

# Benchmarking of Supply Chain Management System (SCM)

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## SUMMARY :

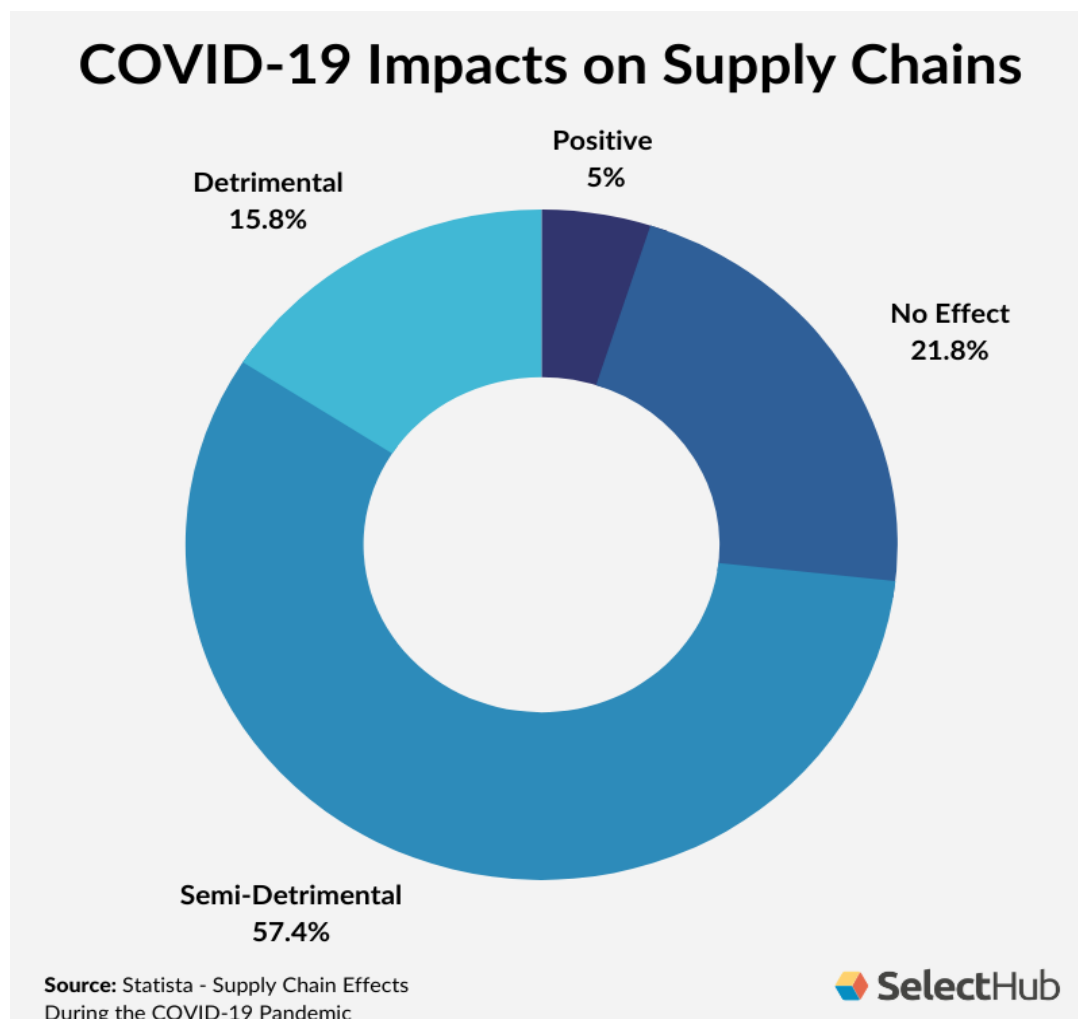
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## Section 1: Introduction to Supply Chain Management

### Definition of supply chain:

Supply Chain Management, as defined by the world famous, Institute of Supply Management Inc., USA, is the design and management of seamless, value added process across organizational boundaries to meet the real needs of the end customer.

A supply chain is a collection of suppliers required to create one specific product for a company. The chain is made up of nodes or “links,” which can include multiple manufacturers for parts, then the completed product, then the warehouse where it is stored, then its distribution centers, and finally, the store where a consumer can purchase it. The concept of the chain is important, because each link is connected in a specific direction and order, and the next link cannot be reached without going through the previous one. Each link adds time and costs, and can involve labor, parts, and transportation. Every product a company carries may have its own supply chain, though they may use certain suppliers for multiple products. You can see why this gets so complicated, especially for international supply chains.



