

NEFAB

NEWS

NEFAB
SAVING RESOURCES

About Nefab

Nefab saves environmental and financial resources by optimizing supply chains. We do this by innovating together with our customers to create smarter packaging and logistics solutions while always respecting people and high ethical standards. This contributes to a better tomorrow for our customers, for society and for the environment.

With more than 70 years of experience combined with competence and presence in more than 30 countries, we offer global solutions and local service worldwide to companies in industries such as Telecom, Datacom, Energy, Automotive, Healthcare, Aerospace and Lithium-ion Batteries.

The owners of Nefab Group are the Nordgren/Pihl family and FAM AB.



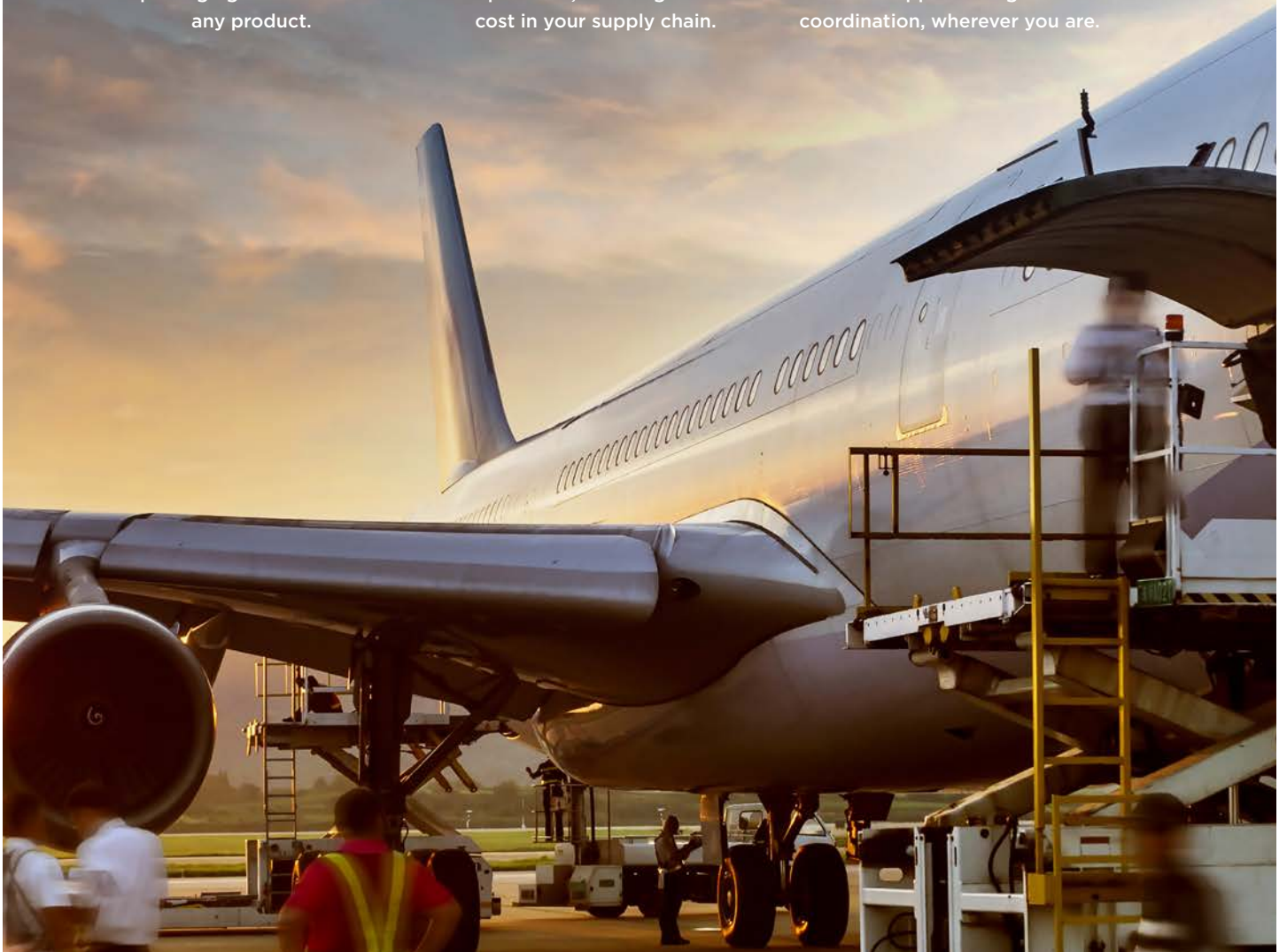
With our **MULTI-MATERIAL ENGINEERING** capabilities, we can develop sustainable packaging solutions for any product.



