

6 Innovative upgrades boost efficiency in handling and transporting shipping containers

February 7, 2024



Shipping Containers are basically the workhorses of modern transportation. They provide efficient transporting of goods, faster shipping processes, enhanced port efficiency, and allow for better management of inventory along the supply chain. In recent years, advancements in technology and new eco-friendly practices have been adopted by shipping companies everywhere to aid in the longevity and efficiency of these cargo boxes. In today's blog, we'll discuss how these innovative methods have improved the handling and transport of a container.

The Structure Of A Shipping Container

To ensure a safe transport of your Shipping Container, consider its structure. Believe it or not but maintaining the integrity of your cargo box is a big deal. It heavily impacts the durability of your container box and the safety of your goods. Consider inspecting the roof, flooring and corner posts of your container on a regular basis. Signs of wear and tear, dents, scratches and even rusts can negatively impact its structure over time. Your container's anatomy will grow weaker and become more susceptible to damage during a transport. Any type of damage could turn into a safety issue when handling and transporting long distances. In most cases, your goods could end up damaged.

Fortunately, companies have started reinforcing their containers with high-quality materials like corrosion-resistant steel to better protect their shipped goods. You'll have to shelve out a lot of money up front but it'll be worth the investment. This kind of steel comes with a long-lasting guarantee. Your container's roofs and walls won't cave in under heavy foot-traffic or the accumulation of snow. Practices such as these make it easier for operators to handle and transport their Shipping Containers.

Sticking With A Maintenance Schedule

In addition to inspecting for any signs of wear and tear, you should also consider lubricating door hinges and padlocks. In particular, lockboxes and especially electronic locks offer optimal protection against thieves. That's why it's important these devices are upgraded, greased down or replaced.

[Container Door gaskets](#) also safeguard your goods, not just from robbers but also from harmful contaminants, such as moisture. A worn or defective gasket will just make your container useless in protecting your goods. You should always prioritize your door's functionality to help give you better access to your container and promote better operational efficiency.

Additionally, ensure that your container has the proper ventilation systems to prevent any condensation from forming. Ensure that the heating and air conditioning systems are properly maintained as well. Air filters must be replaced and receive regular inspections from a professional. Performing maintenance on these essential parts for your container can help extend their lifespan and ensure safety measures.

The Advancements In Shipping Container Technology

Various advancements in technology have also streamlined the process of [Shipping Container Accessories](#). The Deploy Internet of Things (IoT) devices have been implemented across several companies, offering real-time

monitoring of a container's conditions. This includes container sensors, drive control, temperature controls, terminal operating systems (TOS) and AI systems. Thanks to the rise of digitization, these technologies have led to increased job efficiency, faster transport, better security and safer practices with handling Shipping Containers.

For instance, the German international Shipping Container transport company *Hapag-Lloyd* uses a new cargo detection software called "Cargo Patrol" that identifies undeclared and dangerous goods. It'll spot fraud a mile away. Other container transport companies have opted for remote technology and systems as well. Fortunately, these enhancements have reduced the occurrence of on-the-job injuries. Not to mention, they help get the job done faster.

As far as sustainability goes, *Maresk*, the second largest shipping container transport company in the world, has made a huge milestone in lowering their harmful emissions. The upcoming "Ane Mærsk" will be the company's very first methanol-enabled vessel, which will set sail sometime between 2024 and 2025. Its revolutionary design will ensure better fuel operations and reduce the number of harmful gasses released during transportation of their containers. Many shipping and logistics companies like *Maresk* have changed over to more sustainable practices as well.

How Companies Have Benefited From A Modified Shipping Container

Along with new innovative technologies, many companies have adopted the practice of modifying their cargo boxes. In general, customization gives a container owner the freedom to make alterations that suit their needs. They can implement various electronic locks, shelves, lighting fixtures and A/C systems on a container. Companies can turn their cargo box into a storage unit, a retail pop-up shop or even a home.

For instance, Google's *Wing* company received a major upgrade in 2019. *BMarko Structures*, a leading commercial builder that specializes in Shipping Container modifications, built a luxury office complex for the Google company. At the time, *Wing* just launched a new delivery system that dropships everything from food to medicine to customers' homes within minutes. *Wing* was in need of a field office to support its first fleet of delivery drones in Virginia.

Furthermore, *Wing's* office building became the talk around town with its open floor plans and sleek glass exterior. Google's *Wing* benefited greatly from a modified Shipping Container, as it helped expand its drone delivery service.

The Shipping Industry Goes Green

Besides being customizable, containers also come with tons of eco-friendly benefits. The most obvious being that repurposing them eliminates waste and promotes sustainability. Rather than doing away with a cargo box, convert it into a storage unit. Additionally, they don't require the use of harmful building materials like brick and mortar. Instead, you can use more eco-friendly options such as bamboo, reclaimed wood, cork flooring and VOC paints. Additionally, these structures can be altered and fitted with rainwater harvesting, solar panels, green roofs and energy efficient windows to make them more "green."

Even several leading shipping container transport companies themselves are looking into lessening their carbon footprint. Back in 2020, the French shipping and logistics company, the *CMA CGM Group*, spoke about how their new [eco-friendly solution "ACT,"](#) would benefit their customers. *"It enables its customers to analyze their environmental footprint, use cleaner alternative energy sources and to offset the emissions generated during the transport of their goods."* The Shipping industry is taking steps to leave a positive impact on the environment.

The Challenges The Shipping Industry Faces

Despite these innovative efforts, the shipping industry still faces a number of challenges. The biggest stems from fires that break out aboard their cargo vessels, ports and even their terminals. Other issues include overweight boxes, engine failures, ship collisions and even natural disasters. Many of these challenges have led to cargo loss and the destruction of goods. Some companies have even documented accidents that stem from mistakes made during the loading process.

Luckily, shipping companies are working hard to avoid cargo loss and accidents on the job. They've adopted more effective solutions such as using technology to aid with tracking, monitoring and offer better security for containers. Additionally, they've improved their operations by packing containers more efficiently. Many shipping logistics companies have also installed new inventory management systems to help move containers faster down the supply chain. Other measures include opting to use high-quality parts on containers and conducting regular inspections to catch problems ahead of time.

Workers are also being asked to follow company policies and federal laws to the "T." Communication efforts have also improved. Companies are now forming stronger relationships with shipping ports and stakeholders. More importantly, they're able to resolve issues immediately.

All in all, Shipping Containers have become a revolutionary advancement in global trade and logistics. They provide a more durable, efficient and highly-sophisticated means for transporting goods. Their technological enhancements, customizability and eco-friendly practices have helped many shipping companies run more smoothly. Padlocks, advanced tracking systems, rain harvesting systems and even regular inspections of containers have promoted better job safety measures. More importantly, there's less chance of human error to occur. The adoption of these practices have changed the shipping industry for the better.

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