



## Microsoft SQL Server Customer Solution Case Study



### Overview

**Country:** India

**Industry:** Banking

### Customer Profile

The Bank of Rajasthan was established on May 1943 with an initial capital of INR 10 lakh. Today it has 439 branches and around 4000 employees in the country

### Business Situation

Bank of Rajasthan wanted a solution to improve data analysis that would help the bank take more informed, market oriented, business decisions.

### Solution

With assistance from Natural Technologies, Microsoft Certified Partner, Bank of Rajasthan standardized on Microsoft® Windows Server 2003 and Microsoft® SQL Server™ 2005 using BancMate, at its Jaipur central office and over 150 branches across India.

### Benefits

- Facilitates informed decision making and business planning
- Real time access to critical information
- Improves inter branch connectivity
- Enhances customer service

## Regional Bank Improves Real Time Access to Information and Connectivity across Rural Branches

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B. M. Sharma, Managing Director, Bank of Rajasthan

The Bank of Rajasthan is a leading private sector bank in north India. Its central office is located in Jaipur, Rajasthan. The bank has 12 regional offices, above 450 branches and extension counters, around 350 online branches, 100 fully computerised branches, and 5 service branches, spread across the country.

The Bank standardized on Microsoft® Windows Server 2003 and Microsoft® SQL Server™ 2005 for consolidation of their data of distributed branches using BancMate, a bi-lingual banking solution from Natural Technologies (P) Ltd.. Bank of Rajasthan was able to create and finalise the balance sheet for year ending March 31, 2006 on April 1, 2006. This is an achievement of sorts in the banking industry as 40 percent of the bank's branches are located in rural and semi urban India. Access to information also implies that the bank can take more informed decisions thereby making the business more profitable and expanding its presence across India.



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Deepak Saruparia, Executive Director, Bank of Rajasthan

### Situation

The Bank of Rajasthan was established in 1943, with an initial capital of INR 10 lakh (Approximately U.S.\$ 22,250). Late Seth Govind Ram Seksaria, an eminent industrialist, was the founder chairman. In the financial year 2005 – 2006, the bank conducted business worth INR 13,000 crore (Approximately U.S.\$ 2.8 billion) with INR 9,000 crore (Approximately U.S.\$ 2 billion) in deposits and INR 4,000 crore (Approximately U.S.\$ 800 million) in advances.

With over 450 branches spread all over the country, it has computerized all its branches as of 31<sup>st</sup> March 2004 declaring the bank as totally computerized bank. Over 300 branches were using Infosys Core Banking Solution with centralized database and approximately 150 branches are using BancMate, bilingual branch banking software from Natural Technologies (P) Ltd.

Earlier, data as received, on paper, from its branches and was entered in a UNIX based system and validated. There was no way to consolidate the entire data of the branches that were not part of the centralized banking solution. The branches with a decentralized in-house developed solution, used to work on a standalone DOS based system.

The bank required a comprehensive solution, which would daily undertake data mining and integration of the entire bank branch data i.e. centralized data and distributed branches data, to deliver collaborative and Web based reports to multiple business users, across the entire organization.

### Solution

The branches were spread across rural Rajasthan, where connectivity and other infrastructure related issues are prevalent. Therefore, it was not feasible to implement a core banking solution that would require 100

percent power backup and continuous connectivity. The bank then decided to implement BancMate; a Microsoft® SQL Server™ 2005 based bi-lingual, branch automation solution.

The solution was ideal for rural customers and staff as it offered an interface and data entry in the local language, Hindi. It was user friendly and easy to train the staff on.

Another essential criterion was to have reliable database and proven security for the data as well as application. With all these considerations the bank decided to deploy BancMate on and Microsoft SQL Server 2005 solution at all these branches.

The other key consideration was the solution had to support smooth connectivity and data transfer features. SQL Server 2005 offers innovative, high-availability features such as database mirroring, failover clustering, and enhanced online operations, to minimize potential downtime and deliver the best possible customer service.

With the assistance of Microsoft Gold Certified Partner, Natural Technologies, the IT infrastructure was upgraded to a Microsoft SQL Server 2005 and Windows Server 2003 based software, with all banking operations at these branches being automated. Each branch now has flexible options of connectivity and data transfer routines.

