

THE NATURAL STEP ORGANIZATIONAL CASE SUMMARY

IKEA

Headquarters: Humlebaek, Denmark

A. THE BUSINESS

In the lifetime of its founder, IKEA has successfully grown into a profitable and complex global system with 1997 worldwide sales in excess of US \$7 billion, more than 40,000 co-workers, 150 stores in 28 countries, 14 major distribution centers, and approximately 2,300 suppliers in more than 64 countries. Worldwide, more than 168 million people visited IKEA stores in 1998. Clearly a robust company, revenues have grown steadily.

The IKEA group is owned by a Dutch foundation, Stichting Ingka Foundation, of which Ingvar Kamrad is Chairman. The management services to the IKEA Group are provided by IKEA International A/S located in Humlebaek, Denmark, the international headquarters for IKEA. The operations of the IKEA Group are based on four basic functions: the product range (design and development), trading (purchasing), wholesale (distribution), and retail (sales).

In general, IKEA does not manufacture its own products, but works through a complex network of suppliers around the world. However, in the past few years, IKEA has acquired a number of its own factories, some of which function as training units and set standards for other suppliers for production economy, quality, and environmental awareness. To secure supplies and help suppliers develop, IKEA is also partnering as joint owners or financiers in a number of countries including Poland, Slovakia, Russia, Romania, and Bulgaria.

B. PRINCIPLE MOTIVATION FOR CHANGE

IKEA hit its first environmental wall in the mid-80s. In 1981, Denmark established a new law regulating the maximum emissions allowed from formaldehyde off-gassing in particleboard, which is a core component of many IKEA products. According to Nilsson, although the law seemed very strange to IKEA at that time, they simply requested that their suppliers follow it. The Danish authorities decided to test compliance with the new law and found that companies were paying very little attention to it. Being one of the largest furniture companies operating in Denmark, and with headquarters located there, IKEA became the focus of a new and aggressive public campaign. The government tested products from IKEA and found that some products had formaldehyde emissions above the legislated limit. A television program drew dramatic attention to the issue. IKEA was sued for violating Danish laws and assessed a fine. The fine, however, was minimal compared to the damage done to IKEA's image and sales, which temporarily dropped by about 20 percent in the Danish market.

The formaldehyde issue was quickly referred to IKEA's quality department. Russel Johnson, then head of quality, moved into action. IKEA immediately set up a large testing laboratory for its products that today is one of the most sophisticated of such facilities in Scandinavia. They began testing samples from their suppliers and introduced

stringent new requirements for suppliers to meet. For suppliers to meet those standards, the investigation had to go deeper. IKEA's suppliers, scattered throughout the world, use particleboard and plywood from numerous manufacturers. IKEA went to these manufacturers and were advised that they could not solve the problem alone because they, in turn, used numerous manufacturers of the glue, which turned out to be the source of the formaldehyde. IKEA took the investigation to the glue manufacturers and still could not find a satisfactory solution. Eventually they ended up going directly to chemical giants such as ICI and BASF in Germany to find a way to reduce the level of formaldehyde off-gassing in IKEA products. In the course of this investigation, Johnson believes that IKEA actively contributed to finding solutions for the entire European furniture and particleboard industry.

In addition to the formaldehyde crisis, IKEA became aware in the late 1980s that it was being criticized more often for environmentally-related issues. For example, IKEA began to receive criticism for its packaging waste, and for the use of PVC plastic which had become a big issue in Germany. PVC, once considered to be an excellent material, had come under environmental scrutiny particularly after a large fire in the plastic industry traced dioxins to the combustion of PVC. Unexpected criticism was also launched against IKEA's famous catalog, then the biggest circulation color catalog in the world. Criticisms were voiced about the number of trees felled each year for pulp to make the catalog's paper, and for the use of chlorine in bleaching that pulp because the chlorine residues released into rivers and seas endangered marine life, particularly in the Baltic Sea. The company was also criticized for the amount of waste produced in the making of the catalogs and from discarded catalogs after their use. These environmental issues were new and confusing for the company. IKEA began to recognize that environmental concern was a new market reality.

