All around us, due to advancing technology, evolve faster than ever before. Nothing has rocked the way in which companies do business as the emergence of the Internet. Market forces, conducted by the speed of communications that is facilitated by electronic networks, are making product life cycles shorter and shorter. Customer needs and tastes change rapidly. Product inventories are always in danger of becoming obsolete. To counter this tendency, organizations are increasing their expertise and efficiencies in the process of designing and producing new products and in the process of delivering and servicing existing products. Companies that develop higher skill levels in these areas are clearly better able to ride the waves of change and profit from developments in the markets they serve. The processes involved in the designing, building, and delivering of products to the customers that need them have come to be collectively referred to as supply chain management. Electronic management of business supply chains coordinates all business partners in the supply chain over electronic networks and gives all parties an up-to-the-minute overview of all available inventories. Due to the numerous challenges and difficulties that firms face in present's rapidly changing business environment, establishing an effective supply chain is becoming a core competency for many organizations. Effective supply chain management is no longer an option; it is a requirement for survival. Companies within the supply chain must reach new levels of communication and cooperation.

Keywords: supply chain management, information systems, internet.

SUPPLY CHAIN MANAGEMENT – THE CONCEPT

Supply Chain Management (SCM) was once a dream, a concept more than a reality, since there were many necessary components of supply chain management that could not be fully achieved. A key barrier to full supply chain management was the cost of communicating with and coordinating among the many independent suppliers in each supply chain. An entire supply chain stretches from the creation of raw materials to the delivery of the finished consumer goods. Because firms are involved in many, many supply chains, active supply chain management is practical only for items essential to the firm’s market success.

Managers are increasingly interested in actively managing their supply chains because of three environmental changes. First, technology has been developed to simplify communication between members of the supply chain. Second, new management paradigms have developed that are being widely shared among supply chain members so that it is simpler for these managers to coordinate their efforts. Third, the development of a highly trained workforce allows employees at each stage of the supply chain to assume responsibility and the authority necessary to quickly make decisions and take actions required to coordinate the supply chain.

While the three changes above make supply chain management possible, it is competition in the marketplace that is pushing firms to make SCM a reality. Those who master SCM gain a competitive advantage. So, SCM means money. And, SCM means jobs.

For the past 30 years the business world has been inundated by concepts and jargon. These include: Materials Logistics Management (MLM), Just-in-Time (JIT), Materials Requirements Planning (MRP), Theory of Constraints (TOC), Total Quality
Management (TQM), Agile Manufacturing, Time Based Competition (TBC), Quick Response Manufacturing (QRM), Customer Relationship Management (CRM), and many more. These ideas are not replaced or superseded by SCM. Rather, SCM incorporates all of these ideas to improve and manage the entire supply chain instead of just one firm in the supply chain.

Over the past 25 years, managers have learned to view their firms as a system of closely linked processes which deliver products and/or services to customers. Now managers are recognizing that their entire firm is just one link in a chain of firms whose purpose is to serve the customer. By increasing the integration of the entire supply chain, all the firms in the chain can increase their profits.

The APICS dictionary defines the term supply chain as either the “processes from the initial raw materials to the ultimate consumption of the finished product linking across supplier-user companies,” or as the “functions within and outside a company that enable the value chain to make products and provide services to the customer.” The APICS dictionary defines value chain as those “functions within a company that add value to the products or services that the organization sells to customers and for which it receives payment.”

The differences between the definitions of the supply chain and the value chain are illustrated in Figure 1. The supply chain is shown as a series of arrows moving from the raw materials stage to the final customer. Each of these arrows represents an individual firm, which has its own value chain. In Figure 1 this value chain is enlarged for one firm in the supply chain so that some of the internal functions of the firm that add value can be shown. In this example note that purchasing, marketing, and operations management are shown as part of the firm’s internal value chain. These are internal functions of the firm and they occur in every firm that is a member of a supply chain.

Figure 1. Supply Chain (adapted from L.D. Fredendall, Ed Hill, 2001)
Another term used in some firms is pipeline. A pipeline is the supply chain for just one part used in a product. In these firms a supply chain for a complex product consists of many pipelines. An example of a pipeline would be a product that begins with rolled steel. A second step in the pipeline is the cutting process. This is followed by the stamping of the steel into a fender or other component. The component is then assembled into the final product. For example, it may be a fender which is assembled onto a car body.

Figure 1 also illustrates that the supply chain consists of more than the movement of physical goods between firms. It is also involves the flow of information between firms. This communication is necessary to manage and maintain the supply chain. Another supply chain flow is the flow of money. This is also shown in Figure 1 to illustrate that the primary purpose of every firm in the supply chain is to make money. This helps to remind all supply chain members that increasing their own income requires them to do everything in their power to improve the operations of the supply chain.

The Structure of Supply Chains

The participants in a supply chain are continuously making decisions that affect how they manage the five supply chain drivers (Figure 2). Each organization tries to maximize its performance in dealing with these drivers through a combination of outsourcing, partnering, and in-house expertise. In the fast-moving markets of our present economy a company usually will focus on what it considers to be its core competencies in supply chain management and outsource the rest.