Our **TOTAL COST APPROACH** ensures that packaging is optimized, reducing total cost in your supply chain.



In addition, our **GLOBAL SUPPLY & SERVICE** capabilities enable us to provide both local support and global coordination, wherever you are.



FiberFlute

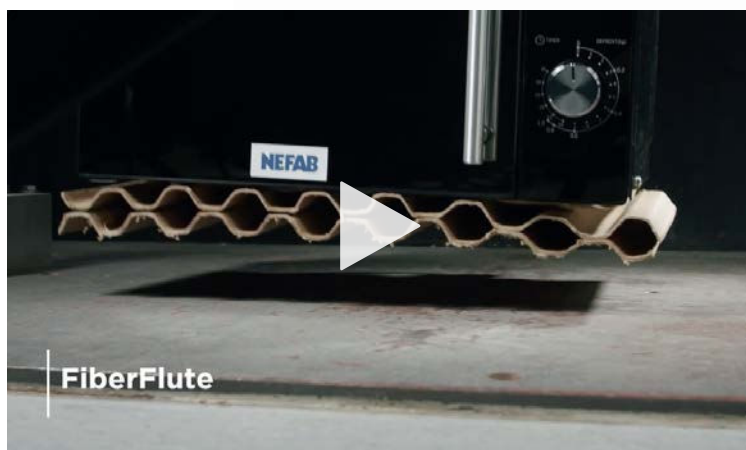
— Sustainable Cushioning Solution

Nefab FiberFlute is a sustainable packaging solution that provides outstanding cushioning performance for a wide range of products. It is eco-friendly and 100% paper-recyclable. It is also available to companies all around the world, thanks to a partnership between Nefab Group AB (Nefab) and Corruven Canada Inc (Corruven). Through Nefab's global footprint and the exclusivity of Corruven's FiberFlute, customers can protect their products while minimizing total costs and environmental impact.

