

# Deutsche Bank Builds Global Integration Platform on Vitria®



*“Using BusinessWare®, Deutsche Bank has developed a proprietary systems management platform called Deutsche Bank Information Bus, dBus, which is instrumental in the real-time trading of various financial instruments at Deutsche Bank, including stocks, bonds and other securities. With Vitria’s® technology, we have consolidated our IT environments saving time with introducing new applications and saving money in overall operations costs. We have also created a system that can perform under strenuous network traffic twenty-four hours a day, seven days a week.”*

- ▶ *Dimitrios Papaioannou, VP application services and global engineering infrastructure, Deutsche Bank*

## Solution Overview

Europe’s second largest bank, Deutsche Bank, has a diverse set of operational support systems (OSSs) within its numerous business divisions. As the bank expanded its information technology (IT) architecture, it also recognized the need to integrate existing distributed applications. After evaluating several alternatives, the company selected Vitria’s ebusiness solution. Leveraging Vitria’s BusinessWare, Deutsche Bank developed a proprietary application management platform called Deutsche Bank Information Bus (dBus). Since implementing BusinessWare and creating dBus, the company has integrated previously independent systems and reduced its need for and the associated costs of developing globally distributed applications.

## Background

The Deutsche Bank Group, headquartered in Frankfurt, Germany, is one of the world’s largest financial institutions with total assets exceeding EUR 758 billion (US \$866 billion) and over 77,000 employees. The company has approximately 2,300 branches in more than 76 countries serving the needs of over 13 million customers.



### Deutsche Bank

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As one of the leading international financial service providers, Deutsche Bank ranks among the global leaders in corporate banking and securities, transaction banking, asset management, and private wealth management, and has a significant private & business banking franchise in Germany and other selected countries in Continental Europe.

**Employees:** 77,000 employees  
**Total Assets:** US \$ 866 billion  
**Customers:** 13 million  
**Stock Ticker:** DB: DBK, NYSE: DB  
**Industry:** Financial Services  
**Region:** Global

## Solution Facts

- ▶ In production since May 1999
- ▶ Integrating proprietary order management systems for securities trading and investment banking
- ▶ Sun 4500 and 450 hardware platform
- ▶ Solaris 2.6 operating system
- ▶ BusinessWare

Through its Global Corporates and Institutions division (GCI), the company provides an integrated investment and commercial banking service to many of the world's leading companies and financial institutions. The GCI division aims to provide clients with sophisticated financial solutions by combining the bank's unrivaled balance sheet with its leadership in world-class capital markets, and its corporate advisory and strategic risk management capabilities. The division employs approximately 7,800 employees.

### **Business Challenges/Objectives**

Deutsche Bank's business divisions include Retail and Private Banking; Corporate and Real Estate; Global Corporates and Institutions (including investment banking and global equities operations); Asset Management (both institutional and retail); and Global Technology and Services units. As the bank added enterprise applications in each of its business divisions, it needed to consolidate the existing IT infrastructure.

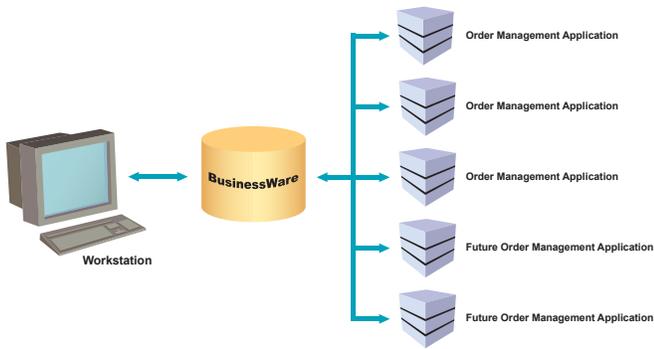
The company's back-end IT applications handle all of the processes associated with buying and selling securities from each of these business divisions. Company traders worldwide manually enter transaction information into separate order management applications and investment banking systems. To streamline its operations and reduce order entry errors, Deutsche Bank wanted an ebusiness platform to integrate each independent order management application, enabling the communication of transaction data in real-time. "We have several order management systems for each business division that capture security information from Deutsche Bank traders," comments Dimitrios Papaioannou, vice president application services and global engineering infrastructure

of Deutsche Bank. "We sought a communication platform that could integrate each back-end system at Deutsche Bank to provide shared access to the company's trading information worldwide."

As Deutsche Bank expanded its back-end application architecture and merged several of its existing legacy applications, the company wanted a flexible ebusiness platform that could handle the addition of applications and support a globally distributed system. The company wanted to avoid creating point-to-point interfaces for each additional back-end application. "Deutsche Bank needed to avoid implementing proprietary application integration technologies," commented Papaioannou. "We had an aggressive growth plan for our IT architecture, so we needed to ensure that our infrastructure was neither difficult to maintain nor expensive to upgrade as we add systems and upgrade existing platforms."