Globalization, highly competitive markets, and the rapid pace of technological change are now driving the development of supply chains where multiple companies work together, each company focusing on the activities that it does best. Mining companies focus on mining, timber companies focus on logging and making lumber, and manufacturing companies focus on different types of manufacturing from making component parts to doing final assembly. This way people in each company can keep up with rapid rates of change and keep learning the new skills needed to compete in their particular business.

Where companies once routinely ran their own warehouses or operated their own fleet of trucks, they now have to consider whether those operations are really a core competency or whether it is more cost effective to outsource those operations to other companies that make logistics the center of their business. To achieve high levels of operating efficiency and to keep up with continuing changes in technology, companies need to focus on their core competencies. It requires this kind of focus to stay competitive.

Instead of vertical integration, companies now practice “virtual integration.” Companies find other companies who they can work with to perform the activities called for in their supply chains. How a company defines its core competencies and how it positions itself in the supply chains it serves is one of the most important decisions it can make.
The Five Major Supply Chain Drivers

1. **PRODUCTION**
   What, how, and when to produce

2. **INVENTORY**
   How much to make and how much to store.

3. **LOCATION**
   Where best to do what activity

4. **TRANSPORTATION**
   How and when to move the product

5. **INFORMATION**
   The basis for making these decisions

Figure 2. The Five Major Supply Chain Drivers - Responsiveness versus Efficiency

The right combination of efficiency and responsiveness in each of these drivers enables a supply chain to “increase throughput while simultaneously diminishing inventory and operating cost”.

**The aims of supply chain management**

Supply chains comprise the companies and the business activities needed to design, produce, deliver, and use a product or service.

Anything or anyone that influences a product’s time-to-market, price, quality, information exchange, and delivery, among other activities is part of the supply chain.

The supply chain management aims at integrating efforts in terms of target 7R’s, i.e., creating the right product, at the right time and right place, in the right quantity and in right condition for the right customer at the right cost (Kapoor and Kansal, 2003). A well planned SCM system helps an organization achieve:

1. Lower costs
2. Competitive edge
3. Reliability of delivery
4. Order fulfillment accuracy
5. Flexibility in replenishment
6. Accuracy of documentation
7. Continuity of supply
8. Quality of company sales, technical and service representation.
Firms depend on their supply chains to provide them with what they need to survive and thrive. Every business fits into one or more supply chains and has a role to play in each of them.

The pace of change and the uncertainty about how markets will evolve has made it increasingly important for companies to be aware of the supply chains they participate in and to understand the roles that they play. Those companies that learn how to build and participate in strong supply chains will have a substantial competitive advantage in their markets.

**THE STATE OF SUPPLY CHAIN INTEGRATION IN ROMANIAN COMPANIES**

Romania’s adhesion to the EU has imposed an entire series of changes of the way the business function, as well as of fiscal and accounting legislation. These changes must be assimilated as soon as possible by Romanian companies that want to last on the market. Adapt or die is the right saying for contemporary business environment.

Although Romanian companies acknowledge SCM efficiency as a tool for business optimization, they still have a traditionalistic, classical approach to it. However there are in Romania companies which paved the way in implementing successfully ERP (Enterprise Resource Planning), CRM (Customer Relationship Management), HRM (Human Resource Management) solutions in order to optimize the SCM.

**Supply Chain Management in a meat processing factory-case study**

The actual case study aimed to reveal the impact of the information systems on the SCM of a Romanian company. For that has been used the example of meat processing factory- Avicola Calarasi.

Avicola Calarasi, one of the main players in Romanian food industry, is reputed among the national economic environment as a respectable company, specialized in the production and sale of chicken meat and other meat products.

The production activity involves the management of an important volume of data and processes, for which reason the decision makers in the company have to identify resources to improve the profitability of the business by implementing an effective SCM.

The organization of the 19 farms Avicola Calarasi, as well as the management of the sales force, are both based on complex set of rules, managed by means of the SIVECO Applications integrated system, provided by SIVECO Romania.

Founded at the beginning of 1992, SIVECO Romania is the most successful software house in Romania, responsible for developing and exporting high-end software products to countries within the European Community, The Middle East, The Near East, North of Africa, and CSI area.

Although the implementation of an IT solutions, such as ERP and SCM software packages, give the most to the businesses, it is quite expensive. However in our example the benefits outweigh the disadvantages.

SIVECO had to face many difficulties in implementing this IT solution, even though it has a excellent know-how. After 1 year of hard work on the both side, SIVECO AND Avicola Calarasi, the implementation of an ERP at Avicola Calarasi has been done with big success. The implementation of the ERP lead to important improvement in the Avicola Calarasi some of them are presented bellow:
• The automation of the supply chain;
• The automation of the price lists, allowing for the management control on the sales prices;
• Integration with the electronic scales, leading to the automation of the weighing process;
• Control of the sales per Client, per Agent and per Distributor;
• Establishment of the discount policies;
• Elimination of the redundancies resulting from the operation within various support systems.

CONCLUSIONS

The essence of supply chain management is communication, allowing the ultimate consumer to become a partner in the process. Although the electronic technology facilitate communication and business can do more now than could even be imagined few years ago, supply chain management remains a largely misunderstood and often misapplied business philosophy. The company in our example should understand that can not rely on only on technology as it has some limitations and the intervention of human resources in controlling IT systems is vital. The analyzed company should be flexible to adapt to new, and recognize that communication between all supply chain members is vital for all parties and the more they use communication channels the more successful they are.

REFERENCES