

Types of Documents in an IT industry

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1. Project Vision Document

1.1. Definition

A vision document defines the high-level scope and purpose of a product, or project. A clear statement of the problem, proposed solution, and the high-level features of a product helps establish expectations and reduce risks.

It uses techniques like Joint Application Design (JAD), SWOT Analysis and GAP Analysis.

1.2. Purpose

The key purpose of a Project Vision Document is to understand the scope and purpose of the project.

1.3. SDLC Stage

Project Vision Document is prepared at the Initial stage of Software Development Life Cycle.

1.4. Prepared By

Project Vision Document is prepared by a Business Analyst.

1.5. Prepared For

Project Vision Document is prepared for the Technical Team and Stakeholders.

1.6. Elements

- Introduction
 - Purpose of Document
 - Scope of Document
 - Definitions, Acronyms, Abbreviations
 - References
 - Overview
- Positioning
 - Business opportunity
 - Problem Statement
 - Product Position Statement
- Stakeholder and User descriptions
 - Market demographics
 - Stakeholder summary
 - User summary
 - User environment
 - Stakeholder profile and needs
 - User profile and needs
 - Alternatives and competition
- Product Overview
 - Product perspective
 - Product functions
 - Assumptions and dependencies
 - Cost and pricing
 - Licensing and installation
- Constraints
- Product Requirements
 - System requirements
 - Performance requirements
 - Environmental requirements
- Documentation requirements
 - Release notes, read me file
 - Online help and Installation guide

2. Project Plan

2.1. Definition

After the Project Vision Document is the Project Plan. A project plan is a centralised reference document that outlines your planned approach to the project.

2.2. Purpose

The key purpose of a Project Plan is to understand the individual roles and provide a clear project timeline.

2.3. SDLC Stage

Project Plan is prepared at the Initiation phase of Software Development Life Cycle.

2.4. Prepared By

Project Plan is prepared by a Project Manager.

2.5. Prepared For

Project Plan is prepared for the Technical Team, Clients and Stakeholders.

2.6. Elements

- 1) Introduction
 - a) Purpose
 - b) Alternatives
 - c) Project Approach
- 2) Goals and Objectives
 - a) Business Goals and Objectives
 - b) Project Goals and Objectives
- 3) Scope
 - a) Scope Definition
 - b) Budget
 - c) Risk Assessment
 - d) Milestones
- 4) Assumptions and Constraints
- 5) Project Management Approach
 - a) Project Timeline
 - b) Project Roles and Responsibilities
 - c) Issue Management
 - d) Communication Plan

3. Product Requirement Document

3.1. Definition

A product requirements document (PRD) defines the requirements of a particular product, including the product's purpose, features, functionality, and behaviour. It serves as a guide for business and technical teams to help build, launch, or market the product.

It is written to allow people to understand what a product should do. It does not focus on how the product will do it.

PRD is created from a user's point-of-view.

3.2. Purpose

The main purpose of a PRD is to get all the stakeholders aligned and create a shared understanding.

Successfully delivering a product or a feature requires the collaboration of multiple teams, including engineering, design, sales, support, and marketing. A PRD sets the course for the release, keeping all contributors in sync and ensuring that you deliver what your customers want, on time.

A PRD is the starting point, based on which other teams will plan their own actions and create relevant artefacts, including functional specifications, design documents, wireframes, mockups, and so on.

3.3. SDLC Stage

Product Requirement Document is prepared at the Planning phase of Software Development Life Cycle.

3.4. Prepared By

The Product Requirement Document is prepared by the Product Manager.

3.5. Prepared For

Product Requirement Document is prepared for the Stakeholders and Technical Team.

3.6. Elements

- 1) Purpose and Scope
- 2) Stakeholder identification
- 3) Market assessment and Target demographics
- 4) Product overview and Use cases
- 5) Requirements,
 - a) functional requirements (e.g. what a product should do)
 - b) usability requirements
 - c) technical requirements (e.g. security, network, platform, integration, client)
 - d) environmental requirements
 - e) support requirements
 - f) interaction requirements (e.g. how the product should work with other systems)
- 6) Assumptions
- 7) Constraints
- 8) Dependencies
- 9) High level workflow plans, timelines and milestones (more detail is defined through a project plan)
- 10) Evaluation plan and performance metrics

4. Business Requirement Document

4.1. Definition

A business requirements document describes the business solution for a project (i.e., what a new or updated product, service or result should do), including the user's needs and expectations, the purpose behind this solution, and any high-level constraints that could impact a successful deployment.

