

Solar: "We save money and CO2 – when we double stack"



From an automated central warehouse of 45,000 m² in Vejen, Solar handles and distributes tens of thousands of different product types to their customers. That requires an optimized, integrated and streamlined logistics set-up throughout their entire value chain. Here Solar works with both data-driven solutions, climate initiatives and other solutions that improve efficiency, such as double stacking of pallets.

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Head of distribution, Solar

Solar continuously focuses on streamlining and optimising their distribution system and logistical processes. They also work hard to reduce their environmental and climate footprints – an effort that is visible in many ways. For example, they have optimised the physical packaging of their goods, and the way the goods are packaged is also of great importance. With this focus, Solar uses 150,000 fewer cardboard boxes a year, and have found smarter ways to pack and move goods.

The optimisation efforts are both system, process and data driven. Solar also optimizes the filling level in each box packed for transport, but also works to optimize the truck loading rate during the actual transport, e.g. by packing in height. The more goods they get loaded on each truck, the fewer trucks will be out on the roads.

At group level, Solar is working hard to reduce their CO2 emissions both through supply chain optimisation and by producing green power for their data centres. Today, the power Solar uses in their data centres comes from solar panels they have placed across the parking lot of their head quarter. The benefits of their initiatives are evident both in the environmental and climate reports, but also clearly visible on the bottom line.

Digital and low-cost logistics optimization

In addition to the digital optimisation of the picking and packaging of their many thousands of item numbers, Solar has found



SpaceInvader doublestack, Solar Vejen

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other low-cost optimisation tools. One solution is the SpacelInvader transport system, which enables double-stacking of pallet cargo.

If Solar for example has 39 pallets, which require a specific transport, but only has space for the 34 pallets, the last five pallets are double stacked. That’s a big win. “For anyone dealing with logistics it is a known problem that you may have to ship excess pallets with an extra truck because it is difficult to load at height. That is obviously not sustainable,” says Jens Erik.

A low-hanging fruit

When Solar is able to pack their pallet goods higher, they can exploit the empty air that most trucks otherwise drive around in the top of the trucks. Usually it is difficult to pack high and maintain a load that at the same time is safe and stable throughout the entire flow of goods from picking to packing, loading, transport and unloading. SpacelInvader has solved that problem when it comes to pallet goods.

When Solar double stacks pallet goods using the SpacelInvader racks, the goods are double stacked and made ready for transport already during line up in the central warehouse.

From here, the goods are delivered to DHL’s Danish distribution hubs and directly to the customers. “The optimisation potential is really a low-hanging fruit, because SpacelInvader allows us to increase the load capacity in our transport. When double-stacking, we get more pallets into the truck, notably pallets which we previously had to ship with an extra truck. The solution therefore makes incredibly good sense from both financial and a climate perspective,” Jens Erik says.

Great potential

Solar was one of the first companies in Denmark to use the SpacelInvader transport system. After approximately 18 months of use, the user experience with the solution is very positive. Jens Erik explains that the Solar terminal operators have welcomed SpacelInvader:

“The racks are easy to use and move around with for the operating staff. Overall, it does take a little extra time to use the system, but that time is quickly earned and even more when you look at the gains”. “Of course, we had to adjust the workflow that comes with the implementation of new tools in operation. Some adapt quickly and others are more reserved until they see how obvious the benefits are when they try it in practice. The solution really is smart and makes a lot of sense for both us and our carrier, DHL”.

Solar is now looking at expanding the solution for especially closed transport circuits to their sister companies in the Netherlands, Norway and Sweden.

How Solar uses SpacInvader

- Today Solar uses the racks ad hoc and where it makes sense in daily operations.
- Solar's goods are shipped from their central warehouse in Vejen in the evening, after which the goods are distributed through DHL's six Danish distribution hubs (Brøndby, Tappernøje, Slagelse, Struer, Aarhus and Aalborg).
- Via daily line-haul transports to the DHL hubs Solar's goods are distributed to the end customers – e.g. a plumbing operator - no later than 7am the next morning, in time for the goods to be ready for use the same day.
- Usually the DHL freight trucks have 34 pallet spaces, and if they have 39 pallets, they find that extra five spaces by double stacking with the SpacInvader racks.
- Solar manages the loading of the DHL trucks from their central warehouse in Vejen, while

DHL employees unload the goods after arrival at one of the DHL hubs.

- Solar is looking into further optimization by using the SpacInvader solution more systematically, one example is whether the latest SpacInvader 80 cm rack would allow Solar to triple stack some of the pallet goods.
- Solar optimizes where it makes sense. The potential both depends on how Solar's suppliers deliver their goods and how Solar's own customers book their orders. Sometimes orders are many small devices instead of pallet goods. Solar only knows the purchase order after the order is placed.



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