Then in 1992, IKEA faced yet another and totally unexpected formaldehyde crisis. This time it was in IKEA's largest market, Germany, and with one of its biggest sellers, the globally popular Billy bookshelf, which represented many millions of dollars per year in revenue to IKEA. Tests conducted by an investigative team from a large German newspaper and television station found formaldehyde emissions for the Billy bookshelf to be just slightly higher than the legislated requirement. This time the culprit was not the particleboard itself — which was the part of the bookshelf that was actually regulated by law — it was the lacquer on the bookshelves. The regulatory details did not matter to the press. The impact of the coverage mattered a great deal to IKEA. Glenn Berndtsson, current head of IKEA's quality division recalls: "It was in all the newspapers and all the television stations throughout the world: 'the deadly poisoned bookshelves.' From Hong Kong to Australia. We had to put a stop on all sales of Billy bookcases. We stopped production worldwide."

Berndtsson estimates that the direct cost just to track the bookshelves and correct the situation was between US \$6 million and US \$7 million at that time, not counting the cost for diverted manpower, lost sales, lost production by suppliers, or the costs and time it took to persuade customers to return to IKEA to buy the bookshelves. Altogether, this one incident cost IKEA and its suppliers tens of millions of dollars to correct. IKEA was learning an important and costly lesson.

Johnson explains that early on, Ingvar Kamprad, founder and Chair of IKEA, defined the mission of the company: to create a better everyday life for the majority of people. If environmental problems such as pollution and health effects are becoming more of a worry for everyday people, they must also be a concern for IKEA. “If people see IKEA as a company that is polluting the environment, creating wastes or emissions, or wasting resources, then we are not living up to our mission as it is understood by people now in the late 1980s and 1990s. That’s a very strong matter. We are meeting customers face-to-face every day. As a company built on the mission to create a better every day life for the majority of the people, of course we must take environmental issues seriously.”

C. CHOOSING THE NATURAL STEP (“TNS”)

Prior to the 1992 German formaldehyde incident, IKEA had already begun to examine its stand on environmental issues. In 1989, Anders Moberg, then President of the IKEA Group, asked Russel Johnson, as head of quality for the IKEA Group, to take on the task of mapping out which environmental questions were relevant to IKEA, which might affect their operations, and conversely, what impact IKEA might have on the environment. Moberg told Johnson: “Environment is not just a new fashion, it will not just fade away, it is the new reality and we have to adapt to it.” He asked Johnson to draft an environmental policy as a basis for discussion for the IKEA Group management.

In January 1990, Johnson presented his first report to the group management. The report detailed a number of environmental issues relevant to IKEA and presented a first draft of the environmental policy. Johnson told the group management that he was clear that neither he nor IKEA had the competence to address these environmental issues. IKEA could not sort these issues out alone. He proposed that the environmental task force would organize an environmental day for the IKEA group management and group staff with someone who could help them make sense out of these issues. Johnson decided that Dr. Karl-Henrik Robèrt, then working as a medical doctor and director of cancer research at a major hospital in the Stockholm area, was the appropriate person to play that role. At that time, although still practising medicine, Dr. Robèrt had a growing reputation for balanced environmental thinking after the well-publicized launch of his Natural Step organization in 1989 under the patronage of the King of Sweden.

The group management agreed that environmental issues were becoming more important to IKEA’s business. They adopted the first environmental policy for a one-year trial period in 1990. In 1991, IKEA’s Board approved the current IKEA environmental policy.

D. TNS INTRODUCTION AND IMPLEMENTATION

The challenge remained to make the environmental policy an operational reality. The next assignment of the task force was to develop an environmental action plan. By early 1992 it was ready. In April 1992, Moberg hosted a two-day environmental seminar for IKEA’s top management to increase their environmental awareness and to get their acceptance of the proposed environmental action plan. At this seminar, IKEA’s environmental task force presented its analysis of IKEA’s relationship with the natural

environment. Karl-Olof Nilsson, Group Staff for Environmental Affairs, recalls: “We stated that we had discovered that we at IKEA are environmental gangsters, that we are a threat to the environment. We are violating the possibilities of having a sustainable society.” The task force used only three overheads to present the results of their analysis. One slide contained IKEA’s success figures such as increased sales and new stores opened the previous year. The second slide pointed out that IKEA had distributed some three million cubic meters of future waste in the previous year. The third slide was a hand-drawn illustration of IKEA’s relationship with the environment.