### Example of Supply Chain:

#### Example: Tesla and Specialized, Owned Chains

Automotive manufacturing has come a long way since Henry Ford used assembly line manufacturing to speed up the production of a single car model in a single color. Now, in a time when even American carmakers are opening factories abroad, Tesla is making innovative, incredibly popular, and luxurious cars right in California, a location with incredibly costly real estate.

Rather than having a long supply chain of cheap part makers, they have a vertically integrated supply chain, with a full-service auto plant near its corporate headquarters and plans for a supplier park and a massive battery factory, and Tesla owns it all. Even more interesting is the digital supply chain the company promotes - new firmware and algorithm updates are pushed out to existing car owners over the cloud.



## Section2: Definition of Supply Chain Management

As the name implies, supply chain management (SCM) is handling and optimizing all the many complicated facets of a supply chain, involving goods and services. Even ensuring timely handoff from manufacturer to shipper to supplier to shipper to buyer is a massive task, but to do it cost effectively and build net value is truly a challenge. Supply chain management is so important because modern commerce exists in a networked global economy. Most businesses are specialized - even department and big box stores are only really equipped to sell to customers, despite their wide variety of products. The value of vertical integration is hard to justify when communication costs and SCM tools are so inexpensive - it almost always makes more sense to outsource for price efficiency.

## History:

The concept of supply chain management was in effect long before the term was created in 1982. In the colonial era, international trade by ship was already making for complicated transportation issues and the need for efficiency. During the Industrial Revolution, the ability to quickly produce goods with machine assistance led to the need to manage significant inventory and constant consumption. By the time history arrives at Henry Ford's famous assembly line for the world's first car production in 1913, supply chain management had become an art.

As the century wore on, more companies were producing more goods and looking for ways to reduce costs. They vertically integrated into owned supply chains to try reducing costs at each stage. In the 1980s and on, globalization became a realistic dream for many companies, because of computer systems, easier communication, and commerce-friendly trade laws. Around the 1990s, it became a common practice for firms to specialize, and focus on core competencies and outsourcing the rest, abandoning the vertical integration of the previous era. At this point, supply chains became truly complex, in order to coordinate hundreds of otherwise unrelated and geographically-distant manufacturers, suppliers, shippers, warehouseers, and retailers.

Now, in the "SCM 2.0" era, the Internet and new methodologies have led to collaborative platforms and democratized processes. This is allowing smaller competitors to use some of the same manufacturers as major players, and reducing inefficiencies for those manufacturers as a result. Better communication and planning tools are providing a way for small and large companies alike to manage even more complex supply chains.

## Section 3: About Supply Chain Management

### Variants of Supply Chain Management (SCM):

**Global SCM:** The combination of global manufacturing with supply chain management, which must account for tariffs and local taxes as goods and services travel internationally to ultimately provide greater value at the end of the chain.

**SAP SCM:** Systems, Applications, and Products (SAP) is a software company that revolutionized logistics and enterprise resource planning. It provides an automated way to manage supply chain networking, supply chain planning, and supply chain execution, along with production planning, business forecasting, and demand planning.

**Logistics and SCM:** The art of coordinating efforts between every member of the supply chain to get products from their source to the consumer.

**Purchasing and SCM:** The focus on the monetary aspect of SCM, from costs to value added at each link in the supply chain.

### Current Issues in Supply Chain Management (SCM):

In addition to the major terms, it's important to keep aware of legal, political, and social events which affect supply chain management when seeking a career in the field. Here are some of the bigger issues of the day:

**Dodd-Frank Decision:** This was a 2010 law which included a clause on "Conflict Minerals." It requires companies to audit their supply chains in order to determine whether gold, tungsten, tantalum, and tin came from the Democratic Republic of the Congo, and report on their due diligence. It adds an extra layer of complexity and costs to SCM for those involved in chains with those minerals.

**NGO Actions:** Activist groups of all kinds work to end common practices within major companies' supply chains, such as sweatshop labor, or push consumers towards less complicated supply chains by encouraging them to support local businesses and farms.

**SEC Regulations:** Whereas NGO actions can force a company's hand for PR reasons or changing the marketplace of ideas, the Securities and Exchange Commission can slap that same company with fines, making company's quick to comply. Third-party audits of supply chains are an important part of keeping in step with these regulations.

**SECH Ratings:** This is a rating that involves economic, social, and environmental judgements to gauge a company's overall sustainability.

**Transparency:** Though protecting data is important, certain measures of transparency can improve company performance. Among consumer products, many younger, disruptive brands make their supply chain a selling point in marketing by being upfront about how and where they get their components, and where they make their products. The reasoning goes, if a company is hiding something, there must be an unethical component to it.

