Software Development LifeCycle

Version 8

REZOLVE.ai

Document Information

Nameofthedocument	SDLC Policy
Releasedate	19-Dec-2018
Ownedby	Boopathi
Governedby	Mr.Udaya Bhaskar Reddy

Revision History

Version No	Version Date	Details of Change
1	13-Nov-2018	InitiallyDrafted
2	10-Dec-2018	Final
3	15-Dec-2020	Reviewed and no change
4	03-Dec-2021	Reviewed and no change
5	04-Mar-2022	Updated Document Information post Subodh'sExit
6	03-Mar-2023	Reviewed and no change
7	24-Sep-2024	Updated Document Information
8	23-Mar-2025	Updated the document details as per migration from ISO 27001:2013 to ISO27001:2022

Reviewerand Approver

Name	Title	Comments	Date
Mr.Udaya Bhaskar Reddy	Co-Founder&CTO	Approved	24-Mar-2025

Contents

Purpose

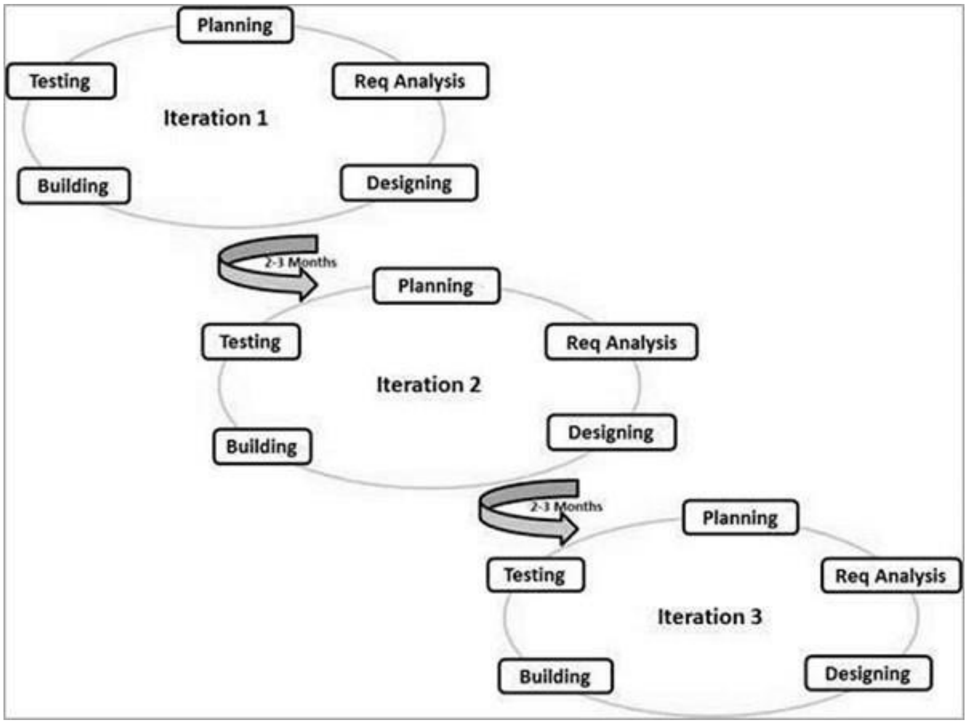
A generic model of SDLC is followed by our Development team for development of applications. This model is a combination of iterative and incremental process models with focus on process adaptability and customer satisfaction by rapid delivery of a working software product. The product is broken into small incremental builds. These builds are provided in iterations.

Following procedure is followed by Cross functional teams on every iteration:

- Planning
- Requirements Analysis
- Designing
- Coding
- Unit Testing
- User Acceptance Testing.

At the end of the iteration, a working product is displayed to the customer and important stakeholders.

The process is displayed by the following diagram.



Processes

Patch Release

Patch releases use the SUP Jira project and its associated workflow for support issues reported by users.

Sprint releases

Sprint based development work use the PRD and DRI projects primarily for the software development work and releases.

Kanban releases

Regression bugs are usually following kanban processes and releases periodically based on the urgency and impact. These are clubbed together and released. The items are tracked in Jira projects.

Development Process

Planning

Planning is an iterative process to be carried out at every phase of SDLC. Detailed investigation of the system is carried out in accordance with the objectives of the proposed system. This involves detailed study of various operations performed by a system and their relationships within and outside the system.