The environmental task force summarized by telling IKEA’s top management that when they analyzed how IKEA works, how other companies work and how society works, “what we are doing is actually transforming resources into waste. The process is measured at the cash register where we measure turnover. What we are actually measuring there is the rate at which we are transforming resources into waste.” After the task force analysis was presented, Dr. Robèrt introduced The Natural Step framework as a way to begin reconceptualizing and redesigning the relationship between IKEA and the natural environment. After the seminar, the group management approved IKEA’s first environmental action plan, and launched a program of education and training.

IKEA decided on a “train the trainers” approach to disseminating the environmental education. Trainers were chosen from each IKEA department. They attended an intensive week-long trainers’ seminar and received a trainers kit consisting of a manual and overhead slides.

IKEA’s goal was to provide full training to all co-workers directly involved in product development or with direct contact with suppliers or customers, about 90 percent of IKEA’s 20,000 employees at that time. All other co-workers were offered the opportunity to attend a shorter version of the training. They started with their major environmental training in 1993, and including the retail side, the majority of the training was done by 1995. However, by the end of 1997, the coverage of the training program in IKEA stores around the world was uneven. In general, where there was higher demand and higher interest about environmental issues in the market, such as in Germany, the training rate was as high as 90 percent of the co-workers in a store. In other cases, it was closer to 50 percent.

After five years’ experience, IKEA is developing its Natural Step-influenced environmental education in three general categories:

1. Basic training for all co-workers to create awareness, understanding and know-how, and refresher training for co-workers who took part in the extended training in 1993-95 that will include information on what has occurred in IKEA since that time and what is being planned for the future.
2. Professional training for (a) specialists to increase knowledge about the environmental aspects in IKEA’s functional areas. (For example, IKEA has developed a program for transport buyers and transport planners who need to know more about the environmental aspects of the transport sector); (b) environmental coordinators and environmental trainers to develop more extensive environmental knowledge and greater capacity to help other co-

workers see the connections between their day-to-day work and the natural world; and (c) suppliers.

3. Master training, which is more advanced training for co-workers that support the professionals, to develop either a very deep knowledge in one or a few areas, or a very broad general knowledge.

It was easy to recognize the need for integrating environmental concerns into business thinking. It was more difficult to imagine how the changes would actually happen. As early as the April 1992 presentation of the environmental task force to the top management at IKEA, the challenge was obvious. When Dr. Robert presented The Natural Step framework at that meeting, one of IKEA's top managers responded: "Thank you very much, you have just ruined our business idea." The discussion that followed acknowledged that IKEA would clearly have to start changing direction, but environmentally friendly products were known to cost more money and thus were out of the question for IKEA. Then one manager suggested that IKEA start by producing an "eco-range" that might be more expensive than other parts of the range, but that would still be less expensive than anyone else could produce. People began to come to agreement around this idea.

IKEA set out to create a line of products under the new name of "Eco-Plus" consisting of products that had one or more environmental advantages. Part way into the development of the new Eco-Plus line, IKEA decided to re-assess and change its strategy. Putting marketing aside for a moment, they asked how IKEA could make the best contribution to a better environment. They concluded that a few products of a very high environmental standard would not make much of a contribution. The best thing to do was to focus on the products already in the range or being designed for the range that had potential to be the best sellers. They reasoned that everything that IKEA can do to reduce their environmental impact in those products would make a greater contribution than if they sold 10,000 eco-sofas. According to the new strategy, it is not a matter of taking five or 15 percent of the product range and making it environmentally the best, it is taking the whole range and improving it step-by-step.

One of the most practical sustainability initiatives arose from co-workers in IKEA of Sweden where the product range is designed, specified and developed. As a result of the mandate to integrate environmental thinking into operations, Björn Frithiof, head of law and standards at IKEA of Sweden, helped innovate an approach that has since been adopted by all business areas as a basic IKEA operational model. Originating in the textile division, the model presents a way of operationalizing the idea of "small green steps."

