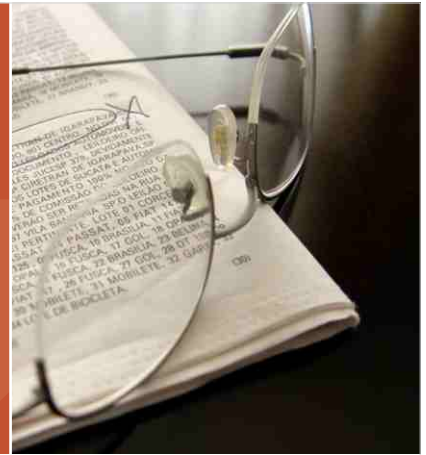


Case Study

New Product Development - Rapid Development of a Loyalty Management System



THE CUSTOMER

A start-up company providing a loyalty management platform for mini-retailers in the US. Their platform provides a cost-effective way for small and medium-sized businesses to increase revenues by acquiring, developing, retaining and rewarding their customers.

THEIR NEED

A fully-integrated marketing solutions platform that would enhance the retail consumer experience and allow retailers to exchange information safely with their customers, strengthen their brand and reward customers for their loyalty. The envisioned product was to be the first-of-its-kind in the existing market and needed to be developed in a compressed timeframe.

OUR DEED

Aspire was involved through the entire product development lifecycle (from concept-to-market) and helped the customer launch their product in just over 4 months. The Aspire team developed an integrated hardware and software solution featuring an electronic hardware system using a secure, multi-channel communication and data transformation gateway, a web framework and a desktop application that acts as a conduit between the hardware and the online web application.

TOOLS AND TECHNOLOGIES USED

Requirements Analysis: Enterprise Architect

Design: Enterprise Architect

IDE: MyEclipse

Operating System: Linux

Architecture: J2EE – JSF, Apache, JBoss, Apache Tomcat, Java, Springs, Hibernate, Web Services

Database: MySQL

Hardware/Software interface: TCP/IP

Embedded Systems: C Programming on Linux

LOYALTY MANAGEMENT PLATFORM

Product innovation begins with an idea and ends with the successful launch of a new product. The product envisioned by the customer was an integrated hardware and software platform to run loyalty management programs for retailers. It would enhance retailers' ability to collect and analyze market data while allowing consumers to view and update business contact and product information in an organized manner.

Customer Speak

“I would like to express my gratitude and appreciation to our development partner, Aspire Systems, who have shown outstanding commitment and dedication to our success”

*- Tony Galluscio,
Co-Founder & VP Research and
Development*



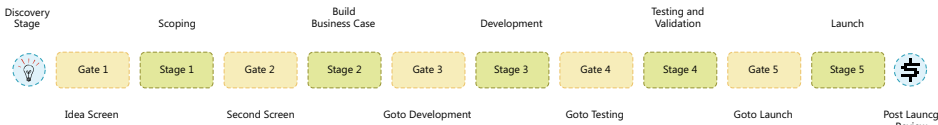
New Product Development - Rapid Development of a Loyalty Management



This product was targeted mainly at small and medium-sized businesses to give them the opportunity to compete with larger competitors and reward their loyal customers for supporting them. As the customer's product engineering partner, Aspire assisted the customer on all aspects of the product, from concept-to-launch. This included product conceptualization, design, development, hardware development and manufacturing (through Aspire's locally based embedded partner), testing, deployment, rollout and support.

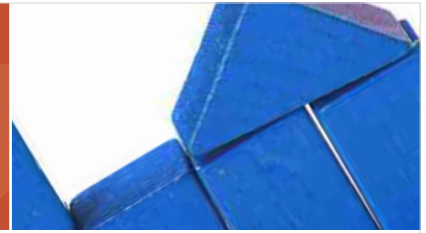
Following idea generation, the project was carried out in five key stages:

Due to the **success of the product development efforts by Aspire**, the relationship with the customer was extended towards product enhancements.