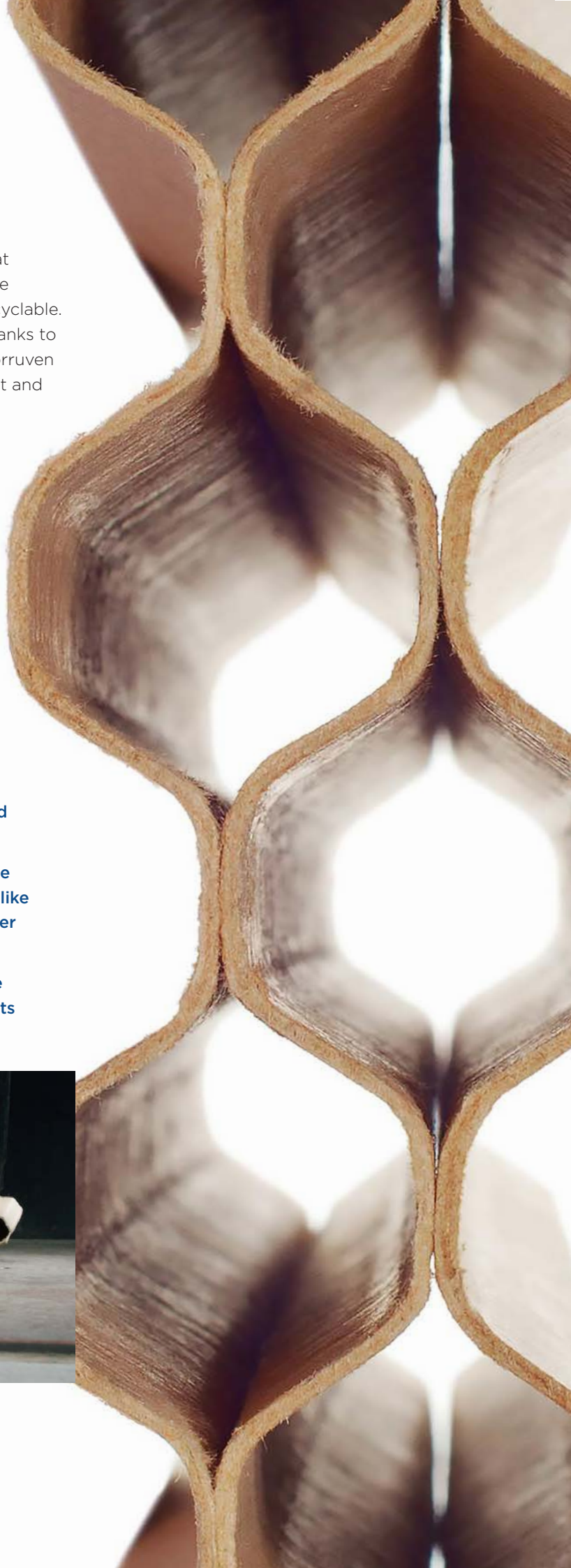
FiberFlute contributes to a better, more sustainable society without sacrificing functionality. It avoids going to landfill by utilizing fiber-based solutions that are paper recyclable. On top of waste reduction, it reduces CO₂ emissions and improves the health of communities around the world due to less trash being burnt or ending up in the ocean.

Benefits

- **Outstanding cushioning performance:** FiberFlute absorbs more shocks with less material compared to polyethylene foam. It performs in both dry and humid conditions and can resist multiple drops.
- **Paper-based and recyclable:** FiberFlute is a recyclable cushioning solution made completely from paper. Unlike plastic-based foam solutions, FiberFlute is 100% paper recyclable.
- **Highly efficient for storage:** FiberFlute has a nestable shape which serves as a smart space saver. This results in less costs in inbound transport and warehousing.



Scan the QR code with your mobile phone for more information.



Fiber-based solutions

EdgePak Straw

Nefab EdgePak Straw is a straw-based packaging solution that provides stacking strength and easy handling at a low carbon footprint. The innovative design creates a solution as strong as plywood that has better stacking strength than a triple wall corrugated box. The solution is easy to handle and can be assembled without using a single nail – creating a quiet and safe work environment when packing and unpacking. Furthermore, the capability to recycle anywhere in the world results in a low environmental impact.

It can be used for a wide variety of applications, from light to heavy, and can be used to ship products via road, sea, and air transport. The EdgePak Straw solution can be custom made with different styles of lids, corrugated sleeves, and pallets to match the needs of your products.



Scan the QR code with your mobile phone for more information.

Benefits

- **Cost-efficient.**
- **Strong.**
- **100% paper recyclable.**
- **Easy to assemble, including larger & longer boxes.**
- **Fully accessible from front side for easy loading & unloading.**
- **Beneficial inner versus outer dimension ratio.**
- **Can be delivered flat or as a kit to assembly line.**
- **Flat compression test strength up to +4 ton.**
- **Customizable lid options.**



STRAW-BASED SOLUTIONS

- Unique foldable corners made of Strawboard.
- The straw fibers are short (not flexible) but very stiff compared to wood fiber.



SUSTAINABLE MATERIALS

- Straw has fibers like paper, therefore, it can be recycled in the paper recycling.
- As it is made from completely natural material it is biodegradable.



STACKING STRENGTH

- EdgePak Straw provides a stacking strength exceeding 4 tons.
- Requires less material to achieve the same resistance.



Nefab receives German Packaging Award for sustainable fiber-based packaging solution

The German Packaging Awards, Europe's biggest showcase for packaging achievements, announced the 2022 competition winners on August 23rd and Nefab's fiber-based packaging solution for Lithium-Ion batteries (LiB) was awarded in the sustainability category.

