Software Development Policy and Procedure

Policy Statement

This policy is concerned with the development of software applications within the premises of Jubilee Life Insurance company. In an organization, the software is developed and maintained for business users which aids them to perform various data processing, management, and reporting functions. A structured software development framework/methodology must be adopted across the organization to produce robust and error-free software within the determining cost, time, schedule, and quality constraints.

The objective of this document is to propose such a development mechanism which can be referred to as a company standard for software development in Jubilee Life Insurance company.

Prerequisite

> This document should be read in conjunction with:
- IT Organization, Structure and Governance Procedure
- Information Security Policies, including:
    - Communications Security
    - Operations Security

Responsibilities

- Group Head Digital, Technology and Strategic Planning
- Unit Head / Head of Departments (Business Heads)
- IT Sectional Manager
- SOC

Procedure:

The development process will be comprised of 7 stages,

1. Development request and approval
2. Project initiation
3. System analysis
4. Development
5. Testing
6. Implementation
7. Post Implementation review

Step	Description	Responsibility
1. Development request and approval		
1.	Request for any new "Application/Module Development or modification" will be initiated by the user via Requirement Management System (RMS). Business Requirement Document (BRD) mentioning the bare minimum functionalities of the required application should be uploaded in RMS.	Users
2.	User's line manager/ Business Heads will analyze the need for the development and approve/reject the request in the Requirement Management System (RMS).	Line manager/ Business Heads
3.	Technical assessment for nature of development along with time and cost (wherever applicable) factor should be evaluated along with effects on the existing infrastructure and systems.	Development Team / IT Department
4.	Sectional IT Manager will decide whether to accept/reject development task.	Sectional IT Manager

2. Project Initiation		
1.	Project Team shall be formed (if required) consisting of the following members: • Project Manager • Development team from IT. • Coordinator from the respective business unit.	Sectional IT Manager / Business Head
2.	**System Analysis**	
1.	With a collaborative effort of business representative, technical team lead, and project manager, a "Requirement Analysis and System Design (RA&SD)" document will be prepared, focusing on all functional and non-functional requirements of the required system.	Business User Project Manager Technical team lead
2.	Adequate security and control features that are required in the system (as per SOC policies) shall be incorporated in (RA&SD) document.	SOC
3.	Requirement Analysis and System Design (RASD) document shall be formally approved by the relevant Business Head. Any conflicts arising shall be resolved and user/business signoffs will be obtained. The scope of the project activity will be froze	Business Heads/ Project Manager
4.	Additional hardware/software required for the project shall be arranged as per feasibility decided.	Project Manager
5.	Software testing plan and testing scenarios with expected output, will be listed by business user in UAT document.	Business User
6.	Software Feasibility and Risk analysis report will be presented to technology team by project manager to identify potential risk areas that could impact the existing infrastructure or systems.	Team Leads / SOC / Sectional IT Managers / Group Head Digital, Technology and Strategic Planning/

4. System Development		
1.	Technical team will decide appropriate development platform according to the system requirements and ensure that the development of the system shall be carried out using the Secure Coding Standards.	Technical Team (Developers)
2.	Database structure shall be reviewed with DBAs to ensure that it is built as required to fulfil all the business user needs. The review shall cover the following: • Database indexes. • Fields constraints and data structures in the Database. • Edit or validation checks.	/ DBAs / Technical Team (Developers)
3.	Technical documentation of developed units/blocks will be maintained including any issues/error encountered during development.	Technical Team (Developers)
4.	Code and Unit testing of developed system shall be performed	/Technical Team Lead
5.	Unit test results shall be compared with expected test results mentioned in UAT document. Testing cycles will be repeated after code changes till expected results are	Technical Team (Developers)
6.	The Application/Module shall be integrated after the successful unit testing.	Technical Team (Developers)
5. System Testing		
1.	Test systems shall be made available with application installed, for User acceptance testing (UAT).	Project Manager / System Analyst Team (Functional Team) /Technical Team

2.	Adequate training of the system should be provided to pilot users and proper user manuals should be prepared for training. Training material will be uploaded on RMS. Portal.	Project Manager / System Analyst Team (Functional Team)
3.	Pilot users will perform thorough system testing and go through with all testing scenarios mentioned in testing plan and update their response in UAT document.	Project Manager/ Business User
4.	The actual output generated by UAT shall be compared against the expected output. If deviations from the expected results are discovered, then these shall be reported to the Project Manager. The root cause of the variation shall be identified, and the rectified system shall be retested.	Users / Business Users / Power Users / Project Manager
5.	UAT results shall be documented and signoffs/ formal comments shall be obtained from business users in the RMS portal.	Technical Team leads / Project Manager/ Users
6.	Test results and evaluation reports shall be prepared. This document shall cover the following: • Results of all system acceptance tests. • Deviations from the expected results. • Responsibilities to be assigned to resolve issues during acceptance tests. • Security considerations. • Recommendations for improvements, if required.	Project Manager/ Business Users / Power Users
6. System Implementation		
1.	System/data conversion shall be performed if required to move the application into the LIVE environment.	Project Manager/ Users/ Business Users / Power Users /Technical Team (Developers)

2.	System shall be rolled out as per application deployment plan. A full system test shall be conducted in the LIVE environment. This shall also involve business users as a part of final system testing.	Project Manager/ Users
3.	All daily activities necessary to operate the system, including monitoring the system's performance to ensure adequate response time, system security, and problem-free operation shall be performed.	Project Manager/ Users Users/ Business Users / Power Users /Technical Team Leads / Developers

7. Post Implementation Review

1.	A post-implementation review shall be carried out including the following: • System performance • Transaction volumes • Inefficient program statements and modules • Memory paging and CPU utilization • Inefficient Database calls, routines, structure, and commands • Availability of the system • Discrepancies of the system • Potential system modifications • Security of the environment	IT Sectional Manager / Application Administrator / Developer