

Case Study

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Finance - Rich User Interface

Business Benefits Delivered

To the customer

End-user satisfaction

- Rich user interface solution provides consistency in communication to customers. Forms are more readable and clear.

Increase of the conversion rate

- New interaction design and better performance are the main drivers for the increase of the conversion rate.

Reduction of the time to market

- The use of modern technologies enabled high component reuse.

Cost savings

- A Proof of Concept, as part of the specification phase, has helped identifying the risks and giving the exact estimates in the early project phases.
- The contractor was able to do more for less, using the Levi9 near shore resources

To the contractor

Expertise

- Levi9 has used the Software Factory approach, for which the contractor did not have in-house expertise

Timely Delivery

- Dedication and high productivity of the Levi9 development team played the significant role for the project to meet the agreed deadlines

Resources

- Levi9 was being able to scale up and scale down its development team according to the contractor's needs.

The Client

The client has the ambition to become the number one on-line bank in the Netherlands. Its mission is providing an excellent service in the field of banking, to be the one of the most successful financial service providers in the world. Its subsidiary bank, wants be the "best in class for customers, employees and shareholders". With more than 7.5 million private account holders the subsidiary bank is one of the largest financial service providers in the Netherlands. The subsidiary bank offers to its customers a complete assortment of accessible, reliable financial products against a sharp price.

The Project

The website of the subsidiary bank contains approximately 250 forms. These forms have been created in the course of nearly 5 years and are all based on Vignette Story server. The code base that constitutes the forms has grown hard to maintain and the time to market for changes in the forms is currently less than desirable. Another major area of concern is the performance of the forms. The project has been started to re-implement and enhance these form for the following main reasons:

- Increase of the conversion rate, leading to more revenue.
- Reduction of time to market for new forms or changes in existing forms
- Being able to track the user behavior for certain extent

The role of Levi9

The main contractor was a well-known Dutch system integrator. Levi9 had a role of a subcontractor responsible for the development of the desired application.

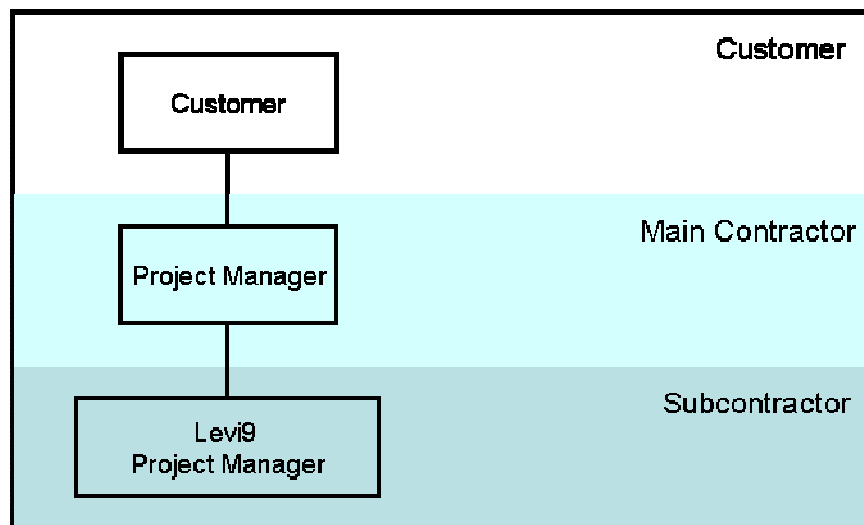


Figure 1 – project organization

The customer has already performed the business analysis and acquisition processes.

The overall project management was responsibility of the contractor. Their project management methodology was based on the principals of PRINCE2.

In these circumstances onsite presence of the Levi9 project team was not necessary.

The application technical requirements where following:

- Backbase Presentation and Form Server for presentation tier

- J2EE Application Server as middle tier
- Integration with the existing COM components

Project Preparation

Using the system functional and technical requirements as input, Levi9 has performed the assignment analysis. During the analysis Levi9 Project Manager directly communicated with the Project Manager for the requirements clarification.

The assignment analysis resulted in the following:

- scope and size of the project
- development time and costs estimations
- development methodology based on Software Factory approach
- acceptance procedure

The Project Manager used the results of the analysis as input for the Project Plan, later to be approved by the customer. During this phase a Communication Plan between the Levi9 team and the contractors project team was defined.

Project Realization

Levi9 Project Team Organization

Upon the Project Plan approval Levi9 has appointed a project team with following organization:

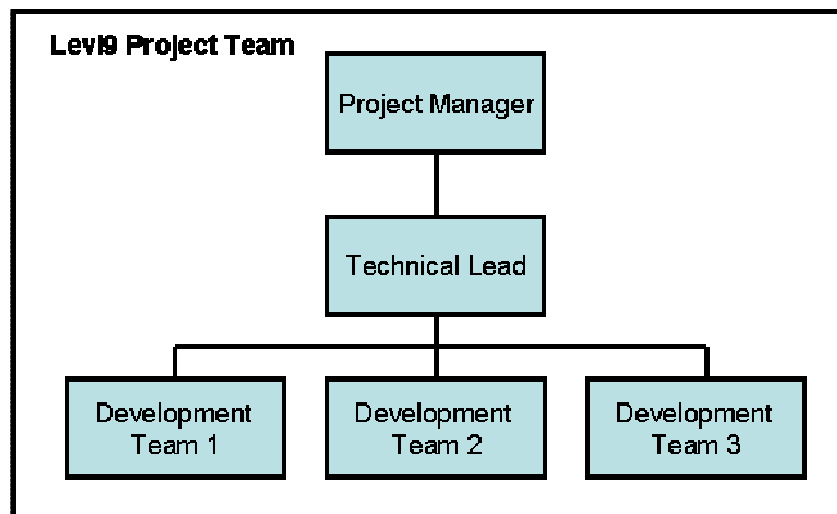


Figure 2 – Levi9 Project Team

Levi9 Project Manager and Technical Lead were already involved in the project during the assignment analysis phase. They have split the development team into three teams, each responsible for one stage of the Software Factory development process.

