

**Terms of Reference for the Hiring of Project Team to
Implement Enterprise Resource Planning System for
Pakistan Railways**



Ministry of Railways

3rd Floor, Block D Pak. Secretariat Islamabad, Pakistan

	Pakistan Railway	Version: 1.0
TITLE: The hiring of Project Team to Implement Enterprise Resource Planning System for Pakistan Railways		

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Terms of References

Project Title: Implement Enterprise Resource Planning System for Pakistan Railways

1. Background

Information and communication technology (ICT) has a proven track record of contributing to the economic development of many countries in many ways. ICT is transforming every aspect of the 21st century: the economy, the enterprises, the society, business and trade, government, the health sector, and so the railways.

Pakistan Railways is the national, state-owned railway company of Pakistan Founded in 1861. It owns 7,791 kilometers (4,841 miles) of track across Pakistan from Torkham to Karachi and operates passage and freight services. PR provides an important mode of Transportation in the farthest corners of the country and brings them closer for business, sightseeing, pilgrimage and education. It has been a great integrating force and forms the lifeline of the country by catering to its needs for large scale movement of people and freight.

Digital transformation is disrupting every industry including Railways all over the world. Through digital transformation Railways all over the world are not only making revenue but providing safer, cheap and comfortable travelling options to its passengers. PR has adopted the technological transformation with the introduction of E-Ticketing. Pakistan Railway has developed so far Payroll System, Inventory Management System, Freight System, Land Record Management System and small reporting modules but still, PR is far behind as an advanced Railway managing resources through IT systems.

Upgradation of existing manual procedures and operations is a dire need of PR for better visibility and strategic decisions. Railway after ML-1 will be difficult to operate with existing manual process and procedures. For real-time visibility across the PR with 24/7 access

and ability to understand, monitor and control various organizational systems with unprecedented access to all facets of PR operations an ERP system is required.

PR has started an initiative to digitize two core operations i.e. Finance and Land Directorate after getting approval from competent authority but with the introduction of the ML-1 project, KCR as well as to align PR with contemporary railways automation is dire need. In house capacity to handle such project is not enough to complete the task beside to look after the daily IT operations within Railways. A dedicated team is required to complete the task within scope, time and budget as per the need of PR.

Therefore, Pakistan Railway needs a specific skilled team to carry out the initiative of ERP implementation in PR by considerate a need assessment by studying the existing SOPs and operations. Qualified skilled individuals are invited to apply and to demonstrate their similar experience to PR.

Details of required roles are:

Project Director PPS-11

2 x Deputy Director IT PPS-09

1 x Deputy Director Finance PPS-09

2. Purpose

The purpose of this assignment is to implement the preferred Enterprise Resource Planning system for Pakistan Railways.

3. Objective

The specific objectives of this assignment are to:

- a. Revise the scope of existing PC-1 of existing project FIS/MIS.
- b. Conduct detailed and comprehensive PR-wide IT systems' functional needs assessment and advice on suitable solutions.
- c. Develop and implement, in a phased approach, the Enterprise Resource Planning and other supporting systems and functionalities based on the comprehensive needs assessment.

- d. The Enterprise Resource Planning solution should integrate all independent software modules that are supporting the operation of Pakistan Railway.
- e. Support in the process of data capture from manual records as well as data migration from old to new systems.
- f. Oversee necessary IT support during and after systems deployment, till functional stability is attained.

4. Scope of work:

Project Director must understand and go through the existing railway's operations and process. He/she should be enough capable to analyze the system. Project Director must be an expert and experienced in implementing ERP solutions. With his/her eagle eye Project Director should spot the imperfections, and his/her generosity of spirit he would tell us all of them.