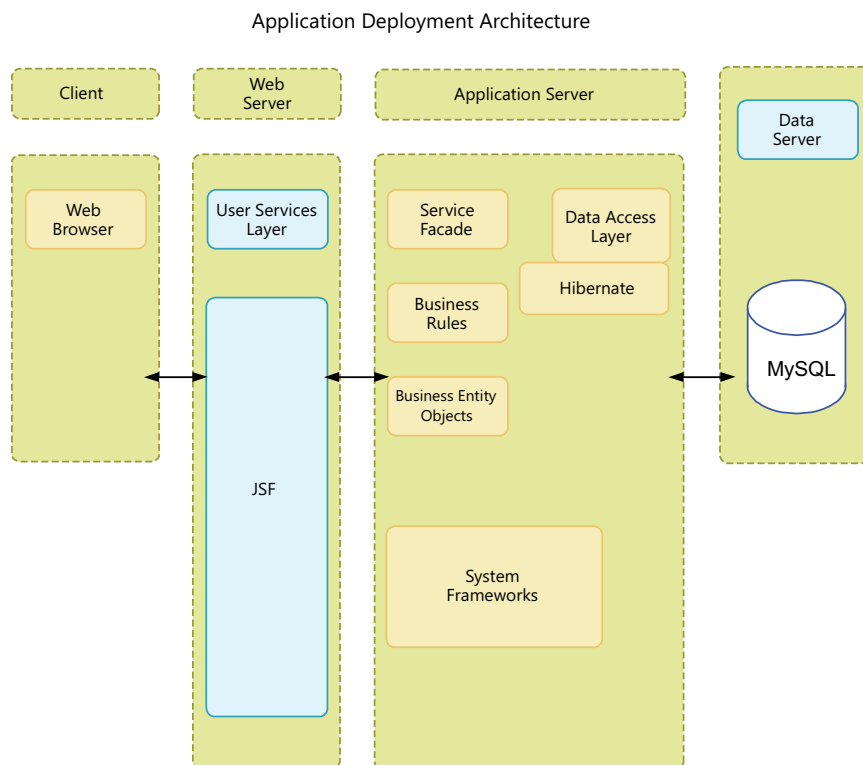


| | |
|---------|---|
| Stage 1 | Scoping: A quick and inexpensive assessment of the technical merits of the project and its market prospects. |
| Stage 2 | Build Business Case: The most critical stage in the project. Technical marketing, business feasibility, requirements analysis were assessed resulting in a business case which had three main components: product definition, project definition and project plan. |
| Stage 3 | Development: Business case plans were translated into concrete deliverables. Product development activities including prototype creation, technical architecture design, coding and hardware/software integration comprised this stage. |
| Stage 4 | Testing and Validation: Validation of the entire project - the product itself, the production process and customer acceptance testing. |
| Stage 5 | Launch: Full commercialization of the product - the beginning of full production and commercial launch. |

New Product Development - Rapid Development of a Loyalty Management



Architecture:



Aspire helped the customer build this new innovative product within a **compressed timeframe**.

The following is the sequence of events when a user requests for information:

- The user's web browser requests a web page from the User Services Layer (Web UI).
- On receiving the request, the web page in the User Services Layer invokes a particular Service within the Business layer.
- The Service determines the kind of data required for the requested web page. If the data requirements do not necessitate any validation through the Business Rules layer, the Facade requests the Data Access Layer for the data directly. If the data needs to be validated/processed, the Service invokes the Business Rules layer.
- The Business Rules Layer applies the necessary business rules on the data passed on by the service and if necessary, interacts with the Data Access Layer.
- The Business Rules Layer sends the response back to the service, which in turn, forwards it to the requested web page.
- The User Services Layer, Business service Layer, Business Rules Layer and the Data Access Layer operate on the objects in the Business Entity Objects Layer.

