

Software Requirement

Specification

for

Supply Management System

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| Course code |  |
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1. **INTRODUCTION**
   1. **Purpose of document :**

The purpose of this SRS document is to provide a detailed overview of our   
Software Requirements Specification for supply management system, its parameters and goals. This document describes the project's target audience and its user interface, hardware and software requirements. It defines how our client, team and audience see the product and its functionality. This document provides a description of the interfaces, key concept, and overall purpose of the software project “Supply Management System”. This document intends to comprehend and clarify the requirements, also serving as the basis of further design. The application design in SRS makes the implementation consistent and removes ambiguity in any process during the development and testing phase. It not only predicts the results but gives the project the base structure to implement the process.

**1.2** I**ntended Audience:**

the intended audience of a supply management system can vary depending on the specific system and organization implementing it. However, typically the audience includes:

**1- Procurement professionals**: Responsible for sourcing goods and services, negotiating contracts, and managing supplier relationships.

**2- Supply chain managers**: these individuals oversees the entire supply chain process.

**3- Operation managers**: responsible for the day-to-day operations of the business.

**4- Finance professionals**: Manages the financial aspects of procurement, budgeting and cost analysis.   
**5- Senior management**: sets overall strategy for the organization and responsible for company’s goals and objectives.

**6- Suppliers:** they need to adjust their processes and procedures to meet requirements.

**1.3 Document Convention:**

**1.3.1. Alignment:**

The entire document is in justified alignment.

**1.3.2. Convention for the Main Title:**

**1.3.2.1.** Font Face: Times New Roman

**1.3.2.2.**  Font Style: Bold

**1.3.2.3.** Font Size: 24

**1.3.3. Convention for the Sub Title:**

**1.3.3.1.** Font Face: Times New Roman

**1.3.3.2.** Font Style: Bold

**1.3.3.3.** Font Size: 18

**1.3.4. Convention for the Sub Subtitle:**

**1.3.4.1.** Font Face: Times New Roman

**1.3.4.2.** Font Style: Bold

**1.3.4.3.** Font Size: 16

**1.3.5. Convention for the Body:**

**1.3.5.1.**  Font Face: Times New Roman

**1.3.5.2.** Font Size: 14

**2- Overall System Description**

**2.1 Project Background:**

A supply management system is a software application used by businesses to manage their procurement activities. The project background of a supply management system typically involves the need for a more efficient and effective way to manage the company's supply chain activities, including the sourcing, purchasing, and delivery of goods and services.

The project background may include:

**Inefficient processes**: The company may be experiencing inefficiencies in their procurement processes, such as delays, errors, and higher costs, which can negatively impact the company's bottom line.

**Lack of visibility:** The company may lack visibility into their procurement activities, making it difficult to track and manage orders, inventory levels, and supplier performance.

**Multiple systems**: The company may be using multiple systems for different procurement activities, leading to data silos and an overall lack of integration

**2.2 Project Scope:**

The project scope of a supply management system typically involves defining the boundaries and objectives of the project. It includes identifying the features, functionalities, and requirements of the system, as well as determining the resources, timeline, and budget needed to develop and implement the system.

The project scope of a supply management system would typically include the following:

**Functional requirements:** This includes defining the specific features and functionalities needed in the supply management system, such as supplier management, purchase order management, inventory management, and reporting.

**Requirements gathering:** This involves identifying the specific needs and requirements of the organization in terms of supply chain management, including procurement, inventory management, and logistics.

**System design:** Based on the requirements identified, the system design would include the development of a detailed plan for the supply management system, including the selection of appropriate software, hardware, and infrastructure.

**System development:** This involves the actual development and implementation of the supply management system, including the creation of a user interface, integration with existing systems, and testing of the system to ensure it meets the organization's needs.

**Data migration**: If the organization is transitioning from an existing supply chain management system, data migration would be necessary to ensure a smooth transition to the new system.

**Training and support**: Once the system is in place, training would be provided to the organization's staff on how to use the system effectively. Ongoing support would also be provided to address any issues that arise.

