Bangladesh Railway Reform Initiative
A Country wide IT Infrastructure for Bangladesh Railway

Bangladesh Railway Reform Project Bangladesh Railway (BR), the principle transportation agency of the country, is a Government–owned and Government–managed organization. BR serves more than 50 million passengers yearly and carries 4,000 metric tons of goods daily across 2,855 kilometres of railway tracks within Bangladesh. It does so with the help of a complex multi-departmental organization set-up and railway network under Zones & Divisions to carry its passenger and freight all over the country, conduct maintenance of Rolling Stock in Workshops, keep stock of spares and other materials in Stores Depot, and perform their overall gigantic business operations through various other offices.

BR has initiated an IT transformation project as a part of "Bangladesh Railway Reform Initiative". The objective of this project is to upgrade the existing Railway IT system by implementing latest hardware and networking equipment and rolling out an ERP based computerized system capable to handle complex real time transactions. An Implementation partner for the ERP software has already been selected.

BR has also three existing systems – CWCS (Carriage and Wagon Control System), BRASS (Bangladesh Railway Automated Support System) and CSRTS (Computerized Seat Reservation and Ticketing System), the central servers of which are located at Dhaka and their users are distributed at different offices and railway stations spread all over Bangladesh. These Systems have their

BR has also a Website maintained currently by a support partner in a hosted site. BR has a plan to upgrade/re-implement the website on its own environment with additional features.

BR has its existing e-Mail facility limited to a certain number of its senior employees only. It has a plan to upgrade the existing e-Mail system to cover a larger mass of Officers and Key Employees.

BR has also future plans to implement the Video Conferencing facilities at its ten strategic office locations to establish better communication amongst its different departments.

BR needed to establish a network immediately to cater the following systems already existing or proposed to be implemented in near future.

a) Oracle ERP R12 e-Business system

local servers also which are located at several BR offices and stations. These local servers are now loosely connected or in some cases not connected to their respective central servers. There is a need of connection of these local servers/ terminals of the above three systems to their respective central servers with a solid, sustainable and reliable network. Amongst the above three system CSRTS is being maintained by another Support partner.

"Bangladesh Railways has been looking for a CAPABLE local System Integrator for completing this large and complex project. With the professional workmanship of Spectrum we can proudly say that we have seen a great success" - name

b) CWCS
c) BRASS
d) CSRTS
e) BR Website (Future implementation)
f) E-Mail (Future implementation)
g) Video-conferencing (Future implementation)

BR has already a fiber optic network connecting all major railway stations and few of its primary office locations. This dark fiber optic backbone will be used and enhanced, wherever required, to establish the connectivity for the above seven systems.

BIG Project comes with Big Challenges

With the vision of Reform of Bangladesh Railway, the country wide IT infrastructure will make the main backbone of development of BR.

The IT infrastructure including Servers system, Networking system for LAN/MAN/WAN up to the user terminals, BR wanted to be transformed to IT enabled Organization with own Data Center and backbone SDH and IP network.

- The Core ERP solution should run on the platform
- The further development on IT system like Email, video communication, telecommunication, central web application, data management, file management, electronic file transfer etc. should get the basic infrastructure benefit at the same time.

All existing systems have to be hosted on own data center.

The whole BR will be set on a single platform to

Spectrum Played The Major Role

The vision of the project is to development of country wide IT infrastructure for BR to use of ERP solution.

• The basic role of Spectrum is to supply, installation, implementation and commissioning all equipment's and services as per scope of requirement and provides three (3) years maintenance and operational services.

As per major scope, spectrum has delivered Oracle SUN servers Storage systems, Cisco Core Network Systems, two Data Center at Dhaka and Rajshahi including construction of building floors and infrastructure of Tier II Standard Data Centers with Power Backup Systems and Sub-stations. SDH Network system for country wide WAN; MAN, and LAN for Zonal IP Networking with Cisco products including office Equipment for BR user as last mile solution.

• Spectrum has designed and implemented its Data Center infrastructure, IP and SDH Network based on country wide user requirement for ERP. Server Systems has been developed to deploy Oracle ERP suite.

As a part of implantation, Spectrum has constructed building floor for Data Center for two sites. We have also built Data infrastructure for Data Center, Power room,

be faster to work over the traditional work flow.

From the ERP to any other Software system on the base infrastructure BR will get more financial benefit and become a modernize sector of Bangladesh Govt.

NOC Room, Training room including corridor. For the Power, additional Sub-station has built including civil and equipment for both sites.

• Also we have implemented LAN and backup power systems to terminal users at offices horizontally and vertically.

In addition, spectrum has provided training to BR resources on Server, Network and Data Center Operation.

Spectrum Engineering Consortium Ltd. (SECL) is a top Systems Integrator in Bangladesh since 1995 and serving clients in more than 10 countries across the globe, in areas of business and IT systems consulting, software system implementation and support operations.