

# **TECHNOLOGY UPGRADATION**

# TECHNOLOGY UPGRADATION

The technology up gradation project was initiated with the assistance of World Bank's FSDIP project and has continued its pace under the Technical Assistance for Banking Sector (TABS) program, again sponsored by the World Bank. The project has already successfully installed the base infrastructure at Karachi Head Office and initial deployment of the banking package (Globus); ERP package (Oracle Financials) and data warehouse has also been implemented to a considerable level.

Expansion of the systems to 15 branch offices beyond SBP Head Office and BSC Karachi office is being processed. The entire roll out of Globus ERP/Oracle financial and Networking of the Branch Offices would be covered under the project.

The major components of the automation project are:

- Hardware system
- Globus (Banking Solution)
- Enterprise Resource Planning (ERP)
- Data Warehouse
- Networking
- Trainings

The main achievements of the Project are:

## **a. Hardware:**

- 1,000 PCs have so far been installed as work stations covering 80% officers of grade II and above level.
- Three N-Class servers are hosting three main applications Globus, ERP and Data Warehouse.
- Two N-Class Servers are working as backup servers for these applications in the backup site.
- Primary and backup site is connected through High speed Gigabit backbone.
- 4 large High-end Laser Printers have been installed in different offices
- Network Printers, Dot matrix printers, Desktop, 1 Plotter and 1 Scanner are operational in different offices/departments.

## **b. Software:**

### **Globus Implementation (Banking Solution):**

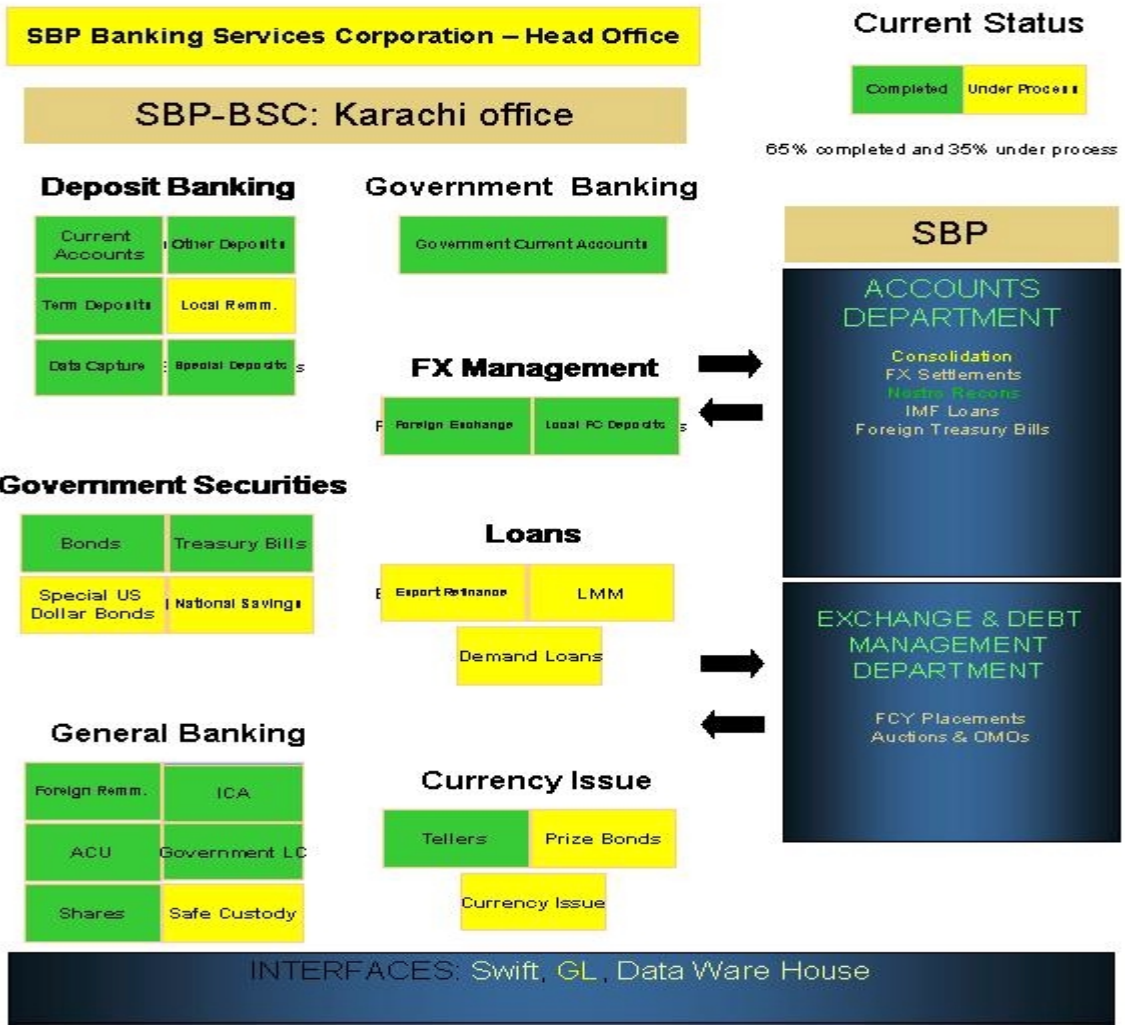
Banking solution "Globus" is an on-line/real-time state of the art banking package, which is being implemented at State Bank. It has been customized to meet the Bank's requirements. As the main banking system, Globus would allow transformation towards international banking standards,

