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## **ROI CASE STUDY MICROSOFT VISUAL STUDIO TEAM SYSTEM KBC BANK**

### **THE BOTTOM LINE**

**KBC Bank used Microsoft Visual Studios Team System and Team Foundation Server to improve application-building methodologies, increase productivity, and accelerate application deployment.**

**ROI: 89%**

**Payback: 1.12 years**

### **THE COMPANY**

KBC Bank is a financial services group active in the fields of banking, insurance, and wealth management. The company's operations consist of retail and commercial operations located in Belgium, seven other Western European countries, and Central Europe, where the company recently expanded its global operations. KBC's strategy is to become one of the leading providers of commercial, private, and retail banking services in both Central and Eastern Europe. The KBC Group was formed in 2005 through the merger of KBC Bank & Insurance Holding Company and its parent company Almanij. KBC is publicly held, has 11 million customers, and employs 50,000 people.

### **THE CHALLENGE**

While KBC has been expanding into new banking markets, it has also been globally expanding its software development operations in an effort to reduce development costs. In 2005, developers and team managers at the bank's headquarters began working with staff at ValueSource Technologies, an Indian software development company that KBC had recently acquired. Although the goal of distributed development was reduced costs and accelerated application delivery, having project managers in Europe and developers in India created some challenges common to development outsourcing:

- Misunderstood messages. Due to language and cultural differences, instructions about system requirements and project changes were often misinterpreted or unclear. Sometimes these problems went undetected for several weeks, requiring code rework.
- Delayed responses. Because of the time zone differences, project managers did not always have the most recent versions of project source code, causing them to delegate assignments and ask for source code changes based on stale code or incorrect project information.

**RELATED RESEARCH**

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- G96 Microsoft Visual Studio Team System ROI Case Study - EDS
- G92 Microsoft Visual Studio Team System ROI Case Study - Global Manufacturer

- Limited progress checks. Because team leaders and developers worked in different time zones, it was difficult to check in daily for progress updates. This often resulted in significant productivity losses for both developers and team leaders who would review or build irrelevant materials.

In order to better take advantage of its distributed development strategy, KBC began looking for a solution that would centralize the tasks, assets, and visibility of its international software development operations.

**THE STRATEGY**

In 2005, KBC evaluated several ways to build and support a new methodology for application development. KBC had been using Microsoft Visual Basic 6.0, and considered migrating to Microsoft Visual Studio 2003, but KBC would have had to combine the solution with several other point solutions in order to get the functionality they needed. KBC was also interested in Visual Studio Team System and Team Foundation Server, which was under development by Microsoft at the time. After careful consideration and negotiation, KBC decided to adopt the beta version of Microsoft Visual Studio Team System 2005 and Team Foundation Server. KBC felt that Microsoft's new products cost effectively enabled it to create a workable platform and respond quickly to its collaboration challenges in India.

Microsoft Visual Studio Team System was quickly deployed by one KBC employee in six weeks and Team Foundation Server was deployed in 10 weeks.

To further leverage Microsoft Visual Studio Team System, three employees then spent time over the next year creating and refining an internal application development framework and aggregating best practices, with assistance from Microsoft consultants.

Microsoft Visual Studio Team System and Team Foundation Server are used by 50 developers and project leaders and have enabled the creation of an orderly workflow between the European and Indian operations. At the beginning of the European business day, project managers use Team Foundation Server to access the most recent versions of source code and other project assets from India, and then provide it to local business users for evaluation. Based on end-user feedback, project managers then provide India with new work orders, which are received by developers in India at the beginning of their business day.

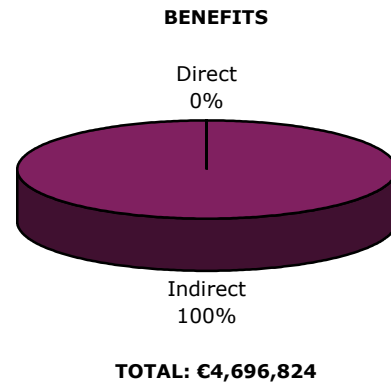
**KEY BENEFIT AREAS**

Using Microsoft Visual Studio Team System and Team Foundation Server has provided KBC with the tools to support better collaboration, improve productivity, and refine its application delivery process. Key benefits from the solution include:

- Increased developer and manager productivity. Because Microsoft Visual Studio Team System and Team Foundation Server enable project managers to work with more up-to-date project assets and take advantage of the time delay, project managers and developers collaborate more effectively and have reduced the amount of code that is discarded or reworked because of faulty or delayed communications. These benefits have made KBC's 35 developers 50

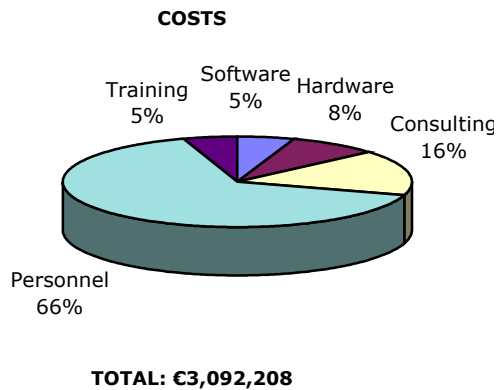
percent more productive and made the five project managers 19 percent more productive.