**Sustainability Measures:** As major companies and countries around the globe move towards sustainable production, all supply chains become impacted. Whether due to changing regulations or seeking good PR, many companies are working to reduce pollution and other issues in their chain.

## Principals of Good Supply Chain Strategy:



## Supply Chain Management Process:

There are key supply chain processes that you must take into consideration to effectively understand and manage them. These processes are all at play regardless of the type of supply chain you're using.



**Customer relationship management (CRM)** comes first, because as the principles of SCM state, you must adapt everything in the supply chain to the customer. If no one is buying, there's no need to produce anything. At the front of your supply chain, where a store's staff interacts with its consumers, they must have plans in place for ongoing relationships. They need CRM tools to gather customer information for marketing and market research, all to determine the products and services to offer in the future.

**Customer service management** is another process that ties in, as it is where you gather negative and positive feedback to determine future needs.

**Demand management** is closely linked with the previous two, as it takes customer interactions and orders into account to determine the workload all the way up the supply chain. At its core, customers buying more means make more, and customers buying less means make less. Customer forecasting is an important task that analysts must perform well to determine the current demand and what it will be in the future, to prevent waste in the supply chain.

**Product development** is an important part of the supply chain that is informed by consumer demand. You must work with CRM and customer service data to determine what they want, which influences new products, product line extensions, and also what to stop making. You must integrate suppliers in this process because it affects cost, quality, and delivery time.

**Supplier relationship management** goes without saying - if you want to produce your products on time and on budget, you need a solid rapport with everyone you're outsourcing to in the chain. This impacts **manufacturing flow management**, which ensures everything gets where it needs to go without delay, and at the correct spec.

**Order fulfilment** involves coordinating with distribution centers and either retail locations or 3PL to get the product direct to consumers. You've now made it all the way back to the beginning of the cycle, and need to pay attention to new CRM and customer service data.

**Returns management**, also known as the "reverse supply chain," is a vital part of the flow of products that doesn't fit perfectly into the clean supply chain cycle. It involves picking up online orders from 3PL locations or from consumers' addresses and accepting returns at retail locations. Once these items are put back into inventory, they must be ready to get to a different customer while the product run is still live.

### Supply Chain Management Software:

Every business needs an effective supply chain management system in place for a good number of reasons. For one, the software helps to make sure that there is a continuous flow of stock into the business without unnecessary interruptions in the deliveries.



This is necessary for ensuring that the production processes do not stop indefinitely, which may affect customer service.

The software is also essential for maintaining good relations with your business's suppliers. This good faith goes a long in ensuring that they are dedicated to providing you the best service they can.

Your company may also need the software to make sure that costs are cut down on the procurement process, and that the best supplier is chosen. This is one of the most emphasized principles of procurement and stock management; obtain the highest quality of stock available at the lowest price possible.

In basic terms, supply management software manages supply chain transactions and activities, flow of data, supplier relationships and any other related activities. The software runs on the principles of the supply chain which is a very crucial area for any business. It may be involved in all processes from the product development stage to the logistics, tapping into activities such as warehousing, transportation, and inventory management.

#### Benefits of applying Supply Chain Management Software:

**Increased revenue:** Supply chain management solutions provide companies with the means to increase their revenue by supporting better manufacturing techniques, greater input and communication from across the enterprise, and faster pivoting when problems arise. The reduced downtime and streamlined operations improve a company's relationships with their customers and suppliers. And faster data sharing for financial reporting in turn improves overall accounting.

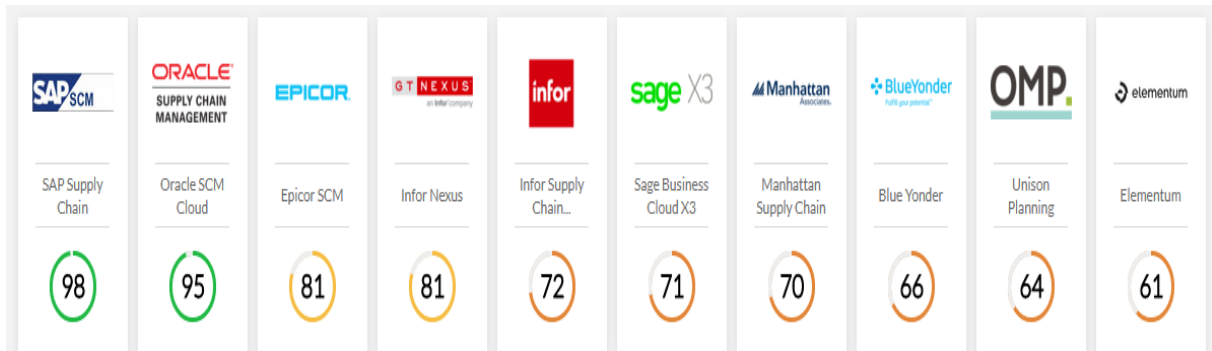
**Decreased cost:** Companies that implement a SCM software will quickly find their way around normal supplier bottlenecks, decrease labor costs, and improve transportation overheads. The combination of these factors, plus increased automation of invoices, work orders, and approvals means that companies spend less to get their products to market.

