

Chapter # 6

Information Technology & Infrastructure Development.....

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- Other Developments

6 INFORMATION TECHNOLOGY AND INFRASTRUCTURE DEVELOPMENT

6.1 Overview

The SBP Banking Services Corporation has enhanced its focus on upgrading technology in its business transactions to improve efficiency. The business automation process was initiated with the assistance of the State Bank of Pakistan. The objective of technological up gradation is to enhance the management decision-making processes and to bring about an improvement in the quality and usage of technology in BSC's operations. Hyundai Information Technologies (HIT) was assigned the role of lead consultant for the design and technological up gradation envisaged by Arthur Andersen. The goal of this exercise is to streamline and improve business processes of BSC by adopting 21st century technologies. The project has developed a comprehensive integrated solution, a seamless amalgamation of individual solutions for banking and non-banking operational automation at BSC.

6.2 Operational Support by ISD SBP

The Information Systems Department (ISD), SBP has played a vital role to strengthen the BSC on technological front. The Department is not only facilitating BSC in setting up latest IT infrastructure but also providing reliable IT support in improving end user performance.

6.3 Main Components of Automation Project

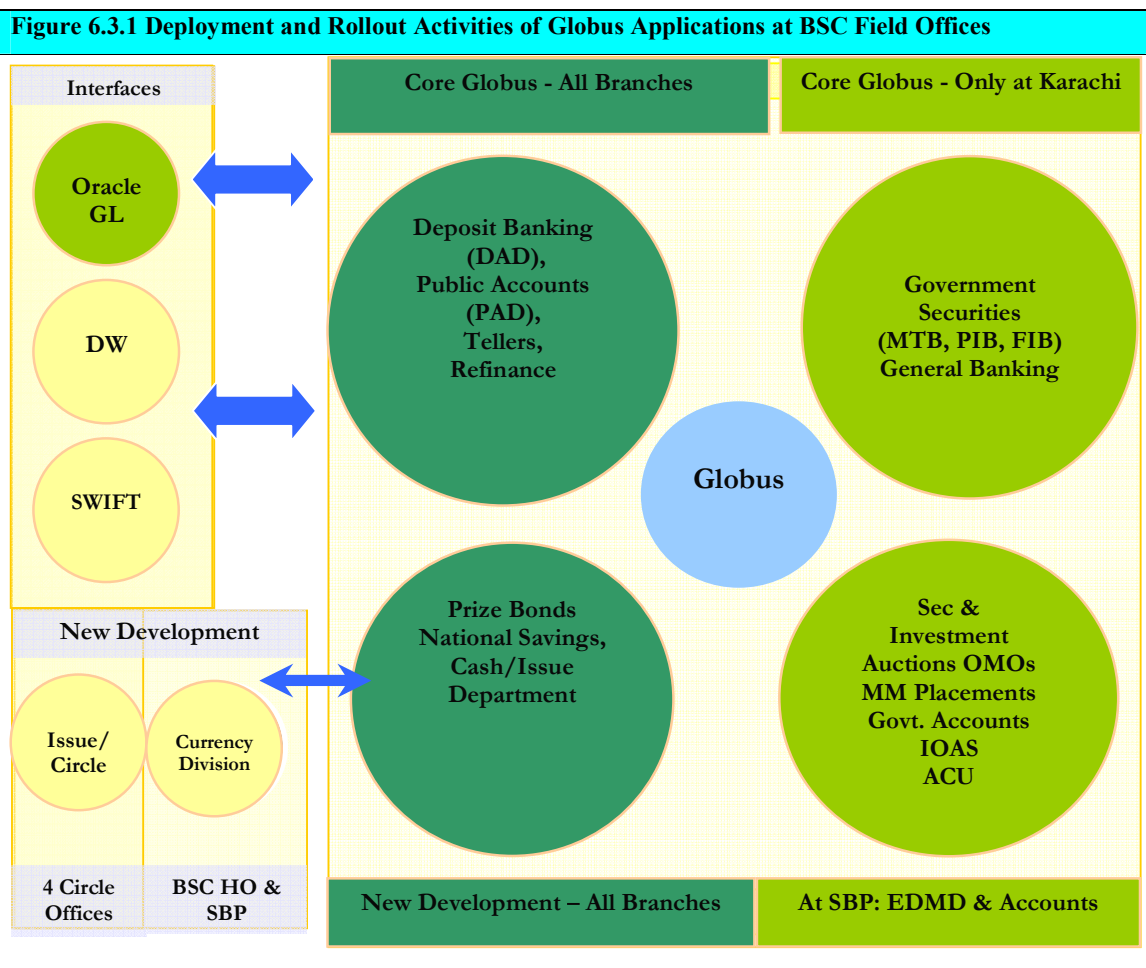
The process of technological up gradation has maintained its pace during the FY05. The installation and deployment of Globus Banking Solution and Enterprise Resource Planning system (ERP-Oracle Financials) is at an advanced stage and expected to be completed in near future. The main components of the automation project are:

- *Globus Banking Solution*
- *Oracle Enterprise Resource Planning*
- *Networking*
- *Hardware*
- *Windows Systems Infrastructure*
- *Training*

6.3.1 Globus Banking Solution

The Globus banking system will automate the retail and treasury banking activities of the sixteen field offices of the BSC. The Globus system has been customized and implemented in the core banking areas of BSC field offices. The Core Banking component of the IT automation project is in its final stages of implementation. The deployment stage consists of customization / development, testing and implementation at the BSC – Karachi Office.

Globus system is presently interfaced with the main general ledger that resides in Oracle Applications. Both the applications (Globus and ERP) are centrally installed at Karachi and are accessed in real time by users from BSC and its field offices over Local and Wide Area networks. This setup gives BSC management an immense capability of managing business risks, in line with international standards.



The project can be broadly divided into following two sets of activities:

6.3.1.1 Application Rollout

The application rollout stage has the new product development and deployment in the SBP and Karachi office of the BSC. In this stage the focus is more on application development, testing, data conversion and deployment. A summary of deployment and rollout activities of Globus applications at BSC field offices is given below:

Table 6.3.1.1 Deployment and Rollout Activities of Globus Applications at BSC Field Offices		
Deployment Stage	Deployment Area	Carried on to Branch Rollouts
Core Globus with Customization	BSC - Karachi Office <ul style="list-style-type: none"> Operations of Banking Zone (DAD, PAD, Tellers, Local Remittances, General Banking) Operations of Refinance Division (Export Refinance, LMM) 	All Branches All Branches
Core Globus with new development	BSC - Karachi Office: <ul style="list-style-type: none"> Prize Bonds Operations National Savings Scheme Operations at SBP Issue System <ul style="list-style-type: none"> Cash Department Issue department Currency Division 	All Branches All Branches All Branches Four Circle Offices SBP and BSC – Accounts Departments

6.3.1.2 Branch Rollout

The branch rollout stage relates to rolling out of the retail banking applications in the sixteen field offices of the BSC. A major part of the branch rollout consists of Globus navigation, product trainings and data conversion. Office wise status of Globus deployment at BSC as on June 30, 2005 was as below:

Table 6.3.1.2 Office wise Status of Globus Deployment at BSC (Position as on 30-06-2005)				
S.#	Office	Core Globus & NPB	NSS	Issue System (Cash/Currency)
1.	Rawalpindi	Completed	Completed	Completed
2.	Islamabad	Completed	Completed	Completed
3.	Lahore	Completed	Completed	In progress
4.	N. N. Karachi	Completed	Completed	Completed
5.	Peshawar	Completed	In progress	To be done
6.	Faisalabad	Completed	In progress	Completed
7.	Multan	Completed	Completed	Completed
8.	Bahawalpur	Completed	Completed	Completed
9.	Muzaffarabad	Completed	In progress	In progress
10.	Quetta	Completed	In progress	To be done
11.	D.I. Khan	Completed	To be done	In progress
12.	Sialkot	Training in progress		
13.	Gujranwala	Training in progress		
14.	Hyderabad	BOAT & Infrastructure deployment in progress		
15.	Sukkur	BOAT Completed/ Infrastructure deployment in progress		