A requirements document defines what is needed from the product. It states the product's purpose and what it must achieve. It does not define how to deliver or build what is needed.

In simpler terms, BRD indicates what the business wants to achieve.

BRD answers the WHY part i.e. Why are the requirements being prepared?

4.2. Purpose

BRD provides guidelines for the stakeholders to make decisions regarding project priorities, design, and structure to ensure the project remains aligned with the overall goals of the business.

4.3. SDLC Stage

Business Requirement Document is prepared at the Planning stage of Software Development Life Cycle.

4.4. Prepared By

Business Requirement Document is prepared by Client and Business Analyst.

4.5. Prepared For

Business Requirement Document is prepared for the Stakeholders.

4.6. Elements

- A summary statement
- Project objectives
- Needs statement
- Project scope
- Financial statements
- Functional requirements
- Personal needs
- Schedule, timeline & deadlines
- Assumptions
- Cost & Benefit

4.7. Example

In case of a new ERP system project for a manufacturing firm in India, the BRD is created after taking into consideration the following factors-

- 50% reduction in operation time of users
- Accuracy of business process increase by 20%
- More efficient and productive system

5. Software Requirement Specification

5.1. Definition

Software Requirements Specification (SRS) is a document that describes what the software will do and how it will be expected to perform. It also describes the overall functionality the product needs, to fulfil all stakeholders needs.

The SRS document contains all the functional and non-functional requirements along with the use cases that the software must meet.

SRS answers the WHAT i.e. What requirements are to be fulfilled.

5.2. Purpose

An SRS gives a complete picture of the entire project. It provides a source of flow that every team involved in development will follow. It is the plan of action and keeps all the teams — from development to maintenance — on the same page.

5.3. SDLC Stage

Software Requirement Specification document is prepared at the Analysis stage of Software Development Life Cycle.

5.4. Prepared By

Software Requirement Specification document is prepared by Business Analyst and System Analyst.

5.5. Prepared For

Software Requirement Specification document is prepared for the subject matter experts and technical leads.

5.6. Elements

- Introduction
- Purpose
- Intended Audience
- Intended Use
- Scope
- Definitions
- Overall Description
- User Needs
- Assumptions and Dependencies
- System Features and Requirements
 - ◆ Functional Requirements (Actor profile specification, Use case diagram, Use case specification, Function hierarchy diagram, Function definition report, Business rules)
 - ◆ External Interface Requirements
 - ◆ System Features
 - ◆ Non-functional Requirements (Security Requirements, Availability Requirements, Usability Requirements, Performance Requirements, Scalability Requirements)

5.7. Example

In case of a new ERP system project for a manufacturing firm in India, the SRS is created by following way:

- Material Management Module
- Sales Module
- Finance Module

6. Functional Requirement Document

6.1. Definition

An FRD describes the details of how certain software components will behave during user interaction. It describes the functionalities of the software in detail.

FRD is generally produced by the technical team in response to the BRD.

It describes high level functional and technical specification of the software.

FRD focuses on the HOW part i.e. How the requirements will be implemented.

6.2. Purpose

The key purpose of an FRD is to bridge the gap between business and technology.

6.3. SDLC Stage

Functional Requirement Document is prepared at the Planning stage of Software Development Life Cycle.

6.4. Prepared By

Functional Requirement Document is prepared by Business Analyst, System Analyst and Technical Team.

6.5. Prepared For

Functional Requirement Document is prepared for the Technical Team like designers, developers and testers.

6.6. Elements

- Introduction
 - Purpose of Document
 - Project Scope
 - Scope of Document
 - Related Documents
 - Terms/Acronyms and Definitions
 - Risks and Assumptions
- System Overview
 - Context Diagram/Interface Diagram/Data Flow Diagram
 - System Actors
 - Dependencies and Change Impacts
- Functional Requirements
- Non Functional Requirements
- Error Handling
- Data Requirements
 - (Data Architecture, Data volumes and conversion, Data retention and archiving, Data definition report)
- Interface Requirements
 - (User Interface Requirements, System Interface Requirements)

6.7. Example

In case of a new ERP system project for a manufacturing firm in India, the FRS is created after taking into consideration the following factors:

- Purchase engineer can send RFP to multiple vendor
- Material engineer can create and edit material
- Account person can do billing to customer

7. Marketing Requirement Document

7.1. Definition

A market requirements document (MRD) is a document that describes the overall market opportunity – the size of the market, the types of customers you will target, and competitors in the space. It helps product managers consolidate market research so you can succinctly explain what customers want and need from your product or service.