The detailed scope of work from the **Project Team** will be the following:

- a. Study the existing PMU PC-1 and will get the approval of revised PC-1 with the help of Planning Directorate.
- b. Conduct detailed and comprehensive PR-wide IT systems' functional needs assessment and advice on suitable solutions.
- c. Review the organization-wide to-be process maps. Conduct interviews with processes owners and end users on IT systems functional requirements.
- d. Document overall IT needs assessment and preferred solution as well as approach for development and deployment.
- e. Advice and recommend any suitable add-on applications that would be useful for the specific needs of Pakistan Railways.
- f. Carryout the process of hiring the firm for the development/implementation of ERP.
- g. Overview the process to develop the required systems' capabilities in a phased approach as per the approved project plan. Plan Test, train, and deploy the new systems; and Monitor the systems' operational effectiveness and make any necessary adjustments.

- h. Support PR operational staff to effectively capture relevant data from the manual record; and Support in the data migration processes from old systems to newly deployed systems.
- i. Support PR IT Staff as well as key users to acquire knowledge and develop the necessary skills to utilise the new systems.
- j. Apprise the higher management about the project position time to time.
- k. Complete the project in all aspects mentioned in the PC-1.
- l. Will oversee the complete project life cycle and responsible to handover the project after UAT.
- m. Will responsible to complete the project within time, cost and scope.
- n. Will responsible to take decision where BRP mandatory in order to improve the efficiency.
- o. Communicate project needs regularly and effectively to management.

5. Timelines

The assignment is expected to last no more than 232 weeks within which all the requirements must be completed, validated, approved and accepted. Initial contract will be of 2 years.

6. Job Descriptions

Designation	Start Salary	Description
Project Director (PPS 11- Equivalent BPS- 21)	455,000/ month	Qualification: 18 Years of education. Must have a Master Degree in Computer Science or MBA or ACCA or ACMA or any other relevant degree from universities/institutes recognized by HEC and must be certified/qualified and have a valid PMP certificate.
		Experience: Minimum 15 years relevant post qualification experience with at least 2 full corporate level ERP implementations. Must have executed the I.T. based projects and have considerable experience of any renowned software pertaining to FIS/MIS.
		Skills Required:
		Project Director will be expected to have a sound background in the execution of similar projects, he/she will be in charge of the project and will be responsible for the successful execution of the project. He/she shall draft project procurement documentation in line with guidelines issued by PPRA where applicable. Project Director shall implement quality standards during execution and ensure project schedule and cost compliance. He/she will also review project reports and documentation submitted by project consultants. Project Director shall report to SR/CM and CEO/SR GM on all project related matters. PD shall be well versed with project planning and monitoring mechanisms using project management tools.
		Excellent communication/ presentation skills with fluency in written and spoken English.
		Ability to work under pressure and to resolve problems in an efficient manner
		Ability to lead a and work effectively as part of a team
		Strong interpersonal skills and ability to work effectively at all levels in a collaborative team environment
		Completed at least 2 ERP projects in his or her portfolio including 1 in any public sector organization within Pakistan.
		Applicants with prior ERP Implementation background are expected to possess below additional skills:
		<ul style="list-style-type: none"> o Participate in the implementation as a subject matter expert and represent customer's business requirements.
		Must be able to produce specific examples of his or her work product (e.g. business requirements, design, output, and training plans, etc.)
		Good understanding of ERP implementation life cycle.
		Job Descriptions:
		Revision of Existing PC-1. Prepare project procurement plans and documentation and execute procurement procedures
Closely interacts with project consulting firm during the project design phase to ensure the incorporation of project requirements.		
Ensures high quality standards during development/implementation and monitor the performance of the consulting firm.		
Continuous monitoring of project milestones and deliverables for proper utilization of funds in-line with project scope, objectives and rules & regulations		
Implement the project plan as devised		

	Overall responsible for project management, success/ failure and execution
	Where required help management and hired vendor on business process reengineering.
	Perform milestone reviews with higher management and liaison with external organizations where necessary.
	Any other duty assigned by the higher management.
	Maximum age: 58 Years.