The jury was impressed by the environmental savings that Nefab's solution offers. Until recently, the battery industry has relied heavily on Expanded Polypropylene (EPP) materials which are difficult to recycle. By switching to a mono-material fiber solution, the whole packaging is sustainable and fully recyclable.

Background: Nefab was contacted by a company with the goal of improving their supply chain. Their customer, the world's 4th largest car manufacturer, requested that they eliminate the expendable Expanded Polypropylene (EPP) trays currently used to transport battery modules from China to Europe. The EPP tray's recycling cost and environmental impact were unacceptable to them.

Our Solution: Nefab engineers in China developed a design almost entirely made of paper. The new solution was based on EdgePak Straw, corrugated and paper pulp fitments.

The EdgePak Straw design provides enough strength to pass the UN certification and allowed 1+3 stacking with a load of over 350 kg per box. The packaging solution is UN certified to meet the demands for transporting LiBs.

Customer Benefits: Nefab EdgePak straw solution was able to reduce the customer's environmental footprint and improve their financial savings. In terms of CO₂, the savings amounted to more than 1000 metric tons per year.



SUSTAINABILITY
WINNER
2022

Wood-based solutions

ExPak — Foldable Plywood Boxes

Nefab ExPak is an exclusive line of engineered packaging solutions to meet all industrial packaging needs.

Designed to transport products of all kinds, it provides maximum protection, even in the most demanding conditions. ExPak is tested and approved in Nefab ISTA certified labs, in accordance with international standards, to support all modes of transportation. The solution is a nail-less, collapsible, export compliant plywood box, which is ideal for heavy, sensitive, and high-value goods. ExPak is very adaptable overall, and can be easily customized according to customer specifications and requirements. Furthermore, the high-quality material ensures a clean, professional look, and allows vibrant printing to promote the end-customer brand.

Nefab offers several different types of ExPaks — ranging from smaller, one-unit boxes to larger solutions with up to six separate pieces, all foldable for ease of storage and transportation. Regardless of the type, each is made with a combination of plywood and galvanized steel profiles, which function as hinges that help to give the ExPak its high strength and flexibility.



Scan the QR code with your mobile phone for more information.

Benefits

- **Worker Safety:** Sophisticated design to accommodate customer specifications and requirements while enabling simple assembly and easy handling.
- **Branding:** High-quality raw material ensures a clean, professional look and allows vibrant printing to promote your brand.
- **Reduced Cost:** Designed to yield cost savings without sacrificing quality, enabling our customers to be, and stay, competitive in the market.



STRENGTH

Technically qualified plywood strengthened by galvanized steel profile, gives it significant strength and durability without sacrificing low weight.



SAFETY

The nail-free fastener options create a safer, quieter work environment during both assembly and disassembly.



COST REDUCTION

Custom designed to yield cost savings throughout the supply chain without sacrificing quality.



ExPak A

The Nefab ExPak A consists of only one collapsible piece, as the bottom, lid and frame are attached to each other, simplifying handling and storage. The ExPak A is suitable for small-medium sized products.



ExPak P

The Nefab ExPak P consists of three sections — bottom, lid and foldable frame — and is delivered flat to save space and shipping costs. The ExPak P is suitable for small-medium sized products.



ExPak S

The Nefab ExPak S consists of six sections — the bottom, lid and four loose sides. This design allows full access from all sides for loading and unloading, offering maximum flexibility in packing. The ExPak S is suitable for large products.



ExPak XL

The Nefab ExPak XL consists of six sections — the bottom, lid and four loose sides. This design allows full access from all sides for loading and unloading, similar to the ExPak S, but is suitable for extra-large products up to 20 cubic meters.

Plastic-based solutions

Thermoformed Solutions — Sustainable Plastic Packaging

Nefab offers a range of sustainable plastic packaging, including thermoformed trays and cushioning applications.

Made primarily from recycled plastics and 100% recyclable materials, they are an efficient alternative for one-way flows, as well as return and circular flows. Ideal for automated lines that require precision packaging due to robotic handling, they are engineered to be highly protective and to match specific product requirements and regulations. Nefab's thermoformed solutions are available globally for several industries, including the Automotive, Electronics, Telecom, Aerospace, and Lithium-ion Battery (LiB) segments.