7.2. Purpose

It will help in validating the market need and evaluating the other solutions that are available, one can get an overview on what is the market trend and who are the competitors as well as helps in understanding the user perspective to improve that product.

7.3. SDLC Stage

Marketing Requirement Document is prepared at the Planning stage of Software Development Life Cycle.

7.4. Prepared By

Marketing Requirement Document is prepared by the Marketing Director.

7.5. Prepared For

Marketing Requirement Document is prepared for the Stakeholders and Team.

7.6. Elements

→ Executive Summary

What problem are you trying to solve?

→ Vision

What makes your product unique?

→ Target Market

How big is the opportunity or market size?

→ Personas

Who are you solving the problem for?

→ Competitor Analysis

What alternatives currently exist?

→ High level Capabilities

What functionality must be included to solve customer needs?

→ Metrics Strategy

How will you measure success?

8. Software Design Document

8.1. Definition

Software Design Document is a written document of a software product's design, describing its overall architecture.

(Such design documents are usually written by software designers or project managers and are given to the software development team to give them an overview of what needs to be built and how.)

8.2. Purpose

Design document is created to coordinate the efforts of a team and give them a reference point to describe all parts of software and how they operate.

8.3. SDLC Stage

Software Design Document is prepared at the Designing phase of Software Development Life Cycle.

8.4. Prepared By

The Software Design Document is prepared by the Designer.

8.5. Prepared For

A Software Design Document is prepared for the Development Team.

8.6. Elements

- 1) Introduction
 - a) Purpose
 - b) Scope
 - c) Overview
 - d) Definition and Acronyms
- 2) System Overview
- 3) System Architecture
 - a) Architectural Design
- 4) Data Design
 - a) Data Description
 - b) Data Dictionary
- 5) Component Design
- 6) User Interface Design
 - a) Overview of User Interface
 - b) Screen Images
 - c) Screen Objects and Actions
- 7) Requirement Matrix

9. Requirement Traceability Matrix

9.1. Definition

Requirement Traceability Matrix (RTM) is a document that maps and traces user requirements with test cases. It captures all requirements proposed by the client and requirement traceability in a single document, delivered at the conclusion of the Software development life cycle.

An RTM is prepared in a tabular format in tools like excel, wherein the relationship between test scenarios and requirements gets established. RTM is also used to track any changes if implemented in the project.

9.2. Purpose

RTM confirms 100% test coverage. It highlights any requirements missing or document inconsistencies. It shows the overall defects or execution status with a focus on business requirements. It also helps in analysing or estimating the impact on the QA team's work with respect to revisiting or re-working on the test cases

9.3. SDLC Stage

Requirement Traceability Matrix (RTM) is prepared at the start of the Testing stage in Software Development Life Cycle.

9.4. Prepared By

Requirement Traceability Matrix (RTM) is prepared by a Business Analyst and Quality Analyst.

9.5. Prepared For

Requirement Traceability Matrix (RTM) is prepared for the Stakeholders and Team.

9.6. Elements

- Serial No
- Type of Requirement
- Requirement Source
- Requirement ID
- Requirement Description
- Test Case ID
- Test Case Description
- Test Log
- Defect ID
- Defect Description
- Requirement Status
- Software Version
- Comments

9.7. Types

- **Forward traceability:** This matrix is used to check whether the project progresses in the desired direction and for the right product. It makes sure that each requirement is applied to the product and that each requirement is tested thoroughly. It maps requirements to test cases.
- **Backward or reverse traceability:** It is used to ensure whether the current product remains on the right track. The purpose behind this type of traceability is to verify that we are not expanding the scope of the project by adding code,

design elements, test or other work that is not specified in the requirements. It maps test cases to requirements.

- **Bi-directional traceability (Forward+Backward):** This traceability matrix ensures that all requirements are covered by test cases. It analyzes the impact of a change in requirements affected by the Defect in a work product and vice versa.

9.8. Example

Req No	Req Desc	Testcase ID	Status
123	Login to the application	TC01,TC02,TC03	TC01-Pass TC02-Pass
345	Ticket Creation	TC04,TC05,TC06, TC07,TC08,TC09 TC010	TC04-Pass TC05-Pass TC06-Pass TC06-Fail TC07-No Run
456	Search Ticket	TC011,TC012, TC013,TC014	TC011-Pass TC012-Fail TC013-Pass TC014-No Run