Designation	Start Salary	Description
2 x Deputy Director IT (PPS 09-Equivalent BPS-20)	175,000/ month	Qualification: 18 Years of education. Must have a Bachelor's Degree in Computer Science or a relevant Master's degree from universities/institutes recognized by HEC. Certification in project management shall be preferred.
		Experience: Minimum 7 years relevant post qualification experience. Must have executed the I.T. based projects for well-known corporate organizations. Experience of any renowned software pertaining to FIS/MIS implementation will be preferred.
		Skills Required:
		Deputy Director IT will be expected to have a sound background in the execution of similar projects, he/she will be in charge of the IT matters of the project and will be responsible for the successful execution of the project. Responsible to look after software development, customization, integration, deployment and testing of the project. Procurement/distribution of necessary hardware for the project. Deputy Director IT shall report to Project Director on all project related matters. Deputy Project Director shall be well versed with project planning and monitoring mechanisms using project management tools. Complete understanding of implementation roadmap and ERP based product implementation. Hands on experience in building UAT test cases and perform functional QA. Able to draft/ understand/ technical documents like Functional Requirements Specification and Statement of Work. Working on the QA side and PPRA rules are plus.
		Excellent communication/ presentation skills with fluency in written and spoken English.
		Ability to work under pressure and to resolve problems in an efficient manner
		Ability to lead a and work effectively as part of a team
		Strong interpersonal skills and ability to work effectively at all levels in a collaborative team environment
		Completed at least 1 ERP projects in his or her portfolio. Applicants with prior ERP Implementation background are expected to possess below additional skills:
		<ul style="list-style-type: none"> o Participate in the implementation as an implementation engineer. o Must be able to produce specific examples of his or her work product (e.g. business requirements, design, output, and training plans, etc.)
Job Descriptions:		
	Work closely with vendor to ensure appropriate integration, configuration and deployment of ERP application.	

	Review modules specifications provided, make recommendations as appropriate.
	Work closely with the vendor on prioritization and clarity of customize requests.
	Ensure timely delivery of assigned tasks.
	Deployment and distribution of hardware recommended by the vendor.
	Troubleshooting a problem during implementation phase.
	Conduct User Acceptance Testing (UAT).
	Perform milestone reviews with higher management and liaison with external organizations where necessary.
	Any other duty assigned by the Deputy Project Director.
	Maximum age: 55 Years.

Designation	Start Salary	Description
Deputy Director Finance (PPS 09-Equivalent BPS-19)	175,000/ month	Qualification: 16 Years of education. Must have a Master's Degree in Commerce from universities/institutes recognized by HEC. Certification in project management shall be preferred.
		Experience: Minimum 7 years relevant post qualification experience. Must have executed the I.T. based financial projects for well-known corporate organizations. Experience of any renowned software pertaining to FIS/MIS implementation will be preferred.
		Skills Required:
		Support the Director of Finance in all aspects of department operations. Provide direction, leadership, and support to the accounting team. Maintain, prepare, inspect, and deliver regular financial reports. Deputy Director Finance has sound knowledge of PPRA rules and Tax matters in Government Department.
		Excellent communication/ presentation skills with fluency in written and spoken English.
		Ability to work under pressure and to resolve problems in an efficient manner
		Ability to lead and work effectively as part of a team
		Strong interpersonal skills and ability to work effectively at all levels in a collaborative team environment
		Job Descriptions:
		TO assist Director finance in accounting and finance matters of the project, including petty funds and field office finance, accounting and administrative activities
Maintains accurate and timely financial information as per IFRS standards and ensures cost control of all tasks and assignments to achieve the project objectives		

	Prepares expenditure analysis, fund requests for overall project as per requirement of MoR and monitors employee time keeping and payroll payment procedures
	Reviews all vouchers prepared by the finance officer (disbursement, receipt and general journal vouchers) for expenditures and ensures that expenses are reasonable, allowable and allocable to the project
	Prepares, reviews and submits monthly financial reports to the MoR Management and Planning Commission
	Supervises and provides leadership, mentoring and training to the field office finance officers
	Any other duty assigned by the Project Director.
	Maximum age: 50 Years.