- Improved software quality. Improved collaboration and better testing have enabled KBC to improve the quality of its software. Before the deployment, coding errors required developers to spend an average of 120 hours on service calls for each of the solutions it deployed and this has been eliminated
- Improved deployment efficiency. By making it easier for KBC to deploy, package, and distribute applications within the company, Visual Studio Team System 2005 has shortened the average project cycle time by approximately 100 hours.



**KEY COST AREAS**

Key cost areas for the deployment included personnel, consulting, training, software, and hardware.



Visual Studio Team System was deployed in six weeks and Team Foundation Server in 10. Three employees then spent time over the next year creating and deploying an application development framework that would leverage the benefits of Microsoft Visual Studio Team System. Two Microsoft consultants were on hand throughout the deployment and helped KBC staff to both deploy the solution and create the development framework. Once the solution was deployed, four

developers attended a .NET boot camp and 35 attended a 1-week training program on Microsoft Visual Studio Team System and Team Foundation Server. Software costs consisted of 35 seats of Microsoft Visual Studio Team System and a Team Foundation Server license for up to 100 developers. The solutions reside on a proxy server in India, for which KBC pays an annual fee.

### **LESSONS LEARNED**

KBC found the benefits of Microsoft Visual Studio Team System went beyond operational improvements to the development process. By using the solutions to create an orderly workflow based on centralized and up-to-date project assets, KBC overcame some of the basic problems that companies typically face when using offshore software development. It also enabled project managers to spend less time on project management problems and more time meeting the needs of the business users. As a result of these wins, the IT department has been able to reduce costs, deliver applications faster, and increase ownership of their projects.

KBC found selecting the right development support application was more difficult than anticipated. Although this was eased by its access to Microsoft Visual Studio Team System as a beta user, beta usage has its own risks. In order to allay internal skepticism about the solution and mitigate the risks from using such a new solution, KBC management maintained a relationship with Microsoft that was close, hands-on, and positive. KBC also took time at the outset to negotiate clear and favorable terms of the beta relationship.

### **CALCULATING THE ROI**

Nucleus calculated the costs of software, hardware, consulting, personnel, training, and other investments over a 3-year period to quantify KBC's total investment in Microsoft's Team system. Indirect benefits including increased productivity of employees were calculated based on the average fully loaded cost of employees. Time savings associated with improved collaboration, better feedback, and improved process efficiencies were multiplied over a 3-year period as well.

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# DETAILED FINANCIAL ANALYSIS

KBC

## SUMMARY

Project:	<b>Microsoft Visual Studio Team System</b>
Annual return on investment (ROI)	<b>89%</b>
Payback period (years)	<b>1.12</b>
Net present value (NPV)	<b>496,763</b>
Average yearly cost of ownership	<b>1,030,736</b>

<b>ANNUAL BENEFITS</b>	<b>Pre-start</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Direct	0	0	0	0
Indirect	0	1,565,608	1,565,608	1,565,608
<b>Total Benefits Per Period</b>	0	1,565,608	1,565,608	1,565,608

<b>DEPRECIATED ASSETS</b>	<b>Pre-start</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Software	0	0	0	0
Hardware	0	0	0	0
<b>Total Per Period</b>	0	0	0	0

<b>DEPRECIATION SCHEDULE</b>	<b>Pre-start</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Software	0	0	0	0
Hardware	0	0	0	0
<b>Total Per Period</b>	0	0	0	0

<b>EXPENSED COSTS</b>	<b>Pre-start</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Software	2,500	53,850	53,850	53,850
Hardware	0	85,797	85,797	85,797
Consulting	500,000	0	0	0
Personnel	299,200	573,405	573,405	573,405
Training	151,350	0	0	0
Other	0	0	0	0
<b>Total Per Period</b>	953,050	713,053	713,053	713,053

<b>FINANCIAL ANALYSIS</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
Net cash flow before taxes	852,556	852,556	852,556
Net cash flow after taxes	426,278	426,278	426,278
<b>Annual ROI - direct and indirect benefits</b>			<b>89%</b>
Annual ROI - direct benefits only			-75%
<b>Net present value (NPV)</b>			<b>496,763</b>
<b>Payback (years)</b>			<b>1.12</b>
Average annual cost of ownership			1,030,736
3-year IRR			72%

Note: all figures in Euros

## FINANCIAL ASSUMPTIONS

All government taxes	50%
Discount rate	15%