Textiles represent between 15 and 20 percent of IKEA's entire product range. In a US\$ 7 billion dollar company, this represents a significant business item with potentially important environmental impacts all the way down the supply chain. The step model developed by textiles is a system that classifies the entire textile range into four groups based on the environmental standard that each product or supplier has attained.

E. TNS IMPACTS AND LESSONS

IKEA has identified five key areas to focus the task of integrating environmental criteria and awareness into its business operations:

1. The Environmental Adaptation of the Product Range: IKEA has become increasingly aware of how much there is to learn about how the materials and substances in their products can affect health and the environment. Currently IKEA is working with Chalmers University in Göteborg, Sweden, to produce a material inventory of all their products using the four System Conditions and lifecycle analysis as their framework. The goal is, first, to identify what material is being used today and, second, which materials they will need to eliminate over both the short and long term to be in alignment with the System Conditions. The knowledge gained through this initiative will be used to improve the environmental performance of existing products as well as to inform the design of new products. Because the IKEA product range is so extensive, with more than 10,000 product lines currently, the project is expected to take between one and two years. IKEA is also working with Kingston University in the U.K. to look at designing furniture from an environmental perspective, including the concepts of dematerialization and design for disassembly.

Producer responsibility legislation, regulation that makes producers liable for taking back products at the end of their lifecycle, is of particular concern to IKEA, particularly with respect to furniture. IKEA believes that eventually the majority of countries will introduce some form of voluntary or legislated producer responsibility for furniture. In Sweden, discussions about the parameters for producer responsibility for furniture have been taking place since May of 1995 and some form of producer responsibility legislation is expected within a few years. In Germany it is no longer legal to dispose of old furniture at dumpsites. IKEA is working on the product development side to design and construct furniture for future disassembly and recycling. In Switzerland, IKEA's store in Spreitenbach has been offering customers the service of recycling their old sofas and armchairs since 1994. This service is offered at a charge that is less than customers would have to pay for disposing of the furniture at a dumpsite. In 1996 this service was expanded to allow customers purchasing home furnishing articles at IKEA to return all types of furniture including kitchen units, white goods and flooring. In both Sweden and Switzerland, IKEA is working with local recycling companies to explore the feasibility and logistics of recycling materials from discarded furniture. The discarded furniture will be recycled for use as raw material for new products. What cannot be recycled will be used for energy recovery.

2. Sustainable Forestry: Approximately 75 percent of the raw material for IKEA's products, packaging and catalogs comes from forests. This makes sustainable forestry a very important issue to IKEA. IKEA has become actively involved with various organizations in establishing principles for sustainable forestry. It is a founding member of the Forest Stewardship Council and was a member of the working group for the Swedish Forest Stewardship Council criteria. IKEA has dedicated one full time position to making an inventory of IKEA's current use of wood, including how much wood IKEA uses and from what sources. IKEA's ultimate goal is to use wood products sourced only from sustainably managed forests.

3. Environmental Work with Suppliers: The manufacturing of products creates some of the greatest environmental impacts. IKEA directly manufactures less than 10

percent of the products it sells. The balance is produced by some 2,300 suppliers in more than 60 countries. IKEA is initially focusing its environmental lens on its largest suppliers as it estimates that approximately 20 percent of IKEA's suppliers provide about 80 percent of its product line. Although individual suppliers are directly responsible for any harmful effects on the environment, IKEA understands its role as the purchaser for deciding which suppliers it will use. Many suppliers, particularly in Eastern Europe and Southeast Asia, have lower environmental standards than in Western Europe or North America. In IKEA's view, sourcing products in those countries provides an opportunity to advise suppliers of suitable technical solutions to reduce environmental impact. IKEA's responsibility includes providing information about IKEA's environmental policy, environmental action plans, and environmental requirements on products. IKEA's policy is to adopt and apply the strictest standards found anywhere in the world to each specific component in their entire product range. So rather than seeing low environmental standards in a country as an opportunity to avoid responsibility for its environmental impacts, IKEA takes this as an educational opportunity to bring a higher level of awareness and understanding to the particular situation.

Until recently, each of IKEA's trading regions has developed its own method of working with suppliers with respect to the environment. Now they are synchronizing and coordinating these activities, and one person has been made responsible for environmental coordination for IKEA trading.