Levi9 Project Manager was the only direct point of contact to the contractors Project Manager. A project portal has been set up to help the project management and exchange of the information.

Development Process

Levi9 was asked to implement more than 250 web forms in an uniform and consistent way. The natural choice for the development methodology was the Software Factory development approach, focusing on a web form as the factory's product. The form description would enter

the factory and the form implementation would exit the factory. During the process, the form would go through different workflow stages.

As mentioned before, the Levi9 Development Team has been split into three teams that could work effectively on the project in parallel. The first team (Common Library Team) was responsible for building the user interface components and a common library, the second team (Assembly Team) was responsible for assembling the forms and the third team (Test Team) was responsible for the testing and quality assurance. Output created by one team, was used as input by the other team. Figure 3 illustrates the relationship between the teams.

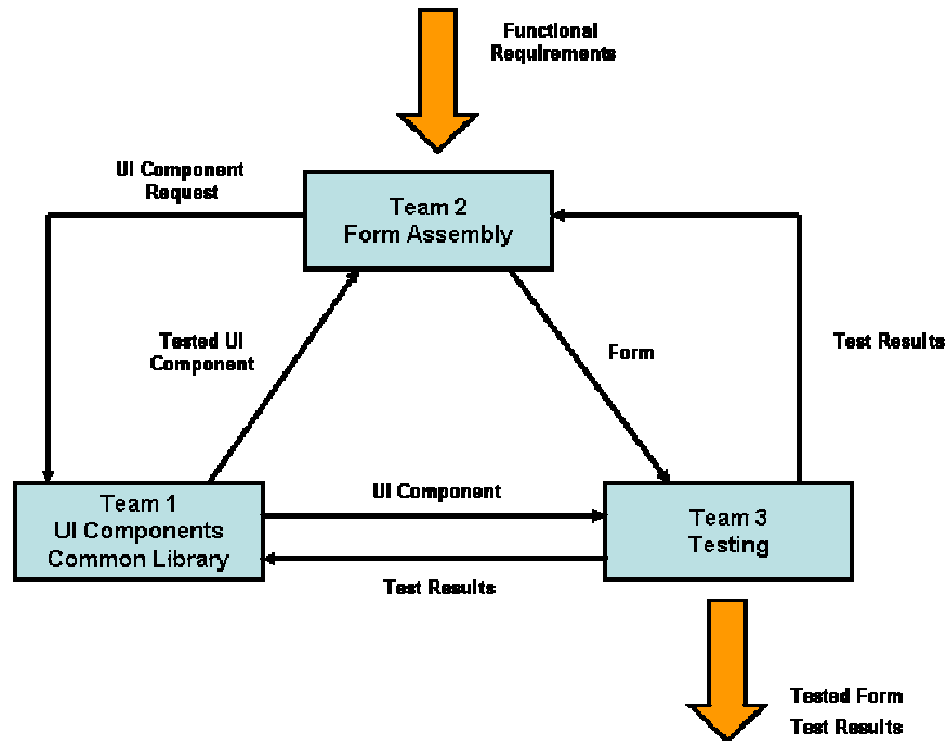


Figure 3 – Levi9 Software Factory

Form functional description was used as input for the factory. The Assembly Team would, upon acceptance of the form description, analyze if all the necessary UI components are available, and if so continue immediately with the assembly of the form. Assembled product, a web form would then be submitted for the test by the Test Team. If the form has passed all the tests, it would be integrated with the rest of the application.

In case the available UI components from the common library could not satisfy the desired functionalities, Common Library Team would get a request to implement new components or enhance the existing components. Before delivering a component to the Assembly Team, Custom Library Team needed to get the acceptance from the Test Team.

Each form delivered would be accompanied with detailed test report containing the description of the test, the results of the test and the input data used during the test.

Increased productivity and higher quality was gained by implementing the following:

Automatic code generation of forms XSL and Java files based on the formal definition of the form (FormXML)

Automatic functional testing has been done using an internally developed tool. The tool simulates the end user interaction with the application. This automated test was an integral part of the test environment deployment process

Application deployment using Ant and Cruise Control scripts from the version control system directly to multiple environments (testing, staging, production)

Standardized on Eclipse IDE as development environment has insured that the project environment related files could also be managed using the version control system. Setting up a development environment for a new development team member took no time.

Using the project portal (Microsoft Sharepoint), The Contractors Project Manager has had insight in the current workflow stage of any form at any given time, giving him total control over the development process happening near-shore.

Delivery

The products that have passed the internal quality insurance, would be tagged in the version control system as "ready for acceptance", allowing automatic application deployment onto the acceptance environment at contractors request.

Together with the deployed application, the contractor would receive all the test reports related to the delivered products.

A customized version of the Mantis Bug Tracking System was used during the acceptance testing. Since the Request For Change (RFC) process has had similar workflow, the same system was used for RFC tracking.

Who we are

Levi9 Global Sourcing was founded in 2001 and has grown to a full blown IT group with offices with development centres in Hungary, Serbia and Romania and sales offices in Belgium, Germany, United Kingdom and the Netherlands.

Levi9 Global Sourcing is all about people and processes. The quality of our team members are the quality that we deliver.

The Levi9 Global Sourcing Near-shore Delivery Services model combines the quality, responsiveness and flexibility normally associated with domestic outsourcers with the cost-savings of an "offshore" development facility, located nearby in Eastern Europe, Nearby in terms of physical distance, languages, EU administration advantages and European culture.