

**What's in it
for you?**

UPS Package Design and Testing Lab



What's in it for you?

At UPS, we can transform your packaging from a liability into an asset ... one that optimizes space, supply chain synergies, and environmental-responsible business practices.



Leaning, and greening, the supply chain

Moving more than 15.5 million packages and documents around the world every day, UPS knows firsthand how the very nature of working more efficiently lets us work “greener.” It’s a powerful motivator for us at UPS and has increasingly become a business essential for our customers.

More than ever, it’s not only what’s inside your package that makes your company successful – it’s also the packaging itself.

Imagine your packages supporting your goals and initiatives. That those brown, corrugated boxes could serve as a springboard to newly uncovered cost reductions, waste minimization, and operational efficiencies.

By reducing damages, companies can significantly reduce the materials and resources required to reship orders – saving on everything from the actual packaging itself to the resources used to produce, manufacture, and transport the goods.

Indeed, small efficiencies and reductions add up and can do a world of good for your business and the environment. And, at the UPS Package Design and Test Lab, we can show you how it’s done.

Defying the Law of Gravity

The real-world forces at play along your supply chain can be formidable. Good intentions and proper procedures are sometimes outdone by unexpected bumps in the road or the Law of Gravity.

But, engineers at the UPS Package Design and Test Lab use science and more than 100 years of UPS know-how to help you protect your packages before they ship and approach your best case scenario.

UPS's innovative test lab is a place where packages go to experience the unintended consequences that life sometimes brings. There, they endure compression tests, impact tests, vibration tests, and shock tests. They're even monitored to measure their temperature variance during test shipments and are confined to a temperature-humidity chamber to simulate realistic transit conditions.

Such real-world experiences provide valuable data that's used to develop solutions to protect other packages. That data is so valuable, in fact, that UPS engineers' recommendations have contributed to significant damage reduction.





MEET OUR EXPERTS

UPS Package Engineers are known in the industry as experts on International Safe Transit Association (ISTA) Level 3A testing. In fact, our certified engineers have studied the effects of typical industry hazards in the global shipping environment, including the consequences on living organisms.

A design-and-test lab or think tank? You decide.

Whatever the nature or magnitude of your packaging needs, the pros at the package lab are ready to help.

Do you need us to assess and recommend? We can study your current packaging materials and procedures and examine your shipping processes. We also scrutinize problems and inefficiencies, provide performance data, analyze the impacts of forces at work, and recommend next steps.

Need us to design, prototype, specify, and test? Whether you're looking for improvements or innovations, next generations or inventions, we'll apply a rigorous approach from development to validation.

You can rely on us to support and report. Every project we undertake results in an action report that's easy to read and practical to implement. Support also can be part of the package, including training and counsel.

SIMPLY PUT

You gain control of damages and returns so there's less remanufacturing, re-shipping, and waste. That means happy customers and improved margins while using fewer resources.

We're fixers and optimizers – bringing the same proven expertise to the individual, tactical assignment as a deep-dive, strategic assessment.

Cube Optimization

Empty spaces in and between packages can be the black holes of efficiency. The effect can be particularly acute in shipping pallets and containers.

Just our kind of challenge – and the kind we meet often. By consulting with you to properly manage variables like carton size and compression strength, stacking and stability, the package lab can help you safely ship more product in a smaller carton. Likewise, we'll work with you to fit more cartons on a pallet or in a container, so you can realize greater efficiencies and control.



**We'll help you
ship safely –
no matter what
your product.**





On average, the UPS Package Design and Test Lab tests more than 2,100 different types of packages. Here a bridged impact test evaluates the center strength of elongated packages.

Plenty of creds. And no shortage of enthusiasm, either.

Our engineers are experts in the dynamics of distribution and shipping environments, and their training exceeds the standards that transportation companies typically require. They are Certified Packaging Laboratory Professionals and members of the Institute of Packaging Professionals.

What's more, our state-of-the-art package testing facility is one of fewer than 400 labs worldwide certified by the International Safe Transit Association (ISTA) and is approved by the National Motor Freight Traffic Association (NMFTA).

We'll help you ace the hardest test of all – the customer satisfaction test.

Today, a company's environmental commitment says as much about its brand as its products or services. Reducing waste and operating efficiently is just as important as delivering a quality product, competitive prices, and good customer service.

With the professionals at the package lab on your side, those challenges can become advantages. We'll help you find cost savings, run a more efficient operation, and be better stewards of the environment – just by improving the packaging that contains your goods.

Our smart, resourceful solutions will satisfy both you and your customers and give you more time to pursue other business priorities.



UPS engineers, like Andrew, perform extensive environmental tests to help pharmaceutical companies adhere to stringent thermal requirements and ensure the safe transport of these commodities.