IKEA is encouraging its suppliers to institute environmental management systems in their operations and many suppliers have already fulfilled the requirements according to ISO 14001, an international standard for environmental work; EMAS (Eco Management and Audit Scheme) which has been developed by the European Union; or BS7750, which is a British Standard. IKEA is not demanding that its suppliers be certified according to these standards but that they work toward continuous improvement with respect to environmental impact.

4. Transport and distribution: Transport is crucial to IKEA because it is a heavily transport-dependent company. The complexity of transportation networks for a modern multinational corporation such as IKEA, and its manifold impacts on the environment, is quite extraordinary. Considering that IKEA has approximately 2,300 suppliers around the world manufacturing approximately 10,000 different products, with each product made of perhaps dozens of parts themselves made and shipped by dozens of sub-suppliers, the environmental ramifications are significant. And this is just from one company in a global economy of millions of suppliers, transporters, and users. It is easy to understand why decreasing the environmental impact of their transport needs is one of IKEA's fundamental goals.

IKEA is clear that there are limits to what they can do to reduce their transport-related environmental impact. Beyond that they must depend upon their transport carriers who are also limited by existing transportation infrastructure, availability of alternative fuels, etc. These are areas where IKEA is building collaborative relationships to move the system in the right direction. Wherever possible, IKEA plans to use rail transport and combined road-rail transport. In the long-term this requires influencing railway

companies and public opinion about the economic and environmental benefits implicit in these choices.

IKEA is working in close co-operation with its carriers to discover ways to reduce the environmental impact of transport. The company has developed a program called "IKEA, Transport and the Environment" to develop ideas with their carriers for making transportation more efficient. An IKEA "Environment Day" was held regionally in Northern Europe in which nearly 100 European carriers participated. The first part of the day included presentations about why IKEA is now focusing on the environment in all aspects of its business using The Natural Step framework as the conceptual model. The second part consisted of collaborative work with the carriers to generate ideas about how IKEA and its carriers could work together in a more environmentally responsible way.

5. Meeting the Customer: This goal is very much an internal process, which includes the environmental adaptation of all IKEA stores, training or retraining of co-workers, and communications with customers. All IKEA stores are conducting material balance inventories to determine the throughput of material and energy through their stores. All new IKEA stores are to be built with environmental criteria in mind.

In the U.S., for example, IKEA is working with the Environmental Protection Agency on their Green Lights Program which encourages the use of energy-efficient lighting. IKEA has partnered with the EPA for about three years. Partners to the program agree to survey 100 percent of their facilities lighting systems and within five years of joining the program to upgrade 90 percent of that square footage to energy efficient lighting, as long as the upgrade achieves a minimum internal rate of return of 20 percent and there is no compromise of lighting quality. IKEA has made excellent progress in the program. As of November 1998, they had reduced their kilowatt demand by 781 kw and their kilowatt hour usages by 3,419,016 kw hours. The expected annual savings from lighting load reduction, air conditioning reductions, and reductions from lower lighting system maintenance costs is estimated to be \$514,321, with a simple payback period for all projects of 1.9 years. Environmentally, IKEA in North America has avoided an estimated 4,576,818 lbs. of annual carbon dioxide emissions, 17,336,606 grams of annual sulphur dioxide emissions and 6,656,530 grams of annual nitrogen oxide emissions equivalent to planting 982 trees, removing 482 cars from U.S. roadways and preventing the combustion of 313,500 gallons of gasoline.

In the process of launching a worldwide education campaign in this area of new learning, IKEA has learned some valuable lessons. In the beginning, the education team was so involved in providing the training to all co-workers that little emphasis was placed on what steps should occur after the training. They counted on the training to be the stimulus for action, but it was not that easy. Training had to be reinforced through practice and action. That is, co-workers needed opportunities to experiment with different ways to do their jobs and management needed to support suggestions and ideas generated after the training about how IKEA could conduct business with more environmental responsibility. Another lesson they learned was to make sure concrete results can be shown very quickly to co-workers to keep the fire of their enthusiasm burning. It is important to take advantage of "low hanging fruits" to demonstrate that something is being done, that progress is taking place.

