

# IKEA : Logistic Study

The image shows the IKEA logo, which consists of the word "IKEA" in a bold, blue, sans-serif font. The letters are contained within a yellow oval shape. This oval is centered on a dark blue rectangular background. The entire logo is positioned in the middle of the page, between a yellow header bar and a blue footer bar.

**IKEA**

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# INTRODUCTION

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IKEA is a privately-held, international home products retailer that sells flat pack furniture, accessories, bathroom and kitchen items in their retail stores around the world.

The company, which pioneered flat-pack furniture at affordable prices, is now the world's largest furniture retailer.

But go back 60 years behind, IKEA was founded in 1943 by Ingvar Kamprad in Sweden. The name IKEA comes from its initial (I.K.) and from the first letters of Elmtaryd, Agunnaryd, the farm and his village.

The company which was originated in Småland, Sweden, distributes its products through its retail outlets. As of August 2010, the chain has 280 stores in 26 countries, most of them in Europe, North America, Asia and Australia.

IKEA's goal is to create a better everyday life for most people. Its business idea supports this vision by offering a wide range of products for home decoration, well-designed, functional and at prices so low and offering quality products that most people can afford.

Now, the IKEA's CEO is Mikael OHLSSON and its turnover is about 23,1 billion Euros in 2010.

# I. HISTORY

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The IKEA Concept began when Ingvar Kamprad, an entrepreneur from the Småland province in southern Sweden, had an innovative idea.

At the beginning, at the 17 years, Ingvar receives money of his father to reward in the success of its studies. This gift is used to him to establish its own company. At its beginnings, IKEA sells feathers, wallets, executives, table runners, watches, jewels, nylon stockings, all the articles which meet a need and which Ingvar can sell at reduced price.

The introduction of furniture into the IKEA set is done in 1948. They are manufactured by local craftsmen installed in the forests located very close to the house of IK. The reception was very favorable and the collection gains in importance.

But especially, Ingvar's innovative idea was to offer home furnishing products of good function and design at prices much lower than competitors by using simple cost-cutting solutions that did not affect the quality of products. Ingvar used every opportunity to reduce costs, and he scraped and saved in every way possible.

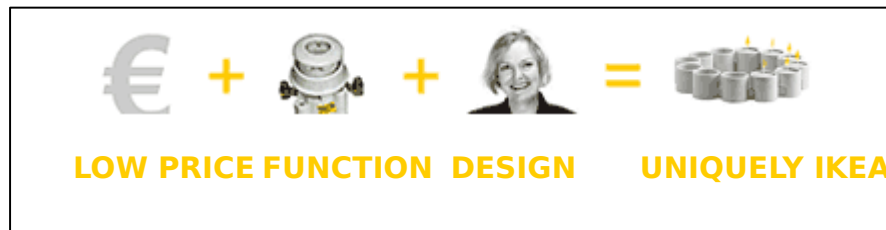
The flat-pack furniture's idea comes from a simply history. It's just one of the first collaborators of IKEA which withdrew the feet of a table to make it enter the car and prevent it is not damaged during transport. Following the discovery, packing flat and the assembly by the customer become integral parts of the concept.

And now, you know the beginning of the IKEA's success.

## II. IKEA RANGE

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Fundamental activities such as eating, sleeping, storing items, socializing and so on create a demand for furniture and practical products that solve essential human needs. IKEA product range meets these needs by offering a wide range of well-designed, functional home furnishing products at prices so low that as many people as possible will be able to afford them. The IKEA range includes products for every part of the home.



**Low Price :** Low price is a condition for the IKEA Concept to realise the IKEA vision "to create a better everyday life for the many people".

As the IKEA Concept aims to serve "the many people", the IKEA product range needs extremely low price levels. IKEA designers do their part to keep prices low by using production capabilities from other areas in unique and previously unimagined ways - like using leftover materials from the production of one product to create an entirely new one. IKEA customers also contribute to keeping prices low. They select and pick up the products themselves, transport them home and then assemble them themselves. And they can do them already later that day.

**Function :** The many people have many needs. They live with kids. They need more storage. They have to make the most out of a small space. So IKEA designers are always seeking new ways to improve people's lives without emptying their wallets. But can good design and function be combined with good quality, all at a low price? It started focusing on what's important. Will an expensive finish on the back of a shelf or under a table-top improve the function? Absolutely not. So IKEA designers do not do it, because the product is of no use to the customer if it is not affordable.