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
2																
3		Sno	Req ID	Req Desc	TC ID	TC Desc	Test Design	Test Designer	UAT Test Req?	Test Execution			Defects?	Defect ID	Defect Status	Req Coverage Status
4										Test Env	UAT Env	Prod Env				
5		1	Req01	Login to the Application	TC01	Login with Invalid Username and valid password	Completed	XYZ	No	Passed	No Run	No Run	None	None	N/A	Partial
6		2			TC02	Login with Valid Username and invalid password	Completed	YZA	No	Passed	No Run	No Run	None	None	N/A	Partial
7		3			TC03	Login with valid credentials	Completed	XYZ	Yes	Passed	Passed	No Run	Yes	DFCT001	Test OK	Partial
8																

10. Change Request Document

10.1. Definition

A change request is a proposal to alter a product or system, often brought up by the client or another team member. During a project, this can happen when a client wants to change or alter the agreed upon deliverables.

10.2. Purpose

The main purpose of a change request document is to understand and assess the impact of change in the entire product and its delivery schedule.

10.3. SDLC Stage

Change Request Management Document can be prepared at any phase of Software Development Life Cycle.

10.4. Prepared By

The Change Request Management Document is prepared by the Project Manager or Business Analyst.

10.5. Prepared For

Change Request Management Document is prepared for the Development Team or Clients

10.6. Elements

- Project Name
- Change Request Number
- Requested By

- Date
- Contact
- Priority
- Impact on Deliverables
- Reason of change
- Impact of the change
- Impact on Deadline
- Status of change
- Alternatives and Recommendations
- Comments
- Signature

11. Software Testing Document

11.1. Definition

Test documentation is documentation of artefacts created before or during the testing of software.

Software Test documentation includes all files that contain information on the testing team's strategy, progress, metrics, and achieved results.

It helps the testing team to estimate testing effort needed, test coverage, resource tracking, execution progress, etc.

11.2. Purpose

The key purpose of a Software Testing Document is to remove the uncertainties, set up the testing environment, offering stakeholders more insight into the testing process and help analyse the efficiency of testing.

11.3. SDLC Stage

Software Testing Document is prepared at the Testing phase of Software Development Life Cycle.

11.4. Prepared By

The Software Testing Document is prepared by the Quality Analyst.

11.5. Prepared For

Software Testing Document is prepared for the Stakeholders, Technical Team and Testing Team.

11.6. Types

- 1) Internal Software Testing Documentation
 - a) Test Strategy
 - b) Test Data
 - c) Test Plans
 - d) Test Scenarios
 - e) Test Cases
 - f) Requirement Traceability Matrix
- 2) External Software Testing Documentation
 - a) External Reports
 - b) Test Summary Report
 - c) Bug Report

12. User Documentation

12.1. Definition

End User Documentation means any end user installation and user guides, manuals, and other technical information in printed and machine-readable form that are normally provided by the licensor Party to end users of software.

12.2. Purpose

User documentation helps ensure your customers or users actually learn how to get the most out of your product.

12.3. SDLC Stage

User Documentation is prepared at the Deployment phase of Software Development Life Cycle.

12.4. Prepared By

The User Documentation is prepared by the System Owner.

12.5. Prepared For

A User Documentation is prepared for the End Users.

12.6. Elements

- Release notes
- User guides
- Manuals
- Installation guide
- Technical information
- FAQs
- Video tutorials
- Embedded assistance
- Support portals

13. System Administrator Documentation

13.1. Definition

System Administrator Documentation helps those responsible for managing computer systems and servers maintain the software. It usually includes information on software installation, updates and functionality. It may also provide a guide to how the software behaves with different systems and what to do if it malfunctions.

13.2. Purpose

The main purpose of a system administrator documentation is to reduce unplanned outages and improve security processes.

Documentation is how sysadmins keep records of assets, including hardware and software types, counts, and licences. Should there be any issues in the production environment, documentation helps identify the hardware, virtual machine, appliance, software, etc., that may be involved.

13.3. SDLC Stage

System administrator documentation can be prepared at the Deployment Phase of the Software Development Life Cycle.

13.4. Prepared By

The System administrator documentation is prepared by the Project Manager or Business Analyst.

13.5. Prepared For

System administrator documentation is prepared for the System Administrator.

13.6. Elements

- Introduction
(Purpose, Scope, Audience, Assumptions, System Administration Tasks and Roles)
- System Overview
(System Software, System Hardware, Communication Architecture, Security)
- User and Group Accounts
(User types, Setting user permissions, Adding or deleting user, Changing user information)
- Server Administration
(Creating Directories, Server Resources)
- Database Administration
(Managing Databases, Data Entry, Database Backup and Restore)
- Security Procedures
(Security Features and Procedures, Guidelines, Setting up passwords)