IKEA has a special place in the development of The Natural Step as an effective instrument for business. It was one of the first major corporations to engage with The Natural Step, initiating their interest as early as 1990. It has the longest continuous business relationship with The Natural Step of any corporation, now a continuous ten year relationship. It has trained more of its employees in The Natural Step than any other corporation, i.e., approximately 30,000 employees. Many of the most effective environmental management tools, methodologies and concepts utilizing The Natural Step were pioneered at IKEA over the past decade and continue to be pioneered there today. IKEA was the first company to bring The Natural Step framework to North America and to begin to link the strengths of organizational learning with The Natural Step framework for sustainability. Finally, IKEA has a culture of entrepreneurial innovation, risk taking, forgiveness of mistakes and learning from them, caring for all of its stakeholders, and has come to an understanding of the business relevance and importance of sustainability. This has been fertile soil to co-create an effective dialogue between The Natural Step and business.

Several factors have facilitated IKEA's process of integrating sustainability as a core value of its business. The foundation of this is the link between The Natural Step framework and the values of IKEA's founder, Ingvar Kamprad, who has always detested waste in any form. Furthermore, exciting product innovation has resulted from seeking to balance environmental criteria on one hand with a low cost structure on the other. The integration of sustainability as a core value also owes a great deal to the tremendous drive of a small group of dedicated and enthused individuals, most notably Anders Moberg, former IKEA Group President. In addition, the enthusiasm and pride with which many co-workers throughout the company have embraced the inclusion of environmental concerns in their work has been very important. Still another significant factor is that IKEA focused its environmental lens on the heart of its business — product design and development, and on supplier relations through educating them on IKEA's sustainability vision, values, and plans.

In reflecting upon the ongoing ten year intellectual and commercial relationship between IKEA and The Natural Step, there are at least five main benefits to the company.

First, The Natural Step has been very helpful to IKEA in creating awareness, understanding, and enthusiasm for environmental issues among IKEA's senior management, middle managers, and co-workers. The Natural Step provides a key part of the environmental education programs used to train all co-workers. It provides the scientific core of the three different types of environmental training programs offered in IKEA today (as described above).

Second, The Natural Step has given IKEA management and co-workers a means to understand their relationship as a company and as individuals, to the rest of the natural world, and how IKEA in its widespread operations affects, and is affected by, the natural environment. By embedding The Natural Step framework into IKEA's strategic and day-to-day operations, through environmental policies, environmental action plans, environmental training, and through making environmental factors a core consideration of investment, supplier, transport and product design and specification decisions, IKEA

is approaching a more ecological worldview. In effect, in terms of its corporate identity as it relates to the natural world, it knows who it is, what it stands for, and why.

Third, with respect to the attacks of critics and the media, sometimes highly emotional, about the safety and environmental impacts of its products and operations, The Natural Step framework empowers and enables IKEA to analyze its products and operations and respond knowledgeably to criticism. IKEA does not claim to be environmentally pristine, far from it, but it at least has a much clearer understanding than most corporations of its inconsistencies and it has a step-by-step vision for their eventual solution.

Fourth, The Natural Step stimulates innovation and out-of-the-box thinking. It provides a framework for design innovation that empowers designers in all media, to innovate for the betterment of profits, people, and planet.

Fifth, The Natural Step provides a rational, common language and mental model for IKEA and its suppliers to create a shared basis for understanding IKEA's environmental vision and enables them to better and more efficiently implement IKEA's purchasing policies. IKEA and its thousands of suppliers around the world comprise a very complex system of relationships, languages and cultures. So far hundreds of IKEA suppliers in Northern Europe have received training in IKEA's Natural Step-influenced environmental policies.

F. ADDITIONAL INFORMATION

For more information about IKEA, visit their website at www.ikea.com. An information booklet entitled "Green Steps" outlining IKEA's environmental actions is available on request at all IKEA stores, or from the Environmental Staff of IKEA International (see address below). IKEA is also one of the main case studies with a chapter of its own in *The Natural Step for Business: Wealth, Ecology, and the Evolutionary Corporation* by Brian Nattrass and Mary Altomare, New Society Publishers, Gabriola Island, BC, 1999. See www.newsociety.com.

G. CONTACT INFORMATION

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