**Evaluation and optimization:** The supply management system would be continuously evaluated and optimized to ensure that it remains effective and meets the organization's evolving needs.

The project scope would also include any specific requirements or constraints identified by the organization, such as budget limitations or specific timelines for implementation

**2.3 Not in Scope:**

Supply management systems typically focus on managing the flow of goods and services from suppliers to customers, with the goal of optimizing efficiency, reducing costs, and improving customer satisfaction.

However, there are certain things that are not typically included in the scope of a supply management system. Here are a few examples:

**Marketing and Sales:** While supply management systems may involve forecasting demand and managing inventory levels, they typically do not involve direct marketing or sales activities, which are typically handled by separate departments within a company.

**Research and Development**: Similarly, supply management systems typically do not involve research and development activities, which are focused on developing new products or improving existing ones.

**Legal and Regulatory Compliance**: While supply management systems may involve ensuring that suppliers meet certain quality standards, they typically do not involve managing legal or regulatory compliance issues, which are typically handled by legal or regulatory affairs departments within a company.

**Strategic Planning:** While supply management systems may involve developing short-term plans to manage inventory levels and reduce costs.

Overall, the scope of a supply management system is typically focused on the operational aspects of managing the supply chain, rather than broader strategic or marketing-related activities.

**2.4 Project Objectives:**

The objective of supply management system is to ensure that an organization's supply chain operates efficiently and effectively to meet the needs of its customers. This involves managing the flow of goods and services from suppliers to the organization and then to its customers.

The main goals of a supply management system include:

**Cost reduction:** By managing the supply chain effectively, organizations can reduce the cost of acquiring goods and services, which can lead to increased profitability.

**Improved quality:** Supply management systems can help ensure that goods and services meet the required quality standards, which can improve customer satisfaction and loyalty.

**Enhanced supplier relationships:** By working closely with suppliers, organizations can establish long-term partnerships that can result in better pricing, improved delivery times, and other benefits.

**Risk mitigation:** Supply management systems can help organizations identify and mitigate risks related to their supply chain, such as supply disruptions, quality issues, or supplier failures.

Overall, the objective of a supply management system is to create a responsive and agile supply chain that can adapt to changing customer needs and market conditions while delivering value to the organization and its stakeholders.

**2.5 Stakeholders:**

The stakeholders of a supply management system typically include:

**Suppliers:** Companies or individuals who provide the goods or services that the organization needs to operate.

**Procurement or purchasing department**: The department responsible for selecting and negotiating with suppliers, and managing the purchasing process.

**Operations or production department**: The department responsible for using the materials and supplies procured by the procurement department to produce the organization's products or services.

**Logistics or distribution department**: The department responsible for transporting goods and materials from the suppliers to the organization, and from the organization to its customers.

**Finance department**: The department responsible for managing the financial aspects of the supply management system, including budgeting, cost control, and financial reporting.

**Customers:** The individuals or organizations who purchase the products or services produced by the organization.

**Regulators:** Government agencies or other bodies that oversee and regulate the supply management system, ensuring that it complies with relevant laws and regulations.

**Shareholders or owners**: The individuals or organizations that own the organization, and who have a financial stake in its success.

**Employees**: The individuals who work for the organization, and who are responsible for implementing and executing the supply management system

**2.6 Operating Environment:**

The operating environment of supply management system refers to the various internal and external factors that influence the system's performance and effectiveness. Some key components of the operating environment may include the availability and reliability of suppliers, the demand for goods or services, the level of competition in the market, the regulatory and legal framework, the technological infrastructure, and the overall economic conditions. Effective supply management systems must be able to adapt and respond to changes in their operating environment in order to remain competitive and meet the needs of their stakeholders.

**2.7 System Constraints:**

System is affected by these constraints imposing externally:

**2.7.1 Software constraints:**

These refer to limitations or requirements imposed by the software used to implement the supply management system. For example, the system may require a specific programming language or database management system.

