

# A GLANCE OF MODERN LOGISTICS. DEMAND PLANNING PROCESS

**Domenico NETTI**  
*Lavazza Spa, Italy*

**Abstract.** *The world keeps on quickly changing and we will probably have to change the laws of the economy. In recent past years the production has dominated the consumptions: today, the consumer is always more, the true judge of the market and the firms of production have to redraw their strategies. The demand planning process becomes essential to face the world-wide competition: in fact, the border between innovative goods and functional goods becomes more and more transitory.*

**Keywords:** *planetization, globalization, functional goods, innovative goods, demand planning, commoditisation.*

## **1. Efficiency globalization and planet-level expansion**

It's not easy to lower costs and improve services in the current context, dominated by steadily increasing international competition, whose strong point – here I am referring to Asia and Eastern Europe – is the low cost of labour. When I reflect that, after the fall of the Berlin wall, about 3 billion potential consumers, competitors and new capitalists began their journey towards industrialization and international trade, I feel the challenge this presents at the same time as I am attracted by the new opportunities created in the marketplace.

## **2. Globalization and planet-level expansion. Opportunity or difficulty?**

Until recently, the expansion of international trade presented a clear opportunity for companies who could sell the goods not absorbed by the domestic market overseas. Modern systems of transport, the new IT technologies allowed, and continue to allow, the sale of goods in every country in the world. Globalization thus presents a clear opportunity for technologically advanced companies who produce a large quantities of finished products. Today, market *globalization* is changing into market *planetization*.

The production and trade *planetization* is a more complex and far-reaching concept than simple globalization. A planetary economy can *produce* the same product in *any* part of the world, while a *globalized* economy merely permits the *sale* of products anywhere in the world. Consequently, it is obvious that planetization presents a constant challenge for companies who want to compete on the global market. Increasingly, they have to find competitive organizational models and new technological solutions in order to gain an edge on the international competition, particularly in Countries whose low labour costs give them a competitive advantage.

### **3. The consumer**

We are simultaneously managers, company operators and consumers of the products we manufacture. The new information technologies – particularly internet, have broadened the consumer's horizons, passing from a limited range of choices to a vast array of offers. Any product can be purchased in just a few minutes, in any part of the world: we only need an internet connection and a credit card.

### **4. Social changes**

Families increasingly tend to have more than one income. It is no longer the case that only one member of a married couple works, while the other takes care of the family „routine”: the kids' education, food shopping and so on. Today, most families have multiple incomes, and this has fundamental implications that alter people's lifestyles and purchasing patterns, and thus company organizational models and production as well. With more disposable income, the average family prefers to consume on their days off from the intense work schedule, once a week, usually on saturday, when they go to a supermarket or shopping mall to make their purchases. When they are unable to find the product they normally purchase on the supermarket shelves, they replace it with something similar.

### **5. Logistics of functional and innovative goods**

Which is the difference between the logistics for functional goods and innovative goods? For example, a consumer who wishes to purchase a new model of personal computer and doesn't find it in the shop at the moment of purchase he is willing to wait or he goes to another shop to find that specific model. But in the case of mass consumption items, like cookies, detergents or other items consumed on a daily basis, if the consumer does not find them on the shelf at the moment of purchase, he replaces them with other similar items. The consequences of the stock out , the lack of product at supermarkets, cause negative effects to the company , as the lost sale of that item makes profitless all the investments done for advertising, research & development and marketing . So what has to be done? In this scenario of constant market change, with a rapid pace of technological innovation and changing consumer purchasing patterns, it is essential to focus on PREDICTING DEMAND.