**Design :** In developing the notion of "democratic design", Ingvar Kamprad, founder of IKEA, had asked: "Why must well-designed furniture always be so expensive? Why do the most famous designers always fail to reach the majority of people with their ideas?"

In his view, well-designed products were only for the rich and privileged; the multitude of people with less money, were excluded. Furniture was no exception. Kamprad's idea with IKEA is to offer a wide range of home furnishings of good design and functionality at a price low enough to be affordable to most people. This is a "democratic idea" that had originated from IKEA's roots in the poor farming communities of the County of Småland in Sweden.

The three dimensions of “democratic design” are form, functionality, and low price. No other furniture manufacturer is producing designed home furnishings that featured all three of these elements. With respect to the third dimension – low price – IKEA designers are always asked to use design to decrease prices, not increase them. In effect, the price tag is “designed” first, beginning with a decision on what price the majority of people can afford to pay. A production line is then designed to produce furnishings that satisfied the other two dimensions. To achieve this, designers work on the factory floor with production staff, rather than in a prestigious office in a distant city.

So, IKEA manages to sell his furniture at low prices by minimizing transportation and storage costs, but what exactly does all of this have behind?

# III. LOGISTICS MODEL

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## 1. INTRODUCTION

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The way how the products from the factory to the customers is quite difficult. The strategy of distribution varies from companies. So, what is the distribution strategy of IKEA?

With its global presence, IKEA uses all means of transport, promoting the most profitable as it is positioned on products at low prices.

Today, about 9.500 IKEA products are manufactured by 1,074 suppliers and transported to 280 IKEA stores around the world, often via one of the company's 27 central warehouses and distribution centers. The objective of strategy is to make the path of the products as short as possible between its manufacture and the customer.

IKEA's supply chain consequently has a global spread with both sales and purchasing in all major regions of the world. IKEA's growth has been great and sales are still growing. Currently IKEA plans to open 10-20 new stores every year with a goal to double sales within the coming five years.

With the increasing of its growth (+7.7% in 2010), distribution and logistics is a real challenge. In fact, IKEA advocates for a constant control of its distribution chain and a high level of visibility in order to avoid obsolete stocks, stock-outs and reduce costs.

IKEA plans to build a modern and more convenient logistics to be able to cope with the expansion of the company: have more distribution centers in the world will allow a better distribution of products still in a lower cost.

## 2. LOGISTICS STRATEGY

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**The logistics (distribution) strategy by IKEA can sum up as:**

**LARGE VOLUMES + FLAT PACKS = LOW COSTS**

A distribution such as that IKEA is set up to make the products available to the client the right time where ever they need it.

The attributes for such a successful delivery system can achieve through:

- A global distribution network
- Large volumes
- Flat packages
- Low costs

### **Better efficiency means lower prices**

The concept of IKEA to sell packed flat products allows to optimize space during transport and storage. They are therefore transported with greater efficiency.

*For instance :*

HOTT kettle.

The fact to stack some more kettles upside down in a box allows you to use the wasted space of usual, and reduce packaging and distribution costs. Indeed, we can put ten instead of six.