The BancMate rollout at each branch took about six months, while the consolidation activity was deployed within three months. BancMate is a bi-lingual banking software taking care of all branch functionality covering around 24 modules.

Presently, the data consolidation is conducted on the basis of day-end data transfer to a central location, from all branches. Data validation routines are

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Vinod Juneja, Deputy Managing Director, Bank of Rajasthan

executed and then the data extraction, transformation, and loading (ETL) is accomplished. The data from the consolidated database is then obtained and formatted to facilitate management information services (MIS) of the bank.

“The use of Microsoft software and BancMate, has provided the top management access to updated, accurate, information in an appropriate format, on a real-time basis,” states Vinod Juneja, Deputy Managing Director, Bank of Rajasthan

#### **Solution Overview – Data Upload**

The first step towards achieving the objectives was to install a Standard Master Set created in SQL Server 2005, across all the branches of the bank. The Master Set contained information about all schemes of the bank and its parameters. This was provided in all the distributed branches, after considering the category of the branch.

All further Master Sets were created at the head office level and communicated to the branches through the regional office for updating the same at the branches. It was also extremely critical to achieve uniformity in the versions of all the branches and it was ensured that the up-gradation to the new version be completed within 10 days of release.

The bank required the following utilities to achieve a Standard Master Set across all the branches:

- **Data Integration Utilities:** For correction of Data, as per the change in the Master Set of the branch.
- **Data Upload Utilities:** For initiating changes in the Master Set at the Head Office and conveying them to the branches Master Set for up gradation. These included utilities for fixed deposit and interest chart charges etc.

- **Version Patch Download Utilities:** For initiating changes in the Software programme, from time to time for introduction of new schemes and functional up gradation in the software.

The procedure for day-end data upload was finalized as follows:

#### **First Data Upload**

- Module activation, at each branch
- Communicating the day end data of each branch, to the head office
- Uploading the day end data, to the central server
- The head office uploaded of the day end data of all the branches of the bank starting 4th March, 2006.

#### **Daily Upload**

- The incremental day end data of the branch was automatically extracted and stored in predefined directories.
- This day end data of the branch was then encrypted, compressed and prepared for communication.
- The above data was transferred to head office by those branches having VSATs with them and rest of the branches communicated the data to their regional office via e-mail, courier service, and personal delivery through bank staff or uploading from another branch.
- Regional offices communicate the data through FTP (file transfer protocol) to the head office

#### **Data Consolidation at the Head Office:**

The data received at the head office, was added to the data set of the branches, through an intricate and secure procedure as follows:

- Backup files were transferred to a pre-identified directory in the head office server
- Data files were downloaded using valid user authentication

**“Standardization of Microsoft technologies and BancMate has helped us improve our customer service.”**

A. S. Bhatnagar, Vice President, Bank of Rajasthan

- Data files were accessed after being decrypted
- Proper user level authentication with access control rights was provided in the head office application
- Checksum verification was provided for a single day and the entire database

After a pilot run at ten branches, the entire procedure and coding was ready at the end of February 2006. In early March the final version of the solution was deployed at all regional offices. The data was then transferred from 150 branches to the head office on the same day.

The challenge was to deliver centralized data for all the branches (approximately 450) spread all over India, including the 280 odd branches running on the core banking solution from Infosys and the 150 branches running on the distributed banking solution. This data had to be available by April 1, 2006 so that the financials could be compiled.

To meet these requirements, the 150 branches forwarded the incremental data, to its respective regional offices, for onward conveyance to the central office. The central office prepared a consolidated financial statement of all the branches and finalized the results of the financial year ending 31 March 2006 by 10 AM on 1st April, 2006. “This meant that the team worked over night, but we had the financial results by the time our branches opened the next morning,” comments A. S. Bhatnagar Vice President (IT), Bank of Rajasthan.

“I find it absolutely amazing that the finalized financial results of the year ending 31st March 2006, are on my table on the 1st of April 2006,” says Sri BM Sharma, Managing Director, Bank of Rajasthan.

## **Benefits**

“Technology is power and its utilization in business and process development is the strength of our bank,” reiterates Vinod Juneja, Deputy Managing Director, Bank of Rajasthan.

