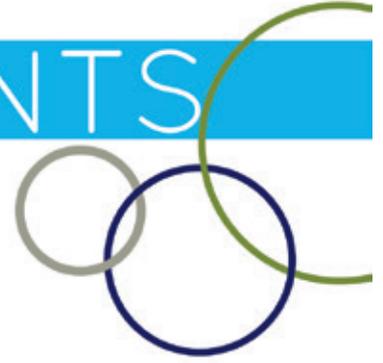


# INVENTORY COUNTS



## Your supply chain



### Do you have a plan in place if disaster strikes?

**G**lobalization and lean manufacturing have made supply chain management more important than ever.

It's crucial that materials and parts arrive when needed in the manufacturing process so that you can fulfill orders and customer expectations. But because of the minimization of inventory, your company could be more vulnerable to disruption.

Most people don't like to think about a catastrophe striking their business, so when things are running smoothly, it's tempting to put disruption planning on the back burner.

Unfortunately, most disasters don't give advance notice, although today's more sophisticated weather tracking does give some warning.

For example, Hurricane Sandy, which struck the East Coast in October 2012, was predicted five days ahead. One of the country's biggest ports was shut down by the huge storm, as were transportation and logistics businesses operating in the region.

Would five days be enough time to make contingency plans if an important shipment was due in New York? Probably not.

In addition to severe weather, disruption might be caused by labor issues, raw materials shortages, wars, fires and terrorism. Sometimes a supplier to your supplier

is the one with the problem, and the ripple effect impacts you.

While you can't prevent these critical events, you can mitigate their impact through risk management, a key part of supply chain planning. Because of economic uncertainty on top of wild weather and political unrest in many regions of the world, risk management is rising in importance.

Almost all executives (98 percent) recently surveyed by consulting company Accenture felt risk management was more important than two years earlier. Four out of five were worried about the resilience of their supply chains.

Most companies plan out their supply chains several years in advance. Rather than regard your plan as static and set, take a hard look at your chain to find the weak spots. Which supplies or sources are most critical to your functioning? Which have the longest lead times? Where are you most at risk because of external political, geographic, weather or scarcity factors?

If currency exchange rates and fuel costs could make supplies from certain countries too expensive, include them as risks.

A useful tool to rank supply risk is a grid with low risk to high risk on one axis and low importance to high importance on the other. You can map out which supplies are both high risk and high importance, high risk and low importance, etc. This will

See **Supply Chain** on back

**F**our out of five executives worry about the resilience of their supply chains in the case of disaster.

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A financial and management bulletin to manufacturers from:

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# Water Conservation

## It helps the environment ... and your bottom line

Ongoing droughts in the United States have diverted attention from energy concerns to another area of conservation – water.

Although manufacturing consumes only 5 percent of the water supply, according to the United States Geological Survey, companies are now actively embracing the goal of reducing, reusing and recycling water.

IBM, for example, has a goal of reducing water use by 2 percent annually. Ford Motor Co. aims to cut gallons per car by almost two-thirds over a five-year period. The water-intensive food processing industry has developed safe methods of reusing washing and cooking water or using steam instead of water.

This focus is more than an attempt to save money. Lean manufacturing principles apply to use of water as well as energy. In addition, maximizing this precious resource positions companies as good corporate citizens.



Imagine the scenario of a company that continues to draw down hundreds of thousands of gallons a day from reserves during a drought that is causing wells to dry up and crops to fail. Even if water use is an integral part of processing, there are technologies and equipment available that reduce or reuse.

Besides the amount of fresh water expended, there is wastewater to

consider. To be returned to the water supply, wastewater must be treated. Cutting down on solids and contaminants reduces the burden downstream as cities and counties grapple with large volumes impacting treatment capacity.

Just like initiatives to reduce electricity use, water efficiency should be part of your corporate culture and mindset. If employees don't understand why you are concerned about cutting down on water use and waste, they may not comply. Compliance will also increase if the issue is framed positively, with rewards for attaining goals as well as for reporting problems. Reward the behavior you want to encourage.

Process and equipment specifics will vary widely according to your industry, but the first step for all companies is a water audit. How much water are you using and where is it being used? Uses may include processing,

boilers, cooling, bathrooms and kitchens, cleaning, vehicle washing and landscaping.

During the audit, you may identify problem areas in which water is leaking or otherwise being wasted. An example of waste is continual flow during processing instead of automatic shut-offs or on-demand use.

The amount of water used in various functions is a prime area to examine. Many industries have created modifications that cut back on the amount needed to perform a function. For example, water volume in the washing and rinsing of vegetables is greatly reduced with the use of sprayers rather than immersion baths.

Steam can replace water entirely in some functions, such as blanching or peeling. Agitation and fog rinsing technologies use less water more effectively.

Plants with boilers can either replace them with on-demand hot water systems or optimize their operation. Using air rather than water in cooling operations also reduces use and waste. For a quick first step, install high efficiency faucets and toilets – relatively easy and inexpensive improvement.

Reuse of water is an area that is gaining momentum as the next step in efficiency. A main concern is the quality of the reused water so as not to contaminate the manufacturing process.

Intel pioneered a method of reducing the tap water needed to make ultra-pure water for cleaning silicon. Then the company developed rinse water collection systems that enable runoff to be used in cooling towers, scrubbers and other operations.

Many companies are using cooling tower and other runoff to irrigate landscaping. The food processing industry is investigating disinfectant methods and reuse guidelines so that water can safely be used more than once in produce washing and preparation, as well as beverage production.