With over 60 business divisions located worldwide, Deutsche Bank's front- and back-office applications are accessed on a continual basis. The company wanted a platform that could support constant usage. "Our IT systems process activity from users twenty-four hours a day, seven days a week," comments Papaioannou. "We wanted an application that could perform under strenuous network traffic."

To further optimize its operations, Deutsche Bank needed to standardize the hardware and software used in each of its locations that perform similar mission-critical activities. "We wanted to reduce the number of technologies that supported our IT infrastructure," notes Papaioannou. "By streamlining our OSSs we hoped to maximize efficiency and performance."



*dBus Worldwide Communications Platform*

Additionally, with business divisions located in the Americas, Australia, Europe and Asia, Deutsche Bank looked for an ebusiness platform that could be managed from a central location. “Deutsche Bank’s distributed systems were not cost effective,” notes Papaioannou. “We needed to implement a technology application that could be maintained by one group from a central location.”

## Solution

After evaluating several solutions, Deutsche Bank selected Vitria’s ebusiness platform for its publish and subscribe messaging technology as well as its secure and reliable data communications infrastructure. “BusinessWare’s messaging platform, which handles high volumes of data transactions, greatly influenced our decision-making process,” comments Papaioannou. “We felt that Vitria’s experience in the ebusiness industry and superior understanding of application integration set BusinessWare ahead of the competition.”

After a four-month development period, Deutsche Bank went into production with BusinessWare in May of 1999. The company created an application management service named dBus, using BusinessWare, Visual Basic,

Java, and C++. With dBus, Deutsche Bank application developers are able to integrate systems that were previously independent.

The dBus platform facilitates securities trading worldwide. When Deutsche Bank traders, in any location, place buy or sell orders through dBus, the trading information is disseminated throughout the company’s back-office systems. dBus users access the system to gain an integrated view of securities trading activity worldwide. “dBus is instrumental in the trading of stocks, bonds and other securities at Deutsche Bank,” notes Papaioannou. “dBus is our primary communication channel between our globally distributed systems, providing all Deutsche Bank traders with access to real-time buy and sell information.”

The company initially rolled out the system to a select number of business divisions worldwide. “We are now using BusinessWare’s publish and subscribe technology to distribute trading records through seventeen business divisions,” notes Papaioannou. “In the future, we will expand the dBus application to Deutsche Bank’s over 50 business divisions worldwide and anticipate publishing hundreds of thousands of records daily.”

## Results

Leveraging BusinessWare, Deutsche Bank has integrated its various independent back-end order and transaction management applications and legacy systems without having to code point-to-point interfaces. “One of our main business goals was to make the dBus platform a standard enterprise-wide,” comments Papaioannou. “BusinessWare’s robust integration platform has facilitated application integration throughout the entire company.”

Moreover, the company's dBus application has enabled Deutsche Bank to extend its technology throughout the enterprise without increasing overhead. The company has also experienced a reduction in implementation time when adding new systems to its IT infrastructure. "Our deployment time with new globally distributed systems has been reduced by months," notes Papaioannou. "Thus we are saving time and money related to introducing new systems to the bank."

Using dBus and BusinessWare, the company has streamlined its IT architecture, reducing the need for additional hardware and software platforms. In addition, system support is now managed from one location for all back-end applications, eliminating the need for support personnel in each business division. "Leveraging BusinessWare, we have greatly optimized our application environment," comments Papaioannou. "By consolidating IT operations, separate business divisions access hardware and software applications located in one central data center. In order to maintain dBus we only need one core support group. By consolidating application systems, maintenance and support costs have been reduced significantly."

### Business Challenges/Objectives

- ▶ Facilitate communication between independent order management applications in real-time
- ▶ Integrate globally distributed application systems
- ▶ Consolidate IT infrastructure management to one location
- ▶ Implement an ebusiness platform to handle high volumes of transactions

### Solution

- ▶ Develop dBus, using BusinessWare, Visual Basic, Java, and C++, as an application management system
- ▶ Implement BusinessWare as the key technology tying together various order management applications and system support
- ▶ Leverage BusinessWare's publish and subscribe technology for traders to globally access real-time buy/sell information
- ▶ Deploy a process of distributing completed trading records to appropriate divisions on a 24-7 basis
- ▶ Go live in under 16 weeks
- ▶ Rollout dBus to over 50 business divisions worldwide

### Results

- ▶ Reduced implementation time for adding new systems to its IT architecture by months
- ▶ Improved its ability to distribute securities information enterprise-wide
- ▶ Established application standards throughout the company, reducing the need for additional hardware and software
- ▶ Decreased the costs related to system support and maintenance
- ▶ Enabled system maintenance and management from a central location
- ▶ Created an application management platform capable of performing under strenuous network traffic 24-7



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