### **6. Demand planning**

The consumer aided by modern technologies, is informed in real time about markets and goods produced in every place in the world, today, in fact he is really able to influence manufacturers strategies, having the possibility to choose among a large number of options. It 's a clear turnover of the strength relations between demand and

### **A glance of modern logistics. Demand planning process**

---

supply. We moved from the traditional operative logics led by supply, “push” ( the company decides what to manufacture and push the product on the market) to a “ pull “ efficiency or “demand driven”, ruled by customer request. The demand arises from the market and act on companies strategies on distribution choices, production, stock until influencing at the beginning the creative process and product design. The market keeps its race towards complexity and companies who intend to compete, have to be able to know the demand in its variegated aspects, to foresee the variability , but also to link in efficient way all the enterprise process : distribution, production and product development. These process are the core problems. The necessary step to a kind of pull or “demand-driven” approach is certainly an overtaking of a “watertight compartments” view in order to get real - time information and a strong integration among the company functions.

In other terms, the first step to be demand-driven is being able to “catch smartly” all the signals coming from the market ( staking on a good demand planning process), the second one is building a fully integrated supply chain, in which, all the process don’t come one after the other closely related , but develop and influence mutually in order to satisfy the demand. A winning demand driven approach is available for so-called innovative goods either for goods once defined “ functional “.The forecasting and demand managing for producers of innovative goods have always been very interesting themes ( short life cycle and the lack of historical data make critic the demand planning process), today even anyone who manufactures “functional” goods spends increasing energies in a perceiving and demand managing .

In order to avoid the so-called “commoditisation”, many producers add continuous functional, technological and packaging innovations (the placement of new versions on the market complicates the forecasting process), and moreover they often choose to put distinguishing elements, not exquisitely practical, but linked to the wellness sphere, the care taking and mostly to social status (the car and the kitchen are enriched by stylist/ designer signature, pottery and furniture are proposed on the marked in labelled collection..).

Once the same goods defined functional and with long average life cycle for the enterprise become in this context , innovative products with shorter life cycle. Whoever produce them, has to take into account new unforeseeable elements and the lack of information in the demand planning Therefore, in nowadays market, often defined globalised, the sale forecast based on historical data and on mathematic and statistic models is not sufficient anymore. It is essential to combine to statistic forecasting the data coming from customers to create production plans according to the market requests and to reduce order-delivery cycle time. So, it is necessary , to analyse and to compare the statistic forecast together with the demand coming from different parts of the world, often with different expectations and style of life. From the comparison and the interaction between forecast – customer, the so-called “one number” has to rise. It is used by all the company branches , finance - human resources –marketing – sales – production- logistics to elaborate tactical and strategic activities own programs in a sole multifunctional synergy oriented to company targets.

## Management & marketing

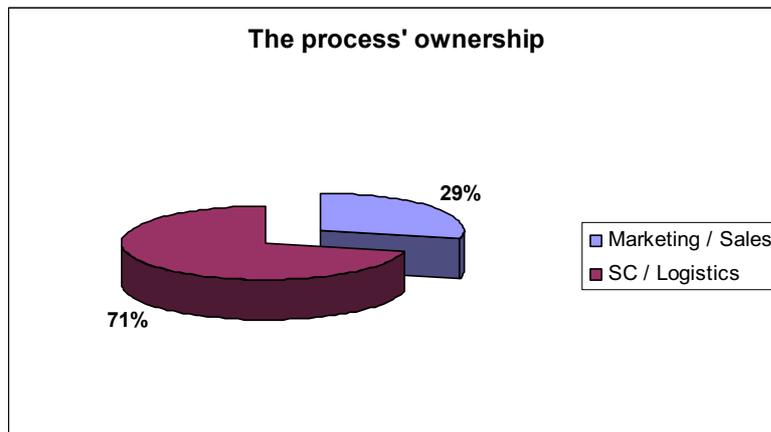
---

The market complexity is unstoppable and the uncertainty of consumers response represent the most important problem the companies have to face and solve .Well-structured Demand Planning can be an invaluable weapon in facing the challenge posed by change. It should provide support for decision-making, with analyses and projections of demand that will correlate and integrate predictive algorithms with information provided by the sales network and by sociologists who monitor changes in consumer purchasing patterns, with an attentive eye to the competition's strategies. This means that forecasting techniques should be based on the active collaboration of all the company departments involved: sales – marketing – logistics – research and development. They must share data and information collected in the national and international markets and define, in concert, a demand plan that is essential to the activation of all the processes following the supply chain: there's no room left for solos, it's time to „play together”.