availability of reliable information, ease of introducing new products, more efficient housing refinance window, depository functions (loans floated by the government and special government bonds), and to take care of the impact of subsidiary. Roll out of Globus to SBP branches include mapping of staff, training and WAN connectivity.

Due to certain unforeseen incidents of September 11, 2001, May 08, 2002 bomb blasts at Karachi etc. the foreign consultants left the country. To mitigate the risk of stoppage of work, a team of important users was flown to South Africa in November 2001 to undertake the User Acceptance Testing (UAT) there. Our strategy of teaming up with foreign consultants have paid dividends in terms of acquisition of necessary skills and competence required to continue the implementation process uninterrupted even without the help of foreign consultants.

### **Scope of Implementation**

- Deposit Banking
- Government Banking
- Government & Other Securities
- Foreign Exchange Management
- General/Retail Banking
- Tellers & Currency Issue
- Prize Bonds



**Next Milestones:** Branch Roll out at Islamabad and Rawalpindi, SBP (BSC) is in progress where necessary training, infrastructure etc. is being put in place. The status is as under:

Activities	Islamabad	Rawalpindi
------------	-----------	------------

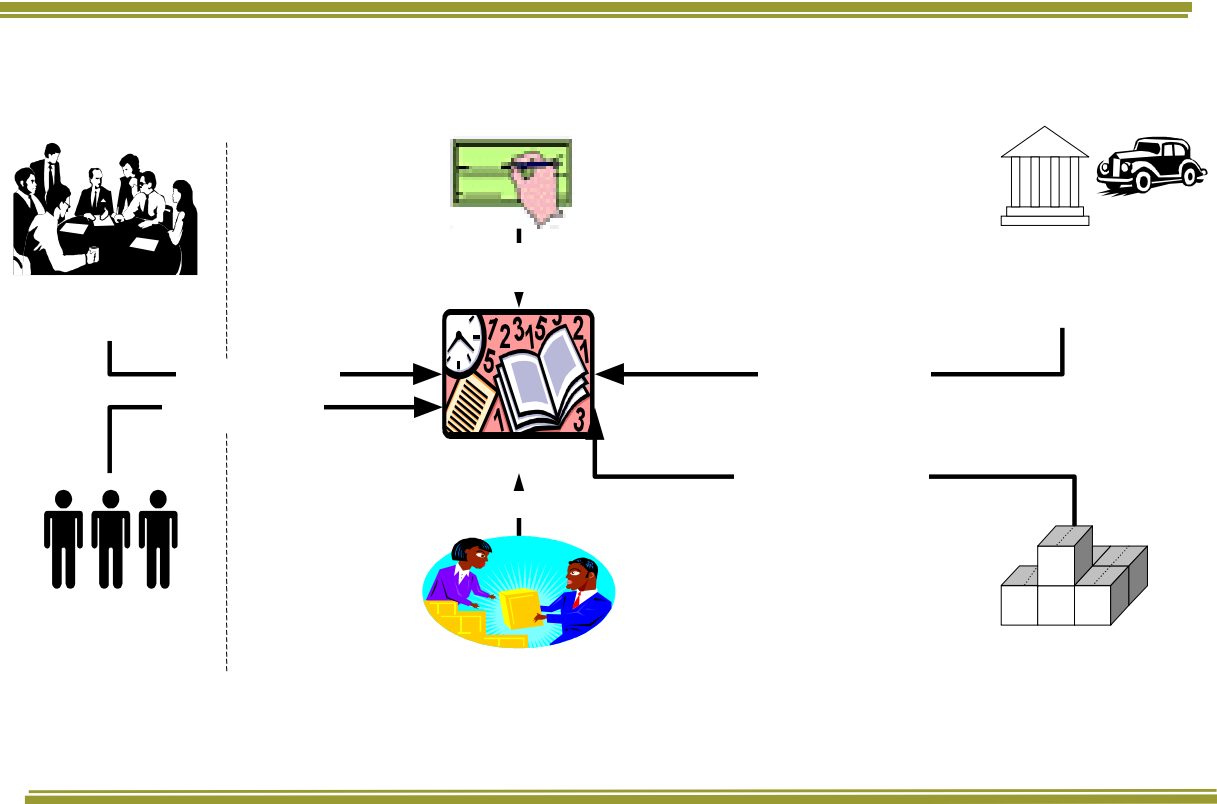
Navigational Training	85 users identified and trained	62 users identified and trained
Product Training	85 users identified and trained	62 users identified and trained
VSAT Testing (WAN)	Done	Under installation
Fibre Link (WAN)	Completed	Completed
Mock Banking	To start in Sept,2003	To start in Oct,2003