Following steps are used to draw the exact boundary of the new system under consideration:

- Keeping in view the problems and requirements
- Work out the pros and cons including areas of the system

All the data and the findings are documented in the form of detailed data flow diagrams (DFDs), data dictionary, logical data structures, and miniature specifications. It includes planning for the new system, analysis of requirement, system constraints, functions, and proposed system architecture, prototype of the proposed system and its analysis.

The goal is to satisfy the current needs of the user and retain scope for future growth within organizational constraints. The result of this process is a logical system design. System analysis is an iterative process that continues until a preferred and acceptable solution emerges.

Requirements Analysis

Requirement analysis is carried out by the Business Team. Requirements analysis includes three types of activities:

- Eliciting Requirements (e.g. the project charter or definition), business process documentation, and stakeholder interviews. This is sometimes also called requirements gathering or requirements discovery.
- Analyzing Requirements determining whether the stated requirements are clear, complete, consistent, and unambiguous, and resolving any apparent conflicts.
- Recording Requirements are documented in various forms, usually including a summary list and may include natural-language documents, use cases, user stories and process specifications.

Designing

Based on the user requirements and the detailed analysis of the required system, the new system is designed. This is the most crucial phase in the development of a system. The functional system design arrived at as a result of system analysis is converted into a technical system design. In the design phase, the SDLC process continues to move from the what questions of the analysis phase to the how. The functional design produced during the analysis is turned into a technical design - a detailed description of what is needed to solve the original problem. Input, output, databases, forms, codification schemes and processing specifications are drawn up in detail. In the design stage, the programming language and the hardware and software platform in which the new system will run are also decided. Data structure, control process, equipment source, workload and limitation of the system, Interface, documentation, training, procedures of using the system, taking backups, and staffing requirements are decided at this stage.

Various tools and techniques like Flowchart, Data flow diagram (DFD), Data dictionary, Structured English, Decision table and Decision tree are used for describing the system design of the system.

Coding

This is the programming phase in which the programmer converts the program specifications into computer instructions, called programs. It is an important stage where the defined procedures are transformed into control specifications by the help of a computer language. The programs coordinate the data movements and control the entire process in a system. The whole program is divided into different modules and these modules are developed as small units of the total program. This helps in fast development, maintenance and future changes, if required. Programming tools compilers, interpreters and language and frameworks are used for coding with respect to the type of application.

Unit Testing

Before actually implementing the new system into operations, a test run of the system is done removing all the bugs, if any. It is an important phase of a successful system. The output of the test run should match the expected results.

Tests are run in the following levels:

- Program test
- System test

Program test

When the programs have been coded and compiled and brought to working conditions, they are individually tested with the prepared test data. All verification and validation are checked and any undesirable happenings are noted and debugged (error corrected).

System Test
After carrying out the program test for each of the programs of the system and errors removed, then system test is done. At this stage, the test is done on actual data. The complete system is executed on the actual data. At each stage of the execution, the results or output of the system are analyzed. During the result analysis, it may be found that the outputs are not matching the expected output of the system. In such case, the errors in the programs are identified and are fixed and further tested for the expected output. All independent modules are brought together and all the interfaces are tested between multiple modules. The complete set of software is tested to establish that all modules work together correctly as an application or system or package.

User Acceptance Testing
After Unit Testing by the development team, User Acceptance Test (UAT) are conducted. UAT are performed in two phases:

- Alpha Testing
- Beta Testing

Alpha Testing
The business team conducts the user acceptance test in-house. During the UAT, the users conduct various types of tests including the following:

- Are Desired outputs generated
- Time duration taken by the application to perform a task
- Report Formats
- Stress Testing
- Negative Testing

The Alpha users provide their feedback on the application to the developers and changes are made as required.

Beta Testing
After in-house Alpha Testing, the software is tested in the "real world" by the intended audience. The Beta Customers actually use the application and testing is an ongoing process. The experiences of the early users are forwarded back to the developers who make final changes before releasing the software commercially.

NOTE - Next review cycle for this policy is March-2026. Management can review policy anytime and can make changes depending on the situation.

- All documents related to policies and procedures any reference to Actionable Science is as good as Rezolve.ai