

Example 4: Essential SRS—Narrative Approach

A. Introduction

Contains an overview of the software development project and the planned new product or upgrade. For upgrades, this section may be condensed to focus on the purpose and objectives of the upgrade. For new software, this section typically includes:

- i. Purpose and objectives: Describes the main objectives of the SRS.
- ii. Software product overview: For both new software and upgrades, lists the most important features and functional capabilities of the planned software. For a software upgrade, lists the principal objectives of the upgrade, and the added features and capabilities to be implemented.
- iii. Business and financial objectives: For software with commercial potential outside the company, includes the key business objectives that customers expect the software to address, and financial objectives such as market share, unit shipments, and revenues.

B. Description of the Problem

For new software, describes why the software is needed, and identifies important unresolved questions. For software upgrades, this section may be condensed to focus on open issues and questions.

- i. Why software is needed: Gives reasons in terms of both management and user needs.

Describes the existing current work practices used by customers, including alternative software products or manual processes. Explains from a management perspective the benefits to be provided by the software, such as how it will solve or improve a business problem. Examples:

- a. Reducing inventory levels
- b. Reducing time to process and ship an order
- c. Achieving competitive advantage
- d. Improving customer satisfaction

This section also explains from a user perspective how the software will improve existing business processes such as data entry, report generation, decision making, calculations, and usability issues.

- ii. Open issues and questions: Lists the customer workflow processes, technology, financial issues, and business concerns that must be addressed before the software upgrade can be successfully developed and used.

C. Description of Software Solution

Summarizes the proposed software product: its capabilities and attributes. For both new software and upgrades, this section typically includes:

- i. Enhancement requests: Lists and prioritizes requests received regarding software capabilities and features, such as from management, client, end users, or user groups. These needs have been collected through meetings, interviews, and other means.

- ii. Features and functional capabilities: Often presented as a table listing and prioritizing features and their descriptions, with sufficient detail that developers will easily understand how the software must work.
- iii. Software attributes and general considerations: Lists items other than features or functionality. Examples here are the need to interface with certain other software, and the software or hardware platforms to be supported.
- iv. Operational requirements: Lists other requirements that the software will meet as it is used. Examples are business or decision rules, user workflows, usability attributes, installation requirements, or required training for users.
- v. Standards and regulatory considerations: Names any applicable standards that the software will meet. Industry examples include EPA, IEEE, NRC, ASTM, ANSI, and ISO. Company-specific examples include forms, work procedures, or data formats.
- vi. Long-term plans for future releases and features: Includes items such as future customer needs and desires, and accommodation of future hardware or software platforms.
- vii. Maintenance and support costs: Describes plans for items such as customization, patch releases, and ongoing support for users.