**Improved analytics and forecasting:** By aggregating, storing, sorting, and analyzing the data provided from every step in the supply chain, a supply chain management solution can give companies insight into how to improve their current processes and better forecast for growth. Using predictive analytics—which runs scenarios against historical data to identify possible outcomes—companies can be ready to react to potential threats that could pop up anywhere in the supply chain.

**Regulatory compliance:** Deep data stores on manufacturing processes, tracking of supplier and distributor behavior, and transparent tracking of individual products or lots throughout the supply chain, companies can quickly provide complete audit records.

**Fewer disruptions:** Today's global economy requires that enterprise businesses react quickly to changing conditions. A transparent and connected supply chain ensures that companies can pivot between suppliers, distributors, and manufacturing plants to minimize disruptions. SCM software can alert companies to weather threats, political changes, widespread medical emergencies, and transportation changes, so the company can plan their response. This insight and foresight improves customer and supplier relations while ensuring maximum output.

### Popular SCM Software Vendors



Source: <https://www.selecthub.com/supply-chain-management-software/>

The best-known names in enterprise application software are major players in the supply chain management (SCM) software arena. The enterprise resource planning (ERP) software vendors SAP, Oracle, and Infor all have solutions across the SCM spectrum. The SCM market benefits from a number of strong niche players that bring unique perspectives to the space. As discussed above, some players might be focused only on SCP or SCE markets.

- Oracle
- SAP
- Infor
- Körber
- Manhattan Associates
- Blue Yonder (formerly JDA Software)
- Descartes
- Kinaxis
- E2open
- Tecsys

## Why Compare between SCM software:

Since SCM system implementation is typically not a small scale operation, there are inherent managerial risks. For example, within businesses with several facilities, partners, and departments etc., a legacy or manual SCM system can lead to bottlenecks. There are cases where the appropriate SCM application is chosen but it does not sufficiently integrate with the rest of the enterprise software applications. In some cases, the wrong SCM application is chosen (perhaps to cut costs or due to poor information); the result is that the whole business from sourcing to distribution is negatively affected. Efficient SCM provides immense benefits; a well-run value chain should positively impact an organization's profitability and success.

## How to Select the Best Supply Chain Management Software:

**Decide What Functions You Need:** One of the first things to do when selecting a supply chain management system is decide which functions are most critical to your line of business. Software can be expansive, and many products can provide a full range of supply chain management functions.

**Integration with Existing Systems:** Another key consideration is whether the supply chain management software you're considering will integrate with your existing IT systems and infrastructure. You don't want to reinvent the wheel and replace your existing technology just so it dovetails with your new supply chain management program. Therefore, it's important to make sure that any supply chain software on your short list of candidates can easily pair with your existing systems.

**Examine the Company behind the Software :** The best software in the world is only as good as the company that makes it and supports it, so it's important that you have faith and trust in the vendor of the software you ultimately select. Look for a vendor that is willing to go the extra mile to ensure you are happy and successful. Find a vendor that offers excellent customer service, is invested in your success, and has a dependable service history.

**Look for Scalability and Upgrade Capability :** The goal of integrating supply chain management software into your business is to make processes run more smoothly and efficiently. That will result in a leaner business more oriented for growth and expansion through better use of company resources and improved customer and supplier relationships. Therefore, make sure you find software that is scalable and can grow alongside your business. You don't want to invest in a software system that will be obsolete as you begin to realize future growth. Also, technology advances at a rapid rate, so software that is considered innovative and cutting-edge today may be outdated in only a few years. Therefore, it's important to make sure that the software can be updated and upgraded as technology changes.