**c. Enterprise Resource Planning (ERP)**

As planned, Oracle ERP started production run on 8th July, 2002. The strategy was to implement the 6 modules phase wise, with live operation on most modules such as General Ledger and Accounts Payable,

Fixed Assets, Inventory and Purchase Order Systems, Human Resource System and Payroll System initiated with effect from 8th July 2002.

*ERP Workflow - SBP*



As for Human Resource Management System (HRMS) is concerned, five of the core modules are operational which include employee information and assignment, compensation and benefits, HR policies, recruitment and payroll, while work on leave management system, training administration, performance management system and self-service are under development.

Finance and Distribution modules are operational since July 2002. These include General Ledger (GL), Fixed Assets (FA), Accounts Payable (AP), Inventory (INV) and Purchasing (PO). Here majority of manual registers have been eliminated and replaced with ERP system generated output while for discontinuing the remaining registers, user department has set a cut-off date of 30th September, 2003. Next area of Oracle ERP implementation is Subsidiary's Head Office, followed by the 16 Filed Office.

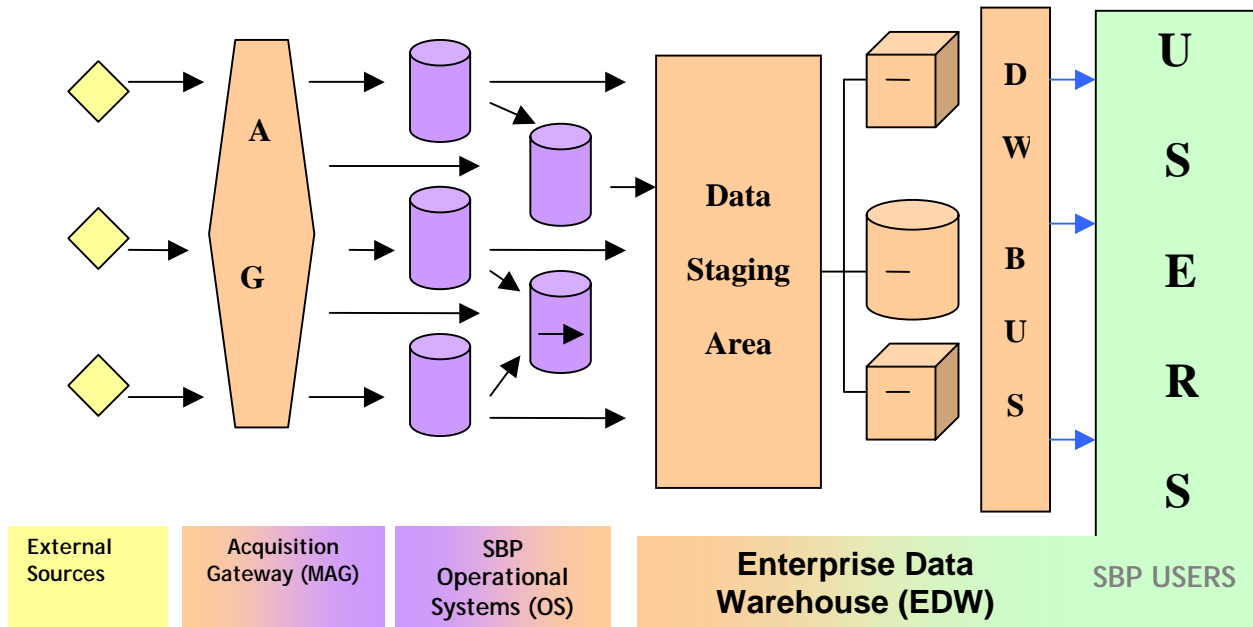
**d. Data Warehouse:** The Data Warehouse project comprises of the following three components:

- i) Data Acquisition Gateway (on line)
- ii) Data Warehouse (Data Bank)
- iii) Data Presentation layers.

The Data Warehouse will affect the Banking Inspection, Banking Supervision, Statistics and Research Departments etc. and will greatly improve their performance. It envisages the collection of all data currently gathered through manual channels, in a much more efficient and timely manner. Further use of the data collected would depend on the specific needs of the department. The Data Warehouse project would not only improve the quality of information and access to it by various departments of the State Bank, it will also reduce the burden on banks that have to file multiple returns to different departments of the central bank. In this reference following areas were identified for implementation:

1. Credit Information Bureau (CIB)	6. Banking Sector
2. Balance of Payments & Exchange Rates	7. Money & Credit
3. Public Finance & Domestic Debt	8. External Debt
4. Economic Growth, Savings & Investments	9. Price Trends
5. Capital Markets	10. Socio-Economic

**Envisioned SBP Information Supply chain architecture:**



The above architecture with multiple external sources feed multiple SBP Operational Systems (often redundantly and sometimes inconsistently), which in turn are accessed by internal SBP users for analysis purposes. Implementation of enterprise data warehouse (EDW) along with an acquisition gateway will help rationalize the data supply chains from external sources to internal operational systems and on to the end users, facilitating analysis and enhancing decision quality throughout the organization.

**Current Status:**

Sr. #	Subject Areas	Activities in Progress and Deadline.	
1.	Credit Information Bureau (CIB)	-	Completed (under User Testing, will be live in 60 days)
2.	Balance of Payment (BOP)	-	- do -
3	Banking Sector	SRS* with the users for review	SDD** Dev. Will be completed by end October, 2003
4.	Capital Market	-do-	-do-
5	External Debt	-do-	-do-
6	Money & Credit	-do-	-do-
7	Price Trend	-do-	-do-
8	Socio-Economic	-do-	-do-
9	Public Finance and Domestic Debts	-do-	-do-
10	Economic Growth, Investment & Savings.	-do-	-do-

\*System Requirement Study

\*\*System Design Document

- e. **Networking and ISP:** All offices of the State Bank in Karachi are accessing the Internet, email and business applications across the installed network from the server room on the 6th floor of SBP. At present 1100 email accounts are in use by the employees of the State Bank.

The Wide Area Network (WAN) has been laid between the following Offices:

- The North Nazimabad office is connected to the Central Directorate via Radio at 128 Kbps
- The Press Building office is connected to the Central Directorate via Radio at 256 Kbps
- The Boulton Market office is connected to the Central Directorate via Radio at 128Kbps