These product developments are a result of two important acquisitions between 2020 and 2021 – Szkaliczki and Partners Plastic Processing Ltd (Szkaliczki) and Reflex Packaging (Reflex). While Szkaliczki secures Nefab's leading position in technology and engineering capabilities for thermoformed trays, Reflex secures Nefab's global leadership in sustainable cushioning solutions. Combining these new capabilities with Nefab's global footprint, the company can now support customers in managing their packaging waste and creating a truly sustainable supply chain.



THERMOFORMED TRAYS



REFLEX® CUSHIONING SOLUTIONS



Scan the QR code with your mobile phone for more information.





HIGH RECYCLED CONTENT

- Made primarily from recycled plastics and 100% recyclable materials.
- Efficiently applicable to one-way flows, return flows, circular flows, and automated lines.



HIGHLY PROTECTIVE AND CUSTOMIZABLE

- Highly customizable and protective thermo-formed solutions.
- Tailor-made according to customers' needs.
- Designed, prototyped, and tested in our ISTA certified labs by our Global Engineering Network.

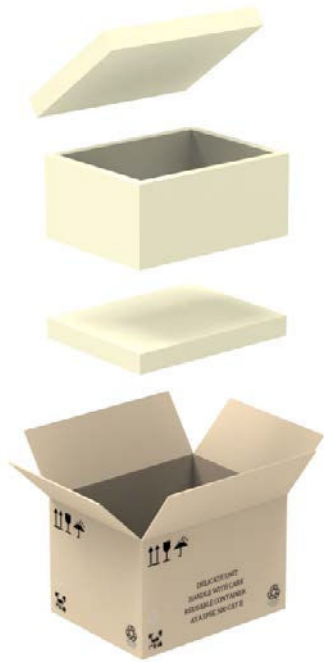


REDUCED CO₂ AND TOTAL COST

- Smart, sustainable plastic packaging applications that require less plastic material and less labor compared to foam and paper.
- Our products reduce costs and CO₂ through the entire supply chain.



WoodFoam



Replace PU-foam in packaging for electrical parts in the aircraft industry to reduce environmental impact.

Nefab and Stora Enso used co-development to their advantage when competing with the traditional foam conversion sector. Together, they gave brand owners in many segments the option to abandon their reliance on PU-foam and go green.

Thales Group is a French multinational company that designs and manufactures electric systems as well as provide services to the aerospace, defense, transportation, and security industries. They have set a long-term goal to lower their environmental footprint by 35% by 2023. As a result, they wanted to substitute the PU-foams used in their packaging for a more sustainable alternative.

The use of WoodFoam instead of PU foam reduced emissions and made recycling much easier. Nefab's complete packaging solution is comprised of corrugated board and Fibrease™ raw material by Stora Enso. Both materials are recyclable in existing paper/board recycling systems. This is in contrast to Thales' earlier PU-foam solution, which was not totally recyclable.

Traditional foam converting processes were employed to generate an acceptable design for the end consumer, and the flexible qualities of WoodFoam provide adequate damping for carrying electrical equipment. The packaging solution has been approved for ATA 300 cat II air transportation.

Lithium-ion Batteries

With a long and proven track record in dangerous goods and lithium batteries, Nefab holds a position to serve all flows and statuses of batteries while supporting our customers with regulation guidance.

Shipping lithium batteries is a complicated process, and as a lithium battery sender, one is responsible for safe shipments of such products – a job that should be taken seriously. If done wrongly, the lithium batteries might quickly become a threat to the safety of anyone in their vicinity.

The basic purpose for dangerous goods packaging is to fully contain the dangerous goods, even if the box is put under great stress. Nefab can provide both existing solutions that are already certified for packing lithium batteries, as well as new solutions that are designed, tested, and validated according to customer specific needs. Nefab has the engineering capability and knowledge to provide complete, multi-material packaging solutions for all statuses and flows, allowing us to be a reliable partner for customer packaging needs, from the outer packaging itself to accessories such as absorbents, labels, and tapes.

