Offshore Update

Best practices by Applied Development

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Applied Development

TopPower

A fast and efficient conversion

With the help of Applied Development, TopPower is quickly and efficiently migrating the ERP-package of its branch Group 2000 to .NET.

TopPower is a software company located in Poperinge and specializes in total solutions for Belgian SME's and accounting offices. The enterprise offers ERP software for commercial administration and accounting software. TopPower also develops specific hardware solutions and internet applications for Belgian SME's through its division IT Care. The software packages are used by more than 3,000 customers in all sectors of commerce and industry. In 2006 TopPower acquired Navision partner Group 2000 based in Leuven. Thus TopPower added an ERP solution for the slightly bigger SME to its existing portfolio. "This solution is developed in 4GL, which is no longer compatible with the new generation hardware" says Serge De Geyter, managing director of TopPower. "That is why we decided to gate the solution to .NET"
The database model in the ERP package stays the same. TopPower only migrates the program code (that contains the functionality) to .NET. The conversion of the code by Applied Development takes place in India. "Of course we also add new functionality in .NET. We intend to optimally use the advantages of .NET." The conversion is now half way through. This project should be wrapped up by the summer of 2009. Then we will roll out the new version of the software with approximately eighty customers, the equivalent of a few hundred users.

FAST AND STRAIGHTFORWARD

Carrying out the conversion of the software in Leuven by a Group 2000 team wasn't an option for TopPower. "Our team just isn't big enough to quickly and efficiently execute such a vast project" says De Geyter. "With Applied Development on board, our team can focus on the operational side of the job: that is the customer support." One of TopPower's priorities was that the conversion could be done fast. "That's one of Applied Development's advantages: the company is flexible and can deploy enough resources to quickly and rigidly execute the conversion, and for a reasonable price." The project manager and contact for Applied Development is manager director Ivan Vercruysse. "We do not have a direct contact with India" says De Geyter. "Everything runs through Applied Development in Ghent. So communication is not a problem for us."

• ***Serge De Geyter**, managing director with TopPower: "Applied Development can deploy, in a flexible manner, enough resources to quickly and rigidly execute the conversion."*

Market report

Offshore migration gains momentum

Legacy applications lack the flexibility that is needed to fully service new business challenges. As software vendors discontinue the support of older development environments, software migration is high on every company's priority list. More than 80 percent of Belgian development projects are carried out on offshore locations.

About 100 mainframes remain active in the Belgian market. Statistics on the numbers of other legacy applications – developed in 4GLs, VB and the likes – are harder to pin down. It is clear however that they all are facing the same challenges. A lot of legacy applications have reached the point where they can't be made responsive to the changes in the business anymore. Any change demands extensive analysis, often resulting in changes that affect not only the primary software, but also the various middleware and front-end components that have been added to the system over the years. Needless to say it is practically impossible to realize these changes within a reasonable time and budget frame. In the Belgian market, specialists in legacy technology become scarcer and more expensive all the time. This way, the company loses momentum and misses out on business opportunities. Instead of supporting the businesses, legacy applications, lacking agility, tend to slow things down. At the same time, maintenance cost for legacy applications weighs down on the development budget. When a company arrives at the point where maintenance inhibits the investment in new solutions, the end of the system's lifecycle has been reached. Sometimes, the vendor itself announces the end of the lifecycle, as Microsoft did last year when it discontinued its support for Visual Basic.

OFFSHORE MIGRATION

A lot of Belgian companies foresee major migration projects for their business applications, as they prefer migration to building a completely new system from scratch. Offshoring mostly offers a solution at the lowest possible cost, efficient, and fast. About one third of the Belgian outsourcing revenue – more than one billion euro – is spent on application development, application migration and application management. More than 80 percent of these activities are carried out on offshore locations, according to EquaTerra. In Gartner's recently published top 30 of offshore locations, India remains the undisputed leader, followed by China, Russia and Brazil. Gartner judged the locations on language, infrastructure, cost, and cultural compatibility, among other things.

Motivation for legacy software migration

- Legacy languages are hard to support
- Legacy specialists are scarce and expensive
- The underlying platforms are usually hard to maintain
- Difficulty in integrating legacy software with other applications

Conversion and offshore development

"The gains are higher"

Currently there are a large number of applications that have been developed using older or less common technologies. Sooner or later, these applications will have to be migrated to a newer platform.

• ***Ivan Vercruysse***, *managing director at Applied Development: "The overall gains of executing conversions offshore, especially full conversions, are higher than other application developments."*

Conversion is necessary for a variety of reasons. Sometimes, the application runs but no support is available. The smallest problem that arises can harm the company substantially. In other cases it is not possible to add new features and adapt the program to changing market conditions. And finally, the newer platforms that are sold do not support the older technology anymore. For instance the new 64 bit computers may not support some critical legacy applications. These elements call for a modernization of the application and there are two important methods to achieve this goal. One possibility is to replace the application by a standard package. This process has already taken place for in-house developed accounting or ERP applications and such. For such solutions, migrating to standard packages is a logical choice because the standard package covers the large majority of the required features and offers the possibilities to implement the remaining functions.
For other applications, such migration is not so easy because the required functions are very typical for the business or have to be considered as a competitive advantage that may not be given out of hand easily. There are also many product vendors that sell applications based on older technologies that have to be migrated to protect their interests and those of their customers. For applications that cannot migrate to standard packages, a conversion to new technology is mostly the only option.

WHAT IS A CONVERSION?

We talk about a conversion of a product when an existing application that has been implemented in an older technology is rewritten by using the current standard technologies, and that retains a large majority or all the functions of the original product. We recognize multiple levels of conversions whereby this level defines the cost and the added value of the conversion.
A pure technical conversion converts the elements one by one without changing the architecture and applying more modern techniques. The added value of such a conversion is low and the application should only be converted if one or other technical reasons inhibit its further operation on the newer platform. The costs of such conversions are also very low and often they can be done with conversion programs.
During a full conversion, the application architecture is modernized and current object orientation practices are applied. The converted application is a solid base for adding new features and extending the life of the application. This conversion may keep some legacy of the older application – one could, for instance, choose only to convert the programs and keep the database more or less intact, which will reduce the cost and the risks involved in database conversion. It is possible to add some new features to the application as well, but these should be small compared to the overall application functions.
Finally, a functional conversion will require a complete new functional specification and drastic changes may be applied to the current application. This can be performed when a majority of the functions of the application are questioned and the new features to be implemented are considerable, compared to the existing functions. One can consider such development as new application development.

CONVERSIONS AND OFFSHORE DEVELOPMENT

The overall gains of executing conversions offshore, especially full conversions, are higher than other application developments. The main reason is that the existing application can be used as reference and effort spent in functional analysis – a task that always has to be performed locally – is fairly limited. During a conversion, the developers look at the existing application code line by line and identify what functions are behind the code. In a next step the functions are implemented in the new code. Because the architecture may change significantly, the place where the function is implemented can be completely different compared to the original application. Tools can assist in the conversion but a high level of human intervention is required if a final product of high quality is targeted. While for Applied Development, it is true that the bulk of the work is being performed in India, some tasks still have be executed locally. Many a time the application is developed in the local language. Identifiers and comments may be in the local language and in many cases a minimal translation effort is required. Prior to starting the conversion, a strategy must be determined and a framework may have to be developed that defines the layout of the user interface, the mapping to the database, and so on. This work is best performed locally because it requires extensive communication with the customer.

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