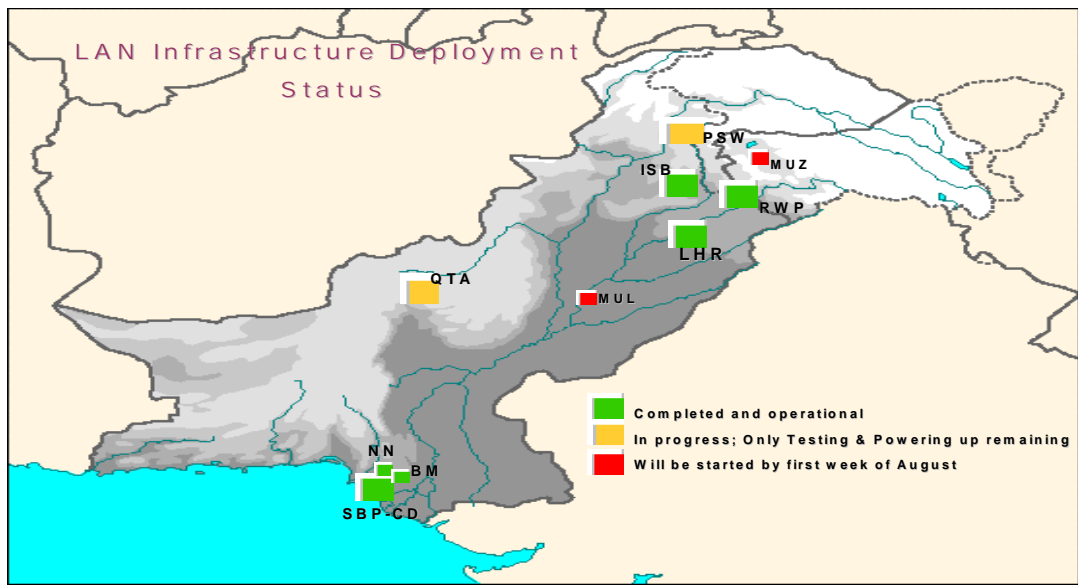
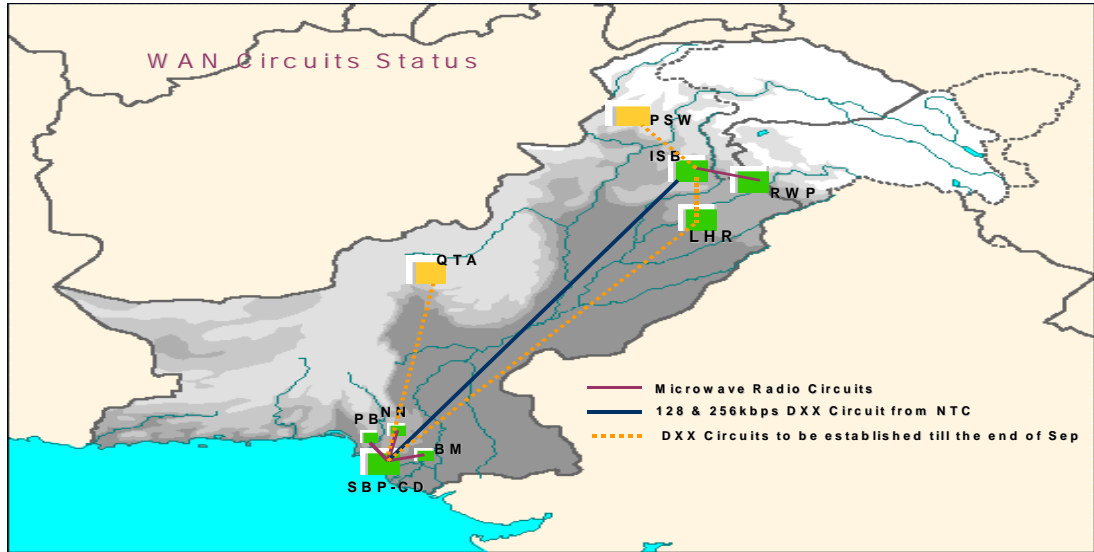
SBP has planned to deploy an internal ISP operation to handle internet connectivity, mail, web hosting and nationwide internet contact provision. This would provide a higher level of service to SBP and also ease management/administration while making efficient use of free bandwidth on the backup WAN links. The proposed ISP setup would allow us to meet the following goals:

- Reduce Internet connectivity costs for the entire SBP network.
- Reduce dependence on third party service providers.
- Ease of deploying and updating the SBP Website.
- Guarantee security in hosting the SBP Website.
- Secure e-mail connectivity for the SBP.