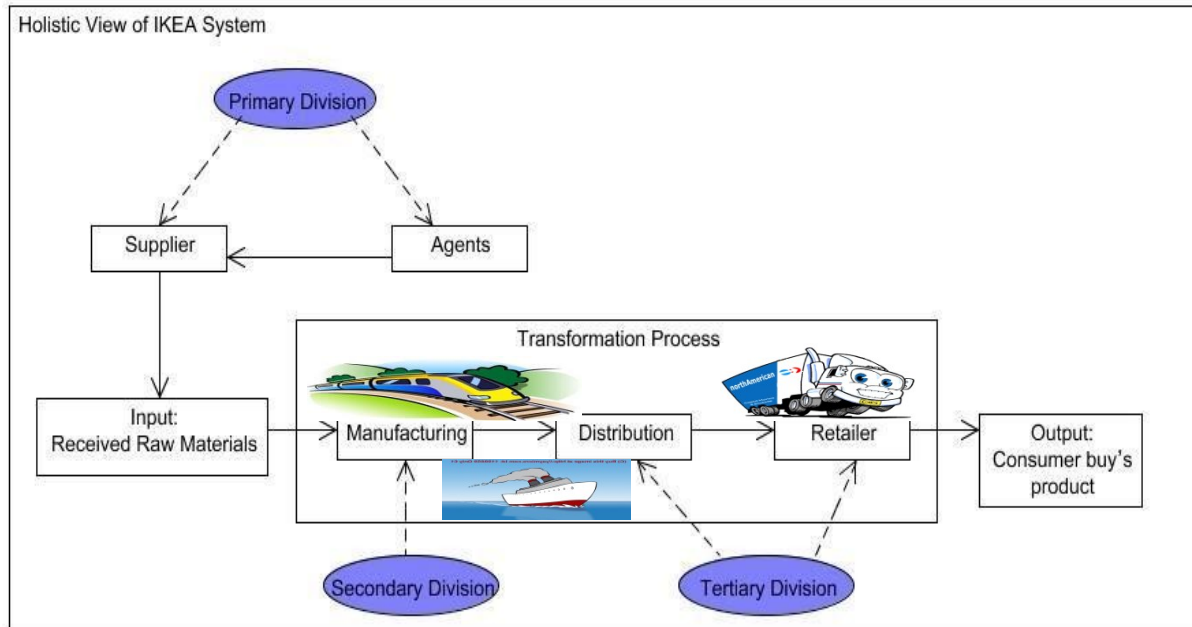
EKTORP sofa

Last year, IKEA's designers found the way to pack the popular three-seater more compactly, doubling the amount of sofa they could cram into a given space. That shaved 100€ from the price tag, and significantly reduced the carbon-dioxide emissions from transporting it.



### 3. FROM PRODUCER TO CUSTOMER

The diagram shows us the whole system of IKEA from production to the customer



The primary division is responsible to **produce and deliver raw materials** for the organization.

The secondary division **uses the raw materials to manufacture the products** of IKEA.

On the tertiary division, the services that are provided by IKEA are showed **to meet the needs of their customers**, for example retailing and distribution of the products.

At some of their retailers, they provide delivery of the products in order for their customers **to save time**, but they also provide vans to hire that they can be use by the customers which they used the public transportation to the reach their stores

### LEAD TIMES

Great emphasis is put on the ordering and distribution methods. IKEA's suppliers are categorised according to the lead time that they work on. **IKEA's policy is to try to shorten lead times gradually.**

A supplier may start to supply goods on either a long warning fixed time delivery basis or a call-off. **Call offs are time based methods** and once the supply chain is functioning smoothly the supplier will progress to an order driven method: **Order Point Distribution Centre (OPDC)** at progressively shorter lead times, from weeks down to days, with the manufacture and delivery of goods being triggered by orders.

Once a supplier is able to achieve this they **explore the possibilities of cutting the distribution link out of the chain** so that retail stores deal directly with **factories (V**

**Management Inventory (VMI)** perhaps with goods by passing the distribution centres altogether and going direct to retail stores .

## **SUPPLIERS ADVANTAGES**

In 2000 IKEA established a code of conduct (known as "IWAY") for the manufacturer of its products. The code of conduct requires its producers to manufacture products under acceptable working conditions utilizing suppliers who, themselves, take responsibility for the environment.

*The experience of Nicolae Borsos, an IKEA supplier in Romania, demonstrates the way in which the code of conduct operates. In 1999, with IKEA's help, Borsos bought a run-down furniture factory in the town of Nehoiu. Since then, an investment program has increased profitability and improved conditions for the factory's 680 employees.*

*All new investments were required to meet IKEA criteria for product quality, working conditions, and care for the external environment*

*In addition, Borsos was responsible for ensuring that his suppliers also respected the code of conduct. According to Borsos: "The IWAY has led to a general improvement in standards at the factory".*

Values from IKEA suppliers are:

Cost consciousness: all units in the company or value chain have to be cost-effective and have to meet quality standards;

Shared development: a development contract between IKEA and the supplier;

Leadership: Borsos, as an IKEA supplier, assumed a leadership role in the general improvement in the standard of the plant, product quality, working conditions, and the external environment; and

Responsibility: Borsos was accountable for social and environmental conditions in accordance with the IKEA code of conduct

Indeed, for suppliers, respondents talked about the "marriage contract" based on IWAY. The relationship implied that a supplier should gradually increase standards to achieve the next level of a four-step staircase, where the first step is marked by the standards requirements on social and working conditions, environment and merchandise while the highest step corresponded to ISO quality standard.