Once the audit is complete, the next steps are to prioritize your water efficiency plan activities and create budgets for improvements and new equipment, if needed. Goals and performance minimums must be set and monitored. Many companies use a team approach, along the lines of safety teams, to implement and manage the water plan.

Resources to help you learn more and plan your water efficiency strategy are available online. The Water Efficiency Manual is available at [www.energystar.gov/index](http://www.energystar.gov/index).

The Environmental Protection Agency has prepared a guide to reusing water, at [www.waterreuseguidelines.org](http://www.waterreuseguidelines.org). The American Water Works Association is a nonprofit organization offering comprehensive resources, tools, education and conferences on the topic of water management. Visit its website at [www.awwa.org](http://www.awwa.org). ■

# Customers looking for leaner, greener packaging

**P**ackaging serves multiple functions. It protects your product during shipment and on the shelf, provides necessary information and promotes your product to your customers.

In recent years, because of an increased focus on sustainability, packaging also communicates your company's commitment to lean principles.

How minimal your packaging can go depends, of course, on your product. But realize that many customers have wearied of tearing apart several layers to get to their purchase.

There is a general perception of wastefulness in such cases, with disposal of packaging into the waste stream a growing concern. And, less packaging and better packaging management generally mean cost savings for your company.

Going leaner in your packaging can take several approaches. The first is simply removing any unnecessary components.

The beverage industry, for example, eliminated the rings on cans sold in cases. Rings are added as needed when cases are broken up for sale. Other companies have eliminated

external cartons, replacing them with shrink wrap.

Reduction in size and weight of boxes, bottles and cans can represent significant savings in materials and transportation costs.

Unilever switched from glass to recyclable plastic jars for mayonnaise, which reduced weight. Plastic containers in general have been reengineered to be stronger while using less resin to produce.

Advances in recycling plastics have addressed the negative perception of plastic as non-biodegradable.

Companies such as FP International are developing biodegradable plastics that meet usage goals but can be composted upon disposal. Their packaging for peanuts is made from recycled polystyrene, can be recycled, and includes an additive that will degrade them into compost if discarded.

Biodegradable materials and recyclable packaging are both selling points for customers, many of whom look for those qualities now.

Using recycled materials in packaging is another lean principle. This content can be either post-consumer – materials recycled by end users – or pre-consumer, which means the use of materials left over from manufacturing.

A survey by the Recycled Paperboard Alliance found that 61 percent of consumers were more inclined to purchase products with recycled content packaging.

In response, brands including Kellogg's, Nestle, PepsiCo, and Xerox have committed to using 100 percent recycled



paperboard. They, along with over 100 other large companies, are members of the 100 percent Recycled Paperboard Alliance.

Another facet of recycling is packaging reuse. Pallets have long been reusable, and companies are now distributing products in totes that can be returned for refill. The Reusable Packaging Association (RPA) promotes the adoption of packaging reuse.

To be considered reusable, packaging must conform to RPA standards that include a minimum of three lifetime uses for similar or same purpose, reintegration into the supply chain and a plan for recycling at end of life.

RPA cites the numerous economic and environmental benefits of reusing packaging. Industries applying reusable packaging include automotive, chemical, textile, electronics and pharmaceutical.

In designing a lean packaging program, there may be tradeoffs. For example, foam pieces used to cradle appliances are lighter than cardboard and therefore cost less to ship. Foam also prevents damage, although foam is not as recyclable as cardboard.

Cost, shipping weight, reuse, recycling, customer perception and product protection are all factors that must be weighed in making the best lean packaging decision. ■

We wish to thank Elizabeth Penney, M.B.A., for her editorial contributions to this publication.

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## About Wall, Einhorn & Chernitzer, P.C.

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### **Supply Chain** *continued*

help you prioritize disruption planning to address the most vulnerable areas first.

Once threats are ranked, the next steps are to mitigate the risk as well as create a plan to address disruption, should it occur.

Risk can be reduced in several ways. You can increase your inventory of the critical, high-risk part to create a more comfortable buffer. Establishing relationships with alternative suppliers and logistics and transportation services will give you options should the worst occur.

Strategic alliances with others in your industry might also be a viable part of your plan, either as an emergency provider of inventory or a source of intelligence.

Recognizing the complex nature of supply chains in a global economy, companies are working together to share information. The Fair Factories Clearinghouse in New York, for example, gathers submitted documentation on 30,000 factories in 142 countries.

A cross-functional team approach is key to developing and modeling your disruption plan, since it is likely all departments will need to respond in some

way – from accounting to the production floor.

Running through "what-if" scenarios, your team can brainstorm and draft on paper various response strategies.

After the best options are selected, testing and dry runs will validate your plan. Your team's roles and responsibilities during a crisis should be pre-determined so decisions can be made quickly and effectively.

A system and responsibility for ongoing intelligence gathering and situation monitoring should also be part of your plan. You can identify the critical issues – weather, currencies, fuel prices, political situations – for your most important suppliers and set up a data-gathering mechanism.

This intelligence gathering could include customized real-time data feeds watched by your team. RTT News and Reuters are examples of services that allow users to set preferences for continuous news updates.

New information should be integrated into your ongoing supply chain management process so that you can respond and adjust to changing conditions as they occur. ■



### **Inventory Counts**

The technical information in this newsletter is necessarily brief. No final conclusion on these topics should be drawn without further review and consultation. Please be advised that, based on current IRS rules and standards, the information contained herein is not intended to be used, nor can it be used, for the avoidance of any tax penalty assessed by the IRS.