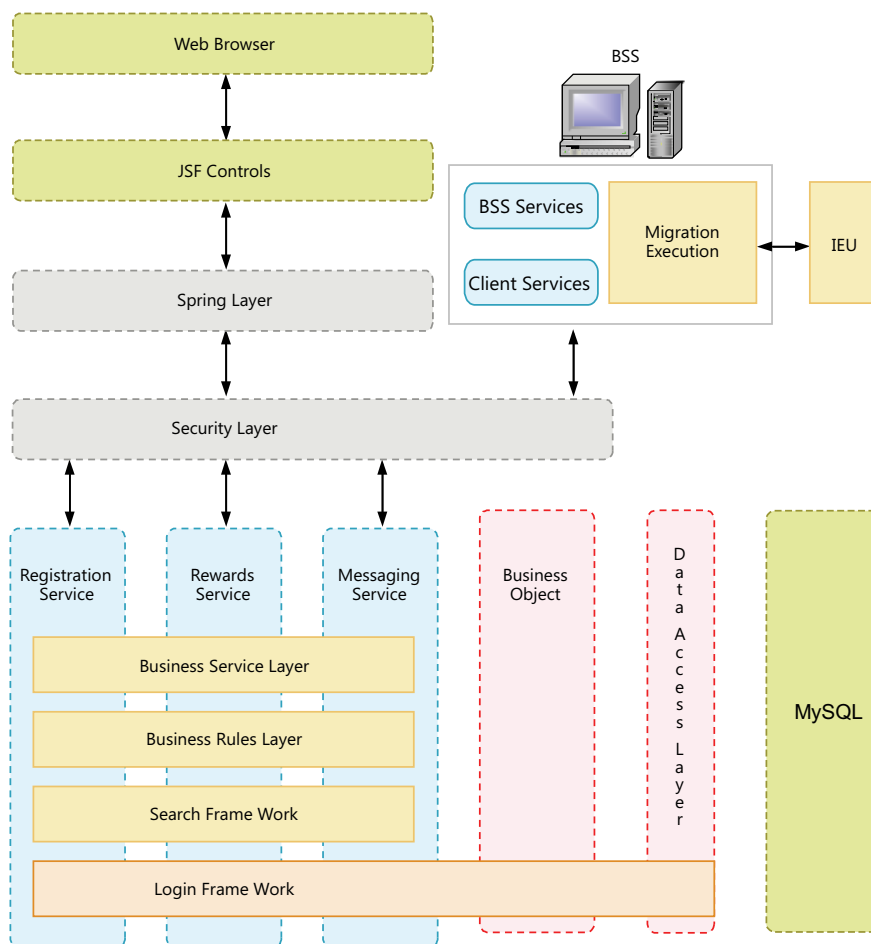
aspire
SYSTEMS
Transforming Product Development

New Product Development - Rapid Development of a Loyalty Management



- The User Services Layer, Business Facade Layer, Business Rules Layer, Business Entity Objects Layer and the Data Access Layer use the System Frameworks Layer for availing system services.

Architectural Components Interaction



The final **product** was **received very well** by the market.

System Frameworks:

The system frameworks layer is concerned with parts of the application that provide system service, system infrastructure functionality, or other shared functionality. The system frameworks layer provides:

- **POS:** Point-of-sale is a software program that is compatible with the customer system. POS system is a desktop application designed by Aspire that is connected with an Information Exchange Unit (IEU).

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- **IEU:** Information Exchange Unit (IEU), is the hardware unit installed at the business location of the retailer. Rewards and incentives are automatically applied upon a swipe or scan of the end-users' loyalty card

Resource flexibility

Initially, the team comprised of 4 resources which was ramped up to 17 resources at the peak development phase and then ramped down to 7 resources (once the product was launched), all within a span of 4-5 months. Due to the success of the product development efforts by Aspire, the relationship with the customer was extended towards product enhancements.

Key Benefits

Aspire was involved through the entire design, development, testing, deployment, roll-out and support of the loyalty management platform, bringing together an integrated solution leveraging hardware, software and services.

Aspire helped the customer build this new innovative product within a compressed timeframe. The conceptual and operational road map for moving the new product from idea to launch was carried out in a very short span of four months.

The Aspire team also traveled onsite to the customer's location during system acceptance testing, which turned out to be very successful for both the hardware and software releases.

The final product was received very well by the market at both the consumer and retailer level during its launch in March, 2007 in the US.



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ABOUT ASPIRE SYSTEMS

Aspire Systems is an Outsourced Product Development firm committed to helping our customers build software products better and faster. We work with some of the world's most innovative Independent Software Vendors and software-enabled businesses, ranging from start-ups to established industry leaders, transforming the way software is built.

Aspire provides complete product lifecycle services, ranging from new product development and product advancement to product migration, re-engineering, sustenance and support. Our product development teams are spread between our Global Innovation Center in Chennai, India and offices in the United States.

For more information contact:

Website : www.aspiresys.com
E-mail : info@aspresys.com
Tel
USA : +1-408-260-2076
UK : +44 203 170 6115
India : +91-44-6740 4000