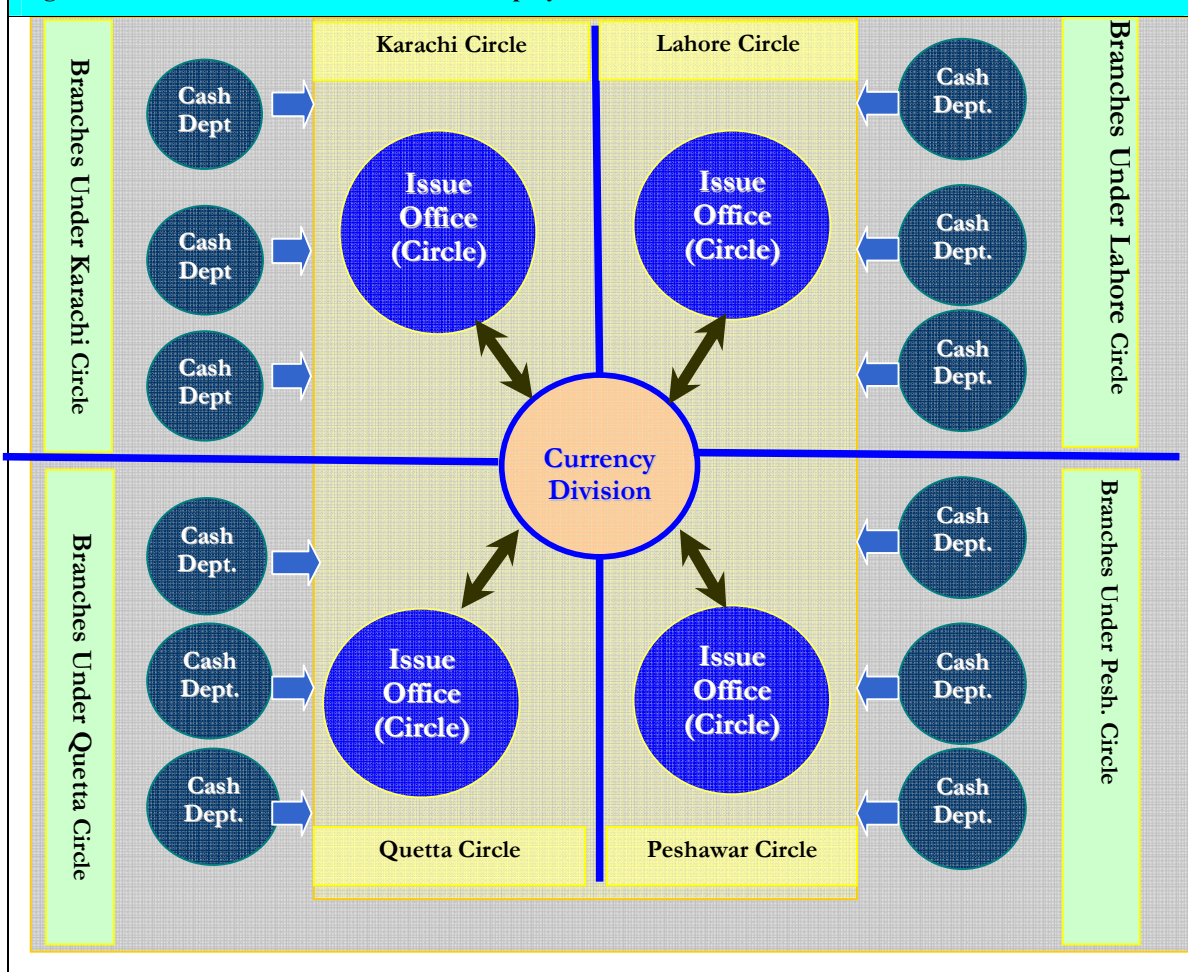
6.3.1.3 Current Status

The overall progress of the project is moving according to the expected pace. After going through a survey of sites all over the country the project has faced enhancement in the scope of work exceeding the original vision of Information Systems Strategy Plan (ISSP). Despite all these changes, the technical teams have been successful in facilitating project deployment in all areas with the help of BSC officers. The officers of BSC have performed so well that Project Management team has always praised their performance in rollout and implementation of the project. The technology up-gradation project is close to completion now and the project rollout is in full swing. Presently, the Globus application is being deployed in the areas of Currency Management Operations, Deposit Accounts, Public Accounts, Remittances, Export Finance Scheme, Securities, National Savings Schemes (SSC and DSC, Prize Bonds), Inter Company Transactions and Interface between Globus & Oracle General Ledger

6.3.1.4 Implementation Benefits

The Globus Banking System does away with the need for labor-intensive manual work. The Globus Banking System automatically manages the accounting side of banking operations. The need for most paper work will be reduced and the large accounting books that BSC maintains manually will no longer be required. There will also be less traffic of paper (letters, certificates of balance, notes, memos and the like) between various departments of BSC. It is envisaged that the role of staff will change from labor intensive (manual) operations to more of a supervisory role. In other words, staff will be more involved in checking entries (on reports, or on-line) against client instructions. Other benefits are:

- Reliable information.
- Information will be available at the touch of a button.
- Staff can perform enquiry functions on-line.
- Security controls.

Figure 6.3.1.2 Office-wise Status of Globus Deployment at BSC

6.3.2 Oracle Enterprise Resource Planning

Oracle applications provide a clear road map for business process improvement. The processes, inherent in the e-Business Suite, are based on the flow of information through natural linkages of business activities. Using these best practices, the project has aimed at bringing fundamental changes to the business operations, distribution and Human Resource Management functions of BSC within the budget. The upgraded systems will not only process transactions promptly and accurately at a lower cost, but will also be scalable enough to handle the increase in transaction volumes in the future due to economic growth and developments in banking industry.

6.3.2.1 Current Status