### Priorities with respect to Best SCM Software

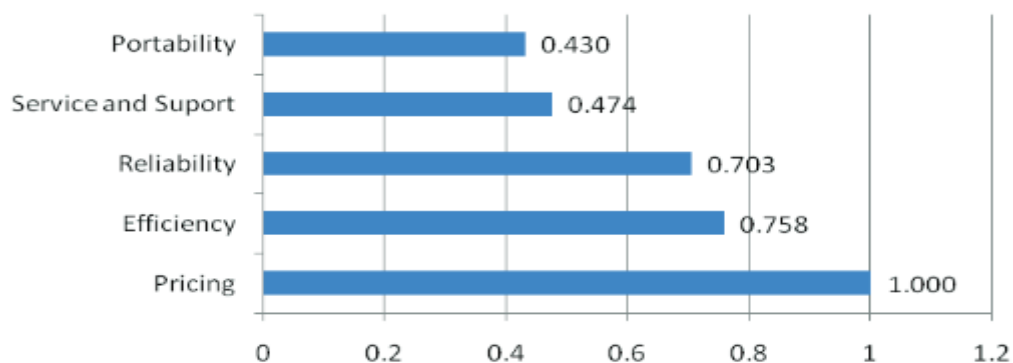


Figure: Presents the prioritized criteria after the initial weight assignments

### Priorities with respect to Pricing

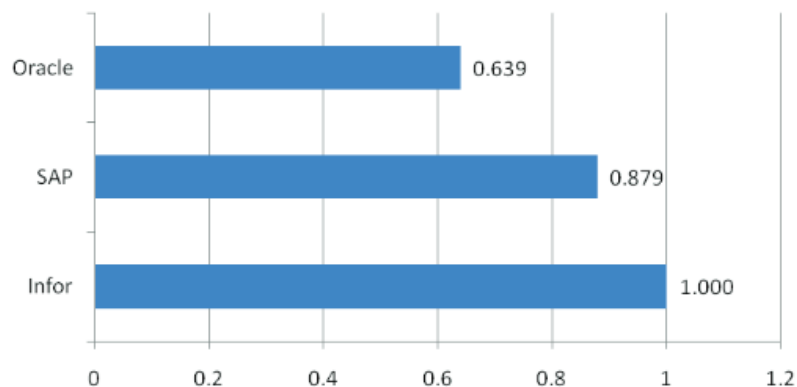








Figure: Presents the introduction of alternative SCM software packages analyzing pricing

## Compare the best supply chain management solutions

Product	Warehouse management	Supplier collaboration	Business size	Pricing tier	Deployment
 SAP SCM	✓	✓	All	High-end	Cloud/ On Premise
 Infor SCM	✗	✗	All	High-end	Cloud/ On Premise
 Oracle SCM	✓	✓	All	Average	Cloud
 FinancialForce SCM	✓	✗	All	Average	Cloud
 Manhattan SCOPE	✓	✓	SMB	Average	Cloud/ On Premise
 Sage X3	✓	✓	All	Low-end	Cloud/ On Premise

What are the latest trends Technologies in Supply Chain Management System:

**Consolidation:** in a bid to grow and keep up with new developments in technology, vendors are merging and acquiring supply chain software applications.

**Analytics:** according to reports, correct analytics help in achieving a more precise product demand forecast, which in turn results in inventory levels that are more accurate and greater cost saving.

**Automation:** supply chain are fast becoming more sophisticated and are able to perform a number of functions without human help, and can also review and select the best possible actions when issues arise.



## Section 4: Supply Chain Management in Morocco

This paper attempts to demonstrate how the Supply Chain Management (SCM) approach, which is an innovative approach of Western origin, could succeed in establishing itself in Morocco, a country where business relations are considered to be still marked by a culture. in transition that could be described as post-traditional. The SCM is judged by experts to be at odds with Moroccan culture. This paper defends exactly the opposite, by postulating that the Moroccan national culture is favorable, but in a specific way, to the implementation of a Supply Chain Management approach.

The goal of Supply Chain Management is to facilitate the integration of flows along supply chains. In this perspective, the academic literature has focused almost exclusively on the organizational and technological elements that facilitate the implementation of Supply Chain Management (information systems, standards, etc.).

If these elements are necessary to allow integration, they are however less and less sufficient, since it must now be carried out between companies belonging to different cultural backgrounds. These cultural differences are more and more frequently invoked to explain the difficulties in the implementation of Supply Chain Management. In a professional report published in 2004 by GALIA, a French consortium of car manufacturers, speakers referred to the problems encountered by their supply chains, particularly in terms of the implementation of quality standards in Morocco and the Philippines. They agreed on the importance of taking culture (especially religion) into account in adapting standards to local values.

In basic terms, a Moroccan company that had been high tech before high tech was even a common term was failing to recognize the acceleration of change in its market, and the true nature of new markets that it was now in more or less by default. In a time of rapid technological change, it's essential to recognize the impact of that change on supply chain management policies and practices, and its potential impact on the financial fortunes of the company.