**2.7.2 Hardware constraints:**

These refer to limitations or requirements imposed by the hardware used to implement the supply management system. For example, the system may require a certain type of server or storage capacity

**2.7.3 Cultural constraints:**

These refer to limitations or requirements imposed by cultural factors that may affect the supply management system. For example, certain cultural norms may dictate how information is shared or how transactions are conducted.

**2.7.4 Legal constraints:**

These refer to limitations or requirements imposed by laws or regulations that may affect the supply management system. For example, there may be specific regulations around data privacy or supplier contracts that must be followed.

**2.7.5 Environment constraints:**

These refer to limitations or requirements imposed by environmental factors that may affect the supply management system. For example, the system may need to operate in extreme temperatures or weather conditions.

**2.7.6 User constraints:**

These refer to limitations or requirements imposed by the users of the supply management system. For example, users may have limited technical expertise or may require specific training to use the system effectively.

**2.8 Assumption And Dependencies:**

a supply management system assumes that demand can be accurately forecasted, production capacity is available, raw materials are accessible, and logistics are efficient. It is dependent on effective information systems, supplier relationships, production processes, accurate demand forecasting, and market conditions.

**3- External Interface Requirements:**

In a supply management system, external requirements refer to the various interfaces and connections that the system must establish with external hardware, software, and communication systems to function effectively. Here are some explanations of the different types of interfaces:

**3.1 Hardware Interface:**

A hardware interface is the physical connection between the supply management system and other hardware devices that it needs to communicate with, such as printers, scanners, bar code readers, and other types of sensors. This interface defines the electrical, mechanical, and functional characteristics of the connection between the system and external hardware devices.

**3.2 Software Interface:**

A software interface is a set of protocols and standards that allow the supply management system to communicate with other software systems or applications. This interface defines how the system sends and receives data, how it formats that data, and how it interprets any error messages or other feedback from the software.

**3.3 Communication Interface:**

A communication interface is the method by which the supply management system exchanges information with other systems or devices over a network or other communication channel. This interface may use standard protocols such as TCP/IP or HTTP, or it may use proprietary protocols developed by the manufacturer of the system or device.

In summary, external requirements in a supply management system refer to the various interfaces that the system needs to establish with external hardware, software, and communication systems to function effectively. These interfaces include hardware, software, and communication interfaces, which define the connection between the system and external devices or systems, the protocols and standards for exchanging data with software systems or applications, and the methods for exchanging information over a network or other communication channel.

**4- Functional Requirements:**

**4.1 Functional Requirements Hierarchy:**

The functional requirements of a supply management system can be categorized into several functional hierarchies, including:

**4.1.1 Inventory management**: This includes managing the inventory levels, tracking inventory movement, and ensuring that inventory is available when needed.

**4.1.2 Procurement management:** This includes managing the procurement process, sourcing vendors, and negotiating contracts.

**4.1.3 Order management:** This includes managing the order process, from receiving orders to fulfilling them, and managing the delivery process.

**4.1.4 Supplier management:** This includes managing the relationships with suppliers, monitoring their performance, and ensuring that they meet the requirements of the organization.

**4.1.5 Logistics management:** This includes managing the transportation and delivery of goods, as well as tracking shipments and managing warehouse operations.

**5 Non Functional Requirement:**

**5.1 Performance Requirement:**

The system opens with in a seconds, after ordering from customer they get notified about their order and how many days they will receive. The system response time will be in seconds.

**5.2 Safety Requirements:**

The customer data will be safe and will provide privacy and the order safely provided.

**5.3 Security Requirements:**

Supply chain security is management of the supply chain that focuses on risk management of external suppliers, vendors, logistics, and transportation. It identifies, analyzes, and mitigates risks associated with working with outside organizations as part of your supply chain.

**5.4 User documentation:**

The purpose of documentation is to provide information about the shipment, facilitate the smooth movement of goods through the supply chain, and protect the interests of all parties involved. In addition to being an important part of the logistics process, documentation also plays a crucial role in international trade.