System Enabled Process Realignment (SEPR) is being replicated for BSC and its 16 field offices. Necessary modifications are being made to accommodate unique processes. However, the basic idea is to implement a standard solution across the entire enterprise that will bring about a standardization of work methodologies and allow the BSC to leverage its strengths in order to maintain transparency in transactions, thus making it easier to audit information by tracing back its origin. System can be used to do a comparative analysis of performance of different offices.

Oracle HRMS modules which include; recruitment, Employees Information Management (EIM), compensations & benefits, Performance Evaluation Report (PER), leave management, work structure

and training administration are now operational. Historical data of active employees from all offices of the BSC was successfully put through the cleanup / filtration process. The data conversion / migration have also been successfully completed. The data related to employees personal information, contact details and assignments, leave information etc have been uploaded in the system. As a result of this, most of the manual work has been discarded.

The payroll systems comprise of four main modules ie salary module, advances module, fund module and pension module. Payroll interface with medical system for reimbursement of medical bills up to Rs5000 has become live with the implementation of Oracle Medical Services System at different field offices of BSC. Implementation of pension system at all eleven BSC offices has also been completed with Salary and Advances modules and the disbursement of pension is being made through the system with Live GL interface. In addition, Oracle Training Administration (OTA) has also been implemented at BSC Head Office Karachi.

6.3.2.2 Implementation Benefits

- Manual registers have been discontinued and replaced by different reports of Oracle ERP.
- The General Ledger (GL) entries generated within Fixed Assets, Purchasing, Inventory, Accounts Payable, Payroll and Globus will be directly entered into the system by the concerned departments, eradicating the need for creating any GL entries for these functions within the GL module.
- Limited or no flow of manual vouchers required from any of the offices for verification and processing.
- Automated consolidation of accounting information at BSC Karachi Office and other offices after implementation of systems at all offices. This ability to consolidate information is a crucial benefit of having data available electronically across the various offices on the ERP system.
- Accuracy and validity of information of the transaction file transferred from Globus to Oracle GL.