### **Facilitates Informed Decision Making and Business Planning**

“Earlier day ending data would be provided on a tentative basis and the final figures could vary by as much as 10 percent. Now, this data is accurately listed on line at the end of each working day, allowing all the branches and the central office, to make timely and informed decisions,” reiterates Deepak Saruparia, Executive Director, Bank of Rajasthan

### **Real-time Access to Critical Business Information**

With the new IT infrastructure in place, updated data is now available online to the management, to facilitate timely decision making for fund placements. “The use of Microsoft technologies and BancMate has provided us with access to updated, accurate, information: in an appropriate format, on a real-time basis,” Sri Vinod Juneja, Deputy Managing Director, Bank of Rajasthan. The management’s directives on change of interest rates can now be implemented and monitored effectively. This also facilitates a central revenue audit to minimize leakage.

### **Inter Branch Connectivity**

With online connectivity of all the branches to a Central office, it is now possible to reduce and centrally relocate technical manpower. This also facilitates the implementation of the proposed delivery channels like: ATM, Mobile banking etc.

### **Enhances Customer Service**

“We have enhanced the services provided to all our customers. We are happy to state that

**“Technology is power and its utilization in business and process development is the strength of the Bank.”**

Vinod Juneja, Deputy Managing Director,  
Bank of Rajasthan

the standardization of Microsoft technologies and the BancMate banking solution, has facilitated this significant change,” concludes P. K. Tayal, Chairman, Bank of Rajasthan

### **Future Plans**

Bank of Rajasthan has chosen Natural Technologies to develop additional modules on BancMate to enhance its features and meet the growing needs of the bank. These modules are being integrated through a distributed architecture with BancMate and a centralized architecture comprised of the bank's core banking solution. These modules are:

- Proposal tracking solution to manage business proposals.
- Retail lending module for consumer loans, vehicle loans, and so forth.

BOR and Natural Technologies are also developing a new bilingual BancMate centralized core banking solution based on Windows Server 2003 and SQL Server 2005.

## For More Information

For more information about Microsoft products and services, call the Microsoft Sales Information Center at (800) 426-9400. In Canada, call the Microsoft Canada Information Centre at (877) 568-2495. Customers who are deaf or hard-of-hearing can reach Microsoft text telephone (TTY/TDD) services at (800) 892-5234 in the United States or (905) 568-9641 in Canada. Outside the 50 United States and Canada, please contact your local Microsoft subsidiary. To access information using the World Wide Web, go to: [www.microsoft.com](http://www.microsoft.com)

For more information about Natural Technologies (P) Ltd. products and services, call +91-141-2549089 or visit [www.BancMate.com/](http://www.BancMate.com/)

For more information about Bank of Rajasthan products and services, visit the Web site at: [www.bankofrajanstan.com](http://www.bankofrajanstan.com)

## About Natural Technologies Private Limited (NTPL)

Natural Technologies Private Limited has created bilingual and multilingual solutions primarily for the banking industry. Natural Technologies is in the business of application development, consulting, distribution of software products, systems integration, and data processing.

## Microsoft Server Product Portfolio

For more information about the Microsoft server product portfolio, go to: [www.microsoft.com/servers/default.mspx](http://www.microsoft.com/servers/default.mspx)

## Microsoft SQL Server 2005

Microsoft SQL Server 2005 is comprehensive, integrated data management and analysis software that enables organizations to reliably manage mission-critical information and confidently run today's increasingly complex business applications. By providing high availability, security enhancements, and embedded reporting and data analysis tools, SQL Server 2005 helps companies gain greater insight from their business information and achieve faster results for a competitive advantage. And, because it's part of Windows Server System, SQL Server 2005 is designed to integrate seamlessly with your other server infrastructure investments.

For more information about SQL Server 2005, go to:

[www.microsoft.com/sqlserver](http://www.microsoft.com/sqlserver)

## Software and Services

### ■ Products

- Microsoft SQL Server 2005
- Microsoft Windows Server 2003 Standard Edition

## Hardware

### ■ HCL and Wipro Intel XEON servers

## Partner

### ■ Natural Technologies Private Limited

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