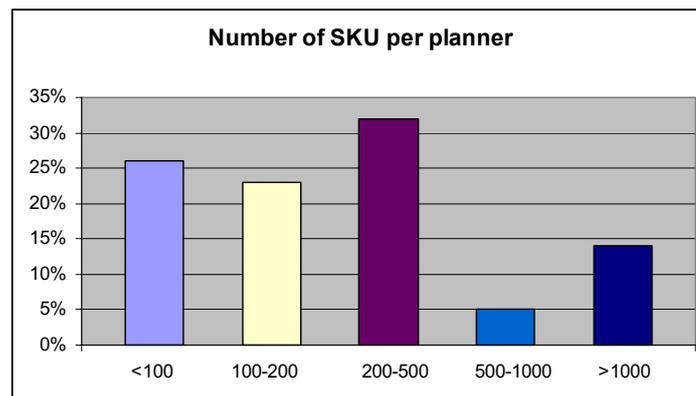
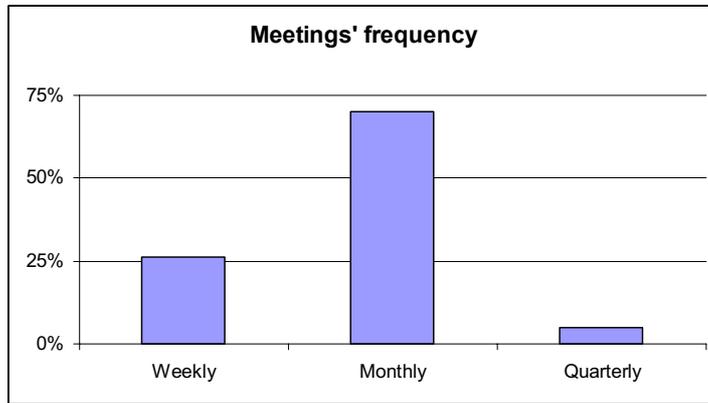
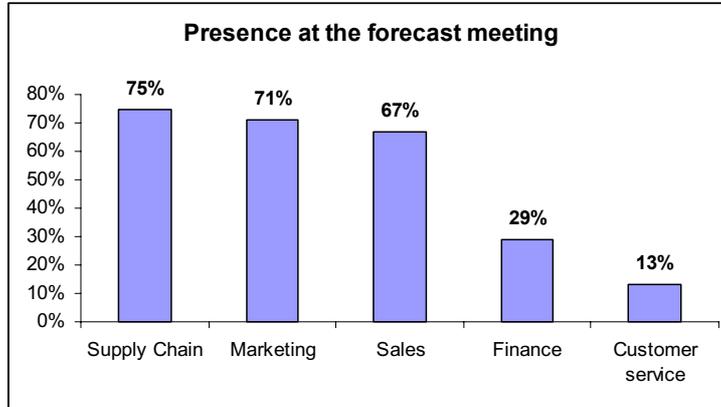
### 7. The demand planning process

Recently, from April 2005 to March 2006, AILOG and the Logistics Research Center of the Cattaneo LIUC University of Castellanza surveyed 25 leading companies in the beverage, pharmaceutical and home & personal care sectors, in order to define the organization of the Sales Forecasting and Demand Planning process. The results of the study are illustrated in the diagram below.

Fonte: Logistica - Ottobre 2006



**A glance of modern logistics. Demand planning process**



**Figure 1. Diagrams of the demand planning process**

## **Management & marketing**

---

A quick glance at the results of the study shows that Logistics must continue to expand its tasks and responsibilities in an increasingly complex business world.

The challenge is exciting, but this is only the first step towards the future and ... the future is in our hands.