

# Improving operational efficiency through a SaaS based web application

Client is a global travel services company offering a range of services for corporate travelers, procurement managers and C-level executives. Managing business travel being their core, they are committed to provide cost optimization through highest return on business travel investment.

## *Situation analysis*

The product services side of the client's business, used Microsoft Excel files for dealing with the operations and all the approvals were done through mails. This involved sending numerous Excel files to the respective stakeholders for approvals. They relied heavily on Excel files to define the product and operational services they are going to deliver to their customers.

The existing system was highly inefficient and time consuming. To increase their operational efficiency, they desired to develop a web application that fulfills the following objectives:

- Leverage the existing infrastructure to remove the gaps in the system in order to build an integrated process
- Implement inter-divisional activities and communication to improve the efficiency of business processes

## ***The vision***

The client's operations department envisioned to create a robust web based system for operations management. They sought a competent business and technology consulting partner to implement a solution to replace their existing Microsoft Excel based format with SaaS delivered web based solution.

## Our solution

e-Zest team of developers and business analysts understood the project background and came out with a project objective and workflow definition.

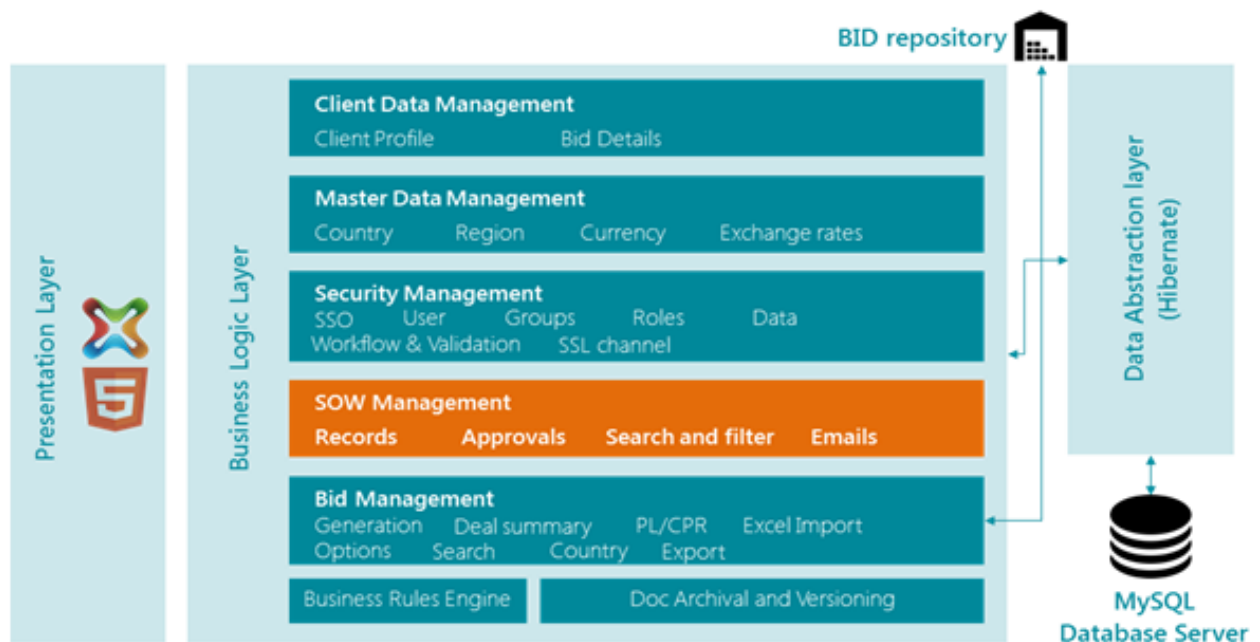
### The project plan included the following activities:

- First and foremost, standardize and automate existing tools, business processes and workflows
- Align and integrate systems and tools across departments
- Centralize system with globally accessible database
- Manage data and reports to automate multilevel approvals
- Implement role based user access model to improve data security
- Leverage next generation technology to implement high performance and scalable solution

For project execution, we used Iterative Prototype Enhancement Model (IPEM), a methodology best suited for custom software and product development.

To make the relevant data available for different users for work approvals and management, and also to ensure the data is protected, various user roles were defined. We provided Single Sign-On (SSO) logins for each user with role management and master data management. The web application also has the following features as per the functions such as Email, Bid creation, Report configurator.

## Solution architecture



### ***Project highlights***

- The project combined new development and reusable components. Many reusable components were used from client's earlier project. Re-using majority of system components ensured close to 70% reduction in efforts. A team well-versed with client's domain, processes and proposed technology.
- Faster delivery with highest quality standards.

### ***Technology stack***

- **Java Framework** - Spring 3.0.4
- **ORM Framework** - Hibernate 3.6.0
- **Load Balancer** - Apache 2.0 +
- **Application& Web Server** - Tomcat 7
- **Database** - MySQL 5.1.51
- **Hosting** – AWS Cloud

### ***Challenges***

- Centralized data maintenance:

The existing data was not centralized and was hence unavailable most of the times as it was maintained in Excel and was with respective individuals. The entire set of data is currently maintained in MySQL on cloud and proper backups are scheduled.

- Standard set of data was not available:

There were too many versions of each and every Excel file and each file had an original and modified versions. The same files were mailed further to users which led to lot of duplication of files.

To solve this, Master Data Modules were provided. Versions of this Master Data are also maintained by owner of Master Data.

### ***Benefits***

- The solution implemented by e-Zest replaced existing Microsoft Excel based management tool with SaaS delivered web based solution that standardized and automated client's business processes.
- The web application generates summary information and provides insights facilitating quick decisions.
- Aligned and integrated advanced systems and tools in all the departments with automated business processes and workflows.

- Centralized system and globally accessible database offered concurrent user access, automated workflow, tracking and emailing.
- Automated multilevel approvals provide time saving and simplify the tasks with streamlined workflows.
- Role based user access model improved data security.
- Using next generation technology gave high performance and scalable solution.

## *Conclusion*

e-Zest helped the client define the scope of the project, delivering the development and deployment of a SaaS based web application that is highly robust. Well defined workflows have ensured effective work management, facilitating multiple approvals across various departments. The web application has improved and optimized client's business process and enhanced business operations.

e-Zest successfully delivered the solution as per the client's requirement and has won their trust. Client has partnered with us for support and maintenance and additional features in the second phase.