GUIDELINES FOR TECHNICAL ARCHITECTURE

PAKISTAN MICROFINANCE INVESTMENT COMPANY
21st Floor, Ufone Tower, 55 C, Main Jinnah Avenue, Blue Area, Islamabad 44000, Pakistan ; Phone: (+92-51) 8487820-45 ;
Email Address: info@pmic.pk

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TECHNICAL GUIDELINES

1. TECHNICAL ARCHITECTURE OF THE ERP

I. The solution provider shall validate PMIC's existing technical infrastructure and recommend an appropriate solution to meet PMIC's business requirements in the implementation of the ERP system.

II. The solution provider shall also monitor the archiving strategy, control and security aspects during implementation of the at PMIC.

Ill. The solution provider will then recommend the IT architecture design including hardware, and operating system for the implementation keeping in view the geographical spread & complexity of the implementation, communication infrastructure available in the country & at PMIC and Data Archival & Storage requirements.

IV. The ERP should have a modular architecture - separate modules of the system should run independently.

V. The ERP should be platform independent.

VI. The ERP should be available in browser-based environment.

VII. The architecture shall be platform independent should support open standards operating system with option of running on multiple App / Web Servers / Database tiers.

VIII. The solution provider shall assist in providing detailed specifications for the sizing of hardware to be procured by PMIC for the ERP implementation. The solution provider shall also validate the hardware configuration to be procured by PMIC.

IX. The system should have an import and export functionality to import and export transaction data and static data

X. The architecture shall provide support for Web-Services and messaging based interfacing

XI. The system should allow for extraction of all data from the system

XII. Integration/ Data Migration should be facilitated across platforms

XIII. The system should interface with mail servers to generate notifications and e-mails

2. EASE OF USE

I. Quick and easy navigation

II. System should provide print facility i.e. print to file, print screen, print to printer etc.

Ill. System should have standard menu structure

3. USER INTERFACE

I. System should support GUI

II. On-line help for important features of the system should be available Ill. The system should provide a consistent and user-friendly interface

IV. Online/ In build Web Help Facility and FAQ's

V. Availability of documentation i.e. User Manuals, System management manuals, technical manual, training manuals

4. ERROR LOGS

I. Application must handle and generate error message and logs

II. The error logs should be descriptive enough to allow traceability of the data / function error to the most granular level.

Ill. Error Logs can be extracted.

5. SECURITY MANAGEMENT

I. System should provide privilege for creation, deletion and modification of users, upgrades of users and data access rights The system should permit access only through password verification and all user IDs should be unique

II. There should be a maker-checker facility for key functions in the system.

Ill. The system should have the ability to generate a detailed audit trail on a daily basis for the following minimum features:

a) Attempted unauthorized logins

b) Time of login and logout Change of passwords Change of parameters

IV. The architecture shall provide with password encryption mechanism that supports encryption - Application level

V. Password, DB Password for DB, Users etc. Preferably with following features.

a) Minimum Six (06) length alphanumeric
b) Password history to prevent reuse of password for the particular user data defined password expiry period
c) The architecture shall support password encryption from client to server
d) Automatic user disabling /account lock after three successive erroneous tries
e) The system should have the ability to force password changes every user defined/ configurable time period.

VI. The architecture shall support two factor authentication, SSO and LDAP Authentication

VII. The architecture shall provide mechanism to allow single login session of any authenticated user

VIII. User should be logged out when the session expires.

a) The timeout period should be configurable by group/ type of users.

6. USER MANAGEMENT

I. The system should allow users to be controlled by a specific Administrator
II. Automatic user time-out on inactivity for a predefined time duration
Ill. The system should have the ability to provide or restrict access privileges based upo hierarchy and multiple criteria

7. AUDIT TRAIL

The system should maintain the audit trail with details like WHAT, WHO and WHEN. The audit trail should be at the granular level and track the user across each activity.

8. DATA ARCHIVAL

I. System should support archiving of data that are beyond a specified time horizon.
II. System should support data retrieval - from the specified archives. The archival and retrieval programs should facilitate easier analysis of old data.

9. BACKUP AND RECOVERY

I. The system should allow secured back-up process.
Ill. The system should also have recovery features in case of system failures Back-up should be possible in external media (CD, tapes, DVD) for off-site storage
IV. Export of data to secondary storage device should be supported by the system without down-time.