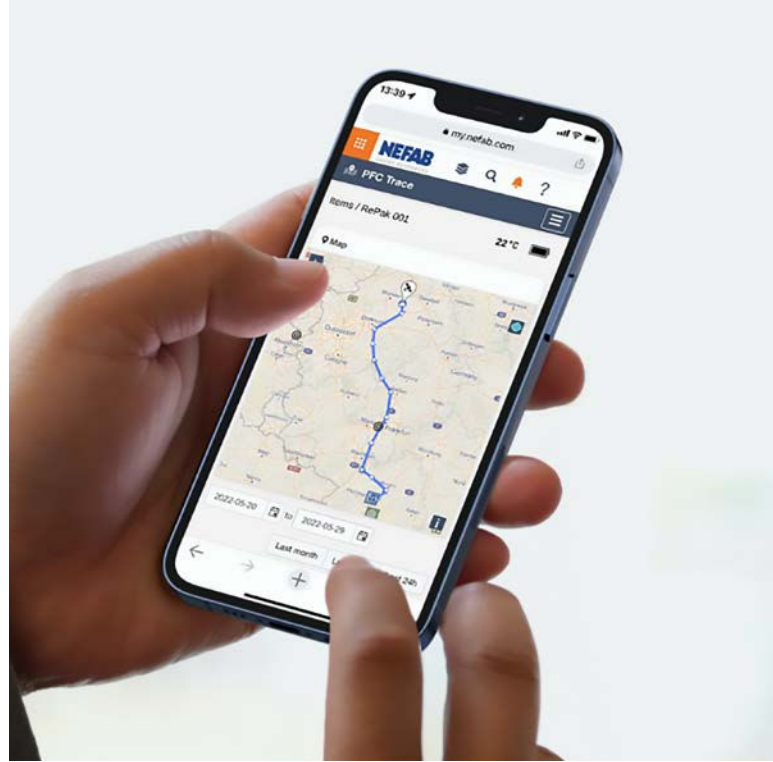


Connectivity

An efficient way to reduce the use of resources is to add connectivity to returnable flows and pools. This can boost efficiency by as much as 65% and save resources in the supply chain.

With a broad portfolio of connected devices, Nefab can trace packaging around the world in real time, measure its temperature, shock, humidity and more to ensure the optimal conditions during shipment. Nefab has created a technology-agnostic track and trace software for connected packaging allowing for full interoperability across different systems.

Currently the network cooperates with over 70 different plug & play devices across different technologies, and monitors over 80 million events daily from over 100 countries around the globe. This means that new, cheaper devices, regardless of their underlying technology (be that QR, RFID, connected gateways, GPS, Bluetooth etc.) can be added to the existing device fleet without the need to replace the current equipment and infrastructure. Nefab estimates that hybrid technology solutions help to save up to 95% in overall device costs.



GreenCalc

GreenCalc is an environmental analysis tool developed internally by Nefab to provide customers with a clear and thorough study of the environmental impact of packaging and logistic flows in order to find opportunities for improvement. Based on this information, Nefab engineers can design new solutions with the aim of reducing customers' carbon footprint, supported by quantified data that serves to report progress on sustainable developments within customer packaging and logistics flows.

Customer Value



With the help of GreenCalc, Nefab can support customers' green initiative by:

- Evaluating the environmental impact of current and potential packaging solutions.
- Identifying areas for improvements, which can be used in the development of a new packaging design.
- Quantifying a large range of climate affecting metrics across a detailed, multi-criteria analysis.
- Implementing engineered complete packaging solutions that are optimized in terms of total cost and environmental impact.

WE SAVE RESOURCES IN SUPPLY CHAINS,
FOR A BETTER TOMORROW

■ Nefab sites

60 sites in
+30 countries

+200
engineers worldwide

We save environmental and financial resources by optimizing supply chains. It's about innovating together to create smarter packaging and logistics solutions while always respecting people and ethical standards. This contributes to a better tomorrow for our customers, for society and for the environment.

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