

# Investigating the science of the new push-pull principle

**Jari Vartiainen**, Sales Director, Actiw Oy, Pieksämäki, Finland

In the world of materials handling, the efficient loading of goods in the warehouse, or into containers for shipping, is viewed by many logistics experts as being the pinnacle of operational excellence within the modern supply chain.

Streamlining this process for speed, efficiency and safety is the main priority for any fully automated warehouse. One tool proving valuable to the loading process is the LoadPlate, designed and implemented by material handling specialist Actiw Oy.

## A complete alternative

The LoadPlate solution is highly flexible, and can speedily and smoothly load goods of varying sizes, lengths, and weights into standard containerised cargo space (DCs) in a matter of minutes. It is suitable for loading difficult cargo that is hard to containerise, is easily damaged or that requires special shipping units such as open-top containers (OTs).

The cost of shipping and transporting OTs is approximately double that of DCs, which can run into thousands of Euros per container – plus the cost of containerisation. With LoadPlate, ordinary DCs can be used instead of OTs, making a significant saving.

Previously, there hasn't been an automated single-door container loading system available within the material handling market place. The LoadPlate system can easily cope with long items such as timber, steel plates, tubes, and profiles. It is also suitable for heavy and complex cargo that has traditionally needed to be loaded into OTs. Loads are moved smoothly on a plate into the cargo space, minimising the risk of product damage and ensuring cargo quality.

"This is a tool already in use where automated loading is called for," says Jari Vartiainen, International Sales Director, Actiw. "We are always pressing forward with technical developments to find new ways of manufacture and making small improvements to the system."

## Savings on transportation costs

With LoadPlate, one operator can load containers in just a few minutes – increasing vehicle turnaround times, and saving on transportation costs. "The operating costs of LoadPlates are low, a couple of Euros per loaded container, including electricity and wearing parts," says Vartiainen.

Actiw has also developed a LoadStrip accessory for unloading full-cargo loads in a few minutes, after which the containers are ready for new use. From a health and safety aspect, deploying LoadPlate means that the use of cargo handling equipment can be minimised to reduce the human involvement on the site.

## Making operational savings

With the cross-section for East-West and North-Southbound rail and road traffic, the Port of Fredericia is an important Baltic hub that has to handle a variety of heavy and bulky cargoes.

### ABOUT THE AUTHOR AND COMPANY

**Jari Vartiainen** is Sales Director of Actiw Oy. He holds a Masters degree in Engineering & Logistics from Lappeenranta University of Technology, and has worked on Actiw's automated material-handling products for over 20 years.

Based in Pieksämäki, Finland, Actiw Oy split from sister company Naaraharju Oy in 2008 and now has offices in Jyväskylä, Finland, and St. Petersburg, Russia. The company specialises in loading and unloading systems for ISO containers,



DCT Gdansk container terminal in Gdansk, Poland, recently purchased a modern LoadPlate loading unit, for loading a wide assortment of cargo into standard ISO containers.

Klaus G. Andersen, head of Danish company Fredericia Shipping, believes using LoadPlate has made difficult loading tasks more efficient: "We heard about the LoadPlate system from a client that had been using one in Sweden," says Andersen. "Basically the ACTIW LoadPlate was the only viable solution for us to stuff long, heavy items into standard ocean-going DC containers, where there is only an access through one door."

"The alternative was to use open-top containers and load them by crane. The potential saving was immediate, as the cost of sea freight for the OTs is far more expensive than for standard DC containers."

Now one-shot loading in a few minutes by only one operator is an everyday process for Andersen's team at Fredericia Shipping. The use of cargo handling equipment can be minimised, meaning that human involvement within the site is reduced.

"We have been hit by the current economic crisis and the turnover on the investment on the LoadPlate has been less than expected. However we still believe that we will have payback, albeit within a slightly longer period than the originally expected time of a couple of years," Andersen says.

## Loading fragile goods

French timber specialist Bois du Nord France deals with shipments from all over the world, specialising in supplying rough-sawn timber and planed, impregnated wood of all dimensions. Company spokesman Bruno Deveau says he first saw LoadPlate being used at Vika Wood, Latvia. "We then started thinking about the system when we visited their sawmill, and saw the advantages that LoadPlate could bring to the business. Now we can load without creating any damage to the cargo that we place in our containers. This is a great advantage when it comes to loading fragile items."

as well as other containerisation equipment. The company's product range also includes storage solutions with automated loading systems. The Actiw Storage, high-density dynamic storage, has been in production since mid-1980s.

### ENQUIRIES

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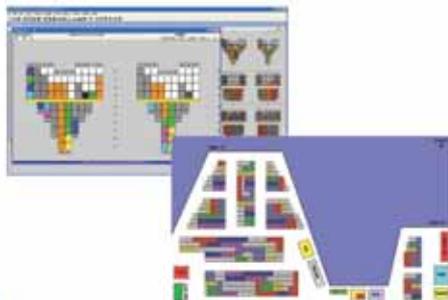
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