These goals would be achieved by deploying a high speed resilient nationwide WAN for SBP Automation Project. The dial-in-Access Servers at Karachi, Lahore and Islamabad will further allow SBP employees to telecommunicate and increase reach of SBP network. These dial-in-ports can be used outside of working hours to provide an added Internet connectivity facility to our users. Other components like training, implementation, soft wares (MS Office, Exchange Server, Back Office, Antivirus) and contingencies shall also form part of the project.

***The current status of LAN Infrastructure Deployment and WAN Circuits status can be viewed from the following charts:***





**f. Training:**

• MS-Office Training for over 1549 officers	Completed
• Specialized Technical Training has been imparted to 45 officers of Information System Department in the areas of Globus, Data Warehouse, System Administration (Unix), Networking from UAE, Singapore and Malaysia, South Africa and South Korea.	Completed
• Executive Training of 55 Executives on MS Completed Outwork and Internet Email Training.	Completed
• Microsoft PDC 2003 .net developers conference	Completed
• Workshop on effective meetings	Completed
• Oracle 9i application server release 2	In Progress
• Work Shop on Stress Management	Completed
• Novell NetWare 6.0	Completed
• Electronic Transaction Ordinance 2002	Completed
• Workshop on Multimedia Presentation	Completed
• Digital Graphics & Video editing with 3D animation	Completed
• ATM Fraud presentation & Security Management	Completed

These courses were attended by concerned teams / divisions

**OPERATIONAL SUPPORT FOR I.T. SERVICES**

The Information Systems Department provides services and solutions to improve and strengthen SBP's technology portfolio and identify future requirements. Besides this ISD focuses on safeguarding the information assets and relevant systems, critical to SBP, through its Security plans and policies. On completion of the IT project the entire responsibility for the maintenance and support of the system will be taken over by the ISD.

The ISD's role is not limited to automation within SBP, but also enhances and facilitates the growth of technology and its impact on the operational development of the entire financial industry.

**1. In House Software Development and Support**

Information Systems Department (ISD) provides departments and subsidiaries with easy-to-use, and reliable in-house developed software systems.

The projects successfully completed are:

- ◆ Money Market Computerized Reporting System
- ◆ Prize Bond Tracker
- ◆ MSD (Medical Services Department) Token System
- ◆ Library System (Kitabware)
- ◆ Pakistan Investment Bonds System (PIB):
- ◆ Equipment Information Recorder (EIR)
- ◆ Inward / Outward:
- ◆ Foreign Exchange Computerized Reporting System
- ◆ Credit Extension to Public Sector Enterprises
- ◆ Textile Financing Monitor:

- ◆ Local & Foreign Training Databases
- ◆ Call Accounting System

## 2. **Web Development**

- Revamping of website
- Revamping of E-Board
- Online Recruitment / Application Posting System

## 3. **Technical Consultancy & Support**

### **RTGS:**

- ◆ ISD continues to support payment system reform at SBP by supporting the RTGS project.
- ◆ ISD provided active technical support and helped define the technical architecture and design, networking support, security, performance, backup and disaster recovery facilities for the project.

### **CIB Online**

- ◆ Another project, which was made successful with the collaboration of ISD and the Pakistan Banking Association (PBA), is CIB (Credit Information Bureau) Online.

## 4. **IT Security:**

ISD has started work on various IT related Security aspects at State Bank. This covers:

- IT Risk Management
- IT Security Policies (drafting, implementing, monitoring, reevaluating and revising)
- Disaster Recovery Site
- Other security implementation and enhancement projects

## 5. **Customer Support:**

ISD is working towards improved customer support services and enhancement in quality & response time of these services

- Remote help desk facility and first Level Support of business applications like Globus, ERP etc.
- In-house maintenance of large number of PCs, Printers, Laptops etc.
- Remote desktop management is in progress

## 6. **Network Support**

This includes Critical Services monitoring, Routine Networking tasks, end user support, Network Management Station installations, LAN support and Support for Network development team deliverables. Besides this ISD provides Network support for various other related projects.

## 7. *Other Areas:*

- Countrywide Deployment and Up gradation of systems.
  - Web mail Facility
  - Digital Archiving
  - Restructuring / Networking of various floors at SBP building
  - ISD ANNEXE WING – Back up site
- Recruitment of IT professionals - 2003