6.3.3 Networking

6.3.3.1 Local Area Network

The Core of any Information Systems is the Infrastructure over which a reliable Network setup is built up. ISD has deployed Fast Ethernet structured network system at all BSC field offices in 15 different cities of Pakistan. The Main Data Center is situated at 6th Floor of the main building of SBP in Karachi, which has State of the Art Campus Clustered setup for the core applications of Globus and Oracle ERP.

6.3.3.2 Wide Area Network

Wide Area Network (WAN) team of ISD designed the nationwide network to interconnect the BSC field offices with SBP. In order to connect BSC offices outside Karachi campus, the system is using three WAN technologies, ie

- Microwave Wireless Bridges – for Metropolitan Area Network connectivity in Karachi,
- Digital Cross Connect System (DXX)/High bit rate Digital Subscriber Line (DSL)- the Primary WAN medium
- Single Carrier per Channel (SCPC), Very Small Aperture Terminal (VSAT) links – the additional WAN connectivity.

6.3.4 Hardware

The project has so far delivered 1430 PCs and 550 printers. By the end of the project the total numbers of PCs and Printers delivered across the country will be 2900 and 850 respectively.

Table 6.3.4 Deployment of Computers / Printers & Scanners etc at BSC up to 30-06-2005

S #	Offices	Personal Computers	Printers	Scanners	Others *	Total
1	HOK	44	27	0	0	71
2	Bahawalpur	49	23	1	0	73
3	D. I. Khan	30	09	0	0	39
4	Faisalabad	93	11	0	6	110
5	Gujranwala	34	25	1	0	60
6	Hyderabad	22	16	1	17	56
7	Islamabad	104	26	1	0	131
8	Karachi	289	147	3	0	439
9	Lahore	278	87	0	0	365
10	Multan	68	19	1	0	88
11	Muzaffarabad	35	18	0	0	53
12	N.N.Karachi	49	15	1	15	80
13	Peshawar	80	16	1	1	98
14	Quetta	75	40	1	0	116
15	Rawalpindi	118	34	0	0	152
16	Sialkot	34	20	0	0	54
17	Sukkur	28	17	0	0	45
Total		1430	550	11	39	2030
<i>*UPS, CDW & Multimedia etc</i>						

6.3.5 Windows Systems Infrastructure

Apart from IT project rollout, a country-wide Windows Systems Infrastructure has been established that is providing centrally managed services to Desktop PC users at 16 country wide locations of BSC. The Windows servers deployed as part of this rollout are enabling information users of BSC to run the required business applications along with access to E-mail, file sharing and internet proxy services.

6.3.6 Training

The training unit established at HOK has successfully coordinated with the Information Systems Department in providing automation training to its employees in the latest Software Development areas. Training sessions were held for key users on the HRMS core modules by master trainers of the BSC in close supervision of Project Management team. The team coordinated the trainings in the areas specially Oracle Inventory, Accounts Payables and Purchasing to facilitate the users. The following table depicts the training imparted to the employees of BSC in the areas of BOAT, Globus, and Oracle (ERP) etc up to June 30, 2005.

Table 6.3.6 Automation Training Imparted By the Employees of BSC up to 30-06-2005

S.#	Offices	BOAT	GLOBUS	ORACLE	Total
1	HOK	146	10	79	127
2	Bahawalpur	30	45	28	103
3	D.I. Khan	27	-	27	54
4	Faisalabad	106	159	50	315
5	Gujranwala	49	44	-	93
6	Hyderabad	107	2	-	109
7	Islamabad	100	85	50	235
8	Karachi	210	260	113	583
9	Lahore	325	118	63	506
10	Multan	60	72	35	167
11	Muzaffarabad	39	-	27	66
12	N. Nazimabad	19	2	25	35
13	Peshawar	284	118	50	287
14	Quetta	80	-	43	123
15	Rawalpindi	124	63	45	232
16	Sialkot	50	52	-	102
17	Sukkur	36	43	-	79
Total		1616	1073	635	3216