PHOENIX ASIA CORPORATION





CONSULTING
PROJECT MANAGEMENT
TECHNOLOGY APPLICATIONS
SPECIALIST RESOURCE PROVISION
TECHNOLOGY PARTNERSHIPS

simplifying projects

© Phoenix Asia Corporation



OUR SERVICES INCLUDE

- Bid Management, Tender Preparation and Risk Management;
- Project Initiation and Start-up;
- Feasibility Studies and Requirement Capture;
- System Design Services and Customized Software Development;
- Project Management and Technology Partnerships;
- Contract and Claims management
- Executive and Contractor Search & Placement services;
- Specialist Resourcing (EH&S, RAMS, EMC);
- Independent Software Assessment;
- Implementation Services including site management, installation, commissioning and training; and
- O&M Documentation.

Phoenix Asia at work for you

WHO WE ARE

Phoenix Asia is a <u>unique</u> combination of specialist Rail Systems Consultants focused on providing Project Services for Clients in a range of transportation industries as well as being a System Integrator delivering a range of Technology Solutions. We are located in Hong Kong, Malaysia and United Arab Emirates.

CONNECTING YOUR BUSINESS TO THE TECHNOLOGY RESOURCES YOU NEED

Phoenix Asia has considerable experience in an extensive range of Telecommunications, SCADA, Control and IT Systems gained in the Transportation market throughout Asia and the Middle East. We focus on Metro, Light Rail, Tram, Monorail, Freight, Heavy Rail and Airports.

Our total lifecycle project experience enables us to provide full range of project services and solutions to clients enabling rapid project start-up, control and management.

Our Systems experience enables us to find optimum solutions for clients across a range of technologies.



MARKET ENTRY STRATEGIES

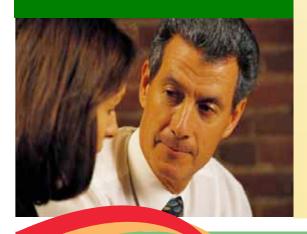
Whatever the industry and project type, we can help you with:

- Market Intelligence & Analysis
- Entry Strategy & Structures
- Strategic & Tactical Partnerships
- Fast Track Project Start Up
- Project Consultancy & Implementation



OUR PROJECT EXPERIENCE INCLUDES KEY ROLES IN:

- Malaysia Double Tracking North
- Malaysia KVMRT Project
- Hong Kong MTRC West Rail
- Hong Kong MTRC East Rail
- Hong Kong Airport Express
- Hong Kong New Airport
- Hong Kong MTRC Light Rail
- Taiwan High Speed Rail
- Thailand Bangkok Purple Line
- UAE Dubai Metro
- UAE Dubai, Al Sufouh Tram
- UAE Etihad Rail Stages 1 & 2
- UAE Palm Jumeirah Monorail
- Saudi Arabia, Mecca Metro
- UK LUL Northern Line
- UK Channel Tunnel Rail Link
- UK LUL Jubilee Line Extension
- China Guangzhou Metro
- Australia Sydney North West Metro
- India Delhi Metro





PROJECT MANAGEMENT

Our approach in the implementation of all projects ensures total customer satisfaction by pre-empting the issues that may impact on the success of the project. In particular, our recent experience on "fast track" projects shows that a more pro-active and prescriptive approach is required when early completion is essential. We do this by:

- Identifying and meeting the Customers Key Success Criteria;
- Understanding and complying with the Contract Requirements;
- Comprehensive forward planning and status reporting;
- Continuous and proactive Risk Management;
- Joint agreement on the Project Management Approach for the Project;
- Joint agreement on the Key Success Criteria for the project and how they can best be satisfied and exceeded;
- The development of a flexible approach that can successfully operate within the bounds of the Contract Conditions;
- The development of a clear understanding of the responsibilities and authority of all parties involved in delivering the Project;
- The promotion of continual and open dialogue and exchange of information between all parties involved to maintain a "no surprises" environment;
- The continual and joint assessment of the project risks and agreement on the actions required to minimise the impact of these;
- Ensuring that interface and integration aspects are resolved in accordance with the requirements of the Project Specification; and
- Ensuring that an end-to-end solution is provided through the detailed management of all aspects of the systems integration.

PROJECT SERVICES

We work with our Clients to ensure successful completion of the Project by providing the following services:

- Fast Track Project Start Up
- · Review and analysis of Operational Requirements;
- · Preparation of Detailed Design submissions;
- Provision of customised Software Development Services;
- Interface Management;
- Supplier and/or Subcontractor Selection and ongoing Management;
- Prototype and Trial System Testing;
- Preparation of Test Strategies and associated documents;
- · Supervision of Installation and Commissioning;
- Identification of Training Needs, preparation of Training Plans and delivery of Training;
- Preparation of Maintenance Plans;
- Preparation of Operation and Maintenance Manuals;
- Independent Software Audits; and
- Provision of ongoing Technical Support and Maintenance.



Rail Systems Experience

Phoenix Asia's key Rail Systems Project Services include:

- Feasibility Studies and Requirement Capture to assist clients in developing their projects parameters;
- System Design Services and Customized Software Development;
- Tender Preparation and Bid Management;
- Specialist Resourcing (EH&S, RAMS, EMC);
- System Procurement including preparation of Contract Strategy, Tender Designs, Specifications, Contract Documentation, Bid Assessment and Contractor Selection;
- Independent Software Assessment, Quality Assurance, EMC Assessment, System Assurance and Audits;
- Selection and Contract Management of project suppliers and sub-contractors;
- Implementation Services including site management, installation, commissioning, training and resource provision; and
- O&M Documentation.