Ensuring consistency and performance throughout your supply chain

Compliance Auditing

Staying on plan in complex supply chains takes diligence. Say, for instance, you serve consumers through a large distribution network of multiple vendors or locations. Your ongoing target is to ensure a consistent level of performance at every step – so customer expectations are met without fail.

The package lab created the Vendor Packaging Program to help customers hold their suppliers accountable for providing adequate packaging for small parcel shipping. Through comprehensive consulting, auditing, and reporting, the program not only ensures that vendors meet specific performance requirements, it also helps streamline your entire pick, pack, and ship process and lower your operations costs.



Plow & Hearth is a leading national catalog, retail, and internet company based in Madison, VA, with annual sales exceeding \$100 million. The thriving company turned to UPS Customer Solutions when it faced a challenge in its mail order business with product packaging.

Customer Challenge

Find a cost-effective means to reduce the damage rate during shipment for its products.

UPS Solution

Analyze their products and packaging at the UPS Package Design and Test Lab to pinpoint the causes of damage and use the data to develop economical and protective new packaging specifications that vendors can easily adopt.

Results

- Significantly improved package condition during shipment
- Enhanced customer satisfaction
- Lowered transportation costs



"The repack recommendations developed by Customer Solutions allowed us to reduce damage rates that were as high as 18 percent for some items to virtually no damages. Not only is our customer satisfaction greatly improved, we're also experiencing significant savings on our transportation costs."

Caroline Busick
Plow & Hearth Director of Mail Order and Retail Distribution

Jubilations Cheesecake delivers decadent desserts while shipping lean.

Jubilations Cheesecake is an online retailer of homemade cheesecakes based in Columbus, MS. The successful company sought guidance from the UPS Package Design and Test Lab to help reduce waste and ease its shipping requirements.

Customer Challenge

Jubilations was using excessive amounts of dry ice to accompany its polystyrene-lined packaging, which resulted in larger packaging, extra shipping charges, and often necessitating next day deliveries.

UPS Solution

UPS engineers recommended several packaging enhancements, including a slimmed-down box size with appropriate polystyrene density and a new insulating material for single orders called InstaPack.

Results

- Reduced packaging dimensions by 10 percent
- Enabled customer to leverage UPS's entire portfolio of services to best accommodate specific shipping requirements and as a result, lowered carbon footprint by reducing the fuel required to ship packages



"Jubilations has realized a 19 percent savings in shipping-related costs per package. And, this good result has led to other benefits. In the past, if a cheesecake arrived in poor condition, we'd make another and ship it out – using more resources for remanufacturing, packaging, and shipping. But, by preventing damages, we preserve our image and guarantee a positive experience for our customers. This increases the sustainability of our company and the earth's finite resources."

George Purnell
Jubilations Cheesecake Owner



Tests, analysis, and assessments

All testing at the package lab is administered in accordance with the latest industry benchmarks and approved test standards, such as:

ISTA* Series 1, 2, 3 and 7

TAPPI** 810 Bursting Strength

TAPPI 811 Edge Crush Resistance

ASTM*** D642 Compression

ASTM D3332 Product Shock Fragility

ASTM D3580 Product Vibration

ASTM D4169 Performance Testing

ASTM D4728 & D999 Vibration

ASTM D5265 Bridge Impact

ASTM D6344 Concentrated Impact

ASTM D6653 Altitude

ASTM & TAPPI Tensile Testing

ASTM D 7386 Single Parcel Shipments

*ISTA (International Safe Transit Association)

**TAPPI (Technical Association of the Pulp and Paper Industry)

***ASTM (American Society for Testing and Materials International)

XYZ Supply meets UPS Eco Responsible
Packaging Program criteria.
Details at ups.com/ecoresponsible



Get Our Green Stamp of Approval

Choosing sustainable materials while protecting your product with a minimum of packaging requires a carefully calibrated approach. Demonstrate to your customers that you are committed to sustainable packaging solutions with our Eco Responsible Packaging Program. You'll differentiate yourself from your competition and show that you are being proactive in conserving valuable resources.

We'll evaluate your shipment packaging processes, and once you qualify you'll be able to affix the Eco Responsible Packaging Program logo on your qualifying packages. Customers will recognize your efforts at making your shipping more sustainable before they even open your package.

Verified Program

The Eco Responsible Packaging Program has been verified by Société Générale de Surveillance (SGS), an inspection, testing, and verification company, and our program is praised by the Sustainable Packaging Coalition and BSR, a global business network and consultancy focused on sustainability.

To learn more about the Eco Responsibility Packaging Program and the recognition it has received, go to ups.com/ecoresponsible.



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Customer Solutions
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