

Toshiba Electronics Europe (TEE) GmbH reduces costs and improves sustainability



CLIENT

Toshiba Electronics Europe (TEE) GmbH

BUSINESS CHALLENGE

Need to reduce costs associated with getting flash memory products to market

SOLUTION

Toshiba Electronics Europe engaged ModusLink to design a new product package that delivers decreased materials costs and more efficient shipments

RESULTS

- 50 percent cut in paper and fiber use and up to an 80 percent reduction with the smallest product
- 50 percent reduction in the amount of plastic used, while maintaining the integrity of the previous package
- 157 percent average increase in pallet density
- 45 percent reduction in shipping costs
- 31 percent reduction in annual CO₂ emissions

¹The process for calculating CO₂ savings involves weighing the packaging and evaluating the data through the Wal-Mart Scorecard, which determines the CO₂ generated in the lifecycle of the package from raw materials to the ModusLink Solution Center.

A Case Study in Sustainability

Toshiba Electronics Europe (TEE) GmbH has engaged with ModusLink for a variety of ongoing supply chain and logistics services since 2007, including content load for flash memory devices.

THE CLIENT

Toshiba Electronics Europe (TEE) GmbH is the European electronic components business of Toshiba Corporation, which is ranked among the world's largest semiconductor vendors. Toshiba Electronics Europe offers one of the industry's broadest IC and discrete product lines including high-end memory, microcontrollers, ASICs, ASSPs and display products for automotive, multimedia, industrial, telecoms and networking applications. The company also has a wide range of power semiconductor solutions, as well as storage products like HDDs, SSDs, SD cards and USB sticks.

Toshiba Corporation is a world-leading diversified manufacturer, solutions provider and marketer of advanced electronic and electrical products and systems. Toshiba was founded in 1875, and today operates a global network of more than 550 consolidated companies, with 202,000 employees worldwide and annual sales surpassing US \$74 billion.

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The packaging design capabilities and the production experience of ModusLink helped to successfully meet our stated cost-savings goal. This collaborative project is widely viewed as a success and a blueprint for further continuous improvement efforts.

For more company information visit Toshiba's web site at www.toshiba-components.com.

THE BUSINESS CHALLENGE

The nature of the market for Toshiba's flash memory products is one of intensely growing price pressures, especially in the USB stick and memory card form factors. At the same time, Toshiba Electronics Europe is also expanding the geographic availability of these products, resulting in growing logistics costs.

Naoyoshi Hosoda, vice president at Toshiba Electronics Europe, notes, "The continuous pressure on market prices for memory products put all costs for these products into focus. We decided to concentrate on the packaging material costs and the logistics efficiency of the packaging. Our goal was to reduce both of these expenses notably, as they had become increasing factors of cost competitiveness."

THE SOLUTION

While Toshiba Electronics Europe had also been considering deploying a specialized third-party agency, the team working on the cost reduction project felt the synergy between ModusLink's packaging design team and the ModusLink groups that were already working on Toshiba's content load and shipping programs offered the quickest route to achieving measurable savings.

"We perceived this as the best solution: to have a close connection between production and packaging design in order to speed up the process and to actually deploy existing resources," Hosoda said.

In order to help the client achieve its goals, ModusLink's package design engineering team took a holistic approach and looked at all aspects of the packaging for areas in which to eliminate redundancies, waste and extra materials. They also measured and analyzed the carbon footprint of the current packaging design in order to benchmark the sustainability of the new design. The team determined the overriding cost concern with the current design was its overly large size and an outsized paper user's manual. The end result was packaging that used too much material, added unnecessary weight and took up space, costing more to ship.

The first step was to begin eliminating the unnecessary plastic. One of the issues was the use of a uniform packaging size despite the various sizes of offerings in the product line. The solution was a standard-sized cardboard back with a blistered plastic packaging front tailored to the size of the product. This dramatically cut the overall amount of plastic required for the devices.

But perhaps most wasteful was the large and bulky separate paper manuals that accompanied each flash memory product. It was important to ensure the fundamental and expected manner of communicating important details about the product to the consumer wasn't lost.

However, a careful analysis and editing of the information typically contained in the user's manual led the teams to scale back the amount of data without losing key facts. This enabled the package design team to develop a double sided printed back card that directly contained the complete set of instructions and information, entirely eliminating the need for a discrete manual and resulting in significant reduction of material costs and weight.

THE RESULTS

With a completely redesigned physical package and an innovative approach to the user's manual, Toshiba Electronics Europe has saved money by eliminating a significant amount of excess paper and plastic. The smaller, lighter packages have resulted in decreased weight and pallet density, drastically reducing the transportation costs for getting the products to market.

The ModusLink package redesign results include:

- 50 percent cut in paper and fiber use and up to an 80 percent reduction with the smallest product
- 50 percent reduction in the amount of plastic used, while maintaining the integrity of the previous package
- 157 percent average increase in pallet density
- 45 percent reduction in shipping costs

Together, these improvements also represent a 31 percent reduction in annual CO₂ emissions, which equates to eliminating 74 metric tons of CO₂ from entering the atmosphere¹, equivalent to:

- Taking 13 passenger cars off the road
- 157 barrels of oil
- 7,592 gallons of gasoline
- 8 households' yearly electrical use
- 2,814 household-sized cylinders of propane

Hosoda concludes, "The packaging design capabilities and the production experience of ModusLink helped to successfully meet our stated cost-savings goal. This collaborative project is widely viewed as a success and a blueprint for further continuous improvement efforts for our next-generation packaging. We are already working on our next project with ModusLink."



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