file module to avoid frequent development on the platform to support additional fields or changes required by the card perso vendor.

- Personally, identifiable information (PII) data and PCI data is stored in an encrypted form in the database. The system supports configurable options to enable and disable encryption for the product.

- Support for virtual card orders

Value Delivered

- The key value delivered as part of the engagement includes:

  - Enable launch of new card programs in less than 60 minutes – accelerating concept to revenue cycle

  - **30%** reduction in program costs by leveraging FSS offshore global engineering solutions

  - Consistently maintain defect density of < 0.004

  - **19.6M** B2C and B2B cards generated; The average TPS for Amex products at 888.38 with a minimum of 738 TPS and a maximum of 1,394 TPS.

  - Overall over **150M** cards inventory generated so far, with over 60M active cards.

  - Micro-services based modular architecture for VMS

  - Continuous Integration and deployment model using Jenkins, optimizing time to market

Tools and Technology

- **Front End –** Servlet, JSP, JavaScript, jQuery, Struts framework, CSS

- **Middleware –** Java, J2EE, Spring framework, Web services (SOAP/Restful) , Spring boot

- **Database –** Oracle 19x (RAC)

- **Application Server –** WebLogic, JBoss EAP 6.3, Tomcat

- **Hardware Security Module –** (Thales)

- **Operating System –** Linux

- **Project Management Tools –** Confluence, JIRA, IBM-CLM

- **Development Tools and Utilities –** Eclipse IDE, SQL developer, SOAPUI, Postman, FindBugs, PMD, SonarQube, IBM Heap Analyzer, Dynatrace

- **Build Tools –** Jenkins, Ant, Maven

- **Code Repository –** SVN, Star Team

- **Test Management tools –** HP-ALM, JIRA, IBM-CLM, Mantis,

- **Test Automation tools –** UFT, JMeter, HP-LoadRunner, Katalon Studio, Web Scarab , Ready API, Selenium

- **Delivery Channels –** ATM, POS, IVR, Mobile, Web, ACH , Proprietary channels

- **Message Formats –** ISO8583(v93), JSON, XML

About FSS

Financial Software and Systems (FSS) is a leader in payments technology and transaction processing. The company offers an integrated portfolio of software products, hosted payment services and software solutions built over 29+ years of experience. FSS, end-to-end payments products suite, powers retail delivery channels including ATM, POS, Internet and Mobile as well as critical back-end functions including cards management, reconciliation, settlement, merchant management and device monitoring. Headquartered in Chennai, India, FSS services leading global banks, financial institutions, processors, central regulators and governments across North America, Europe, Middle East, Africa, and APAC and has 2,500 experts on-board. To know more, write to products@fsstech.com