Moreover, with its code, this shows that IKEA has strong values.

If a manufacturer alliance with IKEA, it knows that its margins will be lower than with other clients, but in return he will receive some support and a relationship that is priced. This includes:

- Contractual Trust : He knows that he will always be paid within 30 days even if there was a problem between IKEA and him, or if a product is discontinued, it's a real financial guarantee for the supplier.

- Product Life Cycles : IKEA strategy is to extend as long as possible life cycle of a product, and thus extend the contracts with suppliers to negotiate over the long term and always keep the same suppliers. It's a guarantee of employment.

Investment : IKEA can invest in its suppliers if he sees that he can improve productivity of this last. It is a kind of credit where the supplier will return the similar or more with his goods to him manufactured.

- Technical advice : Experts from IKEA will visit suppliers to give them some advice from design to packaging. This support enables the factory to be more profitable for the supplier and for IKEA. For example, for packaging, the factories are now many products in one package (see above) : they try to find the most cost effective option of the package.

- IT : The supplier will be linked to ECIS, IKEA's own system. This allows him to view sales, forecast orders, oversee inventory ... as a total transparency of the supply chain. It's a real advantage for the supplier since he works in just in time. And, moreover, the system allows him to find the raw materials at lower costs.

Finally, the relationship between the supplier and IKEA is more than an ordinary relationship. IKEA invests fully in this relationship so that it is beneficial to both players and promotes long relationships with suppliers so they can develop and also avoid the inconvenience of new relationships with suppliers.

## **RAIL - MORE CONVENIENT**

Today 73 % of all IKEA freight is transported by road, 2% by rail and 16 % by sea and 9% by transport intermodal.

In future years, IKEA aims to increase the transport by rail because it is cheaper and more convenient. So within the next 3 years, 40 % of all IKEA freight within Europe will be moved by rail.



## CASE STUDY OF CIMIR SOFA MANUFACTURERS

CIMIR is a supplier of IKEA sofas located in Brodnica (Poland).

In 10 years, the turnover of the factory employing 400 employees increased by € 20m. Its production capacity is 500 sofas today with a surge capacity of 600.

How did he do? *It just changed their supply contract with IKEA.*

Before, they fabricated in a JIT with direct delivery to stores with a period of 2 weeks. Now they are working on an OPDC basis with a period of five days: this requires the keeping of restricted stock, no more than one week's worth depending on the season and the proximity to a catalogue launch.

The next step is to move to within three days using a method of transit where sofas will be routed through the distribution center

Key to the success of these lead times was to separate their sofas from the covers that are now manufactured and shipped separately. They will be assembled to the customer's choice of color.

This separation has helped to simplify the manufacturing process because they are now producing one color: white.

That is not to say that the product is 'mass produced'. There is a batch size of one for covers - and a product range of over 700 different styles. "We could make 500 different sofas in a day" says the production manager, "it would be difficult but we could do it!"

The sofas factory has its suppliers for over 10 years. It advocates such as IKEA's long-term strategy with its suppliers. Thus, they can negotiate prices and work with them on product design or on the supply chain for example.

In addition, he helps them be more profitable by buying for them raw materials such as plywood in Russia. Indeed, he buys raw materials because he can have them at a better price than the supplier, then he sells it in order to buy the semi-finished products.

The cost of labor in Poland is advantageous in Western Europe but cannot compete with the Far East. Indeed, a Polish worker is paid € 330 per month and has to work minimum 40 hours per week. Suppliers must take advantage of their logistics (time, good delivery) and the quality of their products to compete with the Far East.

Two employees of CIMIR are inspectors for quality control and another employee is responsible for quality. They are implementing a TQM program and hope to have ISO 9000 accreditation next year.

CIMIR has full visibility of IKEA forecasts and inventory holdings and they have developed their own forecasting model based on trend analysis (see before: Advantage of suppliers).