Phoenix Asia has considerable experience in Rail Transportation, gained through key engagements in major projects around the world. These projects include:

Malaysia

- Double Tracking North Project
 - Tender Evaluation, Technical Advice and Project Management Advice for the Communications Systems for the Double Tracking Project from Rawang Ipo to Pedang Besar (approximately 330km with 31 stations).
- Klang Valley MRT Project
 - Design Management, System Integration and Installation Management Services for the Communications Systems (approximately 51km with 31 stations).
 - Provision of Computerised Maintenance Management System.

Hong Kong

- MTRC East Rail
 - Bid Preparation, System Design Authority, System Commissioning and Training for a new fully digital Multimedia Broadcast System that includes Video Distribution using DVI, Public Address and Control & Monitoring Systems.
 - Bid Preparation, System Design Authority, Equipment Supply, Installation Support, System Commissioning and Training for the upgrade of the Train Information System that collects and displays information from a wide range of on-train data sensors and includes Wired Train Bus Outstations, Input/Output Concentrators and Driver's Display Terminals.
- MTRC
 - Bid Preparation, System Design Authority, System Commissioning and Training for a new Multimedia Broadcast System for the Airport Express Trains, including Video & Audio Distribution, Media Centre and Content Management Systems.
 - Project Management of Integrated Communications System for the Airport Express railway serving the new Airport in Hong Kong
 consisting of a Transmission Backbone over fibre optic cable, Mobile Radio Systems, PABX Systems, Public Address Systems, CCTV
 Systems and Passenger Information Display Systems.
 - Part of a team of engineers responsible for the Design, Programming, Testing and Commissioning of an Environmental Control System distributed over 7 stations.
 - Provision of software lifecycle V&V analysis, documentation and audit for the extension of the MCS on the Kowloon Southern Loop Project.
- MTRC West Rail
 - Preparation of Systems Feasibility and detailed Technical Studies and subsequent Tender Documentation.
 - Design and Implementation of Test Programs for off site testing of the Main Control System and over 30 associated interfacing systems, prior to on site acceptance testing.
 - Remote Monitoring System for the West Rail Signalling System, including Client Liaison and managing the Design Process and Commissioning of the installed equipment.

Hong Kong

- MTRC Light Rail
 - Design Consultancy Services for refurbishment of Control Centre including Control Room layouts and integration of Communications and Control systems.
 - Preparation of Design and Implementation of Video Wall Systems for Control Centre.
 - Preparation of Systems Design Documentation and provision of general consultancy on Project Implementation on the KCRC Light Rail DB-2040 (Signalling) & DB-2010 (Communications) Projects.
 - Design and Implementation of software for the Traction Power SCADA system, including production of Design Documentation for all design phases, software and data base development.
 - Preparation of Tender System Design documentation during project start up of major Communications & Control and Signalling projects, including contributing to the writing of the Particular Specifications.
 - · Design, implementation and setting to work of data interface between Light Rail signalling system and PIDS enhancement works.
- Hong Kong International Airport
 - Independent Software Assessor for Automatic People Mover Extension to Sky Plaza.

Taiwan

- Taiwan High Speed Rail
 - Consultant to Toshiba Corporation for the provision of a fully integrated Maintenance Management Information System and Operational Planning Systems, including Timetable planning, Trainset Utilization planning and Trainset & Train Crew Rostering.
 - Provision of Software Quantum Assessment evaluation, in support of the Contractor Consortium, as software sizing expert for major claims.
 - Provision of Review, Verification & Validation of Software Design support for the Taiwan Shinkensen Corporation, prior to the detailed design submission.
 - Review of the software design package for the Maintenance Management System, including the Verification and Validation, using custom database tools.

Mainland China

- Guangzhou Metro Lines 4 & 5
 - Passenger Information & Communication System Project including PIDS and PA.

Thailand

- Bangkok Purple Line Metro
 - Tender Evaluation and Technical Advice for the Communications Systems (approximately 23km with 16 stations).

Middle East

- Dubai Metro Coordination of Rail Systems and Civils Interfaces
- Dubai Metro Management of E&M Construction Support Team
- Dubai Metro Independent Software Assessment for Tunnel Ventilation System and Environmental Control System.
- Saudi Arabia, Mecca Metro Technical Management and Test & Commissioning Witnessing Team for the Communications, SCADA and Platform Screen Doors Systems.



United Kingdom

- London Underground
 - Project Management of Design, Installation and Commissioning of the Northern Line Upgrade of Trackside and Trainborne
 Communications Systems, including Track to Train CCTV, Saloon (on-train) CCTV, Optical Fibre Backbone and SDH Transmission,
 Track to Train Data and UHF Trunked Radio.
 - Validation & Integration Services for the Jubilee Line Extension Main Control System at the Service Control Centre providing the status and control of Communications & Control Systems.
- Channel Tunnel Rail Link
 - Preparation and assessment of Tender Documentation for Transportation System Communications contracts, contract negotiation activities, resolution of contractual and technical matters and Communication System Licensing coordination and negotiation with UK and French regulatory bodies.
 - Management of Design Team and Subcontractor personnel and management of interfaces.
 - Assisting the Channel Tunnel Operator (Eurotunnel) in the preparation, operation and commissioning of the Control and Communications Systems prior to bringing the Transportation system into final operation.

Australia

- Sydney North West Metro Project
 - Technical Advisor, Design Integration and Coordination for the Control & Communications System for the Project (approximately 34km with 17 stations), during the Feasibility Design Stage.

<u>India</u>

- Delhi Metro
 - Consultancy Services for assisting Delhi Metro personnel in preparation of Systems Specifications, Tender Document preparation and Supplier Bid analysis.

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