In the storage area CIMIR, IKEA products are packaged effectively to take up less space on the shelves (IKEA's strategy see above). There is no bar-coding as yet and the scheduling is still done manually but the goal is to have an ERP (fully computerized enterprise resource planning system).

At CIMIR, there are teams of 5-6 versatile people who assemble one complete sofa frame at a time from its parts. This is a decision that allows teams to take pride in their work and to feel concern at what they do. The individuals are all multi-skilled and enjoy greater variety of tasks than in a conveyor belt process.

Once finished frames, they are sent to another workshop where they will be packaged with foam padding to protect them. Then employees will barcode products and they will be stocked while waiting to be delivered to distribution centers (see From production to customer: schema).

The warehouse is set up to load straight into either trains or trucks. Video cameras look into the containers to check on the loading for damage or smuggling. The containers are then sealed. Bar-coding facilitates computerized recording of outgoing products. The merchandise will be the road to the next distribution center to be loaded again and be conducted in several stores.

This is the story of IKEA sofas.

## IV. PROBLEMS ABOUT SUPPLY CHAIN

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Supply chain IKEA is mainly make-to-stock (MTS). As a result, the supply chain is dependent on forecasts.

The problem is that the regions / stores have too much freedom with respect to replenishment and planning applications. This makes it mandatory supply chain fragile.

In addition, due to frequent shortages, some regions have done on purpose to increase their demand to be sure it is delivered. This engenders implications for other regions that have suffered from stocks shortages or others who have overestimated their demand or obsolete stocks.

First of all, IKEA uses manual labor for the development of planning that is not very reliable. And in addition, planning is made from fragmented and unreliable information. This therefore leads to a lack of trust between the different parts of the supply chain.

Part of the explanation to this is that IKEA has lacked a common and structured tactical planning of demand and replenishment.

Other problems related to the supply chain performance was difficulties to get enough attention of data maintenance, the lack of proper follow-up tools to monitor forecast deviations, hard to change mindsets among users, no synchronization of order and stock data...

## V. ENVIRONMENT

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In 1992, IKEA created an Environmental Action Plan. The plan allows IKEA to "maximize the impact of resources invested and reduce the energy necessary to address isolated issues." The environmental measures taken, include the following:

- Replacing polyvinylchloride (PVC) in wallpapers, home textiles, shower curtains, lampshades, and furniture—PVC has been eliminated from packaging and is being phased out in electric cables;
- minimizing the use of formaldehyde in its products, including textiles;
- producing a model of chair (OGLA) made from 100% postconsumer plastic waste;
- introducing a series of air-inflatable furniture products into the product line. Such products reduce the use of raw materials for framing and stuffing and reduce transportation weight and volume to about 15% of that of conventional furniture;
- reducing the use of chromium for metal surface treatment;
- using wood from responsibly-managed forests that replant and maintain biological diversity;
- using only recyclable materials for flat packaging and "pure" (non-mixed) materials for packaging to assist in recycling.
- introducing rental bicycles with trailers for customers in Denmark.

Recently, IKEA has stopped providing plastic bags and replaced it with reusable bags.

The restaurant also began to sustainably develop by using reusable plates, knives, forks, .... and IKEA has also recycling bins for compact fluorescent lamps (CFLs), energy saving bulbs, and batteries.

In 2001, IKEA was one of the first companies to operate its own cross-border freight trains through several countries in Europe.

In August 2008, IKEA also announced that it had created IKEA GreenTech. Located in Lund (Sweden), it will invest in 8-10 companies in the coming five years with focus on solar panels, alternative light sources, product materials, energy efficiency, and water saving purification. The aim is to commercialize green technologies for sale in IKEA stores within 4 years.

# CONCLUSION

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After reading this study, we can realize that when we are IKEA customers, we are at the top of the iceberg. We do not imagine all that is behind these products on the shelves in the store.

In fact, IKEA has a logistics system complicated but profitable for the company. We were able to follow the progress of their products in Poland for instance, their journey by truck or by train to IKEA distributors centers and its arrivals in one of 280 IKEA stores in order to be assembled at the customer's home. IKEA's supply chain is closely overseen in order to avoid all kinds of problems. But it is not perfect, there is and there will always be problems.

IKEA values are more than present : a functional product at a low price with good design that was manufactured, while respecting the environment. This is IKEA's